Global Health Promotion

Addressing mental health through intersectoral action in the context of COVID-19 and the 2030 Agenda for Sustainable Development

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COVID-19 continues to challenge all countries around the globe. The pandemic has clearly exposed pre-existing weaknesses in our social, economic and health systems. The wicked problems that the United Nations (UN) Sustainable Development Goals (SDGs) called on all nations to comprehensively address are the very issues that have put many people at greater risk for contracting, dying or now contending with the consequences of long COVID-19. The 2030 Sustainable Development Agenda also pledges to "Leave no one behind" (1). To do so requires explicit attention to dismantling systems of oppression such as sexism, heterosexism, ableism, classism and ageism that continue to socially reproduce racial, gender, health, and other inequities.

Mental health is one of the many issues that the pandemic has further highlighted. According to the World Health Organization (WHO), "mental health is a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community" (2). The promotion of mental health is foundational to personal, community and socio-economic development. The social and economic consequences of ill mental health affect the fabric of entire societies (3). While not new, the pandemic has accelerated attention to the importance of mental health and related inequities, but will this attention be maintained and translated into sustainable action?

The achievement of global mental well-being requires interdisciplinary, intersectoral and intersectional approaches. Mental health clearly aligns with SDG3 (good health and well-being); however, it is influenced by several other SDGs, and this is where the emphasis needs to be – at the intersections of multiple SDGs rather than perpetuating siloed approaches to mental well-being. As a health promotion community, we are well-positioned to co-design, implement and evaluate intersectoral policy and program initiatives that tackle the individual, social, structural, and environmental determinants of mental health inequities. For example, the realization of mental health and well-being is very much related to SDG5 (to achieve gender equality and empower all women and girls) and SDG8 (to "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all") (1). Women's mental health has been deeply affected by the pandemic, but they are also crucial to recovery efforts. They make up more than 70% of the global health and care workforce (4). They are also more likely to perform unpaid care and domestic work which UN Women estimates to be between 10% and 39% of the Gross Domestic Product. Yet much of this labor is not formally accounted for, continues to remain invisible and its mental health impacts have not been adequately assessed (5).

Unpaid care work is a gendered phenomenon. It represents a critical but undervalued dimension of economic activity, with important dividends for the well-being of individuals, families and whole societies. This work can involve caring for children, older adults and people with disabilities. SDG5 (target 5.4) underscores its importance by calling on all countries to better "recognize and value unpaid care and domestic work through the provision of public services and social protection policies. . ." (1).

Social protection measures do exist and consist of policies and programs designed to reduce poverty and vulnerability by promoting efficient labor markets. These measures can include income security, child and family health care, and human right efforts advocating for progressive policy and legislative changes. According to the International

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Labour Organization (ILO), 71% of the global population does not have access to social protection, which also includes two billion workers in the informal economy. This means that only 29% of the world's population has access to comprehensive social security (6) and the situation has most likely worsened during the pandemic. COVID-19 has taken more than 6.3m lives and also contributed to what the ILO has called an "unprecedented loss of jobs and livelihoods" (7).

Social protection is directly related to efforts to achieve universal health coverage (UHC) (SDG3). Of note, one of the key pillars for UHC is financial protection from catastrophic health expenditures. Lack of access to social protection can force people to go to work even when they are sick. We have countless examples of this during COVID-19. Those who do not have the privilege to self-isolate or stay at home because they do not have access to paid sick leave due to their precarious employment status cannot easily adhere to public health advice. If they get too sick, this can result in social exclusion, loss of income, which increases the risk of poverty for workers and their families – all with lasting mental health effects (7). We need to better characterize who is made vulnerable by precarious working conditions in all their various forms, and to document the health and gender implications on mental health and well-being and to evaluate existing social, health and economic policies that otherwise continue to fall short of protecting those in need (8).

As we build back better and more resilient systems, no one discipline, or sector, can tackle complex issues like mental health and its underlying determinants. It cannot be effectively addressed if sectors including the health sector continue to work in silos. Intersectoral action, which results from aligning resources and strategies between sectors to achieve a common goal, is critical for making progress on the SDGs (9). Without sustained attention, nations run the risk of falling even more behind on realizing these goals. Measurement of the co-benefits from intersectoral action is key. New models of intersectoral action are also needed now more than ever (9). I look forward to seeing more submissions to *Global Health Promotion* that focus on equitable intersectoral policy and program solutions to address issues like mental health.

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Original Article

Toward resourcefulness: pathways for community positive health

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Abstract: Communities are powerful and necessary agents for defining and pursuing their health, but outside organizations often adopt community health promotion approaches that are patronizing and top-down. Conversely, bottom-up approaches that build on and mobilize community health assets are often critiqued for tasking the most vulnerable and marginalized communities to use their own limited resources without real opportunities for change. Taking into consideration these community health promotion shortcomings, this article asks how communities may be most effectively and appropriately supported in pursuing their health. This article reviews how community health is understood, moving from negative to positive conceptualizations; how it is determined, moving from a risk-factor orientation to social determination; and how it is promoted, moving from top-down to bottom-up approaches. Building on these understandings, we offer the concept of 'resourcefulness' as an approach to strengthen positive health for communities, and we discuss how it engages with three interrelated tensions in community health promotion: resources and sustainability, interdependence and autonomy, and community diversity and inclusion. We make practical suggestions for outside organizations to apply resourcefulness as a process-based, place-based, and relational approach to community health promotion, arguing that resourcefulness can forge new pathways to sustainable and self-sustaining community positive health.

Keywords: assets/protective factors, capacity building (including competencies), communities, empowerment/power, equity/social justice, health promotion, policy/politics, salutogenesis

Introduction

The role of communities in promoting health and wellbeing is a tenet of public health research and practice. While recognizing that communities are not homogenous or static (1), communities can be linked by common interests and conditions, becoming effective and successful agents of change regarding the connected and complex global and local challenges affecting their health. This article asks to what extent outside organizations can support communities to forge pathways to positive health, and explores community health promotion approaches that reinforce community agency and self-determination and ultimately contribute to reducing global health disparities and inequities. We use the terms 'agency' and 'agency-based approaches' to refer to community agency and not in reference to organizations or institutions. We provide a critical examination of how community health may be defined and determined, as well as an overview of community health promotion including with respect to the

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advantages and critiques of agency-based approaches. We offer and explore the concept of 'resourcefulness' to provide insights into how positive health can be approached as a relational and place-based process and discuss the role(s) that outside organizations can play in supporting communities to strengthen their health assets, renegotiate power relationships, and cultivate local human–environment relationships that form the basis for future health choices, opportunities, and potentialities.

Conceptualizing community positive health

How health is conceptualized instructs where, when, and how it is promoted. Yet, the concept of health is under-scrutinized and often used uncritically in the field of public health (2). The biomedical illness model has dominated contemporary health practices and approaches and shaped Western understanding and practice of health as 'normal functioning' and the absence of disease (3). However, health can be understood as a presence of positive features rather than merely an absence of negative ones. This concept underpins the World Health Organization's (4) definition of health as '[a] state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'. This definition lends itself to 'positive health', which we conceptualize as a spectrum of wellbeing and flourishing partially independent from disease or infirmity that is determined by a collection of health assets. The effects of positive health can be seen in increased longevity and improved abilities to recover from health challenges (5), as well as in broader perceptions of social, cultural, and emotional wellbeing. An expanded notion of health illuminates that it is normatively, rather than objectively defined (6,7).

Several theories of health provide for a deeper understanding of positive health. Nordenfelt (8) proposed health as the ability to achieve vital goals that secure a person's minimal happiness in the long run and achievement of a life that is minimally decent. From this perspective, happiness is relative to a person's set of goals and their ability to achieve them, which is derived from their agency, circumstances, and environment (6,8). Building on the work of Sen (9,10) and Nussbaum (11–13), a capabilities approach to health is 'conceptualized as her abilities to be and do things that make up a minimally good, flourishing and non-humiliating life (7)'. Ability and capability theories both emphasize the non-standardized health goals that people manage to achieve as well as meaningful opportunities to pursue their health.

These ideas complement those from diverse cultures and places. For example, various Indigenous conceptualizations of health emphasize culture, spirituality, interdependence, and interconnections between the individual and their wider environment. In Australia, Aboriginal and Torres Strait Islander social and emotional wellbeing sits across mental, physical, family, community, cultural, spiritual, and environmental and place-based health factors (14). In First Nations communities in Canada, positive health, or 'thriving', is associated with interdependence and interconnectedness across social, family, and community support (15). The Andean concept of Sumaq Kawsay, or Buen Vivir, outlines a plurality of understandings that emphasizes collective wellbeing and living in harmony with others and the natural environment (16). These approaches to health that predate mainstream global health are often marginalized by contemporary practice, but they make important contributions to understanding positive health for communities, or 'community positive health'.

These approaches not only resist reductionist and individualistic (i.e. biomedical) notions of health, but they also articulate the value of collective community health outcomes. While mainstream global health practice tends to treat community health as individual-level health data in aggregate, collective notions of wellbeing are greater than the sum of individual health achievements alone and even call into question the strict delineation between individual, interpersonal, and family health in more collectivist societies (17). Communities are positioned as central to positive health, and community health holds important value instrumentally (as a means to promote individual health and facilitate salutogenic processes) and inherently (as a collective value or public good).

Health is commonly seen as being determined by interactions between internal biology, human behavior, the external physical environment, and social conditions (18,19). The ecological model highlights that health influences occur at multiple interacting scales, including public policy, community, institutional, interpersonal, and intrapersonal levels

(20). In this framing, communities occupy a vital bridging position between larger and smaller scales of health. On the one hand, the community shapes individual and family level health outcomes: collective conditions – including resource constraints and symbolic power (21) – influence access to health and shape the immediate physical and non-physical environment. On the other hand, the community sits at the interface between individuals and broader structural influences: communities may buffer or augment socioeconomic, geopolitical, or environmental determinants of health.

Studying the multiple causes of health, or salutogenesis (22), may reveal distinctions from the multiple causes of diseases and other health challenges and deepen an exploration of not only how to prevent or recover from disease or illness but also how to strengthen the building blocks and patterns of positive health. Although the *determinants* of health enable some understanding of complex salutogenic systems, critical epidemiologists such as Spiegel *et al*. (23) call for a shift away from 'risk factor' dialogue to one that examines process and power, drawing from critical Latin American scholarship to make an argument for the 'social determination' of health. This signals a paradigm shift in how health is conceptualized and achieved: individuals and groups move away from being passive entities that experience discrete health risk factors toward being agents in creating their health. This agency reflects the ability of communities to navigate dynamic and complex systemic health influences and respond to broader structural challenges in order to create pathways to positive health.

Pathways to community positive health

Health promotion seeks to increase access to health by reducing health inequities and inequalities and increasing health opportunities (24), and a focus on what sustains health is reflected in global policy, such as the Ottawa Charter (25), which lays the groundwork for people to take control of their own health (26). Community health promotion ideally strives to build community agency and self-determination, where communities define their own health values and goals and determine how to work toward them rather than passively receiving public health decisions and interventions. Even the most vulnerable and marginalized communities should be characterized by more than their needs, challenges, and limitations, and recognized for the central role they play in strengthening their own health.

However, in practice, community health promotion approaches have tended to focus on addressing narrowly defined needs and improving specific health outcomes through top-down solutions (27). These technology-centered and/or disease-specific 'fixes' have been deemed ineffective and unsustainable (27,28), as they overlook the multiple dimensions that undergird long-term health and wellbeing. Further, they do not factor in broader conceptualizations of positive health or engage with communities as partners and leaders in developing and implementing health strategies.

Faced with the shortcomings of conventional community health promotion in practice, agency-based approaches derived from community development research and work emphasize building community strengths for health rather than focusing solely on needs and deficits. Asset-based approaches focus on what a community believes is important for their health (29) and include physical as well as intangible resources related to individual, social, environmental, and political factors (30) and their interactions (31). Asset-based approaches aim to help communities identify their key resources, build and nurture them, connect and reinforce them, and/or leverage them to achieve self-identified health goals (32,33). Because health resources emerge from within communities, asset-based approaches do not call for heavy-handed external input, including the introduction of new technologies.

While asset-based approaches center on the *objects* of health, community mobilization (CM) further recognizes and supports the power within rather than beyond the community by emphasizing *process*. CM is 'a capacity-building process through which community individuals, groups, or organizations plan, carry out, and evaluate activities on a participatory and sustained basis to improve their health and other needs, either on their own initiative or stimulated by others (34)', which has been practiced in connection with emancipatory community development work occurring across Latin America (35,36). CM focuses on cultivating *participation* (community and other stakeholders), *partnerships* (with supportive outside actors), and *power* (37,38) to stimulate needed changes. Much practice has been informed by Freire (39) and involves a dialogical process of change, where a reflection–action cycle

promotes critical thinking and 'empowerment' of marginalized com-munities (37,38).

These agency and empowerment-based approaches to health related to *object* or *process* have the potential to liberate communities from cycles of aid chiefly through empowering communities to reimagine and reinvent themselves out of a passive or victim role in which they may have been placed. These approaches have nonetheless been critiqued for focusing squarely on developing the innate characteristics of communities while broadly failing to address the structural causes of health that systemically perpetuate inequities (26,40), and they seek to build a healthier future without recognizing the histories and patterns that determine current conditions. The burden of change falls on the most marginalized and disadvantaged communities, and they may face blame for failing to 'choose' to be healthy (41,42) even when social, political, economic, and/or environmental impedi-ments make it virtually impossible to achieve targeted health objectives. Nordenfelt (6) argued that psychological routes to health may be the only viable option when political solutions to structural health challenges are not available, but this defense falls short of identifying how communities are meant to bypass structural and historical constraints to make meaningful health improvements and reduce health inequities.

Community positive health through resourcefulness

Community health defined positively may be closely tied with how communities can foster and leverage their collective strengths both to overcome complex health challenges and pursue their health. Global processes and events – including environmental changes, structural racism and sexism, violent conflict, and vulnerabilities causing other disasters – combine with and are influenced by community-level factors, and altogether these shape dynamic challenges and opportunities for health. The reciprocal interplay between factors at multiple scales (43) underlines that community health promotion must target structural changes to achieve more equitable resource distribution (44) while also empowering communities to guide these structural changes in ways that bolster their agency.

The concept of resourcefulness offers useful and usable insights into pursuing and leveraging community positive health in constraining and dynamic contexts. In critiquing mainstream resilience discourse, MacKinnon and Derickson (45) developed the idea of resourcefulness as a relational and place-based process – rather than a condition or characteristic that communities may or may not possess to some degree – that is centrally interested in the generative nature of communities. Resourcefulness-based approaches aim to foster and mobilize material and non-material resources, skill sets and technical knowledge, Indigenous and folk knowledge, and recognition to enable positive changes based on community priorities and needs (45). Recognizing the uneven distribution of material resources and power that induces resource scarcity and systemically disadvantages certain groups and communities, resourcefulness stresses that the changes necessary for community flourishing are not socially or politically neutral.

Applied to community positive health, resourcefulness has the potential to forge new multipronged pathways for promoting sustainable and self-sustaining community positive health. Through resourcefulness-based approaches, communities cultivate the agency to (a) conceptualize what constitutes their health and health assets and (b) pursue and sustain health agendas driven by local priorities, needs, and learning, while they also work to (c) change power imbalances that drive inequitable patterns of material resource distribution, and (d) nurture ecologically sound relationships with their local environment. Communities pursue their health through their internal strengths and supplement them through strategic partnerships: partners may include other communities with similar priorities and/or complementary resources and other actors at higher institutional scales with additional resources and power. By creating 'genuinely deliberative democratic dialogue' and developing 'contestable alternative agendas' (45), communities are able to take an active and intentional role in determining their health and challenge the systemic drivers of health inequities. Resourcefulness-based approaches thus combine agency-based approaches focused on objects and processes and interweave them with structural approaches to health promotion. In keeping futures and potentialities as well as histories and patterns in full view, resourcefulness recognizes both the continuity and dynamism of health.

Resourcefulness-based approaches offer insights into three interrelated aspects within community health promotion:

1) Resources and sustainability: a community's resourcefulness has the potential to offset certain material resource deficits (46), but natural and other material resources are understood as necessary inputs not only for health but also to access the levers of change. Economic growth and development in aggregate is not the answer to ending (and may indeed promote) disease and illness and their drivers of poverty, marginalization, and inequities, as those with the most power tend to capture the majority of the benefits and evade the costs. Where transforming natural resources into goods and services for health is necessary, it is done congruently with local human–environment relationships that form the basis for future health choices, opportunities, and potentialities, since extracted and degraded local resources that cannot be regenerated no longer function as health assets for communities. Resourcefulness thus recognizes the importance of environmental conservation and regeneration: when appropriate and possible, resourcefulness pursues less resource-intensive solutions to health challenges and opportunities; advocates for the equitable distribution of existing resources, goods, and services; and works with the natural environment.
2) Interdependence and autonomy: unlike purely agency-based approaches that focus on a community's self-reliance and determination, the relational lens of resourcefulness recognizes the interconnectivity of communities with larger institutional and/or spatial scales (vertical linkages) as well as other communities (horizontal linkages). Strengthening progressive translocal connections may help to challenge inequitable relationships within broader systems of power, like dominant economic systems (45), and advance collaborative advocacy for collective rights and recognition from within and beyond the community. Working with partners with access to more resources and power can help to influence changes at higher scales and sustain local health agendas. Resourcefulness may, therefore, support self-help alongside targeted help-seeking from external sources to avoid the added injustice of responsibility without the power to act.
3) Community diversity and inclusion: communities are not homogenous and bounded entities, and community members do not share entirely unified values and goals (47). Members of a community may not be uniformly affected by local and global events and processes, and some may even stand to gain in the short term from drivers of inequity like extractive capitalism, further impeding collective action (48). Resourcefulness recognizes the central importance of broad community participation and ownership in strategies for health and sees community heterogeneity – including diverse knowledge, perspectives, and skill sets – as a strength. Inclusive community positive health initiatives may foster new social connections, social innovation, and capacities for collective action (49) and, in doing so, contribute to more integrative communities and sub-communities of care and self-sustaining community positive health outcomes over the long term.

Resourcefulness for community positive health in practice

The potential usefulness and usability of resourcefulness-based approaches for outside organizations promoting community positive health can be found in diverse communities, settings, and issues, alongside their complications and shortcomings in practice. For example, resourcefulness may be leveraged to break dependencies that are harmful to the short- and long-term health of marginalized communities and forge more equitable power relations and interactions that are conducive to community positive health. Yet, systems are characteristically resistant to change, especially when some actors gain from inequitable resource distribution.

Community activism may be met with violence, which was the case with Honduran environmental activist and Indigenous leader Berta Cáceres. Cáceres organized local communities to peacefully resist the building of the internationally funded Agua Zarca Dam on the Gualcarque River, which is integral to the positive health of the Lenca People. Her coordination was recognized with a Goldman Environmental Prize in 2015, but her efforts also resulted in her assassination in 2016 (50). After this and other violent incidents received widespread international media coverage and galvanized collective demands for change, the funding and consequently the construction of the hydro project was eventually

suspended. This is far from an isolated case, and Indigenous land and environmental defenders are killed or targeted with violence at disproportionately high rates (51). Large-scale hydropower development has experienced a resurgence in interest around the world, but the social and environmental impacts of these extractivist projects, including provoking social and environmental conflicts and deteriorating community health, are considerable (52). Local strategies for health may benefit from engaging with place while also connecting with transnational movements for advocacy and recognition (53), but equity is not merely freely available for those who choose to pursue it. This example highlights the barriers that prevent communities from pursuing their community positive health, and it also suggests potential supporting roles that outside organizations adopting resourcefulness may play, including providing outside legitimacy and financial resources to bolster ongoing community efforts, connecting communities with others in similar situations worldwide to share challenges and solutions, promoting international advocacy campaigns featuring community knowledge to foster broader awareness, and doing more to protect community leaders and activists.

Other situations highlight how outside organizations play a complicated hand in creating health challenges that play out in communities while also supporting community solutions. For example, the structural adjustment programs (SAPs) of the 1980s reduced public spending on health systems in economically marginalized countries, and international non-governmental organizations stepped in to patch the widening cracks (54). Meanwhile, the international aid community started channeling funding to combat the HIV/AIDS global epidemic (55). The combination of reduced government spending and a narrow non-governmental HIV/AIDS focus contributed to the neglect of primary healthcare and to siloed healthcare systems in places like Sierra Leone (54,56). The United Nations International Children's Emergency Fund (UNICEF) and the World Bank launched the community health worker program in Sierra Leone to support primary healthcare (57), and community health workers received training and became responsible for various aspects of healthcare particularly in rural and otherwise marginalized communities (57,58). While the community health worker program is a problematic legacy of a donor-driven post-SAP era, it has expanded access and incorporated community concerns and priorities into the Sierra Leonean healthcare system. The practices remain diverse and connected with place-based concerns and priorities, despite their continued dependence on donor funding and national aims to increase regulation and uniformity (57,59).

The 2014–2016 Ebola outbreak in West Africa brought the important and enduring role of community health workers to the fore, as they were more effective than outsiders at Ebola response and were able to continue providing maternal and child health services alongside traditional birth attendants, community health committees, and traditional healers (59). This example shows that singularly focusing external resources on a narrow health problem can generate foundational challenges to community positive health. Communities are capable of identifying solutions for themselves. Expectations of regulation and uniformity from outside organizations may undermine the unique building blocks of positive health situated in specific communities. Resourcefulness offers lessons for outside organizations to support community positive health systems already in place rather than developing heavy-handed agendas outside of communities and delivering trainings without regard for existing skills and diverse forms of local knowledge.

These vignettes shed light on how communities demonstrate resourcefulness in developing necessary place-based community health strategies, but not without costs and complications. Communities can and do navigate a dynamic stream of challenges and creatively seize opportunities embedded within these challenges to strengthen their community positive health. At the same time, the combination of these multiscalar challenges most often leaves the most socially, politically, economically, and environmentally marginalized communities with increasingly fewer opportunities, resources, and capabilities to realize their health goals. Thus, these examples illustrate that while communities are powerful and necessary agents in determining and advancing their own health, they also benefit from partnerships and alliances – including with outside organizations – that collectively wield greater power and influence to create necessary changes. Resourcefulness as a process-based and relational practice depends on long-term relationships that

adapt to the changing needs, goals, and conditions of communities as well as the dynamic challenges and opportunities they face.

Practical resourcefulness-based strategies for outside practitioners and policymakers to support community positive health may take many forms, including the following non-exhaustive list:

1) developing long-term relationships with communities that build trust over time through learning from and respecting community leaders and community mechanisms for problem-solving and planning;
2) supporting bonding within communities, connecting with other communities, and linking with larger institutional scales to coordinate health strategies;
3) providing support in advocacy and lending perceptions of legitimacy to increase broader recognition of community health initiatives and strategies;
4) fostering awareness and knowledge about current and expected future environmental conditions and their impacts on natural resources;
5) providing seed funding or financial backing for experimentation, as well as continuing support for ongoing initiatives and the maintenance of relationships between communities and organizations over time;
6) assisting with problem-solving when health initiatives encounter barriers and challenges; and
7) providing a platform for inclusive internal and translocal knowledge creation and sharing.

The overarching purpose of these distilled resourcefulness-based strategies is to offer inroads for outside organizations to help support and strengthen community positive health in ways that complement and do not supplant existing community strengths, knowledge, and initiatives. Yet, recognizing that health challenges and constraints can stem from or intertwine with community-level factors, resourcefulness-based strategies may also include bringing to light new information, ideas, and other opportunities and resources to help forge new pathways to community positive health.

Outside organizations adopting a resourcefulness mindset may be better able to link their efforts and investments to health processes and changes that are locally meaningful and self-sustaining. Despite these benefits, outside community health promotion organizations and donors may be reluctant to embrace these roles, because they entail that communities retain or gain control of health promotion processes. Best practices that emerge in a specific context may not be appropriate to import into another context, and this constant learning process may challenge an organization's ability to solidify evidence-based approaches and streamline projects. Community goals may not align neatly with the global public health agenda, progress toward them may not be linear or take place over the short term, and achieving them may not be easily captured through standard monitoring and evaluation tools.

Nevertheless, resourcefulness may be a viable way forward in light of health disasters like the COVID-19 pandemic. Resourcefulness-based strategies could arguably help with pandemic prevention and mitigation in the future by supporting the objects and processes of community positive health directly. When global prevention fails, local resourcefulness could be leveraged to keep integrated formal–informal health systems running, prevent health workers and others from dying from the disease and other treatable ailments, and mitigate its effects on other essential aspects of community positive health (e.g. food security, social cohesion, and information sharing). It might also then galvanize global and multiscalar resourcefulness for positive health.

Conclusion

This paper has applied and adapted the concept of resourcefulness as a process-based, place-based, and relational approach to understand and pursue community positive health, with the goal of strengthening health opportunities and choices. Resourcefulness builds on bottom-up approaches by strengthening and mobilizing community assets, but it also seeks to address the structural factors that determine health by forging tools and partnerships through long-term cooperative actions at multiple scales. Recognizing the importance of material factors and natural resources in community positive health, resourcefulness-based approaches also emphasize the cultivation of socially and environmentally sustainable practices and relationships, and they challenge the inequitable power relations and environmental practices that degrade local resources and capacities

for health. Future research may explore how resourcefulness-based approaches to community health promotion can be leveraged in applied settings to make meaningful gains in narrowing health equity gaps.

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Original Article

Planetary health indicators for the local level: opportunities and challenges in applying the happy planet index in Victoria, Australia

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Abstract: The United Nations *Sustainable Development Goals*, *New Urban Agenda* and *Paris Agreement on Climate Change* are blueprints for health promotion action that mandate human health is linked inextricably to the health of the environment. In the Anthropocene, new indicators are required to promote community engagement with, and measurement of, healthy and sustainable wellbeing for people and planet. This study explored the need for a metric such as the Happy Planet Index that explicitly links human health to health of the environment for a local level scale in Australia. The project arose from an international coalition of health promoters advocating for 'planetary health' approaches. Qualitative description methods guided the study design involving key informant interviews ($n = 17$) and four focus groups ($n = 27$ participants) with health and/or sustainability academics, practitioners and policy-makers. Document analysis of health and environment indices and policy mandates augmented the analysis. Qualitative content analysis techniques were used to analyse the findings. There was strong interest for a local level composite indicator, such as a rescaled Happy Planet Index (life expectancy × life satisfaction × equity adjustment/ecological footprint) for use at a local level. The value of a composite index was: its ability to promote community engagement with planetary health thinking; an advocacy tool for joint health and sustainability policy; to justify programs on health and environmental co-benefits; and to provide a mechanism for correlative comparisons between local governments and national comparisons. However, disciplinary silos currently limit partnerships for health promotion and planetary health and a local composite index could help bridge these divides.

Keywords: environment, wellbeing, planetary health, Happy Planet Index, indicators

Introduction

The planet has entered the Anthropocene, an era marked by colossal human-induced damage to the Earth's natural systems (1,2). Humans are degrading and depleting key resources such as forests and waterways that are central to wellbeing and survival of humans and other species (1,3). The Anthropocene is a combined human and ecological health issue that compromises health and the sustainability of societies now and in the future (4,5). Emerging from the Lancet and Rockefeller Foundation report (6), Planetary Health is a field of inquiry that brings human health and sustainability imperatives together. Planetary Health seeks to promote 'the health of human civilization and the state of the natural systems that

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define the safe environmental limits within which humanity can flourish' (7).

International agreements such as the *United Nations Sustainable Development Goals* (SDGs), and the *Paris Agreement on Climate Change* (PACC) provide longer-term direction for achieving more healthy and sustainable nations and addressing challenges of the Anthropocene. These global agreements are marked by a shift in emphasis from economic development (e.g. measured by gross domestic product (GDP)) toward broader societal progress indicators including quality of life, environmental sustainability and health equity (1,8). In this new worldview, progress is weighted more evenly toward balancing priorities of human health with that of the environment, where economic growth is not the central indicator. These 'think global, act local' mandates require a co-benefit approach to policy and programme design, and subsequent measurement of impact on cross-cutting themes. Using the SDGs as an example, this could include, but is not limited to, Goal 3 – good health and wellbeing; Goal 10 – reduced inequalities; and Goal 13 – climate action.

Over time, the field of health promotion has affirmed its commitment to 'protecting the natural environment (9)' based on the understanding that 'people form an integral part of the Earth's ecosystem. Their health is fundamentally interlinked with the total environment' (10). Proponents of the ecological determinants in health promotion (6,11) and planetary health (5,12) have championed the need for health policy and programme indicators of progress to incorporate sustainable development and environmental outcomes alongside social and economic determinants (13).

The local or community level has been pinpointed by health promotion experts (13,14) as the scale most amenable for health promotion interventions and measurement of 'global to local mandates' for planetary health. There is evidence of increased engagement with co-benefit health and sustainability policy and programmes in a burgeoning field of planetary health research that documents health promotion efforts at a local scale (14–16). For example, in Victoria (Australia) – the project setting for this paper – the formerly named Department of Health and Human Services has mandated climate change as a priority health action area in local government within the *Municipal Public Health and Wellbeing Planning* framework. However, there is still much work to be done on designing planetary health indicators and measures of success in Victoria and other Australian jurisdictions (13,14).

Global mandates have seen a proliferation of single and composite indicators for measuring cross-cutting health, sustainability and equity priorities. The relative value, technical descriptions and limitations of planetary health indices are discussed elsewhere (see (17)). One limitation is that most indicators assign a weighting to inputs that allows one domain to be prioritised over another (e.g. human health weighted more highly than health of the environment). This means there is inherent values system bias for measuring success, which in turn creates barriers to progressing co-benefit planetary health actions. A composite indicator, rather than single indicator, offers the most promise for linking human wellbeing with the health of the environment and hence measuring progress on planetary health (17). A composite indicator gathers data from multiple dimensions and merges them into a single indicator and hence can simultaneously combine key indices and can control for value system bias. However, many existing composite indicators are either calculated at a national or regional scale and are therefore not scalable to local level or they do not include vital 'environmental' measures, that is, greenhouse gas emissions. For example, Australian composite indicators such as the *Healthy Liveable Cities Liveability Index* (18) operate at the local scale but lack an emphasis on vital environmental statistics. *The MJA–Lancet* Countdown (19) provides a national assessment on health and climate change, examining 41 indicators across five domains including climate change, health co-benefits and public engagement. Whilst the indicators are of direct relevance to planetary health, the scale is too distant to local level planning and measurement work.

Given the immense challenges of the Anthropocene, the link between human wellbeing and the health of the environment, and the need for new measures of progress, this paper describes the findings of a project that explored the need for, and barriers and enablers of, enacting a local level composite index that links human health to health of the environment in Victoria, Australia. Anchored in a planetary health view and inspired by the 'one planet' approach set out by Hancock *et al.* (5), it uses the Happy Planet Index (HPI = life expectancy × life satisfaction × equity

adjustment/ecological footprint (20)) as an example of a composite indicator that links human wellbeing with the health of the environment to examine the issues involved in developing and rescaling indicators to a local level. The aim of this project was to explore the need for a metric such as the HPI that explicitly links human health to health of the environment for a local level scale in Australia. The project arose from an international coalition of health promoters advocating for planetary health approaches.

Methodology

The study was guided by principles of participatory research and adopted qualitative description research design. Participatory research is often qualitative in nature, action and change-oriented in purpose and characterised by collaboration with those affected by the issue, such as practitioners and health professionals (21). Specifically, a qualitative description approach was utilised as it is valuable for answering questions of relevance to practitioners and policymakers (22,23).

The project was delivered in three phases. Phase 1 involved desktop document analysis – scoping review of international literature to identify relevant indexes (see 17) and review of Victorian Municipal Public Health and Wellbeing Plans ($n = 79$) for evidence of where local government were making links between human health and the health of the environment. Phase 2 involved primary qualitative data collection and is described in this paper. The final phase (not reported here) involved pilot testing a revised local level HPI with data from five local government areas.

Aligning with a participatory approach, the project was supported by a Project Reference Group including academics, government and private industry representatives. Ethics approval for this research was granted by Deakin University Human Research Ethics Advisory Group (Project No. HEAG-H 60_2017).

Participants and recruitment

A total of 44 participants were recruited based on being a 'local expert' or 'data expert' in the areas of health and/or sustainability. Local experts ($n = 25$) included practitioners and managers working in local government (e.g. employees working in health promotion or environment roles) and community agencies (e.g. community health service or not-for-profit agencies). Data experts ($n = 19$) included health and sustainability scholars, social statisticians and health and environmental managers working in academia, statistical agencies or state government organisations. In this exploratory project, a small sample size was purposefully selected that did not include decision makers, and all participants were from Victorian organisations, except one, who was with a national agency that services Victoria. Purposeful sampling strategies, specifically criterion and snowball techniques, were used to select participants (24). Potential participants were initially identified from among the research team's professional contacts and/or through the document analysis.

Participants self-selected to an individual interview or focus group according to availability and preference. Recruitment for focus groups involved an emailed workshop flyer targeted toward a mix of 'local experts' and 'data experts' from the research team's networks and following a search of organisational websites in Phase 1. Participants registered to attend a 90-min face-to-face workshop with a planetary health presentation by an international health promotion expert. The presentation was followed by break outs into four focus group sessions.

Data collection and analysis

A mix of interviews and focus groups were offered for their different benefits including participant variety, representation and amount of detail elicited (25). A total of 17 stakeholders participated in individual interviews and 27 participants were involved in a focus group. Semi-structured individual interviews were undertaken face-to-face ($n = 13$) or by telephone ($n = 4$). Supplemental Table S1 identifies the nature and scope of the different interview questions by participant type.

Focus groups were used to highlight perceptions, and attitudes towards the concept of joint indicators and the idea of a local level indicator that binds human health to health of the environment. Supplemental Table S1 describes the participants for each focus group.

The interviews and focus groups were recorded using Audionote software on smart devices and saved in accordance with ethical requirements. The

interview and focus group recordings were transcribed, with the resulting transcripts loaded into NVivo 11 for analysis of key themes.

In keeping with qualitative description, a thematic analysis strategy was used (22). The analysis followed the four stages inherent to this strategy: decontextualisation (i.e. creating coding lists combining inductive and deductive strategies); recontextualisation (i.e. comparison with the original data); categorisation (triangulation by investigators) and compilation (drawing conclusions and member checking) (26). To ensure rigour and in keeping with the participatory approach, the researchers performed member checking by returning to the informants and presenting a summary of preliminary findings (26).

Results

The findings are presented in two major themes: (a) interest in and potential uses of a local index that combines human health with health of the environment; and (b) barriers and enablers to designing and using a local index such as the HPI. Key Informants are identified by contextual pseudonyms (e.g. KI (local government), and focus groups are labelled as FG1, FG2, FG3 and FG4, with participants numbered (e.g. P1).

Interest in and potential uses of a local level index

Local experts saw value in a localised HPI or similar joint index for communicating the links between health and environment as well as progressing their work on addressing the effects of climate change and public health issues:

> [I]t's useful because it tries to bring those two things [human health and the environment] together, and we don't have that and that's probably a gap (KI (local government)).

Participants recognised there are increasing numbers of policy mandates that recognise the link between human health and the environment such as Victorian councils' Municipal Public Health and Wellbeing Plans. However, it was felt that the link between human health and environment is not cemented in public consciousness. A representative of an environmental organisation felt that a local HPI or similar could be a useful tool:

> Research that we've done is that the Victorian community clearly does not see the connection between health and climate change... Something like this actually puts climate change or ecological footprint into a more relevant package (FG2, P1).

Similarly, the ability of the index to promote conversations about the interdependence of health and the environment was highlighted:

> If people can think local about sustainability in their area and the links between health and sustainability, a device that makes it graphic for them and that helps them to think globally. That's... the most obvious reason for doing something like this (FG3, P1).

Participants generally felt that a localised HPI or similar could be a very effective tool for supporting community engagement and advocacy at the local level, as demonstrated by the following comment:

> The best placed agencies for delivering things like retrofit programs, particularly for low-income households is local scale government. Whether that's community coalitions or community groups or local government or whatever sort of government structure that is (FG2, P2).

It was discussed that advocacy could lead to positive policy and funding outcomes:

> It [a localised HPI] would strengthen the argument to show the connection between health and nature, which would then lead to policy change and to funding... Because we don't have a lot of time,... it would help to justify and give weight to the urgency of this work (FG2, P3).

In terms of policy and program development, there was interest in how a rescaled HPI or similar

local index could be useful in the development of Municipal Public Health and Wellbeing Plans:

> We have now legislative requirement to consider climate change in the health and wellbeing plan. All councils across Victoria would be grappling with how do we actually do this effectively... and this [HPI] could support that (KI, local government).

Community health participants recognised that current siloing of health and environmental issues in practice but expressed interest in piloting a rescaled HPI or similar index at a community level:

> We can really find a very practical community-based approach or use for the index (KI (community health).

These discussions also highlighted the potential to undertake a 'bottom up' and/or settings-based approach to rescaling the HPI or similar index. For instance, rather than using existing data sets, the community could be engaged in generating new community level data to populate the HPI or similar formula. A community designed local HPI, with locally defined inputs, would support place-based planning and could sit alongside the standardised local HPI that works across jurisdictions.

Participants noted there was value in using a rescaled HPI or similar to make comparisons between local government areas, with participants seeing value in local councils being able to compare 'like with like'.

> It would definitely be useful and no doubt Councillors and residents and staff would all be interested in how we compare to other Councils (KI, local government)).

There was also a perceived value in making comparisons between local, national and global scores. This information could make visible, activities that are obscured in aggregated reporting:

> National data can block or conceal the extremities that are happening within larger countries. Whereas regional data really focusses down on what is immediately happening within that region. And then it's critically important for comparisons within that nation itself and then globally as well (FG2, P4).

Barriers and enablers to a local index

This study identified both barriers and enablers to creating a composite health and environmental index including rescaling the HPI, or similar index, to a local level. These include data availability along with social and political issues. Table 1 presents themes with supporting quotes and implications for action.

Discussion

This study suggests that, in Victoria, Australia, there is interest among health and sustainability practitioners and policy-makers for a local level planetary health composite index. The value of such an index was its perceived ability to promote understanding of the link between human health and health of the environment, support community engagement and action, instigate co-benefit policy and program development and provide a comparative measure of progress. However, interest in the development of a local index was dependent on whether the index could intersect easily with current local government directives, and hence not require additional resources to calculate, and the availability of reliable, comparable and consistent data sources.

With respect to data availability for a localised HPI, the study confirmed there are appropriate data for inputting. However, a lack of consistent local, regional and national data sources for appraising the health of the environment creates challenges for policy and practice in Australia. Unlike vital human health statistics, there does not appear to be consensus on quantifiable vital 'health of the environment' statistics. This is despite the availability of numerous environmental data points, for example, data generated by the Global Covenant of Mayors for Climate and Energy (27), which can be incorporated into various computational models. On the other hand, subjective wellbeing and life expectancy health indicators are more readily accessible, suggesting greater historical focus on measuring human health and wellbeing (e.g.

Table 1. Barriers and enablers to rescaling the HPI or similar to a local level.

Barrier	*Description of sub-theme*	*Indicative quote(s)*	*Implications*
Availability of ecological footprint data	Obtaining local level ecological footprint data is currently impractical because of inadequate data and lack of council resources. Application of carbon consumption data can act as a proxy to give an indication of embedded ecological demand and to engage community.	"We're not going to do an ecological footprint… That would take a lot… it's a very complex thing… A simple measure like the carbon as we're already doing it as part of our compact of mayors [Global Covenant of Mayors for Climate and Energy], is much more attractive to us" (KI (local government)).	In the absence of ecological footprint data, carbon emissions as a proxy for 'environment' is recommended.
Availability of carbon emissions data	Local councils are not reporting on their carbon emissions in a comparable way, and at present, they are not mandated to report on the carbon emissions generated at the local level. These issues need to be addressed for a rescaled HPI or similar index.	Theme identified in phase 1 – document analysis. "If we went to another consultant to do our community emissions for us under the same protocol, there'd be a strong chance that that would then fluctuate again, because they might calculate it differently at the back end" (KI (local government)).	Standardised approach to calculating carbon emissions would advance the field in Australia.
Capacity within local council for generating the index	Local councils have many reporting requirements and the addition of indicators is not something they generally have the resources for.	"…Under-resourced councils, they can't go and get their own data, they haven't got the resources" (KI (local government).	A localised HPI would need to draw from existing or routinely collected and accessible data.
Criticisms of the index	Criticisms stem from a distrust of the methodology or a disagreement with the lack of weighting for human health and environmental health. There is a need to reiterate that the index is meant to offer inspiration and aspiration that will encourage policy and practice changes around sustainable wellbeing.	"…Right now it's just equally weighted. It's like everything is just equally weighted, but some things do matter more than others and we know that" (FG4, P1).	Methodological considerations including weighting issues need to be addressed to ensure credibility and acceptability of localised HPI.
Human health and health of the environment silos	Although the links between human health and health of the environment are beginning to be made, silos still exist between health and environmental practitioners.	"It's still very siloed, and within the same organisation you can have the data being collected but not connected" (KI (community health)).	Data linkage initiatives could support the development of a localised HPI.

(Continued)

Table 1. (Continued)

Enabler	*Description of sub-theme*	*Indicative quote(s)*	*Implications*
Interest in the HPI index or similar	Study participants from health, sustainability and environment could see value in the HPI's community engagement potential and usefulness as a comparative tool across councils.	"It would definitely be useful and no doubt Councillors and residents and staff would all be interested in how we compare to other Councils" (KI (local government).	A localised HPI has relevance to current local government thinking and potential for action in Australia.
Consistency and availability of health data	Both life expectancy and life satisfaction data are available at appropriate scales and are collected consistently in Victoria.	Theme identified in Phase 1 – document analysis.	Health data is available to commence calculation of a localized HPI.
Mandates for climate change on local councils	The HPI aligns to current government frameworks, therefore strengthening the rational for rescaling the HPI.	Theme identified in Phase 1 – document analysis "Our policy objectives were just to reduce our carbon emissions both within our council and our community, and implement a series of strategies to do that, and monitor performance against a range of data sets in order to determine how we were progressing. . .So, it evolves in response to the Climate Change Act" (KI (local government)).	A localized HPI could be used as a measure in local government climate change and health initiatives as part of four yearly Municipal Public Health and Wellbeing Plans as directed by the Victorian Public Health and Wellbeing Plan 2019–2023 and the Victorian Public Health and Wellbeing Framework
Global imperative for local carbon data accounting.	The Global Covenant of Mayors for Climate and Energy is an international alliance of cities and local governments. It exists to promote and support voluntary action to tackle climate change and move to a low emission, resilient society.	Theme identified in Phase 1 – document analysis.	Local councils can participate in the Global Covenant of Mayors for Climate and Energy

HPI, happy planet index.

Department of Health and Human Services (28)). While this is a positive legacy of health promotion, it does not help to progress efforts for integrated measurement at the nexus of health and sustainability. In their *Victorian Public Health and Wellbeing Outcomes Framework*, the DHHS (28) recognise the importance of 'environmental indicators for human health', 'resilient and liveable communities' as well as 'environmental sustainability and quality'. However, none of these indicators have current measures and have been marked as 'measure detail to be determined (28)'.

That state-level policy directives struggle to establish meaningful measures to capture human health and wellbeing within environmental contexts is testimony, not only to the complexity of combined measures, but to the need for indices that capture the intricate relationship between human wellbeing and health of the environment. This current project takes meaningful steps towards the development of such a measure confirming the need, relevance, use and viability of such an index for health and sustainability practitioners. Moreover, study participants endorse a health/environment co-benefit index as a valuable conduit for both engaging with community in mutual health and environment activities, as well as co-creating relevant indices for its measurement.

This study affirmed research that there is significant value in indices that go beyond GDP to assess the success and health status, of a nation, or local area (1,8,29). The acceptance of global agreements such as the SDGs show clearly that there is growing demand for integrated measurement systems of human wellbeing and health of the environment alongside reduced inequalities, etc. The need for integrated systems of measurement has been recognised within health promotion (30–32) and, more recently, with the 23rd World Conference on Health Promotion. Likewise, community-defined measures of success must form part of a nested system of measurement (Supplemental Figure S1) to support local communities to 'think global, act local'. Bottom-up or locally defined indicators help foster community engagement in health and sustainability issues of local relevance and can work in concert with other standardised measures, such as a local HPI. Such an approach is consistent with the tenets of health promotion (9) and is ubiquitous in the remit of health promoters' everyday negotiations between procedural and cooperative approaches to health promotion (33).

Supplemental Figure S1 offers a conceptualisation of a nested system of mutually reinforcing directives and measurement across global, national and local scales and in relation to SDG 3 health, SDG 10 inequities and SDG 13 climate. Each directive or measurement system (white boxes) forms part of a framework for linking goals and highlights how a localised HPI contributes to their achievement. Figure S1 demonstrates that the SDGs have a connection with the PACC, through SDG 13 (double arrowed line) and that the localised HPI (dashed line from global HPI to local HPI) can inform progress on the SDGs and hence the PACC targets. Elements that 'feed in' to the proposed local HPI (e.g. life satisfaction life expectancy, Socio-Economic Indexes for Areas (SEIFA), and community scale greenhouse gas emissions) relate directly to SDGs 3, 10 and 13. The national *MJA-Lancet* Countdown report (19) on climate change and health and the state level *Victorian Public Health and Wellbeing Outcomes Framework* (28) both offer a directive for the local HPI to be operationalised. Moreover, the Victorian *Climate Change Act* (34) provides additional impetus for measurement, recording and action on climate change at multiple jurisdiction levels.

Thus, the project offers a preliminary model of undertaking health and sustainability measurement. Being a novel and interdisciplinary engagement of stakeholders around a common set of concerns with planetary health, the exploring of innovation and appetite in new measurement approaches made connections between a global concept and local practice.

New insights on the opportunities and challenges are provided; with some solutions to those challenges and acknowledgement of the particularities of the stakeholders involved. Further research is required to incorporate proxy ecological footprints at the local level, considering the inherent complexities, as noted by Steinmann et al. (35).

To the authors' knowledge, the project is the first attempt in Australia at investigating the value of the HPI at a local level. It is limited to the level of an exploratory project, with a small non-representative sample size. The study has not explored Aboriginal and Torres Strait Islander perspectives and, importantly, Indigenous ways of defining and measuring success (e.g. 36). This field of inquiry is

moving rapidly, as environmental imperatives, such as bushfires and global pandemics, compel urgent action by statutory authorities. For example, the (then) DHHS, has now provided a compendium for local government to facilitate action on climate change which supports steps to develop local level indicators (37). The use of the HPI as the exemplar composite indicator during the interviews and focus group may have biased responses and innovation in thinking.

Conclusion

Key advances in public health, which have greatly improved the health and wellbeing of communities and are simultaneously cognisant of the environment, have invariably been initiated at the local level (5). The 'one planet' approach asserts the primacy of a planetary health view that instigates action, and measurement, at the local or community level. Findings from this study indicate that a cascading scale of covenants in multiple jurisdictions provide support and guidance for the development of local level indicators for measuring ecological/carbon use that can be coupled with local level wellbeing indicators for promoting health and sustainability co-benefits. Suggestions have been advanced for adapting current carbon measures (e.g. 27), or innovating community-initiated measures to provide action on climate change and population health.

This current research reinforces the need for a locally scaled approach to obtaining information on ecological footprint or carbon use as well as health and wellbeing indicators. This will provide governments, as well as health and sustainability practitioners, with a planetary health profile for their locality, a measure for adjacent community comparisons and mandate for planetary health action for human/environment co-benefits. Considering the foundation of the Ottawa Charter addresses building healthy public policy by strengthening community action (9), a locally scaled planetary health indicator is well positioned to inform that action.

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Perceptions of participation in school and association with health and wellbeing: comparison among Nigerian and Irish pupils

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Abstract: School participation among pupils is considered a key value of the health promoting school approach. However, few studies have documented the relationship between the school participation of pupils and health and wellbeing outcomes in different geographical contexts, especially looking at developing and developed country contexts. This study investigated the perceptions of Nigerian and Irish pupils on participation in school and reported health and wellbeing. Data was collected using self-completed questionnaires among 333 and 231 primary school pupils in 4th, 5th and 6th classes across 17 schools in Nigeria and Ireland. Logistic regression analysis was used to analyse the data from both countries. There was no statistically significant difference in the mean scores for participation in school activities (NIG mean = 22.8, SD 3.5; IRE mean = 22.3, SD 3.4) and school events (NIG mean = 18.8, SD 3.7; IRE mean = 17.1, SD 3.6). However, participation in school decisions and rules (NIG mean = 17.3, SD 4.7; IRE mean = 15.8, SD 3.6) and health and wellbeing (NIG mean = 16.9, SD 1.7; IRE mean = 15.3, SD 2.4) scores were significantly higher among Nigerian pupils, while positive perception of school participation (NIG mean = 24.2, SD 4.1; IRE mean = 26.2, SD 3.4) was significantly higher among Irish pupils. The findings suggest that Irish and Nigerian pupils have positive perceptions of their schools irrespective of their location and levels of development. However, further research using qualitative approaches might be needed to better clarify dimensions of pupils' perceptions of school life and school participation among Nigerian pupils in order to substantiate these claims.

Keywords: health promoting schools, children, Nigeria, Ireland, school participation

Introduction

Health promotion is defined as 'the process of enabling people to increase control over, and to improve their health (1)'. The first International Conference on Health Promotion (referred to as the Ottawa Charter) engendered this definition and a settings approach for health promotion. Schools, as a type of health promotion setting, represent a captive audience and location to access many children for many years (2,3), and to promote the health and wellbeing of children (4). Based on further advancement within the context of the settings approach to school health promotion, the health promoting schools (HPS) framework was developed.

The health promoting school concept encourages a holistic approach to improving not only the health of pupils but also that of all staff within the school and everyone connected to the school environment. This concept also gears towards empowering young people, and within the school setting it aims to promote the concept of democracy and involvement of pupils in decision-making processes alongside adults within the

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school setting (5). These competences and skills help pupils in making health promoting choices (5,4).

Research has linked children's participation to positive health and wellbeing (6) and health outcomes (7), but has been documented mostly in the European context. Research focusing on participation of children in the school and its association with health and wellbeing is limited in the sub-Saharan African context, especially Nigeria. This study investigated pupils' perception of participation in school and its association with their health and wellbeing. Indicators of pupils' participation in school that were measured in this study included school activities, school events, school decisions and rules including pupils' positive perception of school participation.

The study compared perceptions of pupils between two contrasting countries and continents, Nigeria and Ireland. Although the school systems in Nigeria and Ireland share some similarities, for example, in terms of age of pupils attending schools (children aged 3–11/12 years and children aged 4–12 years attend primary schools in Nigeria and Ireland respectively), there are also some dissimilarities. Schools in Ireland are largely state funded and infrastructure is largely conducive to student learning. In Nigeria, schools comprise both state (public/government schools) and private (private schools) funded schools; private schools are better funded than public schools.

In Nigeria, the school health policy, which was approved in 2006 under the Federal Ministry of Health, has highlighted the importance of developing the health of school children and placed emphasis on school health as a component of the national school policy. The main aim of this policy includes provision of suitable facilities, resources and programmes that would engender physical and social wellbeing of students and staff, and ensure safety and security within the school community in order to improve the learning outcomes of each child in the school setting (8, p. 4). The promotion of a healthy school environment was also highlighted in the National Health Promotion Policy which was revised in 2019 and launched in 2020 (9). Although the main goal of the school health service in Nigeria is to promote positive health and prevention of diseases among school children, there is a dearth of information about health and wellbeing status of Nigerian school children. Much focus has been on environmental risk factors including school environments and personal hygiene, among school children. In the Irish context, researchers have linked school participation and the health and wellbeing of school children (6,10) and promotion of the health and wellbeing of school aged children is well documented in the national school programmes.

This study documents the perceptions of Nigerian and Irish pupils on school participation and associations with health and wellbeing of children. The conceptualisations of school participation and health and wellbeing were developed from the context of Irish school children. The aim of this study was to assess the similarities or differences in the pupils' perceptions between both countries based on an instrument developed from conceptualisations of school participation by Irish pupils. This study highlights whether these concepts could be translated to Nigerian schools, considering the different school environments and other diverse factors.

Methods

Procedure

Data were collected using self-completed questionnaires among school pupils in primary 4 to 6 classes in both countries. Random selection was employed to select schools from the Department of Education primary school list in Ireland; three schools each were randomly selected from three school sectors (all boys, all girls and mixed gender schools) to make a total of 9 primary schools. All primary schools in the study site in Nigeria were mixed schools. Four schools each were randomly selected from public and private schools from the Ministry of Education primary school list; a total of 8 schools were selected. A total of 333 pupils aged 8 to 13 years and 231 pupils aged 9 to 13 years participated in the study in Nigeria and Ireland respectively.

The questionnaire was first piloted among Irish primary school pupils from 4th, 5th and 6th classes (ages 10–12 years) – a similar population to the participants in the main study. Based on feedback from the pupils, ambiguous questions were either reframed or removed and difficult words were re-worded. The pilot questionnaire was then given to colleagues to validate the questions after revision. Further comments and suggestions were used to revise the questionnaires before data collection. The validated questionnaire was pretested among Nigerian primary school pupils in 4th to 6th classes

for clarity and understanding before the research process was carried out. Data collection among Nigerian pupils using a questionnaire developed from the Irish school context was also a way of validating this questionnaire.

Nigerian and Irish pupils completed analogous and anonymous questionnaires during the school day. In Nigeria, research assistants were trained to guide the data collection in the schools; in Ireland the questionnaires were sent by post to the schools and teachers helped with the distribution of questionnaires in the class.

In Nigeria, ethical approval for the study was obtained from the Oyo State Research Ethics Review Committee. In Ireland, ethical approval was obtained from the National University of Ireland Galway Research Ethics Committee. Before the commencement of data collection in both countries, consents and assents were obtained from parents and pupils respectively, by signing a consent form. Study participants were assured of the confidentiality of the data collected and all questionnaires were anonymous and identified with numbers.

Measurement

School participation

The four scales for school participation ('participation in school activities', 'participation in school events', 'positive perception of school participation' and 'participation in school decisions and rules') were adapted from previous work (10–13). Items that make up each scale are included in the appendix.

Pupil health and well-being

Pupils' health and wellbeing was adapted from the Health Behaviour in School-aged Children (HBSC) study and measured with a four-item scale focusing on 'self-rated health', 'self-reported happiness', 'self-esteem' and 'life satisfaction'. Items that make up the four scales are included in the appendix.

Other variables

Additional variables measured included school perception, perceptions of school policy, perceptions about teachers, perceptions about class and perceptions about parents' participation in school.

Table 1. Comparison of demographic characteristics by country.

Demographic variables	*Nigeria (n = 333)*	*Ireland (n = 231)**
	n (%)	
Age (years)		
8	62 (18.6)	0 (0)
9	59 (17.7)	12 (5.2)
10	72 (21.6)	74 (32)
11	44 (13.2)	92 (39.8)
12	49 (14.7)	49 (21.2)
13	47 (14.1)	4 (1.7)
Mean age	10.30; SD 1.68	10.82; SD 0.88
Gender		
Male	160 (48)	124 (53.7)
Female	173 (52)	107 (46.3)
Class type		
Fourth	122 (36.6)	83 (35.9)
Fifth	113 (33.9)	98 (42.4)
Sixth	98 (29.4)	50 (21.6)

*Outliers retained.

Data analysis

Analyses were conducted using version 21 of SPSS. Pre-analysis data screening was carried out. Data in both countries were screened for outliers, skewness and kurtosis (14,15). Eight cases identified as outliers were removed from the Irish data thus reducing the sample for the inferential statistics from 231 to 223. There were no extreme outliers identified in the Nigeria data, therefore the 333 sample was retained for analysis. Total scores were computed for each scale. Odds ratios from logistic regression binary models were employed to assess associations between school participation and health and wellbeing of pupils. Analysis included health and wellbeing outcome measures as binary dependent variables, with the scores dichotomised into 'high' and 'low' and school participation as independent variables.

Findings

Demographic characteristics

The sample consisted of 333 pupils in Nigeria and 231 pupils in Ireland. Table 1 shows the demographic characteristics of pupils by country. The mean age of

Table 2. Pupils' perceptions of their school.

Variable	*Ireland (mean (SD))*	*Nigeria (mean (SD))*	*p-value*
School perception	26.8 (4.2)	30.0 (3.4)	<0.001
School policy	18.5 (3.4)	19.0 (3.2)	0.418
School activities score	22.3 (3.4)	22.8 (3.5)	0.405
School events score	17.1 (3.6)	18.8 (3.7)	0.701
Positive perception of school score	26.2 (3.4)	24.2 (4.1)	0.03
Teachers score	20.3 (4.3)	20.6 (3.5)	0.006
Parents' participation score	8.9 (2.0)	9.7 (2.2)	0.428
School rule score	15.8 (3.6)	17.3 (4.7)	<0.001
Class score	34.4 (4.6)	31.4 (5.4)	0.006
Health and wellbeing score	15.3 (2.4)	16.9 (1.7)	<0.001

respondents by location was 10.30 (SD 1.68) and 10.82 (SD 0.88) years for Nigeria and Ireland respectively. Gender distribution of the respondents showed that more (52%) respondents in Nigeria were females while more of the respondents in Ireland were males (53.7%). More pupils were in the 4th and 5th class in both countries.

Pupils' perceptions of their school

Respondents' perceptions about their schools were reflected in the scores related to their perception of their school in general, school policy, school activities, school events, about their teachers, parents' participation in school related activities, school rules, their class environment, positive perception of school and health and wellbeing. Table 2 highlights the scores and statistically significant *p*-values ($p < 0.05$) recorded for school perception, school rules, teachers, class and health and wellbeing variables between both countries.

School participation and health and wellbeing by country and gender

Tables 3 and 4 show the mean scores and standard deviations, that is, the range of scores for variables related to participation in school and health and wellbeing scores for Nigeria and Ireland. Results presented in Table 4 showed a statistically significant difference ($p < 0.05$) in respondents' participation in school decisions and rules and health and wellbeing between both countries. As shown in Table 5, the logistic regression analyses showed statistically significant associations between school participation and health and well-being indicators. Results showed that in both Nigeria and Ireland respectively, participation in school activities (OR 1.12, 95% CI 1.04–1.20; OR 1.20, 95% CI 1.10–1.31), participation in school events (OR 1.12, 95% CI 1.04–1.29; OR 1.19, 95% CI 1.10–1.29), participation in school rules (OR 1.09, 95% CI 1.03–1.15; OR 1.22, 95% CI 1.12–1.33) and positive perception of school participation (OR 1.15, 95% CI 1.08–1.23; OR 1.26, 95% CI 1.15–1.39) were all positively associated with health and well-being indicators for all pupils, and across country and gender, apart from among Nigerian boys. In both countries, findings showed statistically higher values among boys for participation in school activities and school events, and higher values among girls for participation in school decisions and rules.

Discussion

This study investigated the comparison of perceptions of school life and participation among Nigerian and Irish pupils in higher primary school classes and relationships with health and well-being of pupils. Schools are important settings where investments in health and education of children can be actualised for the future to develop well-educated and healthy adults (16). It is expected that pupils in this study age category (with a mean age of 10 and 11 years in Nigeria and Ireland respectively) would be able to effectively express their views regarding school participation, experiences of school life and

Table 3. School participation and health and wellbeing by country and gender.

	Participation in school activities	*Participation in school events*	*Participation in school decisions and rules*	*Positive perception of school participation*	*Health and wellbeing*
Nigeria	**Range 10–30**	**Range 6–30**	**Range 6–30**	**Range 10–35**	**Range 6–20**
***N*=333**	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**
All (*n*=333)	22.8 (3.5)	18.8 (3.7)	17.3 (4.7)	24.2 (4.1)	16.9 (1.7)
Boys (*n*=160)	22.8 (3.6)	19.0 (3.8)	17.6 (4.5)	24.5 (4.2)	16.8 (1.7)
Girls (*n*=173)	22.9 (3.5)	18.5 (3.6)	17.1 (4.8)	24.0 (4.0)	16.9 (1.7)
Ireland	**Range 10–30**	**Range 6–30**	**Range 6–30**	**Range 10–35**	**Range 8–20**
N*=223	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**
All (223)	22.3 (3.4)	17.1 (3.6)	15.8 (3.6)	26.2 (3.4)	15.3 (2.4)
Boys (*n*=80)	21.8 (3.3)	16.7 (3.2)	16.2 (3.3)	25.8 (3.7)	15.3 (2.4)
Girls (*n*=143)	22.8 (3.6)	17.6 (4.0)	15.4 (3.8)	26.7 (2.9)	15.2 (2.5)

*N=223 (after removal of outlier cases).

Table 4. Test of significance of school participation and health and wellbeing.

School participation	*Nigeria N=333*	*Ireland N=223*	*p-Value*
	Mean (SD)	*Mean (SD)*	*T-test*
Participation in school activities			
Range 10–30			
All	22.8 (3.5)	22.3 (3.4)	0.405
Boys	22.8 (3.6)	21.8 (3.3)	
Girls	22.9 (3.5)	22.8 (3.6)	
Participation in school events			
Range 6–30			
All	18.8 (3.7)	17.1 (3.6)	0.701
Boys	19.0 (3.8)	16.7 (3.2)	
Girls	18.5 (3.6)	17.6 (4.0)	
Participation in school decisions and rules			
Range 6–30			
All	17.3 (4.7)	15.8 (3.6)	<0.001
Boys	17.6 (4.5)	16.2 (3.3)	
Girls	17.1 (4.8)	15.4 (3.8)	
Positive perception of school participation			
Range 10–35			
All	24.2 (4.1)	26.2 (3.4)	0.03
Boys	24.5 (4.2)	25.8 (3.7)	
Girls	24.0 (4.0)	26.7 (2.9)	
Health and wellbeing			
Range 6–20			
All	16.9 (1.7)	15.3 (2.4)	<0.001
Boys	16.8 (1.7)	15.3 (2.4)	
Girls	16.9 (1.7)	15.2 (2.5)	

Table 5. Relative odds of health and wellbeing being associated with participation in school, by gender and country.

Health and wellbeing	*Participation in school activities*	*Participation in school events*	*Participation in school decisions and rules*	*Positive perception of school participation*
Nigeria				
All ($n=333$)	1.12** (1.04–1.21)	1.12** (1.04–1.20)	1.09** (1.03–1.15)	1.15*** (1.08–1.23)
Boys ($n=160$)	1.13* (1.02–1.26)	1.13* (1.02–1.24)	1.07 (0.99–1.16)	1.15** (1.05–1.25)
Girls ($n=173$)	1.11^{+} (1.00–1.24)	1.11* (1.01–1.23)	1.12** (1.03–1.21)	1.16** (1.06–1.28)
Ireland				
All (223)	1.20*** (1.10–1.31)	1.19*** (1.10–1.29)	1.22*** (1.12–1.33)	1.26*** (1.15–1.39)
Boys ($n=80$)	1.23** (1.08–1.40)	1.25** (1.10–1.42)	1.16* (1.03–1.31)	1.24*** (1.11–1.40)
Girls ($n=143$)	1.21** (1.06–1.37)	1.17** (1.05–1.30)	1.28*** (1.13–1.46)	1.33** (1.13–1.57)

*$p<0.05$. **$p<0.01$. ***$p<0.001$. $^{+}p=0.05$.

activities. Studies across Africa and Europe among primary school pupils in 4th and 5th classes also correspond to the age group of pupils in this study.

Findings across perceptions and participation of pupils in school life and relationship with health and wellbeing in the two countries emphasised the importance of the school environment and its influence on pupils' health and wellbeing (e.g. references 6,10,11,17). The study findings also suggests that Nigerian and Irish pupils have positive perceptions of their schools irrespective of their geographical location and levels of development. This implies that pupils' health and wellbeing could be improved, irrespective of different contextual settings, if a conducive environment is created and maintained within the school setting. This is consistent with the health promoting schools approach (4,5,18). Further research using qualitative approaches might be needed to better clarify dimensions of pupils' perceptions of school life and school participation among Nigerian pupils in order to substantiate these claims. This suggests a shift in the implementation process for health promoting schools interventions to be context-specific and inclusive of diverse school settings in different contexts (18).

Further, findings showed positive associations between school participation and pupils' health and well-being indicators across both country and gender, but slight differences in values for boys and girls. These results imply that gender is important when developing school health and participation interventions, and gender considerations should be inclusive in school health promotion programmes (11,19).

Conclusions

The findings suggest that Irish and Nigerian pupils have positive perceptions of their schools irrespective of their location and contextual settings. It also highlights that conceptualisations of school participation and health and wellbeing developed from the context of Irish school children (developed context) could be adapted among pupils in Nigeria (developing context). This supports the possibility of adoption/translation of research instruments developed in a European context to an African context. This is relevant when considering school participation and health and wellbeing outcomes for comparative assessments, thus confirming the generalisability of standardised research instruments.

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Health-promoting university: the implementation of an integrated guidance post for non-communicable diseases (Posbindu PTM) among university employees

Tri Siswati[1], Margono[1], Novi Husmarini[1], Yuliasti Eka Purnamaningrum[1] and Bunga Astria Paramashanti[2]

Abstract: Non-communicable diseases (NCDs) remain a challenge globally and in Indonesia. Workplace environments may place employees at risk for NCD behavioral factors. This study aimed to develop an integrated guidance post for NCD (in Indonesian, 'pos pembinaan terpadu penyakit tidak menular' [Posbindu PTM] early detection among employees in one of the Indonesian universities. Posbindu PTM is a community-based program oriented towards promotive and preventive efforts to control NCDs where the community acted as change agents. We conducted a process evaluation based on a quantitative approach through a survey (n = 313) and a qualitative method using in-depth interviews (n = 12) to support our findings that Posbindu PTM was acceptable and feasible to implement in a university context. High participation in Posbindu PTM showed that the program could encourage the university employees to join NCD prevention strategies from early detection to counseling and referral. All participants positively accepted Posbindu PTM for its benefits to health, the flexibility of the program, and the quality service provided by cadres. A need-based program planning, commitment from university leaders, adequate human resources and facilitation, and cooperation between departments, the clinic, and local primary health center and health department determined the success of Posbindu PTM implementation. In contrast, external activities negatively affected participants to join Posbindu PTM. There is a need for more routine scheduling and online-based application to enhance the program's performance. Posbindu PTM is essential for engaging employees with their health and may serve as a model for NCD prevention and control in similar settings. With Posbindu PTM implementation's success, a further stage is required to empower and sustain the Posbindu PTM program towards health-promoting universities.

Keywords: health-promoting university, workplace health promotion, non-communicable diseases, employee, Posbindu PTM

Introduction

Non-communicable diseases (NCDs) are the most significant health and development problems affecting human beings worldwide (1). Moreover, most NCDs in tropical developing countries lead to more deaths at all ages than in high-income Western nations (2). Based on the World Health Organization's (WHO) (3) country progress monitor in 2020, the proportion of deaths caused by NCDs in Indonesia was 73%, with a total number of NCD deaths of 1.37 million.

Changes in lifestyle, technology, and environment have shifted Indonesia's trend of diseases characterized by NCDs such as cardiovascular diseases, diabetes

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mellitus, dyslipidemia, kidney disease, malignancy, and obesity (4). These may also include other typical risk factors in low- and middle-income countries, such as insufficient nutrition and living conditions, ineffective tobacco control, and poorly resourced healthcare (2). Based on Indonesia's Basic Health Research surveys between 2013 and 2018, there was an increase in the prevalence of hypertension from 25.8% to 34.1%, overweight from 11.5% to 13.6%, obesity from 14.8% to 21.8%, and central obesity from 26.6% to 31.0%. Among adolescents aged 10–18 years old, cigarette smoking went up from 7.2% to 9.1%. Low physical activity and inadequate fruit and vegetable consumption also rose from 26.1% to 33.5% and from 93.5% to 95.5%, respectively, among the population aged 10 years or older. In addition, the adult population tends to consume high-risk foods that contain more sugar and salt but less fiber (5,6).

Prevention of risk factors that lead to NCDs should be the key focus for the potential reduction of NCD prevalence (4). Also, the public's awareness needs to be more enhanced across various NCDs. It would assist the public in implementing effective prevention strategies toward these risk factors. In turn, understanding the signs and symptoms and prompt intervention would ensure early detection and treatment of the diseases (7). A whole-system approach through the 'Healthy Settings' idea may optimize disease prevention, including in NCDs. This integrated and interdisciplinary strategy draws on the values of community engagement, collaboration, empowerment, and equity rather than individualistic approaches. Initiated by the WHO in 1986, the 'Healthy Cities' program's success triggered similar interventions in other settings, such as villages, hospitals, and schools (8). In the mid-1990s, the health-promoting university concept was initiated as part of health promotion approaches adapted to the university context (9).

Young adulthood is a pivotal time to develop healthy lifestyles that last a generation (10). Currently, most of the prevention and control strategies depend heavily on personal approaches. Therefore, there is a need to tackle NCD issues through a structural intervention, including workplace approaches. Labor and employment are essential aspects of everyday life in environments identified by their behavioral risk factors (e.g. unhealthy diet, physical inactivity, tobacco consumption) toward NCDs (11). Employees spend more than one-third of their time in the workplace, making them more vulnerable to NCD risk factors. Simultaneously, the workplace may serve as a platform for health promotion among employees, thus, increasing their productivity and reducing sick cost (12). While employee health efforts may have a beneficial impact, a healthy work climate can foster better benefits for workers, their families, and the organization. Thus, establishing a health promotion system in the workplace is a prerequisite for the institutional vision's success and the nation's economic growth (13).

The Indonesian Ministry of Health has proposed the integrated guidance post for non-communicable diseases (Posbindu PTM), a community-based health program oriented towards preventive and control efforts to control NCDs. The program involves the community's active participation, starting from planning, implementation, monitoring, and evaluation. In other words, the community acts as the agent of change that drives Posbindu PTM to be organized according to their ability and needs (14). This study aimed to implement Posbindu PTM for NCD prevention and control among university employees. Furthermore, we also reflected on the implementation process to enhance and expand the Posbindu PTM program towards a health-promoting university. Our reflection followed the WHO guideline on implementation research (15) that covered the program's acceptability, adoption, and feasibility. Findings from this study will inform policymakers and public health professionals to formulate intervention strategies to promote health in workplace settings.

Methods

Study design and settings

This study was conducted in one of the Indonesian universities in 2019. Specifically, the university was located in Sleman District, Yogyakarta Special Region. The university consists of six departments (i.e. Nutrition, Midwifery, Health Analytics, Nursing, Dental Nursing, and Health Environment) and one directorate.

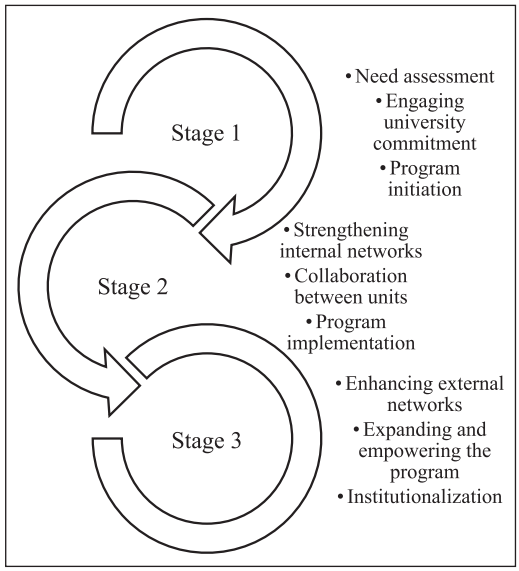

Figure 1. Three stages of Posbindu establishment towards a health-promoting university.

In this paper, we highlighted the development of Posbindu PTM as part of our efforts to achieve a health-promoting university. We defined a health-promoting university as one that provides a healthy environment, promotes the well-being of all community members through healthy policies, encourages broader academic interest in health promotion, and develops links with the community (9). Posbindu PTM or integrated guidance post for NCDs is a program that promotes community participation in early detection and follow-up of NCD risk factors independently and continuously (14). In this study, we specified Posbindu PTM as a workplace health promotion to prevent and control NCDs and their risk factors among university employees. The activities within Posbindu PTM included registration; a behavioral risk factors interview; anthropometric, clinical, and biochemical assessments; counseling; and a referral system related to NCDs.

There were three stages of Posbindu PTM establishment, as shown in Figure 1. During Stage 1, we conducted the following activities: 1) needs assessment, 2) engaging university commitment, and 3) program initiation. In Stage 2, we covered: 1) strengthening internal networks, 2) rallying support and collaboration between faculties and departments, and 3) the program implementation. Before we proceed with Stage 3 of the program institutionalization, we conducted process evaluation of the Posbindu PTM implementation, which covered Stage 1 and Stage 2.

Process evaluation or reflections on Posbindu PTM implementation outputs included acceptability, adoption, and feasibility of the program (15). We defined the acceptability as whether Posbindu PTM was agreeable among participants, providers, leaders and managers, and policymakers. We assessed the adoption based on intention and utilization of Posbindu PTM. Meanwhile, feasibility was the extent to which we could provide Posbindu PTM for regular use in a university setting.

Participants and instruments

There were a total of 313 employees who participated in our program. We asked all participants for their consent to join the study. Instruments used in this action research were the Posbindu PTM guideline book (14), Towards Health Card, Posbindu PTM registration book, and Posbindu PTM kit (i.e. digital weighing scale, microtoise, measuring tape, blood glucose and cholesterol kit with strips, blood lancet, and alcohol swab).

Data analysis

Our reflections were based on a quantitative approach through a survey ($n = 313$) to estimate the participation, NCD prevalence, and NCD-related factors using participants' health records (Towards Health Card). We performed descriptive statistics in Stata 14.2 to summarize our findings.

To supplement our results about Posbindu PTM implementation, we developed interview guidelines to collect qualitative information on its acceptability, adoption, and feasibility. In-depth interviews were conducted with 12 samples until we reached data saturation. Two of them were cadres, and 10 were participants. We transcribed the data verbatim within 24 hours after each interview. We developed the coding based on the interview guidelines and discussed the themes and subthemes until reaching an agreement. Finally, thematic analyses identified barriers, facilitators, and suggestions regarding acceptability, adoption, and feasibility of Posbindu PTM implementation.

Results and discussion

Among the 313 participants, the majority was male (55.3%) and married (67.6%). Most of them completed at least a university degree (84.1%). The mean age of participants was 44.8 ± 10.9 years old, ranging from 22 to 62 years. Only 16 had a contract job with the university.

Establishment and implementation of POSBINDU

Stage 1

1) Needs assessment

We held a meeting to facilitate the needs assessment process among leaders (i.e. director, vice directors) at the university level, managers (i.e. head of department and head of clinic) and employee representatives at the department level, and the university clinic's director. We determined health priority problems, potential interventions, and any existing health program in each department or directorate during the meeting.

Based on our discussion, we found several risk factors for NCDs, such as hypertension, high blood glucose, high sitting time, and low consumption of fruits and vegetables. Our results are similar to an earlier study conducted in four institutional Posbindu PTM in Yogyakarta, Indonesia. The study revealed high proportions of NCD-related risk factors among employees, such as smoking (78%), low consumption of fruits and vegetables (78% and 69%, respectively), physical inactivity (98%), and prolonged sitting duration of 7–10 hours/day (45%). Hypertension (11%), type 2 diabetes mellitus (5%), and heart diseases (4%) were three leading NCDs in these institutions (16).

We also identified a mini hospital owned by the nursing department and the university clinic to help detect NCDs. Inspired by this, representatives from other departments recommended that the intervention be similar to the mini hospital concept. As a result, we determined Posbindu PTM as a university-based approach to prevent and control NCDs and their associated factors among employees. By referring to the health-promoting university concept (17), we designed Posbindu PTM to help the university create healthy environments for working, learning, and setting an example of health promotion for the community.

2) Engaging university commitment

We required the commitment of all the the academic community in higher education (that consists of lecturers, students, and all management bodies) regarding the Posbindu PTM establishment. On 17–18 October 2019, we formally held the agreement contract represented by the university leaders in Banjarnegara District, Central Java Province.

3) Program initiation

The program was initiated by advertising to all employees and prospective networks (e.g. local primary health centers and the district health department). Briefly, we explained the concept of Posbindu PTM to achieve health promoting university along with its activities. We also held capacity building sessions for prospective Posbindu PTM cadres. Cadres were health graduates with at least 3–4 years of post-secondary education and registered as health professionals in nursing, nutrition, medicine, and public health (18). We recruited three trainers from the university and 42 Posbindu PTM cadres. We selected the trainers based on their training on Posbindu PTM and their experience in initiating Posbindu PTM in several institutions in Yogyakarta. Despite the cadres' health backgrounds, we provided refreshers of anthropometric, clinical, and biochemical assessments, counseling, referring to primary health centers, and filling out the Towards Health Card. At the end of Stage 1, we established an organizational structure and designed a program roadmap with university-level leaders and department-level managers.

Stage 2

1) Strengthening internal networks and collaboration

During this stage, strengthening and expanding the internal networks within the university became

crucial. We pinpointed the resources needed during planning and implementation. Every department should have a minimum of six cadres consisting of one person for registration, one person for the interview, two persons for anthropometric measurement, one person for clinical and biochemical assessments, and one person for counseling. Thus, six departments and one directorate required a total of 42 Posbindu PTM cadres.

We collaborated with the university clinic, local primary health centers, and the District Health Department. After we explained our program, the District Health Department facilitated technical guidance of Posbindu PTM through primary health centers. In collaboration with local primary health centers, we provided regular refreshers to our cadres and developed the referral system.

2) Posbindu PTM implementation

We implemented Posbindu PTM regularly every six months. Posbindu PTM activities followed the concept of Five Tables that covered: 1) registration, 2) behavioral risk factors interview, 3) anthropometric measurement, 4) clinical and biochemical assessment, and 5) counseling. After the registration, cadres would question participants' behaviors in the past six months, including tobacco smoking, the average of fruit and vegetable servings per day, physical activity, alcohol consumption, and sleep behaviors. They also performed anthropometric (i.e. height, weight, abdominal circumference), biochemical (i.e. blood glucose, total cholesterol), and clinical (i.e. blood pressure) assessments for participants. Cadres then recorded the answers and other measurement results in the Towards Health Card owned by each participant. Based on these results, cadres provided counseling and, if needed, a referral system. Referral facilities included the university clinic, general practitioner's private clinic, or primary health centers based on their health insurance preference.

During Posbindu PTM implementation, our survey found that most of our participants were female (55.3%) and obtained a minimum of a three-year diploma and a four-year undergraduate degree (59.9%). More than half of our study participants had hypertension (56.4%), followed by hypercholesterolemia (24.8%), and type 2 diabetes mellitus (10.3%). The three leading NCDs among the participants' families included hypertension (34.2%), type 2 diabetes mellitus (29.7%), and stroke (18.5%). Figure 2 presents the distribution of NCD types among participants and their families.

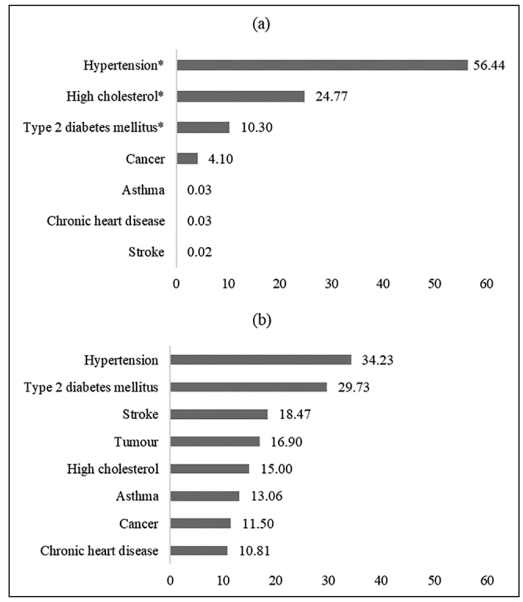

Figure 2. Type of NCDs among participants (a) and their family (b) based on Posbindu's direct measurement* or interview.

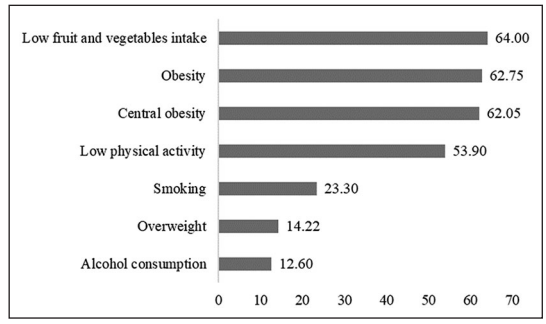

Figure 3. The distribution of NCD-related risk factors among participants.

This study also revealed several NCD-related risk factors among study participants (Figure 3). Low fruit and vegetable consumption (64%) was the most frequent NCD-related risk factor. Both obesity and central obesity were around 62%. Meanwhile, half of the participants were less active. Similar to

our findings, a previous study in a Saudi university revealed NCD risk factors were common among university employees and their families. These included dyslipidemia (37%), diabetes or hypertension (22%), overweight or obese (72%), inadequate fruit and vegetable intake (88%), and low physical activity (77%) (19). In Nigeria, the most frequent NCD determinants among university employees were low fruit and vegetable intake (95%), physical inactivity (78%), and dyslipidemia (52%) (20). Both studies suggested their findings were associated with the participants' socio-demographic characteristics (19, 20). However, behavioral determinants might also have an influence (20). Workplace environments may limit employees' physical activity and food choices while exposing the risk of job stress.

Furthermore, we also developed extended activities, such as 1) body stretching for all staff and students every day at 10:00 am and 2:00 pm at the campus, 2) healthy university campaign, 3) health counseling class for employees, 4) 45–60 minutes of aerobic exercise every week, 5) aerobic exercise competition at National Health Day, 6) advertisement of smoke-free area within the university, 7) development of Youth Posbindu PTM for students, 8) provision of Posbindu PTM supply kit in each department, and 9) socialization of the University Zero NCDs in 2030.

Reflections on Posbindu PTM implementation

Prior to Stage 3, we reflected on the Posbindu PTM implementation in Stage 1 and Stage 2. The reflection included acceptability, adoption, and feasibility of Posbindu PTM.

Acceptability

All participants positively accepted this program. The need-based assessment to determine Posbindu PTM as our primary approach to prevent and control NCDs may explain the high acceptance of Posbindu PTM. Our participants narrated the perceived importance of organizing the Posbindu PTM program:

> Posbindu PTM is essential for early identification of non-communicable diseases. This program can become a reference to prevent and control non-communicable diseases for all Polkesyo members. (a leader, male, 50 years old)

> If the internal circle of the university does not know the condition of their health, then it is impossible to achieve health for all people. (an employee, male, 37 years old)

Moreover, the leaders' commitment and enthusiasm might drive the employees to participate actively in the program. A participant stated: 'Commitment from leaders and all parties. Healthy people can do activities optimally... and influence others to live healthy lives' (an employee, male, 42 years old). A previous study conducted in British Columbia, Canada, found that the workplace health promotion program was acceptable because it had succeeded in engaging the participants. In that study, employee engagement was mainly affected by the time allocated to programming implementation and employers' eagerness (21). While middle-level managers play a significant role in engaging their employees, a Denmark study suggested that these managers be well informed about their roles and responsibilities related to workplace health promotion (22).

Our participants had also gone through an apperception session. This session aimed to improve their understanding and acceptability of the program. In Australia, employees who had high perceptions of the program were more engaged in health intervention at the worksite (23). The perceived importance may explain an individual attachment to a specific health program's results, thus leading them to adopt healthy behaviors (24).

Adoption

Posbindu PTM adoption measures the degree to which a new intervention was delivered to our participants. We also assessed its enabling and inhibiting factors. A total of 140 of 313 participants joined Posbindu PTM without missing a day. Those who did not attend described their absence due to external activities or paid leave. We did not want time limitations, other campus activities, and a lack of resources to disrupt Posbindu PTM. Therefore, we scheduled the Posbindu PTM implementation

according to the agreement with all participants. We also offered services by trained cadres and adequate facilitation. When a program takes place within the workplace, program providers should consider the nature of the intervention (e.g. knowledge of program topics, tools, and facilitation), the dynamic of work culture (e.g. time allocation, workload), and support from employers or leaders (21).

When we asked about Posbindu PTM utilization, most participants explained their active participation and rationale. They stated:

> I always followed the Posbindu PTM schedule because... I want to check my health condition as early as possible. So that we become more aware and concern about our health. (an employee, female, 28 years old)

> Without compromising on friendliness, cadres' performance is good. They measured anthropometric professionally, provided information that is easy to understand, gave positive motivation, and pray for us... very nice. (an employee, male, 37 years old)

On the other hand, few employees stated that they could not control activities outside the university. They sometimes missed the Posbindu PTM schedule due to external events. To improve the Posbindu PTM implementation, participants also provided us with several inputs. Most of them suggested that Posbindu PTM should be conducted more routinely (e.g. monthly) and situated in a more accessible place. Few participants mentioned the use of mobile-based applications that may help record and monitor employees' health status.

> *We can use an (online) application for Table 1 (registration). Table 5 can provide counseling online. Others (other tables) are good.* (an employee, female, 29 years old)

Inter-professional partnership in health promotion is beneficial not only for clients but also for health practitioners. Organizations that promote multidisciplinary teams would likely achieve more meaningful patient health results, indicating effective collaborations (25). On the other hand, working as a team may improve health practitioners' recognition of their own and other fields' duties (26). Due to various health departments within the university, the Posbindu PTM program allowed for inter-professional collaboration between health professionals. For instance, a nutritionist cadre would measure body weight and waist circumference, calculate body mass index, and perform dietary recall, while a nurse assessed blood pressure and blood glucose. Based on these assessments, early diagnosis, health counselling, and, if needed, a referral system were made by a nurse cadre or a general practitioner from the university clinic. If a participant had an issue related to eating habits and physical activity, they would be referred to a nutritionist cadre for dietary counselling and physical activity recommendation. Any procedure taken was based on the participants' condition, yet conducted by a team of cadres from different health backgrounds (e.g. nutritionist, nurse, general practitioner). A broader context of multidisciplinary work included reporting surveillance data between the university's team (e.g. nurse, nutritionist, public health professionals) and the local primary health center and health department's data managers.

Feasibility

We collected qualitative feedback from sampled participants to assess the feasibility in the following areas: practicality and integration into academic routines. Practicality explains to what degree our participants can apply Posbindu PTM procedures using available resources and context within the university. A participant said: 'It is not hard to find quality cadres because they are already equipped with skills. We pre-tested them, and they passed, so we gave them a certificate. We also have supporting facilities and infrastructure' (an employee, female, 29 years).

We delivered activities within the Posbindu PTM program based upon the Five Table concept proposed by the Indonesian Ministry of Health (15). In Indonesia, community-based health programs mostly used the Five Table concept to deliver interventions, such as the integrated health post (Posyandu) for child growth monitoring or adolescent and elderly health check-ups at the community level. Therefore, it is convenient for the participants to follow Posbindu PTM procedures.

The flexibility of Posbindu PTM that fit with employees' work hours also made this program easily incorporated into university activities.

> It's because of the socialization and schedule which are clear to me. (an employee, male, 45 years old)

> As a cadre and a client, I feel necessary and comfortable with this (Posbindu PTM) implementation... (a cadre, male, 55 years)

The university employees typically spent eight hours per day on average from Monday to Friday. If the workload got higher due to special events such as university accreditation, seminars, or workshops, employees would increase their time spent at the campus. Before establishing Posbindu PTM, some employees would visit health care providers during the weekends or after work hours, while others chose to skip regular health check-ups. For this issue, we could consider Posbindu PTM as a health facility that we brought to campus so that employees could access health providers more conveniently in terms of time and distance. Bringing health facilities closer to the worksite may improve employee participation in seeking appropriate care. In agreement with our results, Seaton *et al.* suggested that the workplace may be a vital setting for engaging employees with their health (21). Therefore, in the case of further performance of Posbindu PTM, we may proceed with Stage 3 to improve and expand the Posbindu PTM program and to set up a reliable system within the institution.

Strengths and limitations

Our study is the first action research to implement an integrated guidance post (Posbindu PTM) to prevent and control NCDs among Indonesian university employees. We obtained adequate resources and support from our institution to establish Posbindu PTM until we reached Stage 2 of program implementation. Our reflections on the program's acceptability, adoption, and feasibility suggested we move forward to Stage 3 to enhance, expand, and institutionalize the program. In the case of broader implementation research, there is a significant benefit to apply Posbindu PTM in similar organizations with health-related resources and networks. However, we admit constraints on self-reported dietary and physical activity assessments and social determinants that may confound NCD-related behaviors among participants, restricting the overall ability of the study to evaluate the intervention effects.

Conclusion

Posbindu PTM is vital for engaging employees with their health by participating in NCD risk assessment and intervention. University settings can specifically appeal to employees, providing pleasant avenues and environments to join while attenuating possible weakness related to seeking out health facility-based services. Posbindu PTM implementation's success is driven by need-based program planning, university leaders' commitment, adequate human resources and facilitation, and collaborations within the university and between university and external health providers. Moreover, employees are essential agents of change for making Posbindu PTM more sustainable through active participation. These change agents may act as cadres who facilitate Posbindu PTM within the institution or individuals who are able to empower themselves to practice a healthy lifestyle, thus inspiring people around them. Posbindu PTM program offers an acceptable and feasible approach for workplace health promotion that can set an example for enhancing employees' health in similar contexts. Further research is required to evaluate the effectiveness of the program.

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Ethical approval

This research was ethically approved by the Institutional Review Board of 'Aisyiah University Yogyakarta number 981/KEP-Unisa/X/2019.

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Prevention of type 2 diabetes in sub-Saharan Africa, a review

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Abstract:
Background: Type 2 diabetes (T2D) is a significant factor in the overall burden of non-communicable diseases (NCDs) in sub-Saharan Africa (SSA). While many health organizations call for increased attention to this disease, far fewer resources are being allocated to evidence-based prevention programs. The literature demonstrates a lack of reporting on prevention programs, interventions targeted to decrease the development of T2D, and success stories.
Methods: This review followed the recommendations in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement. Databases searched were PubMed, Google Scholar, Ovid, Medline, World Health Organization (WHO) Library Information System, and African Journals Online. The following terms were searched individually and in multiple combinations: prevention, intervention, type 2 diabetes, sub-Saharan Africa, education, strategy, strategic plan, risk factors. In total, 253 articles were found and 17 were removed as duplicates. Of these, 78 abstracts were reviewed, with 20 being excluded for not meeting criteria, one was excluded as it was not available in English and one was excluded for lack of availability. After the remaining 56 full-text studies were assessed, seven were included in the review.
Results: Throughout the review, the common theme between articles was a lack of resources, lack of prevention strategies, and increasing risk factors. The review highlights the fact that while there are WHO guidelines and packages targeted at primary care level interventions for the prevention and treatment of NCDs, they remain underutilized. Included studies looked at the knowledge level of family members, social marketing and sugar consumption, and primary prevention strategies.
Conclusion: There is an overall lack of reporting on interventions targeting the prevention of type 2 diabetes in SSA. Further research is warranted on interventions, prevention strategies, and implementation of the WHO package targeted at NCDs

Keywords: prevention, type 2 diabetes, sub-Saharan Africa, global health, chronic disease/non-communicable disease

Introduction

The prevalence of type 2 diabetes (T2D) in Sub-Saharan Africa (SSA) is increasing at a rate that far outpaces predictions (1). A recent Lancet report estimates there are 463 million individuals living with diabetes worldwide with more than 80% of the adult diabetic population living in low and middle-income countries (2). Further estimates suggest that Africa will experience a greater than 98% increase in diabetes diagnoses by 2030, with nine of the ten highest prevalence rates by country being in this region (3). Type 2 diabetes is a complex and largely preventable disease, hallmarked by hyperglycemia (high blood sugar) and insulin resistance. Medical interventions such as oral medication and insulin are the most common methods to regulate blood glucose levels. But care for this disease is costly, and the economic impact

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can be great. The overall cost of diabetes in SSA was estimated to be USD 19.45 billion in 2015, or equivalent to 1.2% of the gross domestic product of the region (4). Much of this cost is attributed to direct medical care and includes the cost of complications. Demonstrating the economic impact of T2D, the United Nations Children's Fund (UNICEF) noted there is not an effective intervention for diabetes that is less than or equal to $100 per disability-adjusted life year (7).

A lack of affordable medicine-based intervention strategies to manage T2D in SSA has created an increased financial burden in the region. Much of the increase in T2D cases in SSA can be attributed to rapid urbanization, increased globalization, socioeconomic status, genetics, safety, and lifestyle practices (3,5). Africa is home to nine of the ten fastest-growing economies, and T2D cases are rising congruently. The true burden of the disease is likely to be underestimated due to the lack of reporting, inconsistency in screening, and a lack of overall resources (3). To reduce the number of cases and subsequent human and economic impacts of T2D, preventative strategies are needed throughout SSA. Minimal research and data are available on prevention programs and strategic planning in this area. A gap in research can be attributed to a lack of access to data, technology, and inconsistent application or adoption of programs from organizations like the International Diabetes Federation, World Health Organization (WHO), and non-governmental organizations (NGOs). Globally, current management strategies are focused on healthy lifestyles, nutrition, and family education strategies (6). Implementation of a healthy lifestyle requires physical activity, a nutritionally appropriate diet, maintaining a healthy body mass index, and avoiding tobacco use. Prevention measures and better screening are important components of prevention strategies to reduce the incidence of T2D, and align with United Nations Sustainable Development Goals (SDGs) in reducing mortality from NCDs (7). This review aims to assess and summarize the state of the literature on prevention strategies for type 2 diabetes in sub-Sharan Africa.

Methods

Search strategy

This review followed the recommendations in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (8).

A systematic, online search of primary literature on prevention of type 2 diabetes in SSA (both as a whole and by individual country) was conducted. Databases searched were PubMed, Google Scholar, Ovid, Medline, WHO Library Information System, and African Journals Online. The following terms were searched individually and in multiple combinations: prevention, intervention, type 2 diabetes, sub-Saharan Africa, education, strategy, strategic plan, risk factors. An initial search of the literature was performed, as well as a manual search that consisted of a review of listed references from sourced studies to ensure relevant materials were not missed in the initial search. Both searches were conducted in February 2021. A subsequent search was performed in August 2021, however no new information was discovered.

Inclusion/exclusion

After the search and the abstract reviews were completed, 56 full-text articles were reviewed, and seven studies were retained. No randomized controlled trials were found. Studies were eligible for inclusion if they included prevention measures for type 2 diabetes, looked at the sub-Saharan population or a section thereof, were published between 2015 and 2021, and were available in English. One study was excluded due to lack of availability, even after reaching out to the authors.

Results

Finding studies that specifically addressed prevention strategies in SSA was difficult. The studies that are included in this review look at the complexities in health systems, prevention measures, resources, and the unique challenges that exist in the region.

Prevention measures

The burden of disease caused by type 2 diabetes in SSA is great, but the prevention measures have not kept up with the illness. In a representative sample of South Africa's population, 45% of those found to have diabetes report never having been screened, and 15% were screened but not diagnosed (9). This complex interplay of lack of prevention, diagnosis, and care education plays out through the remaining studies.

Fasanmade and Dagogo-Jack (10) noted the significant burden caused by diabetes in Nigeria. They also indicated that many organizations and charities have offered to or have set up clinics and specialty support for diabetes management to decrease the cost to both the economy and the lives this disease is taking in the country. They noted the importance of prevention and recommended community screenings to identify prediabetes, so primary prevention strategies can be implemented to decrease the overall number of hyperglycemic individuals.

Juma *et al.* (11) noted the use of social marketing in the prevention of a contributing risk factor for diabetes: childhood obesity. Also noted were concerns about food security and the desirability of changing dietary and exercise habits. Community and school leaders have an opportunity to use multimedia support to deliver their message effectively.

Primary and secondary prevention strategies are well known throughout public health, but BeLue (12), offered a perspective for intervention that works differently. The family unit in much of SSA is not the same nuclear family unit of certain other countries. The purchasing and preparation of food, education, and medical care may fall to different members of a larger family unit. The author suggests that interventions that are targeted at families rather than individuals will see more success.

Wolde *et al.* (13) undertook a cross-sectional study of two closely located areas in Ethiopia, exploring whether the knowledge of prevention and complications of first- or second-degree family members of those with diabetes was similar to a control group. Individuals were included if they also had one of the WHO criteria for increased risk of developing diabetes. These criteria include obesity, hypertension, age >18, previously identified impaired fasting glucose or impaired glucose tolerance, reduced physical activity, history of gestational diabetes, or delivery of babies >4.5 kg (14). Their results indicated that a family member was nearly twice as likely as the control to have knowledge of prevention, but that the overall knowledge level was still quite low.

Complexities and challenges

There are many challenges in providing the necessary preventive care in SSA. In much of the region, care is provided in small scale, by unregulated providers who often work with a dysfunctional public health system that largely ignores prevention activities. Progress on SDGs in SSA has consistently lagged behind other developing countries (15).

When reviewing the WHO Service Availability Readiness Assessment surveys, World Bank Service Delivery Indicator surveys and the local knowledge of commissioners, Atun *et al.* (16) found: '[lack of] availability of simple equipment for diagnosis and monitoring, a lack of sufficiently knowledgeable healthcare providers, insufficient availability of treatments, a dearth of locally appropriate guidelines, and few disease registries.'

The low knowledge level about diabetes and nutrition as a whole has been complicated by rapid urbanization and globalization. A shift to a more Western diet in many places has caused a dual issue of both over- and undernutrition in children and an increase in diabetes at younger ages (3). While SSA has an increasing burden, they spend far less than other regions on healthcare and prevention (15). Diabetes is expected to impact 50% more individuals by 2030 than it did in 2010. This rapid increase is outpacing government spending and education. Contributing to the issue is the impact of sugar-sweetened beverages among children. Audain *et al.* (3) explored several studies that found an increase in weight and diabetes linked to this practice, suggesting that limiting sugar intake at home and in schools could be a solid prevention strategy for the early development of type 2 diabetes.

These sentiments are echoed by Forouhi *et al.* (17), who noted that nutritional intervention is key in preventing diabetes. Even in the presence of nutritional standards however, there are other challenges. Low literacy rates and a lack of policy preventing or limiting harmful foods contribute to the issue. While nutritional information may be printed on food items, those who cannot read at the required level to gain the important information offered will not benefit. More simplified and consistent nutritional labeling may be a benefit in prevention. Similar to Audain *et al.* (3), who noted South Africa as the first and, at the time of publication, the only country in SSA to tax sugar-sweetened beverages, there is much oversight needed for nutritional interventions to be successful prevention tools.

Discussion

Though the Alma Ata Declaration was the beginning of a shift in focus to primary care, the landscape of NCDs is far different today than it was in 1978, and the burden has far outpaced support in SSA. With poor progress toward SDGs, an overwhelmingly fragmented and poorly funded healthcare system that relies significantly on unregulated providers, and significant issues of access to care, there is increasing disparity between SSA and the rest of the world (15). It is difficult to quantify the true burden of T2D however, as much of SSA lacks the data and data collection systems to provide a comprehensive picture (16).

Interventions aimed at better nutrition to prevent obesity and subsequent T2D may be difficult to implement in regions where food security is an issue, and in regions where literacy levels prevent comprehensive reading and understanding of nutritional labels (17). Differing cultural patterns may have an impact on nutritional interventions and require a comprehensive assessment, to understand which family members are responsible for food acquisition, preparation, and decision making; including such family members in the education may be more beneficial than a broader implementation (12).

The WHO Package of Essential Noncommunicable Disease Interventions, offers primary care level interventions that governments can adopt to assist in becoming more responsive to the increasing burden of NCDs (18). These interventions are aimed at the early prevention and management of NCDs, yet there was no evidence of their implementation being researched or reported in the literature (14).

All of the included studies noted a lack of resources, prevention strategies, and the challenges of implementing prevention measures in SSA. These range from financial to cultural and safety issues. The Lancet Commission on diabetes (2) notes:

> Apart from ageing, environmental factors, and socioeconomic factors, notable underlying risk associations of diabetes are poor nutrition, physical inactivity, depression, poverty, and low educational attainment, especially in underserved communities. The multidimensional nature of these risk factors calls for a wide-ranging society–population–community strategy to integrate prevention, diagnosis, and care of patients with type 2 diabetes (p. 2020).

This review found that the state of prevention in SSA embodied the conclusions of this committee, and the studies included are examples of smaller efforts that may be but one piece of a much larger need. The wide sweeping change required to implement comprehensive prevention is contingent on the complex interplay of government, NGOs, community public health, and educational components, making true change necessary yet difficult.

The lack of information about the prevention of type 2 diabetes in SSA suggests two things to the authors. There is a lack of evidence-based intervention being undertaken due to the aforementioned challenges and lack of governmental support, or the resources do not exist to study and report the interventions. Both of these options are concerning and warrant further investigation.

While every effort was made to seek out studies detailing prevention efforts for T2D in SSA, there were few findings. This review has demonstrated the lack of available information and suggests that, in the absence of access to such information, less collaboration is possible, and the pooling of knowledge on the subject is more difficult. The authors acknowledge the limitations of the review, which only sourced information electronically, that was available in English, and printed after 2015. Sub-Saharan Africa is a large area with multiple languages, and the ability to include those languages may offer additional insight. Future recommendations include working with a diverse group with additional language capabilities and/or limiting the area of study to gain insight into a specific region of SSA.

Conclusion

While it was evident in the literature search that much attention has been paid to managing and preventing complications, and educating families about type 2 diabetes in SSA, much less attention was noted in prevention. The current state of the literature offers very little in the way of peer-reviewed material examining the impact of, or even existence of prevention programs. Certainly, the

authors concede that there could be programs and research that were not found within the context of this review. However, the small number of studies available through a thorough search demonstrated a significant lack of literature on the subject. This is congruent with the remarks of the Lancet Commission on diabetes concerning the multifactorial nature of decreasing the burden of T2D. The difficulties faced in both creating and implementing prevention strategies offers insight into why there are few reports. Further research and reporting are much needed in the area of preventing type 2 diabetes in SSA.

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Knowledge and perceptions of human trafficking among community-based and faith-based organization members in South Los Angeles

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Abstract: The objectives of this study were (1) to assess the knowledge and perceptions of human trafficking (HT) among leaders and staff from 11 community-based organizations (CBOs) and faith-based organizations (FBOs) in South Los Angeles, and (2) to identify gaps in knowledge of HT and inform community organizations regarding possible best practices in health promotion for addressing this emerging public health problem. A self-administered survey was conducted during the period from 4 December 2015 to 28 January 2016. Descriptive statistics were generated and a logistic regression model was constructed using SAS 9.3. A total of 277 CBO and FBO leaders and staff completed the survey. Participants demonstrated high levels of knowledge of HT but their knowledge was not comprehensive, as gaps exist in recognizing the context in which HT usually takes place; understanding the local laws that govern this activity; and ways to follow related policies/procedures when the problem is suspected. A majority (a) believed there were not enough services in Los Angeles County to help survivors of HT, (b) could not recognize the signs of HT, and (c) did not know what steps to take if they suspected this criminal activity. A statistically significant association was found between education and participants' knowledge of HT, and with their beliefs and attitudes toward this violation of human rights. Study findings suggest that, generally, CBO/FBO leaders and staff in South Los Angeles have good knowledge about HT. However, notable gaps in knowledge and misperceptions remain, suggesting opportunities for Public Health to further educate and intervene.

Keywords: human trafficking, community action, community-based organization, faith-based organization, public awareness

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*This project was partially described in Beatriz Navarro's Masters Project for the UCLA Fielding School of Public Health. Her report entitled 'Rapid Assessment of Knowledge in the Community Regarding Human Trafficking' is unpublished.

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Introduction

Although human trafficking (HT) is a growing problem, little is known about the knowledge or preparedness of community organizations or of their staff to act if/when they encounter this criminal activity. Under United States (US) laws and the United Nations Office on Drugs and Crime, HT is defined as the recruitment, harboring, transportation, provision, or obtaining of a person to perform labor or services through the use of force, fraud, or coercion, including compelling the person to engage in commercial sex acts. The use of force, fraud, or coercion is not relevant when the person compelled to perfrom commercial sex acts is under age 18 (1,2).

The International Labor Organization (ILO), an agency of the United Nations, estimates that in 2016 there were 24.9 million individuals in some form of forced labor worldwide. It has been estimated that 16 million people are exploited in the private sector, such as domestic work, construction, or agriculture; 4.8 million people are in forced and commercial sexual exploitation; and the prevalence of forced labor/trafficking in the Americas is 1.3% (3). In the US, HT remains an ongoing problem despite legislative action to abolish slavery in 1865 (4) and the passage of the Trafficking Victims Protection Act of 2000 (1).

The ILO estimates that there are at least 2.4 million individuals in the process of being trafficked at any given moment worldwide (5). International revenues from HT are estimated to be approximately US $150 billion annually (6).

Research has shown that victims of HT often experience a wide array of health-related problems as a result of trauma and abuse. These include physical and sexual health effects of trafficking including headaches, musculoskeletal pain, sexually transmitted infections, and mental health issues such as anxiety, depression, and post-traumatic stress disorders (7–12). Because of its profound impact on society as well as individuals, HT is increasingly recognized as a public health problem. Based on current scientific literature, poverty, violence, oppression, lack of social or economic opportunities, displacement, and broken families are all believed to be among the predisposing factors that increase vulnerability to HT (2,11,13). In California alone (between 2010 and 2012), HT task forces identified an estimated 1200 youth who are victims of sexual exploitation (14). It has become increasingly necessary to raise public awareness about this taboo topic and to prepare communities to report or act on this sensitive societal problem. To date, few studies have described the circumstances in which urban community organizations and their personnel may come in contact with HT and how knowledgeable or prepared they may be to handle this complex issue.

Although a number of studies have assessed the knowledge and perceptions (beliefs and attitudes) of healthcare professionals, teachers, and law enforcement officers about HT (11,15–19), awareness of, and views about this topic among members (leaders and staff) of community-based and faith-based organizations (CBOs and FBOs) are less characterized in the scientific literature. The information about HT that is currently available is often not used to inform or support these organizations in handling with this issue in the real world. Insights from prior studies suggest that community organizations and their personnel can play important roles in promoting community preparedness and resilience in the face of disasters or difficult events/issues (20,21).

The present study sought to address some of these gaps in health promotion practice by answering the following questions: (1) what are the knowledge level and perceptions of HT among leaders and staff from CBOs and FBOs in South Los Angeles, an underserved metropolitan area of Los Angeles County (LAC), and (2) what knowledge gaps can a local health department address to help prepare these organizations and their personnel to better recognize and report or act on HT?

Context and methods

Local context of an underserved region – Service Planning Area 6, South Los Angeles

For health care planning purposes, LAC is divided into eight service planning areas (SPAs) (22). The primary focus of the present study is on HT in SPA 6. Selection of this geographic area was informed by the region's population demographics, social conditions, and data on its disproportionate burden of disease. SPA 6 has a population of 1,068,550 (23), with residents who are primarily Latino and African American (69% and 27%,

respectively). Cities and communities located in SPA 6, such as Compton and Watts, have among the lowest median income of any SPA – for example, US$36,400 for SPA 6 versus $56,196 for the overall county (24,25). Adult residents of SPA 6 have the lowest educational attainment of any area in the county – 44% (26). The homicide rate involving firearms (16 per 100,000) in this SPA is among the highest in LAC (26). These and other population health and socioeconomic characteristics have been shown to be associated with HT activities (27,28).

Study overview

The Human Trafficking Survey (HTS) team administered the cross-sectional survey to eligible participants in person, from 4 December 2015 to 28 January 2016. Eligible participants or target audiences were leaders and staff members of 11 CBOs and FBOs who attended workshops and events sponsored by a network of community coalitions in SPA 6, which is convened by the Los Angeles County Department of Public Health (DPH) to help local cities and communities address regional public health and social problems. Topics discussed (e.g., wellness programming, Best Start, gang violence, homeless outreach) in these coalition workshops and events are not necessarily about HT. During the sampling period, each CBO or FBO representative attending these coalition meetings received a survey to complete. All surveys were pre-numbered and tracked based on meeting dates, times, and attendance logs. This tracking allowed for proper tallying of an overall denominator, which was used to calculate survey response rates. The onsite presence of HTS staff and the handing out of the survey instrument in person at the coalition meetings were aspects of the survey that helped encourage higher participant responses/enrollment.

Target audience and eligibility

The HTS utilized the following eligibility criteria for survey participation: (1) survey participant must represent the CBO or FBO that is invited to the coalition meeting or event; (2) the agency represented by the survey participant is one of the 11 organizational members of the community coalition network in SPA 6; (3) the organization representative must be at least 18 years of age at the time of the survey; and (4) the organization representative must be able to complete the self-administered survey in English or Spanish. The reach of, and the existing number of representatives from each of the CBOs/FBOs were among the key considerations in estimating the potential size of the survey sample.

Data collection

The 25-question survey instrument was developed by DPH based on information from, and questionnaires available in the scientific and grey literature. Similar to other rapid surveys of this kind (29,30), the questions were drawn from previously validated question items or statements used by US agencies and national surveys (11,31–33). For example, the knowledge questions were adapted using content about HT myths and misperceptions from the US Homeland Security Blue Campaign and the National Human Trafficking Hotline (31–33). Likewise, several of the perception (belief and attitude) questions were adapted from a cross-sectional survey of National Health Service professionals in England (11). The item adaptation process included iterative consultations and reviews by SPA 6 coalition membership and by DPH epidemiologists who had experience in designing rapid health assessments (29). The survey instrument was pre-tested with 12 DPH staff members prior to field implementation.

For the Spanish version, the survey instrument was translated using DPH-approved translators; once translated, the Spanish version was reverse-translated to English by bi-cultural, native Spanish speakers to test for accuracy and cultural competency.

In the survey, responses to the knowledge and perceptions questions were structured as nominal (dichotomous) 'True' or 'False' options or as statements with 5-point Likert scales (i.e., response options ranging from 'Strongly Agree' to 'Strongly Disagree'). The latter – statements about HT – were designed to gauge the level of knowledge (e.g., accuracy: each statement is factually correct or not correct) and any misperceptions that a participant may have about each statement. A principal factor analysis with oblimin rotation was conducted to explore the clustering of question constructs related to several of the knowledge and perception items (34) (see Supplemental Table A). Two factors – 'lack

of knowledge of HT' and 'good knowledge of HT' – were found to explain a total of 21.3% of the variance for the set of variables examined. To calculate the proportion of total variance explained by each of the factors, the sum of the squared structural loading by factor was computed and divided by the items in the survey instrument. Results of this exploratory analysis were used to help guide the selection of the dependent variables utilized in the final model. They pointed to gaps where education and training of community organizations and their personnel may help communities better recognize and build capacity to address HT.

Other question items in the survey instrument collected sociodemographic information on gender, age (group), educational attainment, and race/ethnicity, as well as participants' interest in attending future workshops or training about HT.

Human subject protection

All survey materials and study protocols were reviewed and approved by the DPH Institutional Review Board (IRB). As they were neither known survivors of HT, nor considered at risk for adverse psychological events related to trauma, the IRB allowed the participants to give verbal consent at the time of survey administration.

Statistical analyses

All statistical analyses were performed using the SAS 9.3 statistical software package (SAS Institute, Cary, NC). Descriptive statistics were first generated to present the sociodemographic characteristics (e.g., gender, age, education, race/ethnicity) of the representatives from the 11 CBOs and FBOs who were members of the SPA 6 community coalition network. Univariate frequencies and percentages summarized the proportion of correct/incorrect, as well as Likert-scaled (from strongly agree to strongly disagree) responses to the statements (questions) assessing participants' knowledge and perceptions about HT. Univariate results were used to guide subsequent bivariate and multivariable analyses.

Outcomes of interest included: (a) three 'true/false' statements with the lowest proportion of 'correct answers' (these three questions involved the California poster law on reporting HT, and the definition of HT), and (b) three Likert scale statements with the highest percentage of 'strongly disagree/disagree' responses. For the Likert scale statements, 'strongly agree/agree' was set at '1', while 'neutral', 'disagree', and 'strongly disagree' were set at '2'. This variable adjustment was carried out to dichotomize these outcomes for use in a subsequent logistic regression analysis. The final multivariable logistic regression model explored and examined the associations among the six statements (outcomes of interest) and gender, age group, race/ethnicity, and education variables.

Results

During the sampling period (December 2015 to January 2016), a total of 334 surveys were administered to eligible leadership and staff from the SPA 6 community coalition network's CBOs and FBOs. Of these, 277 surveys were completed and returned to the HTS team (overall response rate, 83%).

Sociodemographic characteristics of survey participants are summarized in Table 1. The majority were female (73%) and 35–64 years of age (65%); 44% and 35%, respectively, were African American and Hispanic/Latino; and 47% reported having received a college or postgraduate degree.

Supplemental Figure 1 shows the level of knowledge about HT among representatives from the 11 CBOs and FBOs. Overall, knowledge about HT was high. However, incorrect answers were relatively prevalent for three of the 'true/false' statements: 'All traffickers use some type of physical restraint, physical force, or physical bondage to control their victims' (43% answered correctly); 'California law says that some businesses have to display a poster with the national phone number for reporting HT' (45% answered correctly); and 'HT must involve some form of travel across state or national borders' (51% answered correctly).

Supplemental Figure 2 shows participants' perceptions of (attitudes toward) HT. On average, only 16% 'strongly agreed' or 'agreed' that there are enough services in LAC to help survivors of HT. A little over one fourth (26%) 'strongly agreed' or 'agreed' that they could recognize the signs of HT, and 43% 'strongly agreed' or 'agreed' that they knew what to do if they suspected someone is being trafficked.

Tables 2 and 3 present the results of a bivariate

Table 1. Sociodemographic characteristics of community-based and faith-based organization survey participants ($n = 277$).

Characteristics	*n*	*(%)**
Gender		
Female	202	73
Male	51	18
Prefer not to answer	4	1
Age (years)		
18–24	16	6
25–29	32	12
30–34	25	9
35–39	33	12
40–44	31	11
45–49	28	10
50–54	27	10
55–59	17	6
60–64	44	16
65 or above	24	9
Race/ethnicity		
African American/Black	122	44
Asian/Pacific Islander	8	3
Hispanic/Latino	98	35
White/Non-Hispanic	15	5
Native American/Alaskan Native	3	1
Other	17	6
Education		
Completed less than high school	28	10
High school diploma or General Education Development (GED)	25	9
Some college, community college or trade school	76	27
College graduate/postgraduate	131	47

*Missing values are not included; percentages may not add up to 100% or may exceed 100% due to rounding.

analysis on statements that received a low percentage of correct answers and/or agreements by gender, age, race (Table 2), and education (Table 3). Results for the statement on travel across borders was significantly different by gender (males were more knowledgeable), age (the youngest age group had the most knowledge), race (Hispanic/Latino had the lowest knowledge level), and education (those with the highest education level had the most knowledge). The proportion of correct answers about the use of physical force was also statistically significant across gender, race, and education. There was a significant difference in the belief that there are enough services in LAC to help survivors of HT, by gender and education ($p < 0.01$).

Tables 4 and 5 show the results of the multivariable logistic regression model, which explored and examined the associations between the sociodemographic characteristics and knowledge of HT laws/policies and the participants' perceptions. In Table 4, the outcome of interest was the 'correct answer' to the 'true/false' statements, while in Table 5 the outcome of interest was the responses 'strongly agree/agree' to the Likert scale statements.

Compared to participants with less than a high school education, the odds of correctly answering the 'true/false' statements was statistically higher among college graduates/postgraduates ($p < 0.01$). Compared to those with less than a high school education, CBO/FBO representatives with college or postgraduate degrees were less likely to 'strongly agree/agree' with the statements, 'I can recognize the signs of HT' (AOR = 0.27, 95% CI = 0.10, 0.76) and 'I know what to do if I suspect someone is being trafficked,' (AOR = 0.36, 95% CI = 0.14, 0.92) (Table 5).

While older CBO/FBO representatives (age >65) were more likely to have positive opinions about the availability of services in LAC for survivors of HT (adjusted odds ratio (AOR) = 2.16, 95% confidence interval (CI) = 0.57, 8.15)), the opposite was true for those with higher educational attainment (AOR = 0.25, 95% CI = 0.07, 0.88).

Discussion

The present study highlighted several common knowledge gaps and misconceptions about HT among leaders and staff members of prominent CBOs and FBOs that are working together as community coalition members in SPA 6. Although these CBO/FBO representatives generally demonstrated high levels of knowledge of HT, the survey revealed important gaps in their knowledge, as reflected by their responses to the 'true/false' statements in the study. As an example: among survey participants, only 45% were familiar with the California law that requires certain businesses to display a poster with the National HT Hotline and the Coalition to Abolish Slavery and Trafficking's hotline phone numbers for

Table 2. Statements that received a low percentage (< 51%) of correct answers (or agreements) by participant demographic characteristics, Service Planning Area (SPA) 6 in Los Angeles County, Human Trafficking Survey, 4 December 2015 to 28 January 2016 (n=277).

Knowledge of human trafficking survey question	*Gender*			*Age group (years)*				*Race/ethnicity*				
	Male n (%)	*Female n (%)*	*p value n (%)*	*18–39 n (%)*	*40–64 n (%)*	*⩾ 65 n (%)*	*p value*	*African American/ Black n (%)*	*Hispanic/ Latino n (%)*	*White/Non-Hispanic n (%)*	*Other n (%)*	*p value*
Laws and Policies (% correctly answered)[a]												
1. California law says that some businesses have to display a poster with the national phone number for reporting human trafficking.	19 (40)	95 (52)	0.11	46 (46)	66 (52)	13 (59)	0.40	53 (47)	45 (52)	8 (62)	6 (40)	0.62
2. All traffickers use some type of physical restraint, physical force, or physical bondage to control their victims.	31 (61)	79 (40)	0.007*	54 (51)	55 (38)	10 (42)	0.12	60 (50)	29 (31)	8 (57)	11 (65)	<0.01*
3. Human trafficking must involve some form of travel across state or national borders.	35 (69)	98 (50)	0.02*	63 (60)	72 (51)	6 (26)	0.01*	74 (62)	37 (39)	11 (79)	9 (56)	<0.01*
Beliefs and attitudes (% strongly agree/agree)[a]												
4. There are enough services in Los Angeles to help survivors of human trafficking.	1 (2)	40 (20)	<0.01[b,*]	13 (13)	27 (19)	5 (21)	0.59[b]	14 (11)	22 (23)	1 (7)	2 (13)	0.27[b]
5. I can recognize the signs of human trafficking.	12 (24)	50 (25)	0.95	24 (23)	45 (31)	2 (8)	0.10[b]	30 (25)	27 (28)	3 (20)	3 (19)	0.36[b]
6. I know what to do if I suspect someone is being trafficked.	19 (38)	86 (43)	0.80	37 (36)	71 (49)	10 (42)	0.04*	51 (42)	43 (45)	5 (33)	8 (47)	0.37[b]

*$p \leqslant 0.05$.

[a]All 'n' and '%' for statements 1, 2, and 3 represent 'n' and '%' of the 'correct' answers. All 'n' and '%' for statements 4, 5, and 6 represent 'n' and '%' of 'strongly agree/agree' responses.

[b]Fisher's Exact Test was used, due to sparse sample size in some cells.

Table 3. Statements that received a low percentage (< 51%) of correct answers (or agreements) by participant education level, Service Planning Area (SPA) 6 in Los Angeles County, Human Trafficking Survey, 4 December 2015 to 28 January 2016 ($n = 277$).

Knowledge of human trafficking survey question	*Education*				
	Completed less than high school n (%)	*High school graduate or GED n (%)*	*Some college, community college or trade school n (%)*	*College graduate/ postgraduate n (%)*	*p value*
Laws and policies (% correctly answered)[a]					
1. California law says that some businesses have to display a poster with the national phone number for reporting human trafficking.	13 (54)	16 (67)	33 (50)	54 (45)	0.24
2. All traffickers use some type of physical restraint, physical force, or physical bondage to control their victims.	6 (22)	6 (25)	28 (37)	76 (58)	<0.01*
3. Human trafficking must involve some form of travel across state or national borders.	5 (19)	5 (21)	30 (41)	96 (74)	<0.01[b,*]
Beliefs and attitudes (% strongly agree/agree)[a]					
4. There are enough services in Los Angeles to help survivors of human trafficking.	7 (27)	12 (50)	14 (19)	7 (5)	<0.01*
5. I can recognize the signs of human trafficking.	10 (37)	13 (52)	16 (22)	25 (19)	<0.01*
6. I know what to do if I suspect someone is being trafficked.	16 (59)	12 (50)	33 (44)	48 (37)	0.10

*$p \leq 0.05$.
[a]All '*n*' and '%' for statements 1, 2, and 3 represent '*n*' and '%' of the 'correct' answers. All '*n*' and '%' for statements 4, 5, and 6 represent '*n*' and '%' of 'strongly agree/agree' responses.
[b]Fisher's Exact Test was used, due to sparse sample size in some cells.

reporting of HT or requesting assistance. Under Senate Bill 1193 and Civil Code Section 56.2, specified business or other establishments including bars, airports, bus stations, and hospitals must post the notice near the public entrance or in another conspicuous location in clear view of the public and their employees (35). One plausible explanation for the low knowledge about this law is the current lack of compliance and enforcement (36). If the signs were appropriately posted among businesses covered by this law, South Los Angeles CBO/FBO representatives would likely be more familiar with it.

The present study is among the first to look at HT within the context of community organizations' emerging need to build capacity to address the negative impacts of this crime on their community. The HTS revealed that South Los Angeles community members held common misconceptions about the methods of power and control used in HT; more than half (57%) believed it is true that 'All traffickers use some type of physical restraint, physical force, or physical bondage to control their victims.' According

Table 4. Association between participant sociodemographic characteristics and knowledge of human trafficking (HT) laws and policies, Service Planning Area 6 in Los Angeles County, Human Trafficking Survey, 4 December 2015 to 28 January 2016 ($n = 277$).

Statements[a]	*HT must involve some form of travel across state or national borders (q_1d)*				*California law requires poster with national phone number to report HT (q_1g)*				*All traffickers use some type of physical restraint, physical force, or physical bondage (q_1k)*			
Variables	*n*	%	*AOR*[b]		*n*	%	*AOR*[c]		*n*	%	*AOR*[d]	
Gender			AOR	95% CI			AOR	95% CI			AOR	95% CI
Female	183	79	1.00	----	172	79	1.00	----	186	79	1.00	----
Male	50	21	1.24	0.57, 2.72	47	21	1.44	0.71, 2.93	50	21	1.90	0.94, 3.82
Age group												
18–39	96	41	1.00	----	94	43	1.00	----	97	41	1.00	----
40–64	116	50	0.87	0.45, 1.70	105	48	0.91	0.50, 1.64	117	50	0.68	0.38, 1.24
⩾ 65	21	9	0.15	0.05, 0.50	20	9	0.42	0.14, 1.22	22	9	0.71	0.25, 2.00
Race/ethnicity												
African American/Black	109	47	1.00	----	103	47	1.00	----	110	47	1.00	----
Asian/Pacific Islander	8	3	0.58	0.11, 3.02	8	4	1.34	0.29, 6.21	8	3	0.88	0.19, 3.95
Hispanic/Latino	89	38	0.51	0.25, 1.04	82	37	0.86	0.44, 1.69	90	38	0.51	0.26, 1.00
White/Non-Hispanic	13	6	1.66	0.30, 9.12	12	5	0.42	0.12, 1.49	13	6	0.71	0.21, 2.40
Other	14	6	1.00	0.29, 3.51	14	6	1.27	0.40, 4.09	15	6	2.03	0.62, 6.67
Education												
Completed less than high school	26	11	1.00	----	24	11	1.00	----	27	11	1.00	----
High school graduate or GED	23	10	1.10	0.27, 4.59	23	11	0.50	0.15, 1.68	23	10	1.11	0.29, 4.28
Some college, community college or trade school	66	28	2.88	0.90, 9.24	60	27	1.04	0.37, 2.92	67	28	1.47	0.48, 4.46
College graduate/ postgraduate	118	51	11.50	3.66, 36.14	112	51	1.52	0.56, 4.11	119	50	2.95	1.02, 8.50

All adjusted odds ratio (AOR) values were generated by simultaneous entry of all covariates in a logistic regression model.

[a]Statements q_1d, q_1g, and q_1k were true/false questions, which received 51%, 45%, and 43% correct answers, respectively.

[b]Hosmer–Lemeshow goodness-of-fit test $X^2_{(df=8)} = 8.1833$, $p = 0.4158$.

[c]Hosmer–Lemeshow goodness-of-fit test $X^2_{(df=7)} = 7.0559$, $p = 0.4231$.

[d]Hosmer–Lemeshow goodness-of-fit test $X^2_{(df=8)} = 7.2663$, $p = 0.5082$.

to the official definition of HT, human trafficking occurs through the means of force, fraud, and coercion (2). Fraud does not involve physical or sexual abuse and most of the methods of coercion do not involve physical or sexual abuse either. Also, according to the US Department of Health and Human Services, Office on Trafficking in Person (OTIP) (37), control of HT victims can occur via means other than physical force. OTIP indicates that 'while some victims are physically held by their trafficker, psychological means of control are more common.' Psychological and other non-physical means of control may include verbal abuse, threats, intimidation, promotion of fear, and exploitation of a person's drug addiction (37,38).

Collectively, study findings suggest that, despite generally high knowledge of HT, gaps in knowledge remain. These gaps could limit community members' understanding and ability to recognize and respond to victims of trafficking with whom they interact. Raising awareness (e.g., familiarizing CBOs/FBOs with local

Table 5. Association between participant sociodemographic characteristics and perceptions of human trafficking (HT), Service Planning Area 6 in Los Angeles County, Human Trafficking Survey, 4 December 2015 to 28 January 2016 ($n = 277$).

Statements[a]	*There are enough services in Los Angeles to help survivors of HT (q_2e)*				*I can recognize the signs of HT (q_2g)*				*I know what to do if I suspect someone is being trafficked (q_2h)*			
Variable	*N*	%		*AOR*[b,c]	*n*	%		*AOR*[d]	*n*	%		*AOR*[e]
Gender			AOR	95% CI			AOR	95% CI			AOR	95% CI
Female	186	79	1.00	----	190	79	1.00	----	190	79	1.00	----
Male	50	21	0.07	0.005, 1.00	50	21	1.26	0.55, 2.89	50	21	0.97	0.48,1.94
Age group												
18–39	97	41	1.00	----	97	40	1.00	----	97	40	1.00	----
40–64	117	50	0.89	0.38, 2.07	121	50	1.11	0.56, 2.18	121	50	1.38	0.77, 2.46
⩾ 65	22	9	2.16	0.57, 8.15	22	9	0.32	0.06, 1.59	22	9	1.36	0.50, 3.70
Race												
African American/Black	110	47	1	----	111	46	1.00	----	111	46	1.00	----
Asian/Pacific Islander	8	3	0.40	0.01, 11.58	8	3	0.33	0.03, 3.13	8	3	0.48	0.09, 2.54
Hispanic/Latino	90	38	1.62	0.61, 4.27	92	38	0.53	0.24, 1.19	92	38	0.81	0.42, 1.56
White/Non-Hispanic	13	6	1.95	0.26, 14.81	14	6	0.69	0.17, 2.89	14	6	0.81	0.24, 2.71
Other	15	6	1.34	0.25, 7.24	15	6	0.35	0.07, 1.87	15	6	1.17	0.39, 3.53
Education												
Completed less than high school	27	11	1.00	----	28	12	1.00	----	28	12	1.00	----
High school graduate or GED	23	10	2.44	0.72, 8.30	24	10	1.74	0.55, 5.49	24	10	0.62	0.20, 1.95
Some college, community college or trade school	67	28	0.75	0.23, 2.42	68	28	0.30	0.10, 0.91	68	28	0.47	0.18 1.24
College graduate/ postgraduate	119	50	0.25	0.07, 0.88	120	50	0.27	0.10, 0.76	120	50	0.36	0.14, 0.92

All adjusted odds ratio (AOR) values were generated by simultaneous entry of all covariates in a logistic regression model.

[a]Statements q_2e, q_2g, and q_2h were Likert-scaled questions, which received 16%,26%, and 43% strongly agree/agree responses, respectively.

[b]Hosmer–Lemeshow goodness-of-fit test $X^2_{(df=7)} = 1.5811$, $p = 0.9794$.

[c]Due to quasi-separation, (AOR = 999, or 'blown up AOR'), the Firth option was used to calculate these AORs.

[d]Hosmer–Lemeshow goodness-of-fit test $X^2_{(df=8)} = 9.2431$, $p = 0.3222$.

[e]Hosmer–Lemeshow goodness-of-fit test $X^2_{(df=9)} = 7.4067$, $p = 0.5949$.

HT laws and policies) and offering training on ways to recognize this serious public health problem may help increase accountability and optimize proper actions among these organizations when HT is suspected. DPH and other health agencies in LAC can assist with this capacity-building effort by developing and promoting well-planned and executed community-based training programs, including, but not limited to, class-based or internet-based workshops, brochures about HT, and technical assistance on implementing organizational protocols that help employees identify and address HT when it is suspected. In addition, workshops on trauma-informed approaches could provide valuable information on how to engage with HT victims (7,39). Based on the results from a sub-module of the present survey (data not shown), CBO/FBOs' interest in further training on HT is high. Among all survey participants, 70% expressed interest in future workshops or trainings on HT. Preferred methods of obtaining such information included: classroom/speaker (58%), via internet (47%), and brochures (41%).

Limitations

Although the study is a first of its kind to survey and investigate HT knowledge and perceptions in South Los Angeles, the design and analysis of the survey were, nevertheless, limited. First, the relatively small sample size available for analysis ($n = 277$) reduced the study's statistical power and limited its ability to comprehensively examine participant characteristics and associations between HT and educational attainment at the individual level. However, the value of the HTS is not its findings at the individual level, but rather the survey's representation of CBOs and FBOs that participated in SPA 6's coalition network. From this more global vantage point, the data from the HTS offers system level value and more possibilities for application at the organizational level. Second, the statistical analyses relied heavily on self-reported information. As such, reporting bias and lack of external validity beyond the surveyed group are present and should be considered carefully when interpreting the results. Lastly, as the study was conducted among a group of CBO/FBO representatives from relatively different racial/ethnic composition, and with higher than average educational attainment, generalizability of the survey results to the clientele they serve or to SPA 6 community residents is limited and should be used with caution. This limitation also applies to the frontline staff at these CBOs/FBOs.

Conclusions

The HTS findings not only identified important knowledge gaps in health promotion practice but pointed to opportunities where improvements could be made, suggesting a roadmap that DPH and others can follow to help prepare communities to better recognize and address HT in their neighborhoods and places of work. This roadmap can be further strengthened by raising public awareness, building better capacity among CBOs/FBOs to mitigate the problem, and offering training/workshops on trauma-informed approaches to care for trafficked people (7,39). The information gathered from this study answers the questions posed in the introductory paragraphs of this article. The information is presently being applied in the field, informing efforts to develop and implement meaningful health education tools and training programs for CBOs and FBOs in LAC.

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Ethical approval

The project was considered exempt by the Institutional Review Board at the Los Angeles County Department of Public Health.

ORCID iD

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Supplemental material

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Alcohol consumption messages in Korean dramas: the globalization of South Korean drinking norms

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Abstract: South Korea has one of the highest rates of monthly alcohol consumption, high-risk drinking, and alcohol-related problems. Global viewers of Korean dramas consume messages about the cultural norms regarding alcohol consumption. There is limited data on the portrayal of alcohol in Korean dramas. The purpose of this embedded mixed methods study is to explore the nature of the portrayal of alcohol consumption in Korean dramas. Content analysis was conducted on a random selection of six drama series. The portrayal of alcohol consumption is ubiquitous, with a reference to alcohol approximately every 12 minutes of programming. The primary messages include the ritualistic importance of alcohol, the over consumption of alcohol by males and females, alcohol as a stress reliever, alcohol as a relationship facilitator, intoxication as a positive valence, unrealistic consequences of intoxication, males as reliable caretakers of intoxicated females, and nondepiction of driving while intoxicated. The results of this study further our understanding of the frequency of the portrayal of alcohol and the prevailing messages about alcohol consumption and intoxication in Korean dramas.

Keywords: alcohol, Asia, determinants of health, global health/globalization, public health, qualitative, quantitative, South Korea

Introduction

The purpose of this embedded mixed methods study is to explore the nature of the portrayal of alcohol consumption in Korean dramas (K-dramas) and to present a theoretical perspective on the prevalent messages about alcohol consumption and related alcohol behaviors that may pose a threat to health and social outcomes. Alcohol consumption is a leading risk factor of the global disease burden (1). Over consumption of alcohol is a known cause of diseases of the heart, liver, and pancreas and is associated with a higher risk of cancer, hyper-tension, diabetes, and intentional and unintentional injury (2). Alcohol-related problems include nega-tive health, social, and economic consequences, particularly in career, family, and marital development (3,4). Alcohol consumption is associated with interpersonal aggression, violent crimes, and sexual assault (5,6). Further, sexual assault victims often report that they were consuming alcohol prior to the assault (6). Previous work indicates that South Korea has one of the highest rates of monthly alcohol consumption, high-risk drinking, and alcohol-related problems in the world (7). In 2012, the total annual cost of alcohol-related violence and crime in South Korea was estimated to be 32.2 trillion Korean won (8). Further, alcohol is associated with close to half (40%) of the reported violent crimes in South Korea (9). Gender is a factor in alcohol consumption, the

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prevalence of high-risk drinking, and alcohol use disorder in South Korea (10). Although annually males consume larger quantities of alcohol (21.0L) than females (3.9L), alcohol consumption among South Korean females has rapidly increased (10).

The consumption of alcohol has a strong social meaning, with accompanying rituals and norms within the Korean culture (11). These cultural norms include values such as not driving after consuming alcohol and the strict etiquette of drinking alcohol with individuals who are older or of a higher rank. In Korean society, the collective consumption of alcohol is used as a means to build bonds and maintain a sense of community, within family, with friends, and with colleagues (11). Collective alcohol consumption and its resultant drunkenness is an integral component of Korean culture, especially corporate culture. The practice of 'Hweshik', colleagues drinking and dining together, is a feature of Korean work life. Further, the achievement of states of extreme drunkenness is valued in corporate drinking events (12).

The practice of 'Hweshik' is regularly portrayed in K-dramas that are easily accessible globally through streaming services. K-dramas refer to televised miniseries in Korean language that are produced in South Korea. Global viewers of K-dramas quickly learn to recognize the distinctive green bottles of soju, a rice-based distilled Korean alcoholic beverage. Alcohol is widely advertised and portrayed across the Korean media (7). Currently, regulations regarding the portrayal of alcohol in the media is limited to commercials (13). Korean media programs promote Korean culture, including cultural norms regarding alcohol consumption. The growth of the Korean media influence across the globe has been primarily through dramas, which are available on the Web and through streaming services. The distinct global rise in the influence of Korean media is referred to as the 'Korean/Hallyu Wave', and extends beyond Asian countries to countries in the Middle East and North and South America (14). The primary consumers of Korean media products are females between the ages of 18 and 24 (15). The impact of the 'Korean/Hallyu Wave' can be witnessed in the growth of tourism in South Korea and the increased acceptance and adoption of Korean cultural products such as food, language, and fashion (16). There is evidence of a positive relationship between Korean TV program exports and Korean merchandise exports such as cosmetics, food, and beverages (17). Embedded advertising of Korean products in K-dramas has been an effective strategy in increasing sales and influencing consumer behavior (17).

It is well documented that television programming is a source of socialization, primarily through the depiction of the lifestyles of influential and/or aspirational characters (18). Chang and Lee (17) report that the attractive appearances of Korean actors, actresses, and singers is one of the primary factors that contributes to the popularity of K-dramas among individuals who live beyond the borders of South Korea. The normalization of the behaviors depicted in the media increases the likelihood of individuals engaging in these behaviors (18). Individuals' alcohol expectancies, attitudes, and behaviors are reported to be influenced by the portrayal of alcohol in the mass media (18). Further, there is evidence that televised advertisements of alcohol contribute to increased drinking among youth (19). Youth are more likely than adults to remember alcohol advertisements on the television and internet (20). However, there is limited data on the portrayal of alcohol in K-dramas. It is important to create an awareness and scrutiny of the messages regarding alcohol consumption that are disseminated globally through K-dramas.

This study utilizes a conceptual model for examining the portrayal of alcohol consumption in K-dramas and is applied with the specific use of constructs from social learning theory (21) and cultivation theory (22). According to social learning theory, individuals' behaviors and beliefs are shaped by observational learning. Bandura (21) postulates that human behavior is learned through the observation of others in a social context. There is evidence that learning and reinforcement of drinking behaviors occur through social modeling and perceived normative behaviors (23). Further, cultivation theory posits that individuals' construction of meaning and perception of norms is influenced by heavy media programming exposure to portrayals of specific behaviors (22). Cultivation theory is grounded on the principle that the content of media programming is a distorted view of reality and frequent exposure to these distorted perceptions of reality result in the internalization of these skewed images.

Purpose

In order to be able to consider the nature of alcohol messages that are being communicated to audiences of K-dramas, it is necessary to actively monitor the content of K-dramas. The aim of this study is to provide an accurate and thorough evaluation of the prevalence and nature of the portrayal of alcohol consumption and intoxication in K-dramas.

Methods

In order to consider the research question through deductive and inductive lenses, an embedded mixed methods design was utilized to conduct a content analysis of K-dramas. The sample included a random selection of six popular K-drama series broadcasted in 2018. The sample was selected from the website Kdramapal (24), which provides information on K-dramas including TV ratings. Each K-drama series included 16 one-hour episodes, with a total of 96 hours of programming. The sample was drawn from international streaming services, such as Netflix and Viki. These dramas include: *What Is Wrong with Secretary Kim* (*WIWWSK*), a romantic comedy about a business man and his secretary; *Devilish Joy* (*DJ*), a romantic drama about a rich man with short-term memory loss, who falls in love with a poor woman; *Something in the Rain* (*SITR*), a romantic drama about an older woman who falls in love with a younger man; *The Smile Has Left Your Eyes* (*TSHLYE*), a mystery thriller that centers on a police detective and his sister, who falls in love with the murder suspect; *Miss Hammurabi* (*MH*), a legal drama about the lives of three judges and the civil cases they oversee; and *Radio Romance* (*RR*), a romance comedy about a radio program writer and an actor (24).

The drama series were analyzed by three investigators, who individually watched and recorded rich descriptions of scenes related to alcohol consumption and intoxication, including dialogue spoken by the characters. Each drama series was analyzed twice by two different investigators to establish interrater reliability.

A database of descriptive information about the explicit verbal and visual depictions of alcohol consumption in the K-dramas was developed. The primary units of analysis included the length of portrayal of alcohol consumption, number of separate portrayals of alcohol consumption, the number of portrayals of drunkenness, and the number of portrayals of consequences of intoxication. Descriptive statistics were utilized to analyze the quantitative data.

The Framework Method, which is best suited for thematic analysis of relatively homogenous data, was utilized to explore the depictions of alcohol consumption and intoxication (25). Data collection and analysis occurred iteratively and simultaneously. Following the analysis of each drama series, the authors individually read the transcriptions to familiarize themselves with the content and to obtain a broad overview of the data.

The coding process began with the investigators conducting 'open coding', and attaching descriptive labels to segments of data (25). After analyzing the transcripts of the first episodes of the dramas, the three investigators compared labels that were generated and agreed on an initial set of codes to apply to all subsequent transcripts. Validity was established through peer debriefing on a weekly basis during the analyses and coding process. Coding decision details were logged during the weekly debriefs. This was followed by focus coding (25), where common codes were grouped into categories within the transcripts of each drama series. The investigators then indexed all the transcripts with the categories and codes. In the final stage, charting was conducted by summarizing the data by category for each transcript, and the nine themes were identified.

Results

Quantitative

Over the 96 one-hour episodes of programming, there were 453 separate instances of verbal and/or visual depictions of alcohol, with an average of one reference to alcohol every 12.7 minutes. All 96 episodes contained at least one alcohol depiction with a maximum of 17 separate instances of verbal and/or visual depictions of alcohol in an episode. For each drama series, the mean separate incidents of portrayal of alcohol ranged from 1.86 (SD = 1.12) to 5.24 (SD = 3.52) incidents per episode. The frequency of separate instances of portrayal of alcohol for each drama series ranged from 71

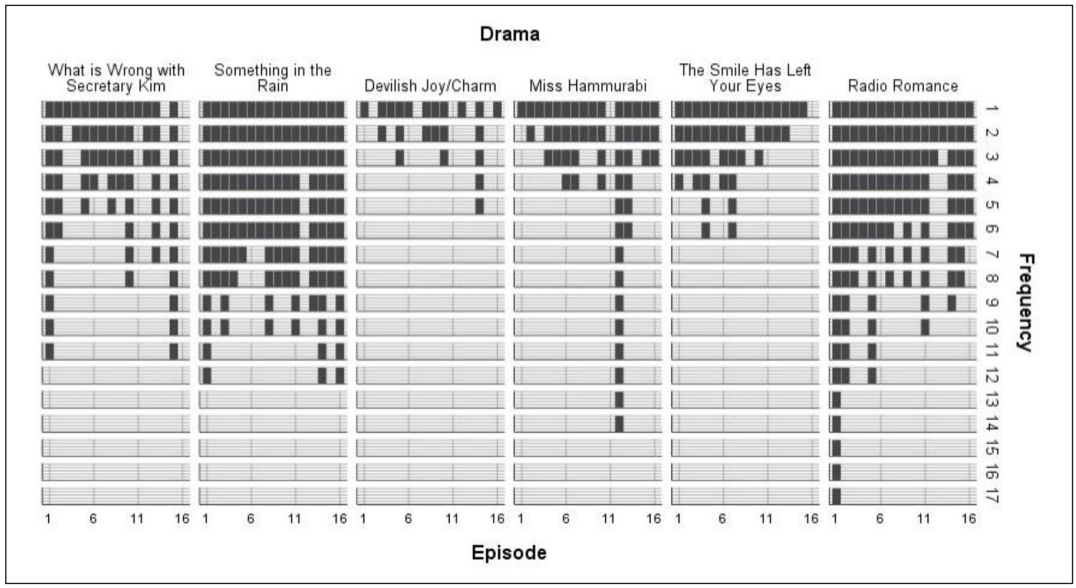

Figure 1. Frequency of portrayal of alcohol per episode across drama series.

(*WIWWSK*) to 137 (*SITR*) (Figure 1). Active consumption of alcohol, such as actors drinking alcohol or holding a bottle of soju, were slightly more common (51%) than depictions of implied consumption of alcohol, such as talking about meeting up for drinks, or sitting at a table with the distinctive green bottle of soju.

The 96 hours of programming included 12.84 hours of verbal and/or visual depictions of alcohol. The length of each separate instance of verbal and/or visual depiction of alcohol ranged from 1.04 minutes to 4.36 minutes, with a mean of 1.7 minutes (SD = 1.97 minutes) (Figure 2). There were 151 separate portrayals of intoxication within the 96 hours of programming, the majority (70.8%) of the portrayals of intoxication were depicted as humorous. The consequences of intoxication, such as waking up with a headache or eating hangover soup, a soup meant to cure hangovers, was depicted 130 times.

The depictions of alcohol consumption occurred across a wide range of environments including home, office, restaurant, bar, and street bars, with bar/restaurant (34.4%) and home (32%) being the most common settings. The primary types of alcohol depicted were beer (21.2%), soju (19.9%), and wine (15.7%). Scenes of alcohol consumption had the following distribution: male characters alone (29.8%), female characters alone (21.9%), and both male and females characters (48.3%). Similarly, characters from all socioeconomic status were depicted consuming alcohol. However, characters from higher socioeconomic status were depicted consuming wine more often than characters from lower socioeconomic status. Underage drinking was not portrayed in any of the dramas series analyzed. There was one portrayal of drunk driving in the 96 hours of programming. Slightly more than one-third (34.2%) of the depictions of alcohol consumption were of heavy binge drinking, which was defined as the consumption of four or more glasses of alcohol in one sitting.

Qualitative

The qualitative analysis primarily sheds light on the research questions: 'What are the environmental, demographic, and social factors associated with the portrayal of alcohol in K-dramas?' and 'What is the nature of the messages about intoxication that are portrayed in K-dramas?'. Nine major themes each with a number of subthemes emerged from the multiple readings of the data. The major

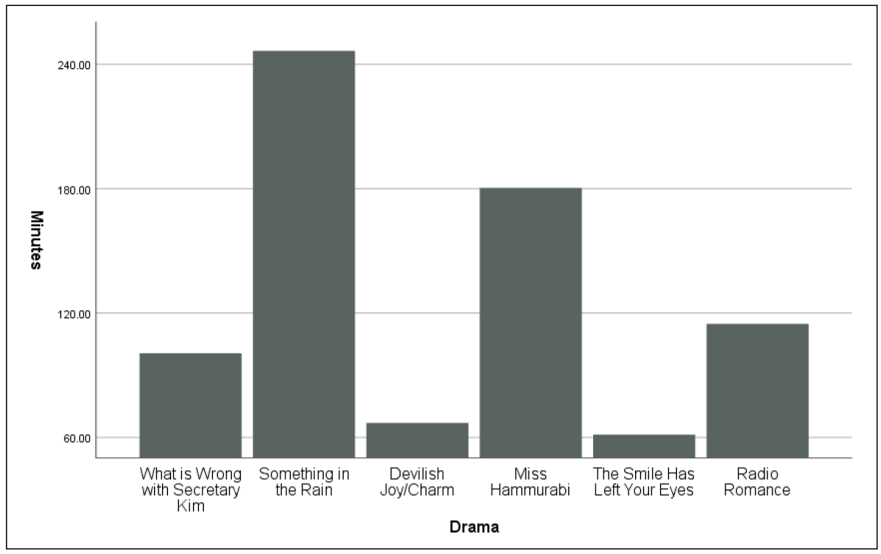

Figure 2. Portrayal of alcohol in minutes across drama series.

themes that were identified include (a) ritualistic importance of alcohol, (b) alcohol consumption as an integral component of professional culture, (c) alcohol as a coping mechanism, and (d) equal portrayal of alcohol consumption by both genders. The major themes that characterized the messages about intoxication in K-dramas include (a) intoxication as positive valence, (b) caretaking of the intoxicated, (c) gendered caretaking of the intoxicated, (d) not driving while intoxicated, and (e) unrealistic depictions of consequences of intoxication.

Ritualistic importance of alcohol

The ritualistic importance of alcohol, specifically soju, is evident in the drama series analyzed. The offering of alcohol to an individual was frequently portrayed as an act of respect, especially to elders or individuals of a higher social status. Rituals such as pouring alcohol respectfully with two hands, and younger drinkers turning their heads away when drinking alcohol, were included in all six drama series. Further, alcohol was portrayed as a significant requirement when visiting the burial sites of the dead. The protagonist in *TSHLYE* makes a toast to his parents and pours soju onto the ground of the site of his parents' death.

Alcohol consumption as an integral component of professional culture

Alcohol consumption, by professionals either in the work environment or as a component of work requirements, was common. The practice of 'Hweshik' was depicted in all but one of the dramas. These scenes included acts of colleagues consuming large quantities of alcohol during dinner in restaurants. Often, the expertise of mixing 'Somek' (a mixture of soju and beer) was highlighted, with the accompanying chants of 'one shot' to encourage the characters to finish the drink in one gulp. A common phrase in these scenes was 'drink till we die'. In *SITR*, female characters encountered sexual harassment at these dinner and drinking parties and female employees were coerced by their supervisors to attend these events. Colleagues who did not participate in 'Hweshik' events or left early were characterized as nonteam players or other negative characteristics. In these 'Hweshik' events, professional hierarchy and behavioral norms dissolve with increased intoxication.

Alcohol consumption as a coping mechanism

Across the various story lines in the drams series analyzed, characters resorted to drinking copious amounts of alcohol when encountering problems.

Scenes of characters who are either stressed out or encountering problems are frequently followed by scenes of these characters consuming alcohol. These problems included romantic, financial, interpersonal, family, and work-related issues. Characters were shown either drinking alone or with friends and/or family, and often to the point of passing out. Characters are depicted consuming alcohol after the depiction of the following: inability to resolve crime cases, being demoted, arguments with colleagues, friends, and family members, and being rejected by love interests.

Equal portrayal of alcohol consumption by both genders

There was no gender disparity in the portrayal of alcohol consumption across the drama series analyzed. Alcohol consumption scenes included both males and females, drinking alone, with members of the same sex, or members of the opposite sex. Further, there was no difference in the portrayal of excessive drinking between men and women. Women were as likely as men to be pictured passed out from over consumption of alcohol.

Intoxication as a positive valence

Overall intoxication was depicted in a light and humorous vein. Intoxicated characters were depicted by flushed faces, hiccups, staggering, dancing, singing, slouched posture, slurred speech, giggling, being over emotional, smelling of alcohol, sleepy or passed out. Intoxication was frequently characterized as a liberating factor that enabled the character to be open and honest about their true feelings and emotions. Intoxication was portrayed as a license for characters to state their true feelings about others and express their romantic interest in the other characters. There were minimal references to the hazards of alcohol consumption. The most common extreme depiction of characters' intoxication was of characters passed out at the table of the venue of alcohol consumption. None of the passed out characters encounter sexual assault, rape, or robbery. Only *MH*, addressed the issue of rape and domestic abuse while intoxicated. Although the portrayals of drunk males and females were similar, intoxicated females were more often depicted giggling. Further, females who were intoxicated were described in paternalistic tones with words such as 'cute', 'crazy', 'funny', 'innocent', 'stupid', and 'silly' as demonstrated with statements such as 'Women are extremely cute when drunk' [*MH*]. Female characters frequently refer to themselves as 'crazy', when they recall their intoxicated behavior [*WIWWSK*]. However, while intoxicated females were generally depicted as cute, they were not specifically depicted as sexually attractive.

The dramas analyzed included several scenes where female characters were either unable to or had difficulty remembering their actions and conversations while intoxicated. The embarrassment of these characters when they do recall their actions and conversations while intoxicated were framed as humorous scenes.

Caretaking of the intoxicated

In all the dramas analyzed, intoxicated individuals were always looked after by their friends, family members, significant others, or their love interests. These included scenes of intoxicated characters being told to either stop or slow down the consumption of alcohol, being provided assistance when they stagger or fall down, and other characters trying to wake up the intoxicated characters who have either fallen asleep or passed out. A common theme in all the dramas analyzed was the depiction of passed out characters being assisted back to the safety of either their own or friend's homes.

Gendered caretaking of the intoxicated

There is a gender difference in the portrayal of caretaking of the intoxicated. Intoxicated females were more often portrayed being carried home on the backs of males. All six drama series analyzed included scenes of passed out females being carried on the backs of their male colleagues, friends, and love interests. Often it was not clear if the character was asleep or unconscious. Men were designated caretakers of intoxicated females more often than the reverse. Only one drama series [*WIWWSK*] included a scene of the female protagonist assisting the intoxicated male protagonist, by holding on to him and helping him walk. Male characters were depicted as trustworthy caretakers of passed out female characters. Further, these scenes signaled the intensity of the love of the male protagonist for the female protagonist.

Not driving while intoxicated

Only one of the dramas included scenes of driving while intoxicated. *TSHLYE* contained a scene of an intoxicated driver driving recklessly, crashing the car, and dying. In all the other drama series, intoxicated individuals either walked or were carried home by their friends, family members, or significant others. Intoxicated individuals were also shown getting into taxis or other cars with nonintoxicated drivers. 'Daeri un-jeon' replacement driver services were often portrayed. Several of these scenes were preceded by scenes where the characters intentionally decide and make plans not to drive to the venue of alcohol consumption.

Unrealistic depictions of consequences of intoxication

The long-term health and social consequences of binge drinking and intoxication were rarely addressed in the drama series analyzed. Frequently, scenes of characters passed out at night were followed by scenes of the same characters going to work the next morning, bright and cheery. The short-term negative health consequences of over indulgence of alcohol was rarely depicted and limited to minor consequences such as a head or stomach ache, the next morning. A common element across the drama series was the serving of 'Haejang-guk' or 'Sulguk', soups that are thought to cure hangovers, for breakfast after a night of intoxication.

Discussion

K-dramas are popular worldwide, including in countries with strict regulations on the advertisement, sale, and consumption of alcohol. These international viewers have their own unique cultures, norms, and alcohol expectancies. For many viewers, especially from countries in the Middle East, K-dramas are one of the primary introductions to alcohol and may shape alcohol expectancies. This is especially true for the primarily young adult viewers of K-dramas, who are more susceptible to alcohol advertisements and portrayals in the media (26). Product placement of alcoholic beverages is a popular marketing strategy of the Korean alcohol industry, as evidenced by the high visibility of the Jinro brand of soju in Korean films (27). Although the portrayal of alcohol is ubiquitous in American television programming, primarily through background visual exposure, the messages, however, are predominantly about the negative consequences of alcohol consumption (28). The expositions of the depiction of alcohol and alcohol consumption through theoretical perspectives provides the basis for discussing the broader range of likely behavioral and health outcomes.

In social learning theory, Bandura (21) states that behavior is learned through the observation of others in a social context. Observational learning influences the definitions of normative social practice and standards of conduct. Behaviors such as the choice and quantity of alcohol consumed, and acceptable behavior while intoxicated can be learned and reinforced through social modeling. The high prevalence and prominence of the portrayal of alcohol consumption in K-dramas may result in the elevation of the perception of alcohol as a requirement for effective social interaction.

The repeated visualization of binge drinking may lead viewers to imitate and normalize the behavior. K-dramas convey information about the appropriate enactment of modeled behavior in varying social and environmental situations. This includes behavior related to alcohol consumption in professional work environments. Although non-Korean viewers may be aware of the differences in alcohol expectancies and work cultures across various countries, vicarious learning about consuming copious amounts of alcohol with colleagues and the resultant intoxicated behavior may still subconsciously occur. One of the most concerning behaviors that is modeled is the use of alcohol as a coping mechanism. This is especially concerning when considering that the viewers of K-dramas are primarily between the ages of 18 and 24, and in the early stages of forming alcohol beliefs and expectations. There is empirical evidence that the use of alcohol as a coping mechanism leads to problematic drinking (29). The common depiction of an intoxicated person either falling asleep, or unconscious, leads viewers to believe that it is a common and normal element of intoxication. However, loss of consciousness from over consumption of alcohol is a symptom of alcohol poisoning and may be life threatening (30).

Through the process of vicarious learning, viewers of K-dramas may learn to associate alcohol consumption with rewarding experiences and not gain a comprehensive understanding of the negative consequences of over consumption of alcohol. Vicarious learning may affect behavior by regulating

the strength of inhibitions governing proscribed or generally disapproved acts; the modeling of punishment or negative consequences may lead to heightened self-restraint, while rewards or lack of negative consequences may have a disinhibiting effect. For example, the observations of intoxicated characters behaving inappropriately in professional settings and not being remorseful of, or punished for their inappropriate behavior, may lower inhibition among viewers. Whereas observations of female characters who are embarrassed about struggling to recall their actions while intoxicated may impel viewers to reconsider drinking excessively.

K-dramas' recurrent linkage of alcohol to sociability, attractiveness of females, and general positive characteristics increases the likelihood of misattributing alcohol consumption to rewarding experiences. The frequent portrayal of intoxicated and passed out females characters being carried home and cared for by their male love interests may lead to the misattribution of intoxication as beneficial to the progression of romantic relationships and a distorted impression of intoxication and safety. Further, through vicarious learning, individuals may connect behavior to causes that are frequently depicted simultaneously. Therefore, the scenes of binge drinking that precede depictions of mild symptoms of a hangover, and the lack of any serious consequences, may encourage viewers to believe that binge drinking is not harmful to health and safety. However, serious harm can occur when individuals consume alcohol to the point of blacking out.

Cultivation theory posits that individuals' construction of meaning and perception of norms is influenced by heavy media programming exposure to portrayals of specific behaviors (22). The frequent exposure to a distorted view of reality facilitates the internalization of inaccurate messages and perceptions of reality. The positive bias of the portrayal of the effects of intoxication may lead to a skewed and unrealistic perception of reality. The frequent portrayal of alcohol as an effective coping mechanism in K-dramas does not reflect the literature on the correlation between alcoholism and depression and/or suicide (31).

This embedded mixed methods study is the first to investigate the portrayal of alcohol and corresponding messages in K-dramas. The limitations to this study include the analysis of drama series available through two video-on-demand streaming services, and only dramas that were broadcasted in 2018. Future studies will alleviate these limitations and broaden the analysis to a wider range of Korean media programming and will include the effect of these alcohol-related messages on the global audience of K-dramas.

Declaration of conflicting interests

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Original Article

Peri-urban water, sanitation and hygiene in Lusaka, Zambia: photovoice empowering local assessment via ecological theory

Sikopo Nyambe[1,2] and Taro Yamauchi[1,2]

Abstract: Water, sanitation and hygiene (WASH) factors are responsible for 11.4% of deaths in Zambia, making WASH a key public health concern. Despite annual waterborne disease outbreaks in the nation's peri-urban (slum) settlements being linked to poor WASH, few studies have proactively analysed and conceptualised peri-urban WASH and its maintaining factors. Our study aimed to (a) establish residents' definition of peri-urban WASH and their WASH priorities; and (b) use ecological theory to analyse the peri-urban WASH ecosystem, highlighting maintaining factors. Our study incorporated 16 young people (aged 17–24) residing in peri-urban Lusaka, Zambia in a photovoice exercise. Participants took photographs answering the framing question: 'What is WASH in your community?'. Then, through contextualisation and basic codifying, participants told the stories of their photographs and made posters to summarise problems and WASH priorities. Participant contextualisation and codifying further underwent theoretical thematic analysis to pinpoint causal factors alongside key players, dissecting the peri-urban WASH ecosystem via the five-tier ecological theory ranging from intrapersonal to public policy levels. Via ecological theory, peri-urban WASH was defined as: (a) a poor practice (intrapersonal, interpersonal); (b) a health hazard (community norm); (c) substandard and unregulated (public policy, organisational); and (d) offering hope for change (intrapersonal, interpersonal). Linked to these themes, participant findings revealed a community level gap, with public policy level standards, regulations and implementation having minimal impact on overall peri-urban WASH and public health due to shallow community engagement and poor acknowledgement of the WASH realities of high-density locations. Rather than a top-down approach, participants recommended increased government–resident collaboration, offering residents more ownership and empowerment for intervention, implementation and defending of preferred peri-urban WASH standards.

Keywords: photovoice, peri-urban, water, sanitation and hygiene, public health, ecological theory

Introduction

Access to improved water, sanitation and hygiene (WASH) can reduce global disease burden by 10% (1). However, there are geographical disparities hindering progress, with urban slums (i.e. peri-urban, or informal settlements) being overlooked in preference for rural settlements (1). Approximately 50% of the African population live in the peri-urban (2) with its few municipalities and services, and limited WASH facility access (3). The continent has the fastest peri-urban growth rate per annum at $> 4.5\%$ (4), adding to peri-urban WASH concerns and subsequent impact on public health.

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In Zambia, WASH factors are responsible for 11.4% of deaths (5). Only 67.7% of the population have access to improved drinking water sources and 40% to improved sanitation (6). Access reduces to 44% for water and as little as 10% for sanitation facilities in the peri-urban (7). In Zambia's capital, Lusaka, approximately 70% of the population live in its 37 peri-urban settlements (8,9). Despite diarrheal diseases being treatable and preventable, Zambia continues to have annual disease outbreaks, often emanating from the peri-urban. While outbreaks bring attention to the status of peri-urban WASH as a causal factor for disease and infection (10,11), they merely support a reactive approach to public health management rather than addressing underlying factors.

Research citing the local narrative, and/or giving an overall breakdown of poor peri-urban WASH maintainers and subsequent disease outbreaks, is scarce. An assessment of the peri-urban WASH ecosystem is, however, essential to creating sustainable, culturally appropriate and preventative public health strategies (12). Thus, working with peri-urban youth as local researchers, we used the photovoice method (13) to (a) define peri-urban WASH, identifying local WASH priorities; and (b) give a thorough analysis of the peri-urban WASH ecosystem through ecological theory.

The ecological theory offers a means of understanding individual and social environmental factors as targets for health promotion and public health intervention, subdividing behaviour impacts into: (a) intrapersonal (an individual's knowledge, attitudes, behaviours, skills and developmental history); (b) interpersonal (family, friends, peers, immediate environment); (c) organisational (rules, regulations and structures of schools, health centres, work places, etc.); (d) community (norms, values, organisational interactions); and (e) public policy (policy, procedure, law) (14). Through this theoretical analysis of the peri-urban WASH ecosystem as per residents' experiences, stakeholders can identify peri-urban WASH causal factors, maintainers and key players for relevant, focused and impactful public health intervention.

Methodology

The methodology will detail a photovoice exercise and analysis conducted in two peri-urban settlements in Lusaka, Zambia from December 2017 to March 2018. Participants acting as researchers were additionally part of a broader participatory action research. The research site selection and sampling procedure are broken down in Figure 1.

Research sites

Research sites were two of nine pre-assessed peri-urban settlements located within Lusaka City (see Figure 1, Stages 1 and 2) (9). They were selected for a participatory action research study focused on the incorporation of children and youth in peri-urban WASH assessment and intervention, of which photovoice was a key component. Sites were therefore selected based on availability of a local health centre, youth centre and recommendation from local research partners relating to disease outbreak and local topography.

Sampling and sample size

Before study commencement, ethical clearance was obtained from ERES Converge Ethical Approval Board, Lusaka: 2017-Mar-012; and Faculty of Health Sciences, Hokkaido University, Japan: 16-103. All research activities were carried out through the *Dziko Langa* (DL) Club (translation: My Community/Country) (see Figure 1, Stages 3–5). Study participants were all DL members who were residents of the research sites and recruited via convenient and then snowball sampling through local youth centres and peers respectively. Informed consent was required for participation. DL had approximately 40 active members between the two sites, but study participants were $n = 16$ (10 males, 6 females; age = 17–24 years); participation was based on availability.

Youth (< 25 years) were targeted as an eligible, representative sample (65.1% of the national population) (6), being active participants in household WASH practices through domestic chores such as water collection, toilet cleaning and even care of younger siblings (15–17). In agreement with this, children and youth have been participants and key actors in WASH and health research (13,18). With the long-term goal towards sustainability and development of peri-urban WASH approaches for intervention, a younger population was therefore, suitable. All participating youth were unmarried and

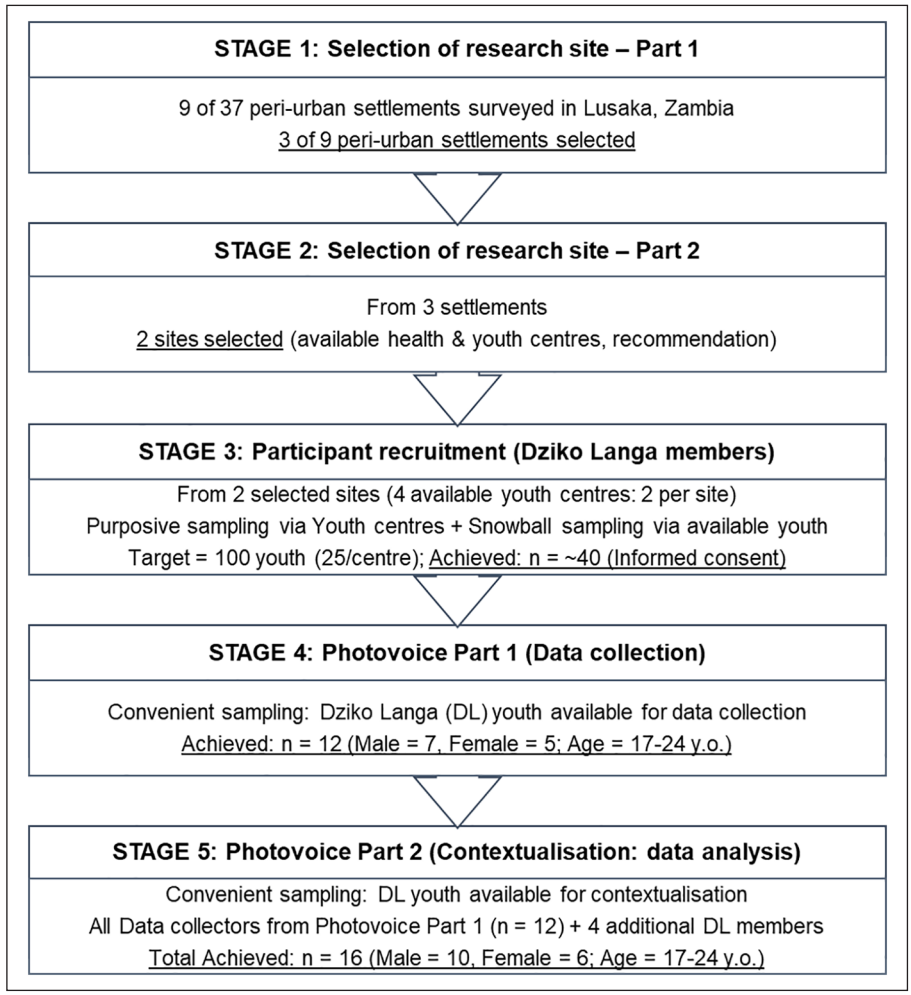

Figure 1. Flow diagram of sampling procedure.

literate in the English language. The lowest level of education was junior high school, the highest was first–year university. Six participants were employed and five were students; the remaining five had no occupation. The only sociodemographic requirements for participation were that participants resided in the research sites and were < 25 years.

The photovoice research method

Photovoice is a visual, participatory method in which cameras are given to individuals often excluded from decision-making processes in order to capture their voices and vision of their lives and their community (13). Relatively cost-effective and simple to use, photovoice was deemed suitable for data collection with this demographic. More so, this fairly new methodology has been found useful for identifying new, unique priorities in WASH, and encouraging community participation in project planning and engagement (19).

Based on previous literature (13,20), the photovoice exercise proceeded as follows:

1. Training: participants (n = 12) had a session on digital camera usage and research ethics, for

example gaining informed consent when taking peoples' photographs.
2. Data collection: each participant had four days to take 2–5 pictures answering the framing question: 'What is WASH in your community?'
3. Photo selection: on viewing all their photographs, each participant was requested to select the two that best expressed their view of WASH in their peri-urban settlement.

Post data collection, four additional youth joined the 12 data collectors, making the total 16. They were divided into five groups of three (one group had four participants) for contextualisation, basic codifying and poster presentation.

4. Contextualisation: narratives of selected photographs were shared by their respective photographers, explaining of why and where photographs were taken, and key variables to be noted in the storyline.
5. Codifying: a two-hour poster creation session provided simplified analysis for summation and categorisation of findings.
6. Poster presentation: each group had six minutes for presentation and an eight-minute discussion session. Discussions confirmed if participants agreed with the presented subject and its positive and negative associated factors.

Data analysis

After the photovoice exercise, theoretical thematic analysis (21) was conducted for more succinct codifying. Open coding of narratives supported by participant contextualisation and basic codifying was used to generate and modify codes which were grouped to create themes. Themes had to give clear, concise answers to the framing question: 'What is WASH in your community?' These themes were then positioned within the five ecological theory levels to describe the peri-urban WASH ecosystem. Note that photographs were not analysed, but were simply supporting pieces to narratives.

Results

Figure 2 shows participant-selected photographs (n = 24). Their corresponding narratives are in Table 1. The following pictures and narratives were related to public WASH facilities (see Figure 2 and Table 1): 1b, 2b, 2c, 2e, 2f, 3a, 3b, 3c, 3d, 4c, 4d, 4e, 5a and 5ax and 5b, whilst 1a, 1c, 1d, 2d, 4a, 4b, 4f, 5c and 5d referred to household facilities.

The results have been outlined by the research objectives; firstly defining peri-urban WASH, and secondly positioning identified themes within ecological theory. Though not often directly associated, participants emphasised poor waste management as a priority and key feature of peri-urban WASH. Poor waste management was cited as a source of faecal-oral contamination in Lusaka's 2017/2018 cholera outbreak (22).

Defining peri-urban WASH: what is WASH in your community?

1. Peri-urban WASH is poor practice (PP)

Within PP, participants describe WASH practices done out of habit, ignorance and lack of facilities, creating two sub-themes: 'Unsanitary' (see Figure 2 and Table 1: 1a, c; 2b, e; 4a, b, c, d; 5c) and 'Lack of Facilities' (see Figure 2 and Table 1: 1a, b; 2b; 3a, b; 4c; 5a, b). Participants highlighted limited access to quality WASH facilities as causal for PP: lack of fully accessible local taps, lack of legal dumping leading to use of dormant land/spaces for waste disposal, and limited toilet access – primarily shared, outdoor or lacking, leading to open defecation. Poor knowledge and hygiene awareness meant few/limited preventative measures, for example poor sorting, recycling and safe waste-disposal practices.

2. Peri-urban WASH is a health hazard (HH)

Contamination routes highlighted environmental cleanliness, hygienic maintenance, location of WASH facilities and child safety in this theme represented by Figure 2 and Table 1: 1a, b, c; 2a, b, c; 3a, b; 4a, b, c, d; and 5a, ax, b, c. Limited access to quality WASH facilities caused contamination through unregulated multipurpose usage (i.e. water sources for dump sites, toilets, recreation facilities; dumpsites for toilets, recreation facilities), created accessible illegal/contaminated facilities (i.e. dumpsites near households, makeshift toilets) and caused overuse and/or poor maintenance of existing facilities (e.g. public toilets). Secondly, habitual poor

Figure 2. Photovoice photographs (numbered by group).

Table 1. Summary of photovoice narratives by group (refer to Figure 2).

Photo	*Photograph narratives*
1	(a) It's not good to have this type of toilet. We need good toilets. The toilet is not built. It does not have a roof, wall, door and floor. It's dirty and the toilet hole has no cover. There's also no handwashing station.
	(b) The location of the dumpsite is not OK because the area is surrounded by houses. Children play near and at the dump site. Due to this scenario, people around the community get sick often. It's not safe for residents.
	(c) Always keep your tap clean, not like this.
	(d) We should keep our homes clean like this. A clean home is a clean nation.
2	(a) Children are playing on the wet ground, scrubbing it with their fingers and hands.
	(b) Drainages are blocked with garbage due to people's ignorance on where to dump the garbage.
	(c) Water pipes are close to the surface of the ground. Plastic pipes are easily damaged. The man is not a worker for the Lusaka Water and Sewerage Company (LWSC). He doesn't have the correct equipment or safety wear. He risks polluting water with the plastic bags used to tie the pipes.
	(d) Contaminated surface water will affect underground water if pipes are damaged.
	(e) No proper equipment for waste separation. The burning of garbage causes air pollution to nearby houses.
	(f) Water and wind carry away plastic materials from our communities into drainages. The council are not cleaning up on time.
3	(a) Poor drainage systems. Turning of drainages into dump sites.
	(b) Poor waste management. No legal dumping sites due to poor policies, personal interests and lack of knowledge.
	(c) These people fetch water from this tap every time. The water source area is not clean. They are cleaning their water buckets with soap, but we don't know if the water is safe or not (poor water supply and infrastructure).
	(d) Poor toilet structures in public institutions create health hazards.
4	(a) There is a bin near the door. There's a smell and there are flies going into the house. People who are eating the other side can get diseases.
	(b) There's a bin near the window. It's possible for someone to get a disease like cholera, typhoid and tuberculosis (TB) due to the smell coming from the waste [the narrator said she was not sure if it's true].
	(c) The drainage is filled up with bottles, plastic and sand.
	(d) There's a tap with running water behind the girl. She, however, is washing the bucket with dirty water on the ground which is stagnant and contaminated.
	(e) This open dumping site is near the houses.
	(f) This is a poor toilet. There are some faeces on the surface, the structure is not well built and the slab is not in good condition.
5	(a) Stagnant waters (dam) [The dam is in the vicinity of the image. *5*ax shows a similar dam]: the same water is used for washing, dumping site for residents, people urinate in the water, children swim and play.
	(b) Local dumping site (illegal).
	(c) The house has a bin right next to the door and a dirty drainage.
	(d) The household and yard are clean. The household owner has good sanitation qualities.

practice maintained ignorance, creating a health hazard norm through ease of poor practice. Lastly, lack of WASH standards and regulations (e.g. toilet standards, waste collection) created and facilitated health hazards.

3. Peri-urban WASH is substandard and unregulated (SU)

Sub-themes were standards (see Figure 2 and Table 1: 1a; 2c, e; 3a, c, d), regulations (see Figure 2

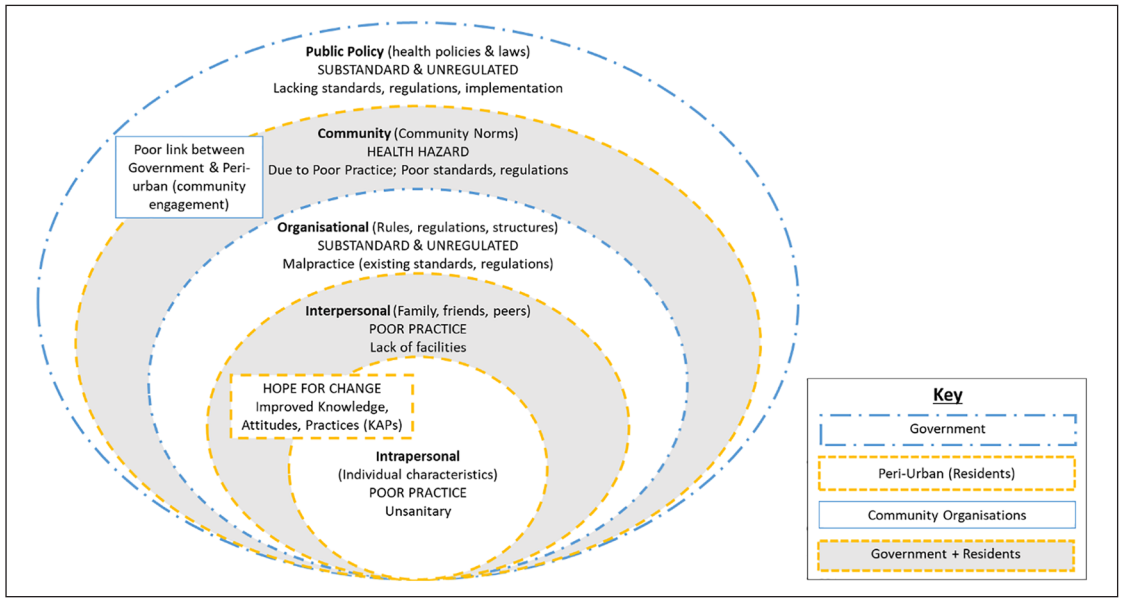

Figure 3. Defining the peri-urban WASH ecosystem via ecological theory.

and Table 1: 1b; 2c, e; 5a) and malpractice (see Figure 2 and Table 1: 2f; 3b). Participants registered a lack of and ignorance on WASH infrastructure standards on toilet and water sources: residents lacked guidelines on quality and use of wells, flush toilets, etc.; and were unaware of recommended infrastructure materials and standards for installation to avoid contamination and protect users. They also complained of poor adherence and/or consequence for ignoring standards and regulations, or malpractice (e.g. for bad waste-disposal practice, tampering with public WASH facilities, etc.), with a failure/inability to report malpractice. Lastly, participants reported overuse, misuse and limited to no maintenance of WASH facilities (poor/no regulation). Their communities had several unattended to faulty public taps, congested drainages, misused water sources and blocked toilets. Furthermore, it was common for non-authorised persons to do maintenance on public WASH facilities.

4. Peri-urban WASH offers hope for change (HC)

Good WASH practices that offered hope for change and improvement were expressed in Figure 2–1d and 5d (refer to corresponding narratives in Table 1). Rather than challenges, participants pinpointed promoting factors for the positive household condition: (a) that the household was well managed; and (b) that the household owner had put in place (created a pattern for) good sanitation habits.

The peri-urban WASH ecosystem

Figure 3 gives a summary of thematic analysis via ecological theory. Based on participant contextualisation and codifying, it links the above themes and indicates how the themes create the individual and environmental factors that sustain the peri-urban WASH ecosystem.

Results showcased in the ecological model of Figure 3 indicate PP at both intra- and interpersonal levels of the ecosystem divided into 'unsanitary' and 'lack of facilities' sub-themes respectively. HC falls within these themes, as participants deemed residents as the most capable of creating change when equipped with necessary knowledge, attitudes and practices (KAPs). SU was placed into public policy and organisational levels of the ecological system. At an organisational level, malpractice relating to existing standards and regulations was a predominant feature, while public policy zoned in on lacking standards,

poor regulations and poor implementation of policy. Finally, HH was placed at the community level, being viewed as a community norm, with interactions between various WASH stakeholders adapting to already existing poor practice, poor standards and lacking regulations. Participants highlighted a lack of community engagement at the community level, preventing top-down public policy from adequately impacting the peri-urban WASH ecosystem.

Discussion

WASH is poor practice (PP)

The theme of PP referred to residents' poor WASH knowledge and attitudes, leading to poor practices (Sub-theme: Unsanitary) and a lack of WASH facilities to facilitate good practice, even when required KAPs were known (Sub-theme: Lack of facilities). Photovoice findings highlighted various scenarios of poor practice linked to limited WASH knowledge and poor WASH attitudes: some examples are makeshift toilet structures, indiscriminate waste disposal and use of contaminated water for cleaning of water storage containers. Studies have found that higher WASH KAPs correlate with improved WASH access and sanitary practices, having an impact on residents' choice of household WASH facilities and general WASH management (23). However, key to this is the ability for households to afford access to improved WASH facilities and services in order to apply attained knowledge (23).

This is difficult in the peri-urban, being described as a settlement area having high density, limited space and few municipal provisions and services (3). Being unplanned settlements, there is a common shortage of WASH facilities and services for the population (9). Sewer systems and water piping are often lacking; and the installation of such networks is expensive, even for governments. Additionally, there is limited space for installation of private facilities. Rather than go without, several residents set up poorly made facilities, and/or communal facilities, which are prone to overuse and increase contamination risks (24). In the case of waste disposal, indiscriminate public dumping, digging of ditches, or burning of waste has the ability to block drainages, stagnate water, block toilets causing faecal seepage, and allow for breeding of pathogens causing contamination and disease spread (25). Other than a lack of facilities, preference and culture have also been found to impact poor WASH practices. In sanitation, open defecation has often been preferred even when toilets are available; this has been due to comfort, ease of use, culture and an avoidance of poorly made and/or unhygienic facilities (24,26). Moreover, open defecation comes at a lower cost than the setup of facilities.

WASH is substandard and unregulated (SU)

The theme of SU was divided into the sub-themes of standards, regulations and malpractice. To mention a few, photovoice findings highlighted poor-quality sanitation facilities, poor maintenance of public taps and toilets, and illegal dumpsites. Two major aspects of Zambia peri-urban need to be addressed under this theme: the upgrade of the peri-urban from illegal-unplanned to improvement areas, and the mismatch between WASH guidelines and attainable WASH for the peri-urban.

As of 1974, the Zambian government moved to change the status of several peri-urban settlements from illegal-unplanned to improvement areas, granting them legal status, government provision of social and physical infrastructure and title deeds for residents (27). Both of our research sites were fully covered by this pronouncement. This upgrade was, therefore, the official start of government intervention into peri-urban development, warranting government installation of peri-urban WASH systems, infrastructure, regulation and implementation of regulations and standards.

This upgrade, however, has been slow and expensive. Improvements and extension of water supply and sanitation in the peri-urban and low-cost areas of the country have only covered ~ 23% of the peri-urban populace (28), opening the way for SU WASH. It has been documented that several governments, just as individuals, struggle with the costs of upgrading WASH (24). This makes it difficult for both governments and individuals to follow WASH guidelines and regulations for which quality WASH facilities and services may not be available or easily obtainable. It also renders several planned interventions unusable. Unattainable standards and guidelines further open the way to malpractice and misuse of available facilities.

With the unique stature of the peri-urban being overlooked, governments and citizens are robbed of

suitable options for the attainment of improved WASH and waste facilities. Though recommended in previous studies (29), local knowledge is barely explored and community priorities are often overlooked. Recognition of gender and cultural disparities, and space limitations of the peri-urban would allow for the creation of guidelines for inclusive, shared, safely managed WASH facilities. Though facility sharing is unavoidable in high-density areas, this factor has not been taken into account in the UNICEF and WHO Joint Monitoring Programme's categorisation of WASH at the safely managed level (30).

WASH is a health hazard (HH)

The sub-theme of contamination routes highlighted environmental cleanliness, hygienic maintenance, location of WASH facilities and child safety. Of concern to participants was the ease of pathogen transmission due to multipurpose use and misuse of public/shared facilities, increasing faecal-oral contamination (22). Additionally, that a lack of space brought contaminants closer to households, for example illegal dumpsites, and consistent poor practice made poor practice a community norm, placing children at risk.

The yearly outbreak of waterborne disease emanating from peri-urban areas is a testament to the participants' definition of WASH, with several of these outbreaks spreading to other parts of the city and the country (10,11). Despite this annual recurrence, strong preventative strategies to change this trend are few. The 2017/2018 cholera outbreak in Lusaka had government closing schools and markets, and employing the army to assist in public waste management. Additionally, a cholera vaccine was administered to residents to curb the spread (10,22). The outbreak encouraged the reinstatement of the 'Keep Zambia Clean Campaign', focused on public waste collection and WASH education (31). Research is yet to indicate the long-term effectiveness of these measures. That being said, all participant information relating to the theme HH could be linked to both PP and SU, deeming the WASH status quo as a sustained community norm.

WASH is hope for change (HC)

HC focused on possible improvements in peri-urban WASH, primarily highlighting resident KAPs and decision making as key. Based on their study focused on environmental health promotion using photovoice, Postma and Ramon (32) recommended community engagement as a tool towards policy change to align local efforts and social frameworks, citing an increase in community strengthening. This will be covered more in the definition of the peri-urban WASH ecosystem.

Defining the peri-urban WASH ecosystem

Breaking down participant findings and contextualisation via ecological theory reveals a link between PP and HC themes, with both of these themes being placed at intra- and interpersonal levels. While both themes are linked to individuals KAPs, at the interpersonal (household/neighbourhood) level, lack of facilities may inhibit good practice. Household head and landlord socio-demographics and KAPs have a bearing on WASH decision making (6). With WASH facilities often being shared and studies showing negative impacts on less vocal users (e.g. children, disabled, women and girls) (16,26), efforts need to be made to not only educate decision-makers, but also encourage the inclusion of dependents and other WASH facility users where possible. Government and public organisations also need to consider multiple users and their needs in the provision of public facilities.

According to participant results, SU covered public policy and organisational levels, with government being the key player. This creates a top-down effect on peri-urban WASH, thus requiring information sharing on WASH standards, regulations and their implementation to be facilitated through government to other WASH stakeholders. This is best done through organisations capable of WASH education and community engagement (32). According to participants, this community engagement, however, was lacking. The relationship between government and residents placed residents as recipients of education and information through health centres. Participants stated limited information sharing from residents to government, opting for more community organisations led/managed by residents. Participants also lobbied for more WASH public–private partnerships and community-based organisations, with residents taking leading roles. These partnerships would allow for greater incorporation of local knowledge towards affordable and sustainable WASH improvement, helping to

reduce health hazards and impacting the community level of the peri-urban ecosystem (29,32).

Conclusion

Participants defined peri-urban WASH as poor practice (intrapersonal, interpersonal), a health hazard (community norm), substandard and unregulated (public policy, organisational) and offering hope for change (intrapersonal, interpersonal). Participant findings revealed a public policy gap, with standards, regulations and implementation having minimal impact on peri-urban WASH. Additionally, failure to recognise the unique nature of the peri-urban as a high-density settlement making heavy use of shared WASH facilities has crippled suitable inclusive, cost-effective intervention. Rather than a top-down approach, participants recommended a more integrated relationship between government and peri-urban residents via community engagement, offering residents more empowerment for intervention, implementation and defending of standards and regulations within the peri-urban. However, without a change in current peri-urban WASH power dynamics (top-down approaches) to cooperation and inclusion (capacity building, knowledge sharing, joint problem solving), real peri-urban empowerment and engagement may be unsuccessful. The use of participatory research tools that empower the disadvantaged could go a long way in creating means towards inclusive models and, subsequently, resident, organisational and policy-approved collaborative peri-urban WASH interventions.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Before commencement, ethical screening was conducted and cleared by ERES Converge Ethical Approval Board, Lusaka: 2017-Mar-012; and Faculty of Health Sciences, Hokkaido University, Japan: 16-103.

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Original Article

Reusable sanitary napkins in rural India: a remote quality improvement project for adolescent girls promoting menstrual hygiene health during the COVID-19 pandemic

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Abstract: Medical and public health research supports an ongoing need for health promotion in meeting menstrual hygiene needs, including menstrual hygiene management (MHM) education and the adoption of reusable sanitary napkins. This quality improvement project focuses on menstruation education for adolescent girls in rural Tamil Nadu, India and the promotion of reusable sanitary napkins. Results indicate a significant improvement in MHM knowledge, confidence in managing menstruation, adoption of reusable sanitary napkins, and a decrease in missed school days. These findings support global recommendations for health promotion in India.

Keywords: adolescents and youth, collaboration/partnerships, education (including health education), global health/globalization, health promotion, reproductive health, rural, sanitation/hygiene

Introduction

Women of India face greater challenges than men in accessing water, sanitation and hygiene (WASH) resources to address their daily needs (1). These daily challenges can lead to women adopting unsafe menstrual hygiene management (MHM) practices and missed days of school for adolescents due to lack of feminine hygiene products (2–4). The term MHM is characterized by a diverse range of practices, such as type of absorbent material used and the frequency changed, associated personal cleansing, the methods of washing, drying and storing of reusable pads, and location of menstruation-related changing and washing practices (5).

Managing menstruation can be more difficult for some women than others. Each month women need sanitary napkins or other materials to absorb menstrual flow, along with cash to purchase supplies and privacy to tend to their personal hygiene. Women living in rural India face many hardships, including limited access to running water and bathroom facilities (1). During menstruation the need for both water and bathroom facilities increases. Due to the constant struggle, many women adopt unhygienic practices. Women in rural India also face challenges with access to sanitary napkins, privacy to maintain proper hygiene, and basic education on the principles of menstrual health management (2).

Many factors influence health care in India, including the historical foundation of the caste system, religious beliefs and physical location (6). This study focuses on adolescent girls living in South India, where

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geographical, social and cultural isolation along with deep-rooted caste system influences impact their education and physical health. In the rural towns of Trichy and Tiruvannamalai, Tamil Nadu, adolescent girls are significantly impacted by the lack of MHM resources and menstrual health education. In the state of Tamil Nadu, the current practices as reported by Visions India, an NGO of community health workers for adolescent women, indicates 25% use disposable sanitary napkins, 65% use homemade rags or clothes, and the other 10% use nothing (A. Mohan, personal communication, 5 March 2020). Those who opt to use nothing wash their genital area frequently to keep clean. These practices are largely affected by a lack of structured education programs in schools addressing feminine hygiene and by religious beliefs that see menstruation as a punishment from God (A. Mohan, personal communication, 5 March 2020).

Scientific literature from both women's health and public health highlights the need for improved menstrual hygiene management in rural India. Published studies describe the low level of fundamental knowledge of MHM and the resulting effect that lack of knowledge has on girls attending school (4,7–12), WASH influences (2,3,13), female reproductive infections linked to poor hygiene (1,5) and accessibility to latrines and reusable options with regard to menstrual products (14–16).

Lack of menstrual hygiene knowledge, poor access to sanitary products and poorly equipped school facilities make it difficult for adolescent females in India to complete school (12). Tamil Nadu has one of the highest levels of development, with 6.1 million adolescent girls. Failure for the girls to complete school and enter the workforce has significant economic impact on the country. In 2011, the state government implemented a free sanitary pad program for all girls living in rural areas (12). The program provides three packs of pads once every two months, iron tablets to combat anemia, and menstrual hygiene education from an 'aganwadi' (female community health worker). While the program has the best of intentions, the free sanitary napkins have not been of good quality and the girls would rather use something else. Quality napkins sold at local stores are too expensive and the young women do not have access to reusable sanitary napkins (A. Mohan, personal communication, 5 March 2020). Their inability to manage menstruation at school results in missed days of education, and ultimately can lead to females dropping out of school before graduation (4,7,8).

Following WASH guidelines is important for maintaining safe living environments and promoting optimal physical heath. Multiple studies have shown that lack of access to clean water, lack of sanitation facilities and lack of hygiene products can cause negative physical side effects and disease (2,3,13). Chattopadhyay *et al*. (2) studied over six thousand girls living in poverty pockets of East India. Of those, 82% practiced open defecation and 76% did not use sanitary napkins. These girls had decreased height, low body mass index and small mid-upper arm circumference. Poor WASH practices in India can also lead to the prevalence of trachoma; untreated trachoma can lead to pain and irritation, impaired vision and, in severe cases, blindness (13).

Female reproductive tract infections such as bacterial vaginosis, candida and trichomonas vaginalis have also been linked to poor WASH and MHM practices (1,5). These practices and untreated infections can lead to severe future complications for females, including preterm labor, placenta previa, spontaneous rupture of membranes and even infertility (1,5,17). Due to lack of MHM education, most women are not able to identify these reproductive tract infections in early stages (1).

Lack of bathroom facilities, especially for women, and limited access to sanitary products remain a large problem across India (15). In some rural areas, including Tamil Nadu, there is only one latrine in the community, and that latrine was funded by government money and is for men only (J. Metzger, personal communication, 15 January 2020). The literature identifies that successful sanitation depends on access to water and relies on economic, social and political support (15). Another problem involves proper waste management and disposal of sanitary napkins. There is often debris littering the streets and this can also lead to water contamination and the spread of communicable diseases (14). Providing alternative low-cost reusable sanitary napkins and building more bathroom facilities not only helps improve waste management, but also enhances WASH practices (14–16).

The purpose of this quality improvement (QI) project was to improve the health and wellbeing of adolescent girls age 10–19 living in rural Tamil Nadu, India by implementing an evidence-based intervention aimed at improving feminine health

knowledge and practices through the use of more socially accepted and developmentally appropriate hygiene products. The project specifically aimed to: (a) improve knowledge of feminine hygiene care; (b) increase the menstrual practice needs met; (c) increase the adoption of reusable sanitary products; and (d) decrease the percentage of school days missed due to menstruation.

Methods

Design

This project utilized a single group pre-post design in which MHM knowledge, use of reusable sanitary products, percentage of school days missed due to menstruation, menstrual practices and needs were assessed before and after an MHM intervention among 50 adolescent girls in rural Tamil Nadu, India. The intervention included an MHM education program on feminine hygiene care and the distribution of MHM kits to all participants. The kit included menstrual hygiene educational materials, five reusable sanitary napkins and a privacy drying shield. All participants received the MHM kit and printed educational materials on an individual basis due to COVID-19 restrictions and the need to maintain social distance. The MHM education program attendance and successful reusable sanitary products distribution were examined to identify barriers to implementation of the intervention.

The intervention was conducted in two phases over a 120-day period. Phase 1 was a 30-day period in which 50 adolescent girls were recruited, pre-intervention assessments were completed and the MHM intervention was implemented (4 December 2020–3 January 2021). Phase 2 took place over a 90-day period in which these same adolescents were asked to use the materials in the MHM kit and complete the post-intervention assessment at the end of the period (4 January 2021–3 April 2021). This QI project was deemed exempt from the Institutional Review Board review.

Setting and participants

Participants were adolescent girls (age 10–19 years) who had reached menarche and were living in the rural towns of Trichy or Tiruvannamalai, Tamil Nadu, India. Only adolescents who had access to a computer with internet connectivity and who wanted to try the reusable sanitary napkins were included. The exclusion criteria were an inability to speak, read and understand English, pregnancy, inability to comprehend written materials distributed for the study, inability to physically care for oneself, and inability to provide verbal consent to participate in the MHM intervention and complete the pre- and post-intervention assessments. Participants were selected through door-to-door recruitment. A total of 50 adolescent girls were enrolled and all 50 completed both phases of the project.

Intervention

The intervention consisted of the distribution of an MHM kit and two online MHM pre-recorded education sessions. The MHM kits contained five reusable sanitary napkins, one heavy absorbency and four regular absorbency pads, along with one privacy drying shield. The online pre-recorded sessions focused on hygiene practices that reinforce the WASH protocols, an overview of the menstrual cycle, puberty education and instructions regarding the washing and drying of reusable sanitary napkins. The distribution of materials was a one-time occurrence.

Measures

Participants completed a pre- and post-intervention demographic questionnaire that included current age, age of menstruation onset, school attendance, religious affiliation, running water in home, running water in school, and current practices for managing monthly menstruation.

An MHM knowledge test was also administered before and after the intervention. The 20-item test included items to assess ability to define menstruation as well as items regarding what organs are involved in menstruation, what hormones are involved in menstruation/ovulation, recommended hygiene practice during menstruation, disposal of used menstruation materials, drying of reusable menstruation materials, symptom management of menstruation, and where participants received their current knowledge of menstruation. The knowledge total was calculated based on a correct score ranging from 0 to 20.

Participants also completed a modified version of the Menstrual Practice Need Scale -36 (MPNS-36)

(18) before and after the intervention. The MPNS-36 was the first questionnaire developed to capture perceived menstrual hygiene. The original MPNS-36 includes 54 items and is comprised of six subscales: (a) material and home environment needs; (b) transport and school environment needs; (c) material reliability concerns; (d) change and disposal insecurity; (e) reuse needs; and (f) reuse insecurity. A reliability assessment for the original MPSN-36 indicated acceptable internal consistency of the items constituting each subscale (Cronbach's alphas: 0.47– 0.79). A recent study by Hennegan *et al.* (18), undertaken in Soroti, Uganda, found that higher home-based and school-based subscale scores are associated with greater confidence to manage menstruation at home and school, and higher overall scores are associated with not missing school during the last menstrual period.

A modified version of the MPNS-36 was used for this project on current menstrual practices and needs. The modified version included 31 items of the original 54 items to reduce participant burden and included the following items: (a) Question 1: *I was able to choose the menstrual materials I most wanted to use*; (b) Question 19: *I felt clean during my last period* and a subset of items from the (c) material and home environment needs – 13 items, (d) transport and school environment needs – 5 items, (e) material reliability concerns – 3 items, (f) reuse needs – 5 items and (g) reuse insecurity – 3 items. As with the original version, each item was rated using the 4-point Likert scale: 0 = never, 1 = sometimes, 2 = often, 3 = always. Negatively stated items were reverse coded so that higher scores indicated a more frequent positive experience for all items. Subscale scores were derived by calculating the means of the items comprising each subscale.

As a measure of participant adherence, attendance at time of enrollment and viewing of taped online education was recorded by Visions staff. Participants were given an additional question on the post survey. Question 1: *How many total days of school were missed during Phase 2 (4 January 2021–3 April 2021) due to menstruation?*

Procedures

During Phase 1, participants were recruited by the NGO for the project. Only those adolescent girls who met the eligibility criteria received the MHM intervention. Once the pre-intervention assessment was completed, each eligible participant received the MHM intervention. Project materials were distributed individually to participants by Visions India staff, beginning on 4 December 2020, prior to the start of Phase 2 due to COVID-19 restrictions and the inability to use the Visions training center.

Phase 2 began on 4 January 2021 and ended on 3 April 2021 (90 days). During this time, participants were asked to utilize the distributed materials in the MHM kit, specifically knowledge gained from pre-recorded education sessions, the five reusable sanitary napkins and privacy drying shield. Staff from Visions India completed one check-in with participants during this period. On the final day of Phase 2 (day 120), the participants were asked to complete post-intervention assessments and the completed assessments were collected in person.

Data analysis

Descriptive statistics were used to detail the adolescent characteristics, intervention outcomes and intervention fidelity outcomes. Non-directional statistical tests were performed, with the level of significance for each test set at 0.05. Non-parametric methods were used due to the skewness of the continuous outcomes. The sample size of 50 provided at least 80% statistical power to test for within-adolescent intervention changes, assuming medium effect sizes.

Results

Adolescent characteristics

Table 1 details the characteristics of the 50 adolescent girls who participated in the intervention. The median age was 15 years (range: 12–19), while the median age of menstruation onset was 13 years (range: 11–16). All 50 participants reported attending school. Of note, 46% reported having running water (sink and toilet) in their homes and 89% of the adolescents had bathroom facilities at their school.

Knowledge test and Modified MPNS-36 scores

Table 2 describes the knowledge total score and Modified MPNS-36 scores assessing current menstrual

Table 1. Sample characteristics ($N = 50$).

Characteristic	*Median (Q1, Q3)*
Age, in years	15 (14, 16)
Age at onset of menstruation, in years	13 (12, 14)
	n (%)
School attendance	50 (100%)
Religion	
Hindu	30 (83%)
Catholic	6 (17%)
Sink/toilet at home	23 (46%)
Sink/toilet at school	40 (89%)

Q1, Q3 = 25th, 75th percentile. Religion: $N = 36$ with data available.

practices and needs. The mean correct knowledge total for the pre-test was 12.5 (range: 7–18) compared to 16.3 (range: 10–19) for the post-test. There was statistical significance in adolescent total improvement scores ($p < 0.0001$), with a mean post-pre difference score of 3.7 (range: –2.0–12.0).

In terms of the MPNS-36, higher subscale scores indicated a more frequent positive experience. A significant increase (improvement) in scores was observed for the following subscales: material and home environment needs ($p < 0.0001$), material reliability concerns ($p = 0.0049$), reuse needs ($p = 0.0002$). A significant decrease (reduction) in scores was demonstrated for reuse insecurity subscale ($p = 0.0305$).

There was a significant improvement in the percentage of adolescents who responded often/always to Question 2: *I felt clean during my last period* ($p = 0.0082$), but not to Question 1: *I was able to choose the menstrual materials I most wanted to use* ($p = 1.0000$). Among the 22 respondents who reported never/sometimes for Question 2 during the pre-assessment, 21 (95%) reported either often/always during the post-assessment. Among the 28 who reported either often/always for Question 2 during the pre-assessment, 7 (25%) changed their response to never/sometimes in the post-assessment.

MHM adoption of use and missed school days

Table 3 summarizes the use of different MHM materials and school days missed in the last 90 days due to menstruation. Interestingly, 49 (98%) of the girls used commercial pads before the intervention, but none (0%) reported using commercial pads after the intervention. Conversely, none of the adolescents used reusable pads before the intervention and all (100%) used the reusable pads after the intervention.

A key goal of this project was for girls to miss no school days because of menstruation. Among the 50 participants, 67% reported no days missed before the intervention and 90% reported no days missed after the intervention. There was significant increase in no school days missed post-intervention ($p = 0.0023$). Among the 16 students who missed one or more school days during the pre-assessment period, 12 (75%) had no missed school days and 4 (25%) continued to miss one or more school days during the post-assessment period. Among the 32 students with no missed school days during the pre-assessment period, only 1 (3%) reported one or more missed school days during the post-assessment period.

Discussion

Among the adolescent girls within the project, there was significant improvement in increased MHM knowledge, increased confidence in managing monthly menstruation, adoption of reusable napkins and fewer missed days of school. This is the first time a project like this has been done, focusing on female health improvement within the Dalit community. The majority of the participants in the study identified as Hindu. The Hindu religion continues to have a significant impact on healthcare delivery in India. This section will further discuss how each initial aim was addressed.

Among the participants, the greatest areas of improvement in the pre-post knowledge test were the ability to define menstruation, identifying the hormones involved in menstruation, the correct way to wipe female genitals after urination and defecation, identifying urinary tract and yeast infection symptoms, and dietary modifications to include during menstruation. The participants provided feedback that the pre-recorded PowerPoint slides were easy to follow and the pictures in the slides were helpful for understanding menstrual hygiene material.

The Modified MPNS-36 scores showed an increased confidence in managing menstrual hygiene health. The largest growth in confidence was seen in

Table 2. Knowledge test total score and Modified MPNS-36 scores ($N = 50$).

Outcome	*Pre*	*Post*	*Post-Pre*	*Paired* t-*test*
	Mean ± SD	*Mean ± SD*	*Mean ± SD*	p-*Value*
Knowledge test				
Total correct score	12.5 ± 2.3	16.3 ± 2.2	3.7 ± 3.1	<0.0001
Modified MPNS-36 subscale scores				
Material and home environment needs	24.3 ± 5.7	33.5 ± 5.1	8.8 ± 6.4	<0.0001
Transport and school environment needs	10.2 ± 3.8	10.7 ± 3.6	0.6 ± 4.1	0.3371
Material reliability concerns	4.9 ± 2.0	6.0 ± 2.1	1.1 ± 2.5	0.0049
Reuse needs	11.6 ± 2.6	13.4 ± 2.4	1.8 ± 3.3	0.0002
Reuse insecurity	5.0 ± 2.0	4.1 ± 2.4	-1.0 ± 2.9	0.0305
Modified MPNS-36	*Pre*	*Post*	*Post-Pre*	*McNemar*
	n *(%)*	n *(%)*	*(%)*	p-*value*
Q1: I was able to choose the menstrual materials I most wanted to use.				1.0000
Often/always	33 (66%)	33 (66%)	0%	
Never/sometimes	17 (34%)	17 (34%)		
Q2: I felt clean during my last period.				0.0082
Often/always	28 (56%)	42 (84%)	28%	
Never/sometimes	22 (44%)	8 (16%)		

SD = Standard deviation; Knowledge test total correct ($t = 8.25$, df = 49, $p < 0.0001$); Materials and home environment ($t = 7.48$, df = 36, $p < 0.0001$); Transport and social environmental needs ($t = 0.97$, df = 44, $p = 0.3371$); Material reliability concerns ($t = 2.95$, df = 48, $p = 0.0049$); Reuse needs ($t = 3.96$, df = 49, $p = 0.0002$); Reuse insecurity ($t = -2.23$, df = 46, $p = 0.0305$). Q1 (McNemar S = 0.0, df = 1, $p = 1.0000$); Q2 (McNemar S = 7.0, df = 1, $p = 0.0082$).

material and home environment needs and reuse needs. For material and home environment needs, participants reported their reusable menstrual materials were more comfortable compared to the disposal sanitary napkins they were using prior to the study. Participants reported they were significantly more satisfied with the cleanliness of the reusable napkins compared to the commercial napkins. The largest sense of confidence came from comfort in storing menstrual materials until their next period. Each participant utilized the privacy drying shield created for this project. The drying shield was made of black mesh material, fastened to a hanger. This design allowed the girls to hang their materials in a closet or private area. The shield doubled for proper drying of reusable materials during use and storage when the napkins were not being worn. For reuse needs, the participants reported an increased confidence in ability to wash and dry menstrual materials when they wanted to.

All 50 participants reported using reusable sanitary napkins at the end of the project. Feedback from the participants included that the reusable options were comfortable to wear, easy to clean, and provided adequate absorption. All participants preferred the design of the overnight/extra absorbency pad. They felt the design, coupled with the extra layer of cotton wicking material, provided the best leak protection. While the original design was for these pads to be utilized during sleep, the participants chose to wear them to school for extra coverage. This extra absorbency and additional coverage at school allowed the girls to focus on school work and worry less about leaking and needing to find privacy to change menstrual materials. Approximately half of the participants reported they were more comfortable and felt more secure with the overnight pad design versus the daytime lighter flow option.

Table 3. Menstrual hygiene material (MHM) use and missed days of schools ($N = 50$).

Outcome	*Pre-assessment*	*Post-assessment*
	n *(%)*	n *(%)*
MHM use	$N = 50$	$N = 50$
Commercial pads	49 (98%)	0 (0%)
Tampons	4 (8%)	0 (0%)
Homemade rags/pads	1 (2%)	0 (0%)
Reusable pads	0 (0%)	50 (100%)
Vaginal cups	1 (2%)	0 (0%)
Nothing	0 (0%)	0 (0%)
Other	0 (0%)	0 (0%)
Missed school days, in past 90 days	$N = 48$	$N = 50$
0 days missed	32 (67%)	45 (90%)
1 day missed	9 (19%)	4 (8%)
2 days missed	2 (4%)	1 (2%)
3 days missed	4 (8%)	0 (0%)
4 days missed	0 (0%)	0 (0%)
5 days missed	1 (2%)	0 (0%)
Missed school days, in past 90 days	$N = 48$	$N = 48$
0 days missed (goal)	32 (67%)	43 (90%)
1 or more days missed	16 (33%)	5 (10%)

MHM use was a select all that apply for current management. School days missed due to menstruation. Within adolescents, a significant pre- to post-improvement in no missed school days due to menstruation (goal) was observed (McNemar Test: $S = 9.3$, $df = 1$, $p = 0.0023$).

There was a significant increase in no school days missed post-intervention. Prior to the use of reusable napkins, major barriers for managing menstruation at school were lack of privacy and bathroom facilities, lack of disposal areas for commercial napkins, and the worry of leaking during school and associated embarrassment. This project focused on providing high-quality reusable options, designing the pads to fold into themselves for cleaner storing options in backpacks and providing pads with up to eight hours of protection, alleviated the increased need for privacy and toilet facilities that were either limited or nonexistent. Addressing these factors contributed to fewer missed days of school due to menstruation.

The collaboration with the local NGO Visions India allowed for successful participant recruitment and delivery of the intervention for the project. The women working for the NGO had established relationships within the communities of rural Trichy and Tiruvannamalai, serving adolescent females. Feedback from the NGO suggests that many more adolescents and women would like the opportunity to try reusable sanitary napkins and learn more about MHM. The innovative design and implementation of this project lends itself to being replicated in other areas of India or in different countries where there is a need for sustainable, low-cost and efficient means of menstruation management.

Limitations

COVID-19 significantly altered the original design of this project. The principal author had planned to run this QI project on site and in person. Inability to travel during the pandemic meant that the educational portion of the project had to be pre-recorded and watched on iPads provided by Visions India. The staff at Visions India individually collected pre- and post-data at participant homes and oversaw the distribution of the reusable sanitary napkins and privacy drying shields. The transition to an international collaboration with the partnering NGO incurred additional expenses from the lead

author, as well as demanding additional time and resources from the NGO.

Conclusion

The results of this project demonstrate a strong association between MHM knowledge and the use of reusable sanitary napkins, resulting in an increase of confidence in managing menstruation and a decrease of school absenteeism. These interventions have led to an increased sense of autonomy and empowerment among adolescent girls in Tamil Nadu, India. At the start of this project, the biggest limitation was the first author's inability to travel to Tamil Nadu in person, but became one of its greatest strengths, as being conducted by local Tamil women gave them self-agency. These findings support global recommendations (19) for structured MHM education among girls attending school and the promotion of reusable sanitary napkins. Future studies are needed to expand this sustainable model within rural areas and urban poor communities. After the completion of this project, multiple NGOs have reached out about exploring future partnerships in India.

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Is social media, as a main source of information on COVID-19, associated with perceived effectiveness of face mask use? Findings from six sub-Saharan African countries

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Abstract:

Background: The use of face masks as a public health approach to limit the spread of coronavirus disease 2019 (COVID-19) has been the subject of debate. One major concern has been the spread of misinformation via social media channels about the implications of the use of face masks. We assessed the association between social media as the main COVID-19 information source and perceived effectiveness of face mask use.

Methods: In this survey in six sub-Saharan African countries (Botswana, Kenya, Malawi, Nigeria, Zambia and Zimbabwe), respondents were asked how much they agreed that face masks are effective in limiting COVID-19. Responses were dichotomised as 'agree' and 'does not agree'. Respondents also indicated their main information source including social media, television, newspapers, etc. We assessed perceived effectiveness of face masks, and used multivariable logistic models to estimate the association between social media use and perceived effectiveness of face mask use. Propensity score (PS) matched analysis was used to assess the robustness of the main study findings.

Results: Among 1988 respondents, 1169 (58.8%) used social media as their main source of information, while 1689 (85.0%) agreed that face masks were effective against COVID-19. In crude analysis, respondents who used social media were more likely to agree that face masks were effective compared with those who did not [odds ratio (OR) 1.29, 95% confidence interval (CI): 1.01–1.65]. This association remained significant when adjusted for age, sex, country, level of education, confidence in government response, attitude towards COVID-19 and alternative main sources of information on COVID-19 (OR 1.33, 95%CI: 1.01–1.77). Findings were also similar in the PS-matched analysis.

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Conclusion: Social media remains a viable risk communication channel during the COVID-19 pandemic in sub-Saharan Africa. Despite concerns about misinformation, social media may be associated with favourable perception of the effectiveness of face masks.

Keywords: nonpharmaceutical interventions, COVID-19, social media, face masks, health promotion

Introduction

The novel coronavirus disease 2019 (COVID-19) pandemic continues to pose significant challenges for health systems around the world (1). Despite the development of new vaccines, the emergence of new viral strains of concern, delays and logistic challenges inherent in large scale immunisation campaigns across countries of the world reinforce the need to strengthen existing nonpharmaceutical interventions (NPI) to limit disease spread (2,3). One such NPI that has gained public interest is the use of face masks by individuals in the community as a way to prevent disease spread, especially from infected persons who are asymptomatic (3–6). The World Health Organisation (WHO) and other health authorities in various jurisdictions have made evolving and sometimes confusing recommendations about this issue (6,7).

There is growing concern about the role of social media in spreading misinformation about the effectiveness of face masks and other NPIs in preventing the spread of COVID-19 (8,9). While concerns about health misinformation via social media are not new, the COVID-19 pandemic has amplified these concerns (9–12). Suboptimal regulation of information sources and the propensity for social media algorithms to prioritise the most popular posts make it inherently difficult for the public to verify health information via modern media channels like Twitter, Facebook and Instagram, and messaging platforms like WhatsApp (9,13,14). Yet these channels are major channels for risk communication and health promotion, especially in health emergencies like COVID-19 (10,11,15).

In resource-limited settings like sub-Saharan Africa, the importance of social media in health prevention and promotion, especially during COVID-19, cannot be overstated (16). However, social media has been seen as a medium for misinformation, especially about reduced vulnerability to COVID-19 and the availability of untested therapies (17,18). Concerted efforts at misinformation have been shown to be often politically motivated, especially in a health emergency like COVID-19, resulting in the development of an 'infodemic' – a situation defined by the uncontrolled spread of low-credibility, false, misleading and unverified information (11,12,17). Misinformation via social media is also suggested to be fuelling untoward perceptions of the effectiveness of NPIs, particularly the use of face masks (19–21). Despite these concerns, evidence is limited on the relationship between the use of social media as the main COVID-19 information source and perceived effectiveness of face masks as a public health strategy.

The limited and emerging evidence suggests that social media may play a role in informing people's perception of the effectiveness of face mask use (22). Yet, no study has specifically assessed this relationship in the sub-Saharan African region. This region may have escaped the first wave and second waves of the COVID-19 with relatively less morbidity and mortality than the rest of the world, but emerging data from the third wave is raising concerns as morbidity and mortality rates are on the increase (23–25). More evidence is required to inform ongoing public health engagement strategies that will continue to protect the health of Africans in subsequent waves. In this context, this study seeks to assess the association between use of social media as the main COVID-19 information source and perceived effectiveness of face mask use in six sub-Saharan countries.

Methods

Study design, setting and population

We conducted a cross-sectional survey of 1198 respondents from six sub-Saharan African countries: Botswana, Kenya, Malawi, Nigeria, Zambia and

Zimbabwe. These countries, although largely diverse, share similarities. In terms of the variations, population sizes range from 2.2 million in Botswana to about 200 million in Nigeria (26). However, there is a shared growth in the adoption of mobile and internet technologies that facilitate access to social media platforms. For example, between January 2019 and January 2020, the number of internet users increased by 2.2 million (2.6%), 3.2 million (16%) and 595,000 (16%) in Nigeria, Kenya and Zambia, respectively (27). Large variations in education have been noted for the selected countries. For instance, less than 1% of Zimbabwean children of primary school age are out of school. The same applies to Malawi, where only 2% of children are out of school (26). However, 15%, 19% and 34% of children were reported out of school in Zambia, Kenya and Nigeria, respectively (26).

Sample size and sampling

We selected a sample of respondents from six countries in West (1), East/Central (1) and Southern Africa (4). These countries were selected to give a geographic representation across the different sub-Saharan African blocs that typically differ in national culture and context. For each country, since the population was greater than 20,000, we determined, at 95% confidence level, a sample of 384 respondents to have sufficient power to provide generalisable results in each country at a total sample size of 2304 (28).

Data collection

The survey was administered online, between 17 May 2020 and 15 June 2020 using structured questionnaires on Google forms (Alphabet Inc., Mountain View, CA, USA), with appropriate skip logics and patterns as indicated. Respondents were recruited via email listservs, Facebook, Twitter, Telegram and WhatsApp. Enrolment in the study occurred on a first-come, first-served basis. As part of the survey, we assessed respondents' perceived effectiveness of face mask use in limiting COVID-19, and their main source of information including social media, television, newspapers, employers, family, friends, and online/web channels. Further, data on respondents' sociodemographic characteristics, COVID-19 risk perception and attitude to COVID-19 were collected.

Analytic sample and study variables

Our study sample included all respondents who had valid responses to our outcome question, which assessed how much they agreed that the use of face masks was effective in limiting COVID-19 in their countries, on a 5-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. Responses were dichotomised as 'agree' and 'does not agree'. Responses such as 'don't know', or 'does not apply to my country' were excluded from the analysis. For our exposure variable, respondents were asked to indicate their main source of information on COVID-19. Participants were allowed to provide up to three main sources of information on COVID-19. Potential confounders and predictors of the outcome were included based on an a priori framework informed by the literature (9,29,30) (Figure 1). The following variables were included in our analysis: alternate sources of COVID-19 information (including television, radio, newspapers, family/relatives, employers, and other online/web channels), COVID-19 risk perception, confidence in government COVID-19 response and attitude to COVID-19. Sociodemographic variables like age, sex, level of education and occupation were also included. Where potentially important sociodemographic variables like socioeconomic status were unmeasured, we ensured that we included proxy variables that could potentially account for these variables (Figure 1).

Data analysis

Simple descriptive analysis was used to summarise the characteristics of study respondents using frequencies and proportions. Unadjusted odds of our outcome given the exposure and covariate were generated using logistic regression models. Thereafter, multivariate logistic regression models were used to estimate the adjusted effect of social media as a main COVID-19 information source on the perceived effectiveness of face masks, using odds ratios (ORs) and 95% confidence intervals (CI). After

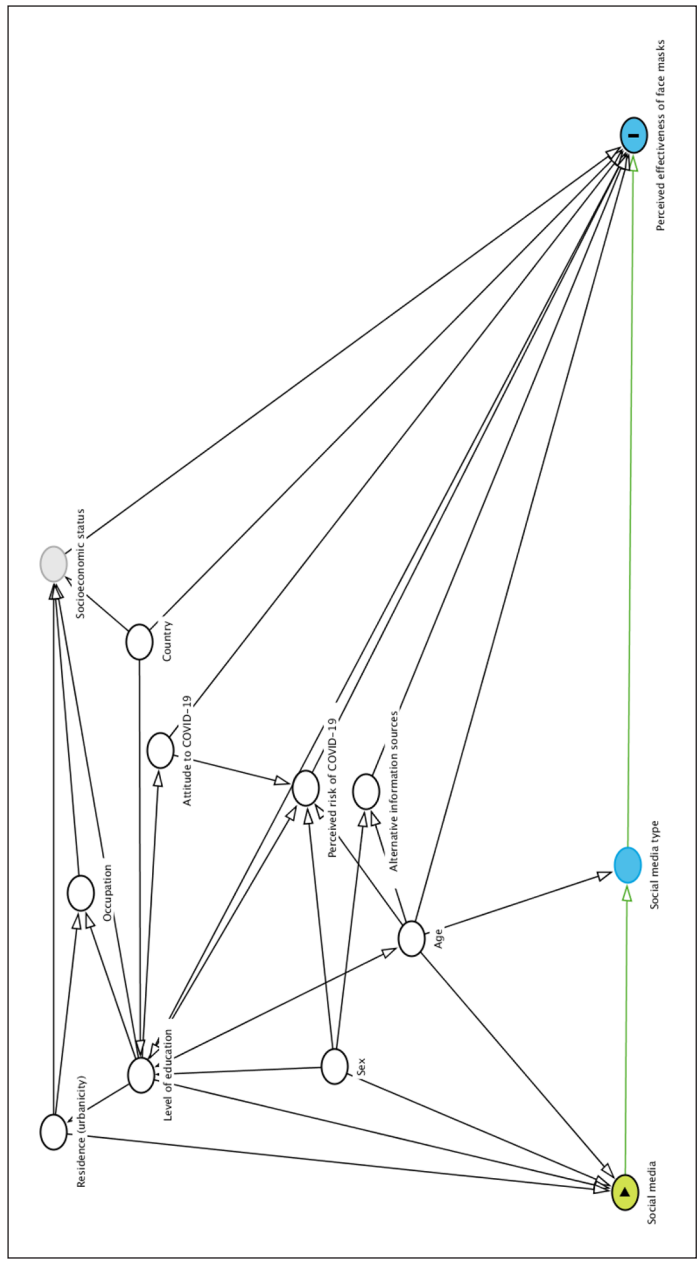

Figure 1. The DAG for assessing the relationship between social media as a main source of COVID-19 information and perceived effectiveness of face masks as an NPI for COVID-19. This illustrates the confounding effects of age, sex, occupation, country, level of education, confidence in government response, perceived COVID-19 risk, attitude towards COVID-19, first source of information on COVID-19, and alternative main sources of information on COVID-19 including television, radio, friends and family, online/websites, newspapers and employers. It also shows social media type as a mediator of this association. Socioeconomic status is an unmeasured variable.
COVID-19: coronavirus disease 2019; DAG: directed acyclic graph; NPI: nonpharmaceutical intervention.

retaining confounders and predictors identified in the literature (9,29,30), automated backward elimination method based on the Akaike information criterion (AIC) was used to select the final model (31). We also assessed possible effect modifiers and covariate interactions including age, sex and country of residence. No significant interactions were identified, therefore the simpler model was considered as the final model. In terms of model diagnostics, we assessed the model using the area under the operating characteristics curve (AUC) (32), and the Hosmer–Lemeshow goodness-of-fit test (33). Collinearity was assessed using a cut-off for variance inflating factor as <10.

To assess the robustness of our findings and our multivariate model specification, we conducted a propensity score (PS) matched analysis to balance covariates between the exposure and control groups (34). Covariate balance was assessed using a standardised mean difference (SMD <0.2) with 1:2 nearest neighbor matching without replacement. All covariates from the main analysis were included in the PS logistic model. All analyses were tested at the 5% significance level and were conducted using R-4.0.2 (35).

Ethical approval

The survey protocol was approved by the Health Research Development Committee (HRDC) of the Ministry of Health and Wellness, the local institutional review board of Botswana (REF Number HPDME 13/18/1). Informed consent was collected electronically from respondents completing the survey. Participation was voluntary and those who consented were allowed to exit the survey at any time by simply closing the browser page.

Results

Study sample characteristics

Among 1988 respondents included in the analysis, 1084 (54.5%) were males, 782 (39.3%) were aged 30–39 years, 1257 (63.2%) resided in urban settings and 522 (26.3%) were from Kenya (Table 1). Further, 1454 (73.1%) felt at risk of COVID-19, while 623 (31.3%) were fearful of COVID-19. A total of 1169 (58.8%) respondents used social media as their main source of information, while 1689 (85.0%) agreed that face masks were effective in reducing the spread of COVID-19.

Association between social media and perceived effectiveness of face masks

Table 2 illustrates the unadjusted and adjusted relationship between social media as main COVID-19 information source and perceived effectiveness of face masks. In unadjusted analysis, respondents who used social media as their main COVID-19 information source, had greater odds of agreeing that face masks were effective compared with those who did not (OR 1.29, 95% CI: 1.01–1.65). This association remained the same when adjusted for age, sex, country, level of education, confidence in government response, attitude towards COVID-19 and alternative main sources of information on COVID-19 (aOR 1.33, 95% CI: 1.01–1.77).

PS matching analysis

In sensitivity analysis using PS matching, we achieved considerable improvements in the balance of covariates between exposed and unexposed in the PS matched sample (all SMD <0.2) compared with the main sample. Table 3 describes the PS-adjusted relationship between using social media as the main source of COVID-19 information and perceived effectiveness of face masks. Findings were similar to those obtained in the main analysis (aOR: 1.44, 95% CI: 1.04, 2.00).

Discussion

In this study, we found that over half of respondents used social media as their main source of information on COVID-19 and most respondents perceived facemasks to be effective as an NPI for preventing COVID-19. We also found that respondents using social media as their main source of information on COVID 19 had 33% (95% CI: 1–77%) greater odds of perceiving face masks as being effective in preventing COVID-19. This association was significant in the main analysis, and remained significant in sensitivity analysis using PS matching methods to ensure covariate balance between the exposed and control groups.

Findings from this study agree with emerging findings from Africa on the perceived effectiveness

Table 1. Study sample characteristics stratified by social media as main COVID-19 information source, yes or no.

Variables	*Overall sample*	*Main COVID-19 info source: social media – No*	*Main COVID-19 info source: social media – Yes*
	n (%)	*n (%)*	*n (%)*
	1988	*819*	*1169*
Perceived effectiveness of face masks			
Does not agree	299 (15.0)	139 (17.0)	160 (13.7)
Agree	1689 (85.0)	680 (83.0)	1009 (86.3)
Sex			
Female	846 (42.6)	311 (38.0)	535 (45.8)
Male	1084 (54.5)	472 (57.6)	612 (52.4)
Prefer not to say	58 (2.9)	36 (4.4)	22 (1.9)
Residence			
Peri-urban	421 (21.2)	197 (24.1)	224 (19.2)
Rural	310 (15.6)	142 (17.3)	168 (14.4)
Urban	1257 (63.2)	480 (58.6)	777 (66.5)
Country			
Botswana	489 (24.6)	262 (32.0)	227 (19.4)
Kenya	522 (26.3)	214 (26.1)	308 (26.3)
Malawi	167 (8.4)	74 (9.0)	93 (8.0)
Nigeria	493 (24.8)	146 (17.8)	347 (29.7)
Zambia	179 (9.0)	69 (8.4)	110 (9.4)
Zimbabwe	138 (6.9)	54 (6.6)	84 (7.2)
Confidence in government response			
Very low	150 (7.5)	55 (6.7)	95 (8.1)
Low	264 (13.3)	90 (11.0)	174 (14.9)
Indifferent	435 (21.9)	153 (18.7)	282 (24.1)
High	705 (35.5)	295 (36.0)	410 (35.1)
Very high	434 (21.8)	226 (27.6)	208 (17.8)
Age			
<30 years	565 (28.4)	220 (26.9)	345 (29.5)
30–39 years	782 (39.3)	304 (37.1)	478 (40.9)
40–49 years	481 (24.2)	208 (25.4)	273 (23.4)
50 years and above	160 (8.0)	87 (10.6)	73 (6.2)
Level of education			
Primary/Secondary	179 (9.0)	110 (13.4)	69 (5.9)
Tertiary	1809 (91.0)	709 (86.6)	1100 (94.1)
Occupation			
Employed	1510 (76.0)	610 (74.5)	900 (77.0)
Student	281 (14.1)	109 (13.3)	172 (14.7)
Unemployed/retired	197 (9.9)	100 (12.2)	97 (8.3)
Alternative main COVID-19 info sources[a]			
Television	1257 (63.2)	551 (67.3)	706 (60.4)
Radio	530 (26.7)	286 (34.9)	244 (20.9)
Friends	179 (9.0)	65 (7.9)	114 (9.8)
Family & relatives	107 (5.4)	43 (5.3)	64 (5.5)

(Continued)

Table 1. (Continued)

Variables	*Overall sample*	*Main COVID-19 info source: social media – No*	*Main COVID-19 info source: social media – Yes*
	n (%)	*n (%)*	*n (%)*
	1988	*819*	*1169*
Online/Web	577 (29.0)	223 (27.2)	354 (30.3)
Employer	179 (9.0)	84 (10.3)	95 (8.1)
Newspaper	186 (9.4)	96 (11.7)	90 (7.7)
Perceived COVID-19 risk			
Not at risk	534 (26.9)	232 (28.3)	302 (25.8)
At risk	1454 (73.1)	587 (71.7)	867 (74.2)
Attitude to COVID-19			
Calm	339 (17.1)	146 (17.8)	193 (16.5)
Doubt	160 (8.0)	73 (8.9)	87 (7.4)
Fear	623 (31.3)	257 (31.4)	366 (31.3)
Worry	689 (34.7)	286 (34.9)	403 (34.5)
Others	177 (8.9)	57 (7.0)	120 (10.3)

[a]Multiple response question.
COVID-19: coronavirus disease 2019.

of face mask use in preventing COVID-19. For example, a study in Uganda found that over 80% of people perceived face masks to be effective in preventing COVID-19 infections (30). Our findings also support studies suggesting positive associations between information seeking on social media and various aspects of face mask use, including perceived effectiveness. A study in China linked information seeking on social media with perceived effectiveness and compliance with face mask use (36). Another study assessing content from Twitter related to face masks, revealed that clusters of conversations were facilitated by influential accounts run by citizens, politicians and popular culture figures (22). These conversations commonly encouraged the public to wear masks. Further, a study in the United States (US) described personal stories of loss from COVID-19 reported on social media as a motivation to support community use of face masks to prevent COVID-19 (5). Our study provides evidence of the association between the use social media as the main COVID-19 information source and perceived effectiveness of face masks in preventing disease spread, especially in the sub-Saharan context.

Despite the obvious limitations in available evidence, plausible causal explanations for these associations have been proffered. It has been suggested that the personalisation and catchiness of information sharing experiences may explain the association (5). The emotional nature of the messaging in such contexts as exist on social media may also elicit feelings of worry, which have been described as a mediating factor for preventive behaviours such as compliance with face masks (36). However, this mechanism has been disputed, as beliefs about consequences and benefits of face masks may be more important than exposure and belief in misinformation (37).

Our findings support the role of social media as an effective COVID-19 risk communication channel. As successive COVID-19 waves exert their toll on already vulnerable health systems in sub-Saharan Africa, public health interventions leveraging social media may be useful, especially in urban centres where crowding and reliance on subsistent earnings may imply that lockdown measures and stay-at-home orders may not be feasible for extended periods (38). However, health authorities must be aware of the debate about ongoing misinformation via the same channels (13). As has been described, suboptimal regulation, propagation of misinformation based on popularity metrics by

Table 2. Estimates from logistic regression assessing the relationship between social media as main COVID-19 information source and perceived effectiveness of face masks.

Variables	*Crude relationship*	*Adjusted relationship*
	OR (95% CI)	*aOR (95% CI)*
Main info source: social media		
No	Reference	Reference
Yes	1.29 (1.01, 1.65)[b]	1.33 (1.01, 1.77)[b]
Sex		
Female	Reference	Reference
Male	0.94 (0.73, 1.21)	1.13 (0.85, 1.51)
Prefer not to say	0.40 (0.22, 0.72)[a]	0.47 (0.24, 0.92)[b]
Residence		
Peri-urban	Reference	
Rural	1.02 (0.67, 1.56)	
Urban	0.93 (0.68, 1.27)	
Country		
Botswana	Reference	Reference
Kenya	2.33 (1.56, 3.47)[a]	4.00 (2.35, 6.81)[a]
Malawi	0.26 (0.17, 0.38)[a]	0.52 (0.31, 0.86)[b]
Nigeria	1.16 (0.82, 1.64)	2.30 (1.44, 3.68)[a]
Zambia	2.76 (1.47, 5.20)[a]	4.49 (2.21, 9.13)[a]
Zimbabwe	1.17 (0.69, 1.99)	2.62 (1.39, 4.96)[a]
Confidence in government response		
Very low	Reference	Reference
Low	1.16 (0.75, 1.80)	1.12 (0.70, 1.80)
Indifferent	2.26 (1.48, 3.45)[a]	2.39 (1.50, 3.79)[a]
High	4.97 (3.23, 7.65)[a]	5.51 (3.41, 8.93)[a]
Very high	4.77 (2.96, 7.67)[a]	6.46 (3.65, 11.41)[a]
Age		
<30 years	Reference	Reference
30–39 years	0.80 (0.58, 1.10)	0.98 (0.66, 1.44)
40–49 years	0.65 (0.46, 0.93)[b]	0.89 (0.58, 1.36)
50 years and above	0.45 (0.29, 0.70)[a]	0.52 (0.30, 0.88)[b]
Level of education		
Primary/Secondary	Reference	Reference
Tertiary	1.48 (1.00, 2.18)[b]	1.51 (0.4, 2.41)
Occupation		
Employed	Reference	
Student	1.59 (1.05, 2.39)[b]	
Unemployed/retired	0.79 (0.54, 1.16)	
Alternative main COVID-19 info[c] sources		
Television	1.24 (0.97, 1.60)	0.87 (0.66, 1.16)
Radio	1.08 (0.81, 1.43)	1.32 (0.91, 1.91)
Friends	0.80 (0.53, 1.19)	
Family and relatives	0.71 (0.43, 1.16)	
Online/Web	0.72 (0.55, 0.93)[b]	0.73 (0.54, 1.01)
Employer	1.54 (0.94, 2.52)	1.84 (1.08, 3.15)[b]

(Continued)

Table 2. (Continued)

Variables	*Crude relationship* OR (95% CI)	*Adjusted relationship aOR (95% CI)*
Newspaper	1.28 (0.81, 2.02)	1.64 (1.00, 2.70)
Perceived COVID-19 risk		
Not at risk	Reference	Reference
At risk	0.97 (0.74, 1.29)	0.93 (0.67, 1.28)
Attitude to COVID-19		
Calm	Reference	Reference
Doubt	0.67 (0.42, 1.09)	0.62 (0.37, 1.06)
Fear	1.30 (0.89, 1.91)	1.21 (0.79, 1.86)
Worry	1.05 (0.73, 1.52)	0.96 (0.64, 1.43)
Others	0.71 (0.44, 1.14)	0.89 (0.53, 1.49)

Adjusted model discrimination and calibration: AUC = 0.77, Archer-Lemeshow ($P = 0.19$).
VIF < 3.
[a]Significant at $P < 0.01$.
[b]Significant at $P < 0.05$.
[c]Reference groups are those who did not indicate using each alternative main source of COVID-19 information.
AUC: area under the operating characteristics curve; COVID-19: coronavirus disease 2019; OR: odds ratio; aOR: adjusted odds ratio; CI: confidence interval; VIF: variance inflating factor.

Table 3. Sensitivity analysis using PS matching to assess the relationship between social media as main COVID-19 information source and perceived effectiveness of face masks.

Variables	*Adjusted association (OR)[a] (95% CI)*
Model: PS matched (1:2 nearest neighbor without replacement)	
Main info source: social media	
No	Reference
Yes	1.44[b,c] (1.04, 2.00)

[a]PSs were adjusted for sex, age, country, level of education, confidence in government response, perceived COVID-19 risk, attitude towards COVID-19, first source of information on COVID-19, and alternative main sources of information on COVID-19 including television, radio, friends and family, online/websites, newspapers and employers.
[b]Propensity score matched estimates not adjusted for sex, age, country, confidence in government response, level of education, perceived COVID-19 risk, attitude towards COVID-19, and alternative main sources of information on COVID-19 including TV, radio, friends and family, online/websites, newspapers and employers.
[c]Estimate significant at $P < 0.05$.
CI: confidence interval; COVID-19: coronavirus disease 2019; OR: odds ratio; PS: propensity score.

social media algorithms and unwitting social media users often spread harmful messages that are often politically motivated (8,17,18,39). Concerted efforts by media, scientific organisations and government institutions are therefore needed to leverage the availability of social media in disseminating important information on the effectiveness of NPIs for COVID-19 including face masks (39), and the benefits of compliance (37).

Future research will be necessary to explore if perceived effectiveness of face masks ultimately result in compliance with mask use. Research will also be necessary to fully understand the mechanisms that result in perceived effectiveness of face mask use in preventing infections with social media use as main source of COVID-19 information. Efforts should also seek to understand the differences in this relationship between various social media platforms. Such information will

be useful to inform replicable public health promotion strategies via various social media platforms that are better positioned to influence people's behaviour to achieve improved health outcomes.

The strengths of our study findings are inherent in the consistency of the observed association in sensitivity analysis using PS matching methods. The association remained significant in both analyses. Moreover, to the best of our knowledge, this is the first study assessing the relationship between social media as a main source of COVID-19 information and perceived effectiveness of face masks in sub-Saharan Africa. This is despite widespread debate about the role of social media misinformation, especially in the context of COVID-19 risk communication. However, our study must also be viewed in light of its limitations. First, our route of participant recruitment implies that the study respondents may not necessarily be representative of the study population of interest. For example, with our online recruitment strategy, respondents included were more likely be those who regularly access online services like social media, and 91% of our sample had tertiary level of education, whereas Nigeria for instance had only 62% adult literacy rates in 2018 (26). However, given that our findings remained consistent in PS analyses where we attempted to account for potential selection bias, we remain confident in our findings. Further, we only recruited 86.3% of our intended sample size and this may have limited the power of our study. We posit that existing fears about government involvement with such types of research may have discouraged participation. Finally, while we considered it expedient to dichotomise our outcome variable for ease of interpretation and applicability to policy discourse, we realise that this may result in loss of statistical information (40).

Conclusion

In this study of respondents in six sub-Saharan African countries, we found that people who used social media as their main COVID-19 information source were more likely to perceive face mask as effective in preventing COVID-19 spread and this association was statistically significant. With current fears of more deadly waves of infection in the sub-continent, health ministries and agencies may leverage social media to strengthen health promotion messaging on the effectiveness of face masks with a view on promoting widespread mask use.

Data availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Original Article

Framing matters but varies: a semantic network analysis of media representations of post-Fukushima food imports across three Chinese societies

Xiao Wang[1], Yi-Hui Christine Huang[2] and Maggie Mengqing Zhang[3]

Abstract: There is a remarkable gap between scientific experts and the nonscientific public regarding the safety of food imported from nuclear-contaminated areas in Japan. How socio-scientific issues such as post-Fukushima food imports are framed in media discourse may have effects on the way people perceive and reason about potential threats, and, in turn, influence government-initiated policies and regulations. In this study, semantic network analysis is performed to examine the diverse media representations of post-Fukushima food imports across information-seeking sources (mass media and search-based media) and three Chinese societies (Hong Kong, Mainland China, and Taiwan). We found that media representation of the crisis differs across sources and sociopolitical contexts. It is also discussed how these channel-specific and contextual factors may affect public opinion. This knowledge can enhance regulatory authorities' informed decision-making about food safety issues, guide crisis professionals' communication efforts, and call for a more context-sensitive approach to public health crisis management.

Keywords: food safety, framing, media representation, public opinion, semantic network analysis

Introduction

Food safety crises have been a core concern across Chinese societies in the past decade and weakened public trust toward regulatory authorities and public health policies (1,2). Such crises range from the contaminated infant milk powder scandal and the McDonald's rotten meat scandal, to the more recent lead-contaminated drinking water incident. The post-Fukushima food imports from Japan have sparked one of the largest public outcries in recent years that challenged both the institutional trust of public stakeholders and the risk management of government regulators across Hong Kong, Mainland China, and Taiwan. As the nonscientific public have limited ways to evaluate the potential threat, they need to rely on messages delivered through multiple channels to monitor the risk surroundings. However, a significant gap between scientific consensus and public opinion still remains regarding the safety of food imported from nuclear-contaminated areas in Japan (3,4). Because public opinion may influence policies and regulations about post-Fukushima food imports, it is crucial to evaluate how the climate of opinion can be influenced.

Framing can be defined as the process of creating and tailoring messages so that they resonate with core values of others (5). Framing of food and agricultural issues in mass media can influence public opinion (6). By shifting attention toward or

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away from a certain issue, framing has been utilized by individuals or organizations as a means to mobilize the public in order to change or maintain a public-health-related policy decision (7). For example, people's perception of media coverage about genetically engineered (GE) foods is consistent with their calculus of GE food benefits and risks (8). And thus, how socio-scientific issues such as post-Fukushima food imports are portrayed in media discourse is likely to influence the way people perceive and reason about potential threats.

Prior studies have investigated the framing of food safety crises in mass media (9–11). Nonetheless, these efforts focused on food safety coverage primarily in newspapers and online news. Since the Internet landscape is not homogenous, it is imperative to consider potentially diverse venues exploited by nonexperts who seek crisis information on the web. Algorithm-curated media content constitutes an increasing share of information users consume online. Search engines, while generally not conceptualized as a media form, make up a major source of online information for web users (12,13). The search page forms an excellent prototype of the 'meta-media' because it accesses and uses previously accumulated media in new ways (14). Therefore, in addition to mass media, we follow an emerging trend in using Google webpages to gauge the public's news exposure (15,16), seeking to conceptualize search-based media content as another predominant source for those looking for information about food safety and health-related crises. Moreover, previous efforts focused on cases that have provided either localized controversies (17) or worldwide debates (8). Media representation of issues addressing inter-regional food importing and exporting flow has received little scholarly attention. With the common heritage from the collectivistic Confucian culture prioritizing holistic beliefs and in-group norms (18), Hong Kong, Mainland China, and Taiwan have different political systems and are at different stages of regulating and restricting products from Japan. People in these three societies are capable of using diverse channels and digital platforms to seek scientific messages and build connections with other public stakeholders. Hence, how people perceive and reason about post-Fukushima food imports is contingent upon contextual variations, which are closely associated with public diplomacy and intercultural communication.

The present study pays close attention to the framing of post-Fukushima food imports across distinct information-seeking sources as well as three Chinese societies. Semantic network analysis (SMA), a computer-assisted form of content analysis, was performed to examine the diverse media representations of the case across Hong Kong, Mainland China, and Taiwan. It has recently been used to investigate varying media discourses of food safety crises. For example, a comparison of online representations of GE crops reveals that the framing and sentiment of the same search term varies across online news titles, Google search pages, and US federal websites (16). Another empirical study in analyzing 6400 newspaper articles about mad cow disease in South Korea demonstrates that policy issue concerns of four stakeholder groups (i.e. bureaucrats, scientists, citizens, and interest groups) can evolve over different crisis stages (19). Extending these SMA applications, taking a comparative approach, this study compares the framing of a single food safety issue across both media sources and socio-scientific contexts. This knowledge has the potential to enhance regulatory authorities' informed decision-making about food safety issues, to guide crisis professionals' channel-specific communication efforts, and to call for a more context-sensitive approach to public health crisis management.

Method

SMA sets out from the basic idea that the meaning of a concept depends on its interpretive surrounding context. This analytic approach helps identify the network of associations between concepts expressed in a large quantity of communication texts, such as organizational press releases, online news, and social media content (20,21). For the current concern, using SMA to investigate the multiple media representations of post-Fukushima food imports shows two prominent advantages. First, SMA provides a representational framework to identify specific associations between the expressed languages as a relational structure in the period (22), thus enabling more nuances to be recognized when comparing crisis narratives across distinct sources and social contexts. Second, the semantic-level approach methodologically supplements the existing organization-centric scholarship by enlarging the

scope of examination from discerning thematic categories of crisis response strategies to looking at associative frames or patterns among emerging concepts, issues, and actions (23).

Data collection

For the search-based corpus, we crawled the first 10 standard pages from an online search query (i.e. 10 websites per page) for each society on March 1, 2021, because prior research showed that more than 97% of users browsed less than 10 pages of search results (24). A Google search was conducted for Hong Kong and Taiwan, respectively. As mainland had blocked access to Google since 2012, Baidu, which held the largest market share in China's search engine market, was adopted as the alternative data source for search-based information in Mainland China. With 'nuclear AND food' (核AND食品) being set as the keywords, three search queries were conducted in Private Browsing mode in the Chrome web browser in order to refrain from the optimization customized by the browser. It should be noted that for the purpose of simulating Internet users' information-seeking behaviors in a geographically sensitive manner, the region option was set separately as Hong Kong and Taiwan when operating search queries in these two regions. After removing duplicates, we crawled 83, 77, and 83 websites for Hong Kong, Mainland China, and Taiwan, respectively.

WiseNews, a widely used Chinese-language database that provides full-text newspaper articles, was employed to retrieve the mass media corpus. First, we collected news articles that contained the keywords of both 'nuclear' (核) and 'food' (食品) from March 11, 2011 to March 1, 2021. Search queries resulted in 1212, 1404, and 1963 news articles for Hong Kong, Mainland China, and Taiwan, respectively. Next, we extracted titles of these news articles for further analysis because news titles were demonstrated to be manageable and effective for quantitative analysis of large amounts of journalistic texts using automated content analysis (25,26). The mass media corpus was created on March 6, 2021.

Data preprocessing

To get six corpora (2×3) ready for SMA, we preprocessed our collected texts using tm R package (27). We performed two preprocessing procedures specific to Chinese texts after converting texts in traditional Chinese into simplified Chinese. First, jiebaR (28), a widely accepted Chinese text segmentation and speech tagging package, was used to segment each corpus according to the default standard dictionary. Then, similar to the typical English stop-words that contribute little to the text (e.g. articles, conjunctions, prepositions, and transitive verbs), a list of Chinese stop-words was created and removed from the original corpus. Next, we returned to the usual natural language processing chain and removed punctuations and white spaces contained in the corpus. Last, we created our document–term matrix (DTM), in which each row represents a document while each column indexes the segmented Chinese words. As we are concerned about the joint occurrence of words in a text rather than the exact term frequency, the DTM was further encoded into a binary form, in which a '1' was written into the DTM if the term appears in the text, whereas a '0' otherwise. Only words that occur at least five times were taken into account. The preprocessed corpus was thus prepared for data analysis.

Data analysis

The principle of creating node connections of a semantic network was the word co-occurrence, which suggests the chance of noticing one concept on the basis of reading about other concepts (29). First, a matrix multiplication on the binary DTM was conducted upon the counting of word co-occurrences, thus resulting in a term–term matrix. In such a symmetric term–term matrix, each cell indicates the number of co-occurrences of two concepts in a given text segment (i.e. a news title in mass media corpus, a sentence in search-based corpus). In other words, two concepts are linked by their joint occurrences. Next, the normalized eigenvector centrality was calculated to determine each concept's importance within the semantic network. Eigenvector centrality measures a concept's overall network position and importance relative to other concepts. A greater value of eigenvector centrality indicates that a concept is linked to more centrally connected concepts. The last step was to use the measurement of log-likelihood (LL) to determine the significance of co-occurrences. Compared to the normalized frequency indicator,

which usually reveals meaningless contexts, LL performs better in demonstrating interpretable meaning of texts and allows researchers to test whether the joint co-occurrence of two concepts is significant (30).

Results

To examine the frames of post-Fukushima food imports constructed by mass media and search-based media and variations across both sources and societies, we firstly identified concepts of critical importance in each semantic network. Tables 1 and 2 present the top 50 concepts ranked by the normalized eigenvector centrality for both news titles and search pages across three Chinese societies. Concepts such as 'nuclear', 'nuclear radiation', 'import', and 'pollution' consistently ranked top of the list in both media sources, naturally due to the main features of the crisis. However, the cross-source overlapping concepts only accounted for 44% of the top-ranked concepts in Hong Kong, 24% in Mainland China, and 42% in Taiwan, suggesting that news titles and search pages presented information that was framed differently for the same socio-scientific issue. Moreover, the cross-regional overlapping concepts only accounted for 14% of the top-ranked concepts in news titles and 12% in search pages, suggesting significant variations across three Chinese societies.

Both media sources in Hong Kong demonstrated that: (a) the regulatory authorities sampled and tested food imported from Japan on a daily basis in order to ensure food safety (e.g. 'exceed standard', 'tag', 'contain', 'iodine', 'microscale', 'check', 'place of origin'); (b) everyday science and simple language were utilized to explain the risky states for easier public comprehension (e.g. 'fruits and vegetables', 'eatery', 'dairy products', 'should', 'caution', 'confidence'); and (c) government authorities actively took actions to monitor, alert, and re-call risky products imported from Japan (e.g. 'ban', 'authority', 'off shelves', 'plan', 'restriction', 'agreement', 'WTO', 'appeal').

Media discourse in Mainland China was characterized by a greater number of event-sensitive information since 2011, particularly the panic-buying of salt over nuclear threat in 2011 (e.g. 'buy', 'supermarket', 'radiogen', 'radioactive', 'radioactive materials', 'carcinogenic') and the '315' gala (an annual global consumer rights day television show held by CCTV, which is similar to CBS network's '60 Minutes') in 2017 (e.g. '315', 'CCTV', 'gala', 'exposure', 'Youkeshu', 'AEON', 'Taobao.com', 'Alibaba', 'Meiji', 'Muji', 'Calbee', 'oatmeal', 'e-commerce', 'cross-border'). In Taiwan, news titles appeared to be closely associated with politics and political issues (e.g. 'councilmen', 'public hearing', 'countersignature', 'Executive Yuan', 'blue camp', 'KMT', 'referendum', 'anti-nuclear food', 'Tsai [Ing-wen]'). However, concepts emphasized in search pages differed greatly from news titles and were characterized by: (a) explanation of risk conditions with reference to the international scientific standards (e.g. 'international', 'standard', 'strontium', 'risk', 'assessment') and (b) emphasis on the adequate actions taken by the government, which outperformed the majority of other countries and regions (e.g. 'United States', 'European Union', 'CPTPP').

In addition to analyzing concept importance, we set 'food' as the target term of which co-competitors are to be measured, the parameter for the representation of the co-occurrence as 15, and the measurement of co-occurrence significance as LL. The modest 1% level of confidence interval was applied such that if the LL is greater than 6.63, researchers can be reasonably certain at the 1% level that the joint occurrence of two concepts was not due to chance. Table 3 presents the top 20 concepts ranked by the LL value for counting co-occurrence with 'food' in news titles and search pages across three societies.

Frames shared by three Chinese societies were identified from both news titles and search pages. Three major themes emerged and respectively demonstrated: (a) general hazards of post-Fukushima food imports (e.g. 'nuclear disaster', 'nuclear food', 'import', 'radiation', 'nuclear radiation', 'disaster area'); (b) comprehensive investigations of illegal food import from nuclear disaster-hit Japanese prefectures (e.g. 'milk powder', 'spinach', 'safety'); and (c) controversies and discussions revolving around the legitimacy of lifting the post-Fukushima ban or proposing a partial relaxation on Japanese food imports (e.g. 'lift a ban', 'lift a restriction'). Specifically, the first frame informed the public of 'what', 'when', and 'where' about the post-Fukushima food imports crisis and specific guidelines on meaningful protection of self and others; whereas the remaining two frames

Table 1. Top 50 concepts ranked by the normalized eigenvector centrality in news titles across three societies.[a]

	Hong Kong			*Mainland China*			*Taiwan*		
	Word	*Word (Chinese)*	*Eigen*	*Word*	*Word (Chinese)*	*Eigen*	*Word*	*Word (Chinese)*	*Eigen*
1	***radiation***	***辐射***	0.500	***import***	***进口***	0.661	nuclear disaster	核灾	0.446
2	***import***	***进口***	0.451	prohibit	禁止	0.292	disaster area	灾区	0.356
3	Hong Kong	港	0.192	pollution	污染	0.251	***nuclear***	***核***	0.346
4	disaster area	灾区	0.166	(our) country	我国	0.228	***import***	***进口***	0.313
5	Taiwan	台	0.140	***nuclear***	***核***	0.226	nuclear food	核食	0.214
6	lift a ban	解禁	0.136	agricultural products	农产品	0.204	***radiation***	***辐射***	0.187
7	nuclear disaster	核灾	0.133	nuclear radiation	核辐射	0.201	lift a ban	解禁	0.171
8	deregulate	放宽	0.126	portion	部分	0.168	import to Taiwan	输台	0.148
9	***prefecture***	***县***	0.119	***radiation***	***辐射***	0.151	lift a restriction	开放	0.136
10	**exceed standard**	***超标***	0.116	China	中国	0.130	**councilmen**	**议员**	0.093
11	***nuclear***	***核***	0.116	district	区	0.124	**public hearing**	**公听会**	0.091
12	***detection***	***检测***	0.107	region	地区	0.121	save	救	0.082
13	pollution	污染	0.104	**radiogen**	**放射**	0.105	homeland	家园	0.082
14	reinforce	加强	0.102	exceed standard	超标	0.105	government	政府	0.082
15	**tag**	**标签**	0.095	monitor	监测	0.103	abolish	废	0.081
16	China	中国	0.094	find	发现	0.090	regulate	管制	0.074
17	**ban**	**禁令**	0.075	detect(ed)	检出	0.086	**countersignature**	**连署**	0.074
18	food	食物	0.074	substance	物	0.085	**Executive Yuan**	**政院**	0.068
19	**contain**	**含**	0.072	milk powder	奶粉	0.083	**blue camp**	**蓝**	0.067
20	**authority**	**当局**	0.072	impact	影响	0.082	**KMT**	**国民党**	0.065
21	import	入口	0.067	restriction	限制	0.079	food	食	0.063
22	**fruits and vegetables**	**蔬果**	0.062	***prefecture***	***县***	0.076	**referendum**	**公投**	0.060
23	***place of origin***	***产地***	0.060	***detection***	***检测***	0.073	Taiwan	台	0.058
24	five counties	五县	0.058	microscale	微量	0.072	safeguard	把关	0.055
25	safety	安全	0.058	**radioactive materials**	**放射性物质**	0.071	oppose	反对	0.054
26	**off shelves**	**下架**	0.057	country	国家	0.069	***detection***	***检测***	0.053
27	import to Taiwan	输台	0.057	quality control	质检	0.067	food safety	食安	0.053
28	prohibit	禁	0.052	health	健康	0.066	regulation	条例	0.052
29	***check***	***检验***	0.052	administration	总局	0.060	request	要求	0.052
30	export	出口	0.051	**radioactive**	**放射性**	0.058	Taiwan	台湾	0.050
31	import to Hong Kong	输港	0.051	**supermarket**	**超市**	0.057	off shelves	下架	0.048
32	food safety	食安	0.048	vegetables	蔬菜	0.057	***prefecture***	***县***	0.047
33	**plan**	**拟**	0.048	***place of origin***	***产地***	0.056	***check***	***检验***	0.046
34	nuclear area	核区	0.047	spinach	菠菜	0.051	**anti-nuclear food**	**反核食**	0.046
35	find	发现	0.047	market	市场	0.050	autonomy	自治	0.042
36	councilmen	议员	0.046	the public	公众	0.048	FDA	食药署	0.042

(Continued)

Table 1. (Continued)

	Hong Kong			*Mainland China*			*Taiwan*		
	Word	*Word (Chinese)*	*Eigen*	*Word*	*Word (Chinese)*	*Eigen*	*Word*	*Word (Chinese)*	*Eigen*
37	nuclear pollution	核污染	0.045	Guangdong	广东	0.048	MOHW	卫福部	0.042
38	**iodine**	**碘**	0.044	**Meiji**	**明治**	0.048	inspect	稽查	0.041
39	mainland	内地	0.044	nuclear leak	核泄漏	0.047	**Tsai [Ing-wen]**	**蔡**	0.040
40	**restriction**	**限制**	0.043	environment	环境	0.047	eat	吃	0.040
41	Tokyo	东京	0.042	reinforce	加强	0.043	refuse	拒绝	0.039
42	milk powder	奶粉	0.039	mainland	内地	0.042	product	产品	0.038
43	**confidence**	**信心**	0.038	milk	牛奶	0.042	proposal	提案	0.035
44	import	输入	0.037	Guangzhou	广州	0.041	health	健康	0.034
45	**eatery**	**食肆**	0.037	not yet	暂未	0.041	***place of origin***	***产地***	0.033
46	center	中心	0.037	safety	安全	0.041	mark	标示	0.031
47	substance	物	0.037	iodine	碘	0.041	import	输入	0.031
48	nuclear radiation	核辐射	0.037	***check***	***检验***	0.040	disaster	灾	0.030
49	**microscale**	**微量**	0.036	nuclear accident	核事故	0.040	counties and cities	县市	0.030
50	Hong Kong residents	港人	0.036	nuclear power plant	核电站	0.039	prohibit	禁	0.030

[a]Common concepts in the three semantic networks are marked in italics; noteworthy unique concepts in each semantic network are highlighted in bold; concepts may exceed one word in length because they were translated from Chinese; repeated English concepts in each semantic network were translated from Chinese words with different expressions but similar meanings.
KMT: the Kuomintang; FDA: Food and Drug Administration; MOHW: Ministry of Health and Welfare.

Table 2. Top 50 concepts ranked by the normalized eigenvector centrality in search results across three societies.[a]

	Hong Kong			*Mainland China*			*Taiwan*		
	Word	*Word (Chinese)*	*Eigen*	*Word*	*Word (Chinese)*	*Eigen*	*Word*	*Word (Chinese)*	*Eigen*
1	***nuclear***	***核***	0.491	nuclear radiation	核辐射	0.533	***nuclear***	***核***	0.506
2	***import***	***进口***	0.314	nuclear pollution	核污染	0.528	***nuclear disaster***	***核灾***	0.503
3	***nuclear disaster***	***核灾***	0.226	district	区	0.407	disaster area	灾区	0.484
4	nuclear pollution	核污染	0.196	China	中国	0.302	lift a restriction	开放	0.323
5	***Taiwan***	***台***	0.187	***import***	***进口***	0.264	***import***	***进口***	0.309
6	disaster area	灾区	0.171	**exposure**	**曝光**	0.250	**risk**	**风险**	0.154
7	import to Taiwan	输台	0.146	**315**	**315**	0.250	radiation	辐射	0.153
8	Taiwan	台湾	0.132	**CCTV**	**央视**	0.123	***lift a ban***	***解禁***	0.151
9	***lift a ban***	***解禁***	0.132	off shelves	下架	0.109	government	政府	0.137
10	prohibit	禁	0.125	United States	美国	0.104	**assessment**	**评估**	0.115
11	China	中国	0.098	***pollution***	***污染***	0.094	***Taiwan***	***台***	0.109
12	prefecture	县	0.088	***nuclear***	***核***	0.083	regulate	管制	0.103
13	nuclear radiation	核辐射	0.087	entry	进入	0.077	manage	管理	0.097
14	sales	销售	0.084	***lift a ban***	***解禁***	0.077	public hearing	公听会	0.095

(Continued)

Table 2. (Continued)

	Hong Kong			*Mainland China*			*Taiwan*		
	Word	*Word (Chinese)*	*Eigen*	*Word*	*Word (Chinese)*	*Eigen*	*Word*	*Word (Chinese)*	*Eigen*
15	Tsai [Ing-wen]	蔡	0.083	response	回应	0.069	detection	检测	0.090
16	deregulate	放宽	0.083	sales	销售	0.068	**United States**	**美国**	0.080
17	CCTV	央视	0.077	eat	吃	0.066	problem	问题	0.079
18	food	食	0.075	region	地区	0.062	***pollution***	**污染**	0.072
19	safety	安全	0.070	**Youkeshu**	**有棵树**	0.055	review	检讨	0.070
20	***pollution***	**污染**	0.066	permission	允许	0.054	import to Taiwan	输台	0.068
21	**plan**	拟	0.064	authority	当局	0.051	deregulate	松绑	0.068
22	representative	代表	0.063	(our) country	我国	0.051	five counties	五县	0.067
23	partner	伙伴	0.062	restriction	限制	0.048	**international**	**国际**	0.065
24	**agreement**	协定	0.060	**buy**	**买**	0.046	the public	民众	0.059
25	**should**	应	0.060	FDA	FDA	0.046	Gunma-ken	群马	0.057
26	region	地区	0.059	**supermarket**	**超市**	0.044	Ibaraki-ken	茨城	0.057
27	Youkeshu	有棵树	0.057	prohibit	**禁止**	0.044	Chiba-ken	千叶	0.057
28	**tag**	标签	0.057	**Muji**	**无印良品**	0.042	Tochigi-ken	栃木	0.057
29	nuclear food	核食	0.057	**e-commerce**	**电商**	0.041	hazard	危害	0.057
30	Beijing	北京	0.056	**cross-border**	**跨境**	0.041	information	资讯	0.057
31	**dairy products**	奶类	0.055	**gala**	**晚会**	0.040	discussion	讨论	0.057
32	**fruits and vegetables**	蔬果	0.053	***nuclear disaster***	**核灾**	0.039	FDA	食药署	0.052
33	**caution**	小心	0.053	product	产品	0.033	**CPTPP**	**CPTPP**	0.051
34	[Tsai] Ing-wen	英文	0.053	***Taiwan***	**台**	0.031	Tsai [Ing-wen]	蔡	0.050
35	**authority**	当局	0.053	**Calbee**	**卡乐比**	0.030	import	输入	0.050
36	lift a restriction	开放	0.053	medium	中等	0.030	**strontium**	**锶**	0.049
37	Hong Kong	香港	0.050	**carcinogenic**	**致癌**	0.030	**European Union**	**欧盟**	0.049
38	detection	检测	0.045	**oatmeal**	**麦片**	0.030	description	说明	0.048
39	**WTO**	世贸	0.045	**AEON**	**永旺**	0.030	eat	吃	0.046
40	**appeal**	申诉	0.044	imports	进口产品	0.029	**standard**	**标准**	0.046
41	green camp	绿	0.040	stipulation	规定	0.029	prefecture	县	0.046
42	importer	进口商	0.040	snacks	零食	0.029	Frank Hsieh	谢长廷	0.046
43	source	来源	0.038	summary	汇总	0.028	referendum	公投	0.045
44	radiation	辐射	0.037	nuclear leak	核泄漏	0.028	counties and cities	县市	0.043
45	list	清单	0.037	accident	事故	0.028	citizen	公民	0.042
46	Hong Kong residents	港人	0.037	large quantities	大量	0.028	nuclear food	核食	0.040
47	Muji	无印良品	0.036	appear	出现	0.027	rights and interests	权益	0.040
48	disaster	灾	0.035	**Taobao.com**	**淘宝网**	0.027	market	市场	0.040
49	district	区	0.034	**Alibaba**	**阿里**	0.027	impact	影响	0.040
50	problem	问题	0.033	investigation	查处	0.027	Executive Yuan	行政院	0.040

[a]Common concepts in the three semantic networks are marked in italics; noteworthy unique concepts in each semantic network are highlighted in bold; concepts may exceed one word in length because they were translated from Chinese; repeated English concepts in each semantic network were translated from Chinese words with different expressions but similar meanings.

FDA: Food and Drug Administration; WTO: World Trade Organization; CPTPP: Comprehensive and Progressive Agreement for Trans-Pacific Partnership.

Table 3. Top 20 concepts ranked by the LL value for counting co-occurrence with 'food' in news titles and search results across three societies.[a]

	Hong Kong			*Mainland China*			*Taiwan*		
	LL terms	*LL terms (Chinese)*	*LL*	*LL terms*	*LL terms (Chinese)*	*LL*	*LL terms*	*LL terms (Chinese)*	*LL*
News titles									
1	nuclear disaster	核灾	28.42	import	进口	143.18	nuclear food	核食	185.65
2	food	食物	25.81	prohibit	禁止	46.78	nuclear disaster	核灾	141.20
3	radiation	辐射	25.36	microscale	微量	41.37	disaster area	灾区	67.41
4	import	进口	24.85	milk powder	奶粉	33.98	anti-nuclear food	反核食	49.96
5	deregulate	放宽	20.92	spinach	菠菜	30.60	referendum	公投	40.26
6	exceed standard	超标	18.24	district	区	28.19	import to Taiwan	输台	32.56
7	eatery	食肆	16.48	iodine	碘	27.32	countersignature	连署	31.05
8	reinforce	加强	16.16	detect(ed)	检出	27.19	import	进口	26.22
9	milk powder	奶粉	15.27	restriction	限制	18.81	food	食	24.10
10	food safety	食品安全	12.76	Meiji	明治	17.41	radiation	辐射	22.38
11	caesium	铯	11.93	agricultural products	农产品	15.50	lift a ban	解禁	22.26
12	import to Taiwan	输台	11.67	radiogen	放射	14.74	KMT	国民党	21.11
13	lift a ban	解禁	11.26	radioactive materials	放射性物质	14.71	nuclear	核	20.82
14	ban	禁令	10.33	region	地区	13.82	Hau Lung-pin	郝龙斌	20.79
15	tag	标签	10.09	portion	部分	13.13	import	输入	19.24
16	disaster area	灾区	10.02	the public	公众	12.89	regulate	管制	18.98
17	Taiwan	台湾	9.33	not yet	暂未	11.87	inspect	稽查	15.88
18	spinach	菠菜	8.73	Taiwan	台	11.87	blue camp	蓝	15.80
19	substance	物	7.96	sample	抽样	11.32	refuse	拒绝	15.77
20	contain	含	7.92	health	健康	10.40	prefecture	县	14.14
Search results									
1	food	食	145.94	nuclear radiation	核辐射	126.89	nuclear food	核食	190.24
2	radiation	辐射	107.07	Taiwan	台	71.41	nuclear disaster	核灾	149.76
3	nuclear food	核食	69.42	product	产品	64.76	safety	安全	90.13
4	nuclear radiation	核辐射	59.75	large quantities	大量	64.10	disaster area	灾区	64.35
5	lift a ban	解禁	34.94	gala	晚会	60.18	Internet	网路	41.29
6	Taiwan	台	33.71	impact	影响	47.70	food	食	38.70
7	representative	代表	27.01	lift a restriction	开放	42.94	nuclear	核	35.03
8	lift a restriction	开放	23.59	authority	当局	39.69	Frank Hsieh	谢长廷	29.76
9	caution	小心	19.00	restriction	限制	27.35	lift a restriction	开放	24.04
10	radioactive materials	放射性核素	16.53	eat	吃	25.97	import	进口	21.11
11	detection	检测	13.49	United States	美国	24.00	problem	问题	17.48
12	exceed standard	超标	11.89	import	进口	19.57	science	科学	16.85
13	import	进口	11.46	315	315	17.13	Taiwan	台湾	15.22
14	Tsai [Ing-wen]	蔡	11.02	exposure	曝光	17.09	product code	代号	13.58

(Continued)

Table 3. (Continued)

	Hong Kong			*Mainland China*			*Taiwan*		
	LL terms	*LL terms (Chinese)*	*LL*	*LL terms*	*LL terms (Chinese)*	*LL*	*LL terms*	*LL terms (Chinese)*	*LL*
15	nuclear	核	9.84	lift a ban	解禁	16.14	description	说明	12.34
16	safety	安全	9.66	Internet user	网友	12.05	CPTPP	CPTPP	10.14
17	deregulate	放宽	8.21	nuclear pollution	核污染	12.30	United States	美国	9.16
18	nuclear disaster	核灾	7.27	hazard	危害	9.80	deregulate	松绑	9.08
19	nuclear accident	核事故	7.19	serious	严重	9.09	radiation	辐射	8.71
20	prohibit	禁	6.92	district	区	8.65	eat	吃	7.83

LL: log-likelihood value; KMT: the Kuomintang; CPTPP: Comprehensive and Progressive Agreement for Trans-Pacific Partnership.
[a]LL terms may exceed one word in length because they were translated from Chinese; repeated English concepts in each semantic network were translated from Chinese words with different expressions but similar meanings.

consisted of government-initiated actions to protect the public from being affected by illegal food import in the wake of the Fukushima nuclear power plant meltdown.

In addition, cross-regional variations of semantic networks unfolded in the following ways. Mass and search-based media discourse in Hong Kong highlighted the explanation of public safety measures and instruction of self-protective action based on credible and international scientific standards. Media frames in Mainland China showed consistent sensitivity to specific events such as the panic-buying salt crisis and the CCTV '315' consumer day gala. In Taiwan, concepts significantly associated with 'food' were once again closely linked to the 'referendum', which rose to be an urgent political issue addressing the long-lasting fight between the Kuomintang (KMT) and the Democratic Progressive Party (DPP).

Discussion

There remains a remarkable gap between the nonscientific public and scientific experts on the safety of food imported from nuclear-contaminated areas in Japan. Information-seeking channels and contextual factors are likely to have distinct effects on public opinion, which, in turn, influences government-initiated policies and regulations. We demonstrated how post-Fukushima food imports were framed in mass and search-based media, and how these frames were contingent upon contextual differences among three Chinese societies. Our findings indicate that media representations of the crisis differ across sources and socio-political contexts.

Less than 44% of the most important concepts were shared by news titles and search pages, whereas a much greater proportion of concepts (between 56% and 76%) were peculiar to each source. This suggests that messages about post-Fukushima food imports were framed distinctly by printed media and high-traffic websites. For instance, news titles in Taiwan were highly relevant to political issues and partisan battles, which may deepen the distrust in the safety and legitimacy of food imported from disaster areas. In contrast, the technical frame identified in search pages, which presented concepts associated with the regulatory process and the government's adequate actions, may induce public trust in the safety of risky food. Because people's perception of media portrayal of food safety issues aligns with their perception of potential risks (8), it is likely that printed media in Taiwan generally persuade the public against, while search pages generally persuade the public for, the imported food. In this regard, we predict that the noted gap between scientific communities and the nonscientific public may be widened or narrowed accordingly.

The cross-regional difference of media discourse can be primarily attributed to the varied evolution of crisis. In Hong Kong, few sensational events occurred partly because crisis responses adopted by the government turned out to be more timely,

consistent, and active than the two Chinese counterparts. Immediately after the 2011 Fukushima nuclear power plant incident, the Hong Kong government issued an order to restrict certain food imports from Fukushima and another four prefectures in Japan to Hong Kong. Moreover, the government has been reviewing risk management measures on imported food products in light of the latest situation, taking into account the recent surveillance results and experts' views from international organizations, and implementing revised arrangements for import control on Japanese food. The continuously updated official information published on governments' websites may have invoked the public sense of regulatory gatekeeping to safeguard food safety and, therefore, elicited strong demonstration effects for both mass media and search-based discourse.

In Mainland China, media discourse revolves around two major events. In 2011, supermarkets around the country ran out of salt after false rumors circulated that iodized salt can help ward off radiation poisoning, even though any radioactive fallout from a crippled Japanese nuclear power plant was unlikely to reach the country. In 2017, the CCTV '315' show, a mix of undercover reports and song-and-dance, highlighted Japanese brands including Meiji, Muji, and Calbee, which were reported to sell food products in China from an area of Tokyo where high levels of radiation were detected in 2015.

In Taiwan, media frames are highly politicized. Apart from the possible explanation that media organizations in Taiwan are highly polarized in political leanings, it should be noted that issues revolving around the nuclear food referendum have become a focus of controversy and confrontation between the KMT (blue camp) and the DPP (green camp). After the 2011 Fukushima nuclear disaster, the government led by KMT placed a ban on all products from Fukushima and its nearby areas. In 2016, the new government led by DPP proposed maintaining the ban for Fukushima products only, but to allow foodstuff in from the other prefectures if they passed inspection. Two parties have since been mired in the partisan rancor centering around whether to lift the Japanese food ban or not, which have been intensively and continuously reported and commented on in media coverage.

A closer examination also pointed to the dynamic interactions between regions. Specifically, a given society's semantic networks invariably contained concepts directly representing the other two regions, since each society often places itself onto a coordinate system that sees the other two regions as references. For example, news titles and search pages in Hong Kong consistently regarded China- and Taiwan-related content as critically important (e.g. 'China', 'Beijing', 'CCTV', 'Taiwan', 'import to Taiwan', 'Tsai [Ing-wen]'). Moreover, media frames in Mainland China and Hong Kong paid noticeable attention to crisis issues occurring in Taiwan (e.g. 'Taiwan'). One plausible explanation is that the highly politicized discussion and deliberation, as well as the dramatic state of play in Taiwan, has provided global lessons for political regimes ranging from the authoritarian system in Mainland China to the semi-democratic system in Hong Kong.

This study has several limitations. First, we only provided a static overview, neglecting change in the framing of food safety issues over time. Hence, periodical summaries of post-Fukushima food imports in different crisis stages can further update and enrich scientific experts' understanding of how the latest public opinions and attitudes are influenced, and more importantly, facilitate their efforts in attenuating the gap between scientific consensus and the climate of public opinion. For instance, up-to-date reviews comprising substantial evidence, such as that presented in this study, can be quoted in public consultations and official documents to exemplify both catalysts and barriers to the safe consumption of food imported from nuclear-contaminated areas in Japan. Second, we only displayed the media representation as it may appear to the nonscientific public. The information validity and scientific correctness of each source was not evaluated. Despite the empirical evidence that printed media and high-traffic webpages may invoke varied levels of trust in food safety, future research can be expected to measure the precise effect of different media discourses on public opinion. Third, although it has been demonstrated that the personalization effect of search results is minimal (31), recent empirical work has captured evidence of filter bubble effects, the phenomenon in which algorithmic content only exposes users to information that reinforces their existing opinions (12). This may

further influence people's information-gathering and opinion-formation process, thus introducing more complexities to their perceptions and attitudes. Future efforts highlighting the coevolution of media discourse and online public discourse (e.g. public opinion on social media platforms) can render a more unbiased approach to measuring how the climate of public opinion about post-Fukushima food imports is influenced.

Ethical approval

Ethical approval was granted by the Survey and Behavioral Research Ethics Committee (SBREC) at the Chinese University of Hong Kong (number SBRE-19-090).

Data availability statement

The data that support the findings of this study are available from the corresponding author, Xiao Wang, upon reasonable request.

Declaration of conflicting interests

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Original Article

A qualitative study to explore health literacy skills in older people from a disadvantaged community in Brazil

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Abstract: We aim to describe older peoples' experiences of accessing, understanding, communicating and appraising health information in the context of primary care in a disadvantaged community in North-East Brazil. A qualitative interview study was conducted with 42 older people at two primary healthcare units in the city of Arapiraca, Brazil. Semi-structured interviews were guided by a qualitative health literacy instrument, translated and adapted for use in Brazil. Of the 42 participants, 30 were women and the majority ($n = 32$) were 60–69 years of age. Qualitative analysis identified that participants had difficulties accessing, understanding and communicating health information, often in the context of chronic disease. Few participants demonstrated an understanding about their specific health concerns, and most had difficulty explaining and interpreting health conditions more generally. Most participants indicated that they did not actively seek health information and this was compounded by physicians who were reported to provide limited information about diagnosis and treatment of health conditions. More than half of the participants reported that they did not understand medical terms included in health information, but most reported that they took no action to clarify understanding. In conclusion, we observed that conventional health literacy skills are very poor in this population of older Brazilians living in a disadvantaged community, with many resigned to not receiving health information or relying on sources other than health professionals. The findings from this study speak to the need for health literacy interventions targeting older adults in Brazil. A two-tiered approach which seeks to reduce the demands and complexities placed upon patients within the healthcare system but also targets interventions toward building the skills and capacities of individuals is likely to be most effective.

Keywords: health literacy, elderly/older adult, primary health care, health promotion

Introduction

Health literacy is defined as the personal, cognitive and social skills which determine the ability of individuals to gain access to, understand, and use information to promote and maintain good health (1). The past decade has also seen much improved understanding of the impact of the context in which people are required to use their health literacy skills and capabilities (2). Health literacy can be better understood as the application of personal skills that are mediated by the

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environment in which these skills are to be applied. Improving health literacy is not simply concerned with advancing personal health knowledge and understanding, but also developing the skills and confidence to act on health information to maintain and promote health (3).

Low health literacy has consistently been shown to be related to adverse health and social outcomes. These include increased mortality, reduced overall health status, lower participation in prevention programs, poorer adherence to medication and higher rates of hospitalization and emergency care (4–6).

Most population surveys have identified a social gradient associated with health literacy, with the most socially disadvantaged groups disproportionately affected (7). Socioeconomic status, age, race, cognition, and education level are all correlated with health literacy levels in adult populations. Older adults are observed to be at greater risk to have lower health literacy (8), especially those with a lower education level, with lower household income, and those residing in disadvantaged areas (9–11). Older adults also have higher rates of compounding factors such as poorer vision and hearing, and other impairments that interfere with information processing compared with younger adults (12).

Although health literacy has been widely discussed and researched in developed countries where basic living conditions are assured (13), less work has been done in developing countries such as Brazil. Poverty is disproportionately high among older people. This is compounded by relatively high rates of illiteracy among older people corresponding to 20.4% of 11.8 million illiterate citizens. The Northeast region of Brazil is disproportionately affected (14).

Given this context, it is reasonable to assume that low heath literacy is common and likely to impact on the health and wellbeing of older Brazilians. To date, most health literacy research in Brazil has used quantitative methods with observational/cross-sectional designs (15,16). Two qualitative investigations have explored older peoples' health literacy experiences in the context of health education groups and from a primary healthcare unit (PHCU) (17,18). The first study indicated that improvements in health literacy brought benefits to participants with chronic disease, impacting their health condition and their ability to perform self-care (17). The second highlighted health literacy as having a positive impact on self-care, adherence to treatments and supporting a more active life (18). Both of these studies were conducted in the South of Brazil, one of the most developed regions of the country.

The present study was conducted in a less developed region of Brazil with known high rates of poverty and illiteracy among the elderly population. This is a distinctly different population to those previously studied in Brazil, and may offer insight into the health literacy needs of similarly disadvantaged populations in Brazil, and in other medium and low-income countries.

This paper specifically reports on older peoples' experiences of accessing, understanding, communicating and appraising health information in the context of primary care services operating in a disadvantaged community in Northeast Brazil.

Method

This study used semi-structured interviews to explore older peoples' experiences of accessing, understanding, communicating and appraising health information, in the context of a self-selected health interest or concern. The data were collected at the commencement of a comprehensive health literacy intervention program, reported elsewhere (19). This study is reported in accordance with the Consolidated criteria for Reporting Qualitative research (COREQ) checklist (20).

Setting

The study was conducted at two PHCUs in the city of Arapiraca, Brazil. The PHCUs were purposively selected as they were located in suburbs with relatively high poverty and social vulnerability. Arapiraca is a city in the countryside of the Northeast of Brazil, with approximately 230,000 people and a Human Development Index of 0.649 (21).

Participants and recruitment

The researcher, with the assistance of the professionals of the health units, invited older people to participate in the study. Initial contact was made

by phone call or in person (at the PHCU or by home visit) to assess for eligibility.

Inclusion criteria for the study were: (a) aged over 60 years, (b) enrolled in the health unit, and (c) ability to read and speak Portuguese. The exclusion criteria were users enrolled in the register system as illiterate; declared that they were not able to respond to the interview (e.g. hearing or vision problems) and suggestions of cognitive impairment assessed using a score of <6 on a 10-point cognitive screener (22). PHCU users registered as 'illiterate' were excluded because the intervention was based in part on the use of widely available government written materials and because a part of the evaluation was based on a health literacy instrument that required functional literacy (19).

Given the location of the PHCUs, rates of illiteracy were exceptionally high. One health unit had enrolled 305 older people, of whom 202 (66%) were illiterate; the other had enrolled 166 older people, of whom 120 (72%) were illiterate. Five potential participants were excluded based on cognitive impairment; 16 participants were also excluded as no contact could be made after a phone call or home visit three times. A small number ($n = 11$) refused to participate.

Data collection

The 42 individual interviews were conducted and audio recorded by the researcher (the first author) at the PHCUs between September and November 2017. After transcribing the interviews in Portuguese, transcripts were translated into English.

For data collection, participants initially were asked to provide demographic information including sex, age, schooling and income. Interviews were then guided by a qualitative health literacy instrument composed of open-ended questions, originally developed by researchers (23) in Canada and previously translated and validated for use in Brazil (24). This instrument was considered the most suitable among the very few already validated in Brazil. It was the only qualitative instrument available that also captures contextual information on the social circumstances of the participants. To ensure practicality and relevance for the study participants, the interviewer asked participants about their experiences in applying these four health literacy skills (experiences of accessing, understanding, communicating and appraising health information) in the context of a health interest or concern that was self-selected by the participant (23,24). As the instrument had been previously validated for use with a similar population, no pilot study was conducted before this research.

Data analysis

For the organization of qualitative data, Qualitative Solutions Research NVivo software (QSR NVivo) version 11.0 was used. Data were then analyzed according to the five key steps of Framework analysis (25). AS and DN read a sample of transcripts (familiarization) and developed a provisional thematic coding framework (identification) based on the instrument's questions and recurrent issues from interviews. The framework was revised by DM and LP who coded a selection of transcripts and relevant written feedback was added to the framework. The findings and interpretation were discussed by all authors to reach consensus.

The questions that formed the key dimensions to the health literacy instrument were used as the basis for the presentation of the results. The participants' quotes were grouped by thematic areas in each of the classifications: accessing health information, understanding health information, communicating health information and impacts of health information.

Ethical considerations

This study was approved by Federal University of Rio Grande do Sul Human Research Ethics committee. All participants provided written informed consent.

Results

Among the 42 participants, 30 were women and the majority ($n = 32$) were between 60 and 69 years of age. Of the total number, 19 were married, 11 were widowed, 10 were divorced and two were single. Participants had a median of 4 years of school education and all received the minimum state pension (R$998/US$247 per month) as their only income.

Table 1. Categories, thematic areas and number of responses.

Categories	*Thematic areas*
Accessing health information	
Questions about the health concern	Did not have doubts ($n = 15$); If the health concern was serious ($n = 12$); What was the health concern ($n = 8$); Did not care ($n = 7$).
Information from the first source	Physician ($n = 37$) [Information and prescriptive treatment ($n = 28$), Lack of information ($n = 9$)]; PHCU ($n = 2$); Emergency Department ($n = 2$); Television programs ($n = 1$).
Information from the second source	Family ($n = 10$); Friends ($n = 7$); Television programs ($n = 5$); Alternative medicine ($n = 4$); Books ($n = 3$); Pamphlets ($n = 1$); Internet ($n = 1$).
Which source did you find to be the most useful	Question excluded.
Understanding health information	
Did you come across information that did not agree with each other	Question excluded.
What did you do when you came across words that you do not understand	Did not do anything ($n = 14$); Ask others ($n = 5$); Ask the physician ($n = 2$).
Communicate health information	
Who did you tell that you were concerned about your health concern	Family ($n = 26$); Nobody ($n = 9$); Friends ($n = 5$); Priest ($n = 1$); Physician ($n = 1$).
Keys points that other seniors should know about the health problem	Find a physician ($n = 12$); To have healthy habits ($n = 9$); Take care to not worsen the health condition ($n = 7$); To pray and have faith ($n = 6$); Care with the disease ($n = 3$); Don't know how to answer ($n = 3$); Alternative medicine ($n = 2$).
With whom have you had a chance to share what you have learned about	Friends ($n = 18$); Family ($n = 12$); Nobody ($n = 11$); Church ($n = 1$).
The health information made a difference in other peoples' lives	Made a difference ($n = 25$); Has not made a difference ($n = 17$).
Impacts of health information	
The information that you found made a difference in your life	Change care of the disease ($n = 22$); Did not make any difference ($n = 14$); Change to healthy food ($n = 3$); Made a difference ($n = 3$).

The health interest/concerns defined by the majority of participants related to chronic diseases ($n = 23$) including diabetes mellitus, high blood pressure, mental disorders and more general symptoms of discomfort such as back pain, tiredness and dizziness. One participant chose to talk about the lack of access to health services. Categories, thematic areas and number of responses are summarized in Table 1.

General understanding of their health condition

Most participants ($n = 28$) reported that they did not know what their health condition was or had only a vague idea about the condition. They had difficulty in explaining or interpreting the condition, and few ($n = 14$) reported full understanding.

> I know it's bad, but I do not know what it is. (Participant 4, F, 74 years)

Accessing health information

When asked about seeking and accessing information related to their health interest/concerns, some participants ($n = 22$) indicated that they did not regularly seek health information. This disconnection was often associated with a lack of understanding about the condition, or participants

indicating that they 'did not care' about the condition.

> I don't have questions because I don't even know what it is. (Participant 4, F, 74 years)

> So why in my case, I have never needed to take insulin, what type of Diabetes is my disease? Type one or type two? (Participant 15, F, 61 years)

When participants were asked about the sources of their health information, the majority of participants ($n = 37$) indicated that they sought health information/advice from their physician, followed, in order of responses, by the PHCU ($n = 2$), emergency department ($n = 2$), and then media/television programs ($n = 1$).

However, most of them ($n = 28$) reported that physicians provided them with limited information about diagnosis and treatment, and did not offer more detailed information about the causes and nature of health conditions. Participants perceived the type of information as prescriptive and treatment-focused.

> The physician did not explain to me what it was (the disease) and what were my risks. (Participant 40, F, 61 years)

Family, neighbors and friends were cited as important secondary sources of health information (when participants said that there was more than one source). A smaller number of participants indicated that they used a range of media to get health information, for example from television programs ($n = 5$), internet ($n = 1$), books and magazines ($n = 3$), pamphlets ($n = 1$).

> I ask my daughter to search the internet because I do not know how to use it. She tells me everything I need. (Participant 13, F, 60 years)

Understanding health information

In relation to understanding health information, participants were asked how easy it was to understand the health information and how often they came across words that they did not understand. Some respondents reported that they had little difficulty in understanding the information they found ($n = 13$); many of them ($n = 8$) reported that it was easy or very easy to understand. On the other hand, more than half of the participants ($n = 21$) did not understand some medical terms included in the health information provided by their primary source of information, and most ($n = 14$) reported that they took no action to clarify understanding. This was particularly evident for information obtained verbally from others, where participants often reported feeling 'ashamed' to seek clarification.

> I did not ask; I was ashamed to ask because the person could think I was stupid. (Participant 10, M, 73 years)

> I try to comment with other people and even with the doctor. (Participant 8, F, 69 years)

Communicating/sharing health information

When asked about who they shared their health concerns with, respondents identified different individuals, but primarily reported their family ($n = 26$) to be an important source of communication, support and care. Participants similarly identified family ($n = 12$) and friends ($n = 18$) as the main groups with whom they shared health information that they had learned.

> I talk with my daughters-in-law and my daughter. And they keep saying that I have to take care of my health. (Participant 29, F, 61 years)

> I talk to my colleagues who have high blood pressure, I tell them to not eat salt. (Participant 20, F, 60 years)

Although most participants relied on their family to share concerns and information about their health, a substantial portion of those interviewed ($n = 20$) reported that they 'did not talk to anyone' (Participant 7, F, 61 years) about their concerns, or did not share health information due to a perceived lack of knowledge.

> The little I learned I did not tell anyone. (Participant 24, F, 68 years)

When participants were asked about the key points that other older adults should know about

health, although some participants ($n = 3$) '[did not] know what to suggest' (Participant 23, F, 67 years), others ($n = 28$) referred to the importance of healthy habits in relation to diet and physical activity, the importance of finding a physician, and the need to be careful with diseases and not exacerbate health problems.

> Find a physician and take your medicines. (Participant 32, F, 76 years)

> You have to do some physical activity, even without the help of someone. If you stop at once, the situation became worse. (Participant 31, F, 63 years)

A few ($n = 8$) participants also recommended that others should have faith and to look for alternative medicine:

> I would say to wait for God, have faith because in God I trust. (Participant 9, F, 62 years)

Although most participants ($n = 25$) thought that health information had the capacity to change older adults' attitudes about health, and could positively support self-management, others could not articulate the impact that health information might have for others. A portion of participants ($n = 17$) responded that health information would have no impact, or it had not made a difference in other seniors' lives.

> I think it does, because they start to change their attitude considering their health issue and take care of themselves better. (Participant 1, F, 70 years)

> It doesn't matter because people did not take care of themselves. (Participant 39, M, 62 years)

Impacts of health information in life

Participants were asked about the impact of health information on their lives. Most of participants ($n = 22$) mentioned that health information changed the care of disease and made them 'feel more careful about health' (Participant 27, F, 73 years), and this information could be related to positive aspects such as self-care and management of chronic illness. Some participants ($n = 14$) mentioned not having noticed changes because they 'did not receive any information' (Participant 24, F, 68 years).

Discussion

This study aimed to describe older people's health literacy skills in the context of managing personal health priorities in a disadvantaged community from Brazil. The findings indicate that many participants appeared to be disengaged from the (limited) health information available to them, and somewhat fatalistic about the typical health conditions they faced. Such findings are not unusual in populations with poor literacy and limited resources (26), and the fatalistic expressions used by the participants may be face-saving devices, or mechanisms for coping with uncertainty (27). Although the study participants were registered with the services provided by PHCU, this did not mean that they had access to or made use of all the potential that PHCU can offer. Many people are only registered at the service, but are not monitored, and often do not use the services provided. Not all PHCU offer continuous access to their registered users, particularly in relation to health promotion services and management of chronic disease.

It is not surprising that participants cited chronic diseases as the main topic of health concern/problem, as they have become an increasingly serious public health problem due to progressive population aging in Brazil (28). Health literacy plays a crucial role in chronic disease management, enabling individuals to access health services and interact confidently with health professionals (29). However, several participants during the interviews complained about the lack of access to medical specialists and diagnostic services, and that they lack information about treatment and management, similar to findings from other studies (30).

Improving health literacy can contribute to the development of empowerment and social control, better enabling older people to access health services and information. This potential can only be fulfilled if health organizations and professionals actively support access and communicate with patients in ways that are sensitive to their personal circumstances. This does not appear to have been

the experience of the participants in this study, who, it seems, only felt confident to talk about these system challenges through the interviews, and not with their healthcare provider. Some participants reported shame associated with asking for clarification about things they did not understand. Early evidence has established that individuals often feel intimidated or anxious when looking for health care (31). In contrast to a previous study (17) in Brazil, few participants demonstrated an understanding about their health concern, and most had difficulty in explaining their health conditions. This lack of knowledge may be linked to the surprising lack of concern expressed by some participants about their health condition. This may be further exacerbated by a reluctance to interact with healthcare providers, with older adults generally less likely to ask questions or elicit clarification of information provided (32). Our study participants appeared to prioritize the functional requirements of disease management such as taking medications over improved understanding of their conditions (23) and implementing recommended preventive/behavioral changes (17). These discrepant findings are a reminder that health literacy is fundamentally mediated by the social determinants of health (33), with observable differences in the way people understand and act on information in different regions of Brazil. Health disparities are largely determined by the maldistribution of social and environmental forces and exposures — problems that can be addressed, at least in part, through enhancing health literacy (34).

Most participants identified physicians as the most trusted source of health information. This is consistent with previous research in other countries (35,36), though the growth in access to information online is having an effect on this established relationship. However, the participants in this study have limited access to health information, and consistently observed that the information they received through their health providers was restricted and limited in detail. This has been found in a previous study in Brazil (17). Many also reported that they did not understand some medical terms used by physicians, and, as indicated earlier, lacked the confidence to seek clarification from them and other healthcare providers. This experience is common in medical encounters, with patients often feeling overwhelmed and forgetting the questions they had planned to ask (37).

The lack of information from healthcare providers highlighted above meant that secondary sources of health information are important to this population. Many participants relied on popular knowledge, alternative medicine, religion and previous experiences. The presence of a good support network played critical roles in knowing when and where to seek health information as well as helping information retention (38). A smaller number of participants in this study also found a health information from television programs, books, magazines and pamphlets. This contrasts with other research indicating growing use of the internet and other digital media to access health information (36).

The results of the present study illuminate the nature and extent of the difficulty that many older people have in accessing, understanding, communicating, and applying health information in typical circumstances for a socially disadvantaged community in Brazil. They offer an important reminder of the challenges of improving health literacy — illustrating the practical difficulties experienced, and the personal, social and professional barriers to seeking health information and interacting with healthcare providers. Although there is widespread enthusiasm for the use of digital communication in health information provision, this population serves as a reminder of the enduring importance of the personal physician as the most trusted professional for health information.

This study enabled us to gain a broader understanding of the health literacy of older adults in Brazil, and our recruitment strategy reached typically hard-to-reach older adults from disadvantaged communities in North-East Brazil. However, our study also has some limitations. A majority of vulnerable older people in this disadvantaged community were excluded from the program because they were illiterate and unable to engage with the written content that formed an important part of the intervention. New studies including illiterate older people should be developed. Nevertheless, some participants still had difficulties in understanding and responding to some questions of the instrument. This is likely to have reduced the amount and quality of data collected from

participants, and will have impacted further on the representativeness of the population. This instrument had been previously used in the southern region of Brazil and did not present these difficulties (17,18).

The findings from this study strongly reinforce the conceptualization of health literacy as a dynamic interaction between personal skills and situational complexity. It follows that future interventions should focus both on improving people's health literacy skills, and on the development of the health system's capability to reduce the literacy demands of the clinic environment, particularly by improving the communication skills of healthcare providers (39,40). This population has exceptionally low inherent skills that could be developed in an environment that was sensitive to their needs. Healthcare providers, for example, could do far more than is currently observable to improve health literacy through communication that is more inclusive and interactive (41). Health professionals can also more actively check that patients have understood the information they receive, using techniques such as 'Teach Back' (42).

The challenges are great, but the opportunity exists in Brazil to work with older people in groups through the PHCU network, and our work has demonstrated the feasibility of doing this (19). However, Brazil still needs to implement health literacy as a national health policy and define actions to improve health literacy in populations, as has been done in other countries worldwide (43).

Conclusion

In this study, we observed that conventional health literacy skills are very poor in this population of older Brazilians living in a disadvantaged community, with many resigned to not receiving health information or relying on sources other than health professionals. Interventions are needed to improve the health literacy of older adults in Brazil, targeting both the adults themselves through capacity-building initiatives, as well as improving healthcare system responsiveness and health provider communication skills.

Future research should also investigate health literacy of illiterate populations, and the feasibility and efficacy of intervention programs to improve health literacy among vulnerable older populations in the community setting.

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Healthcare and social needs of international migrants during the COVID-19 pandemic in Latin America: analysis of the Chilean case

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Abstract: International migrants are a particularly vulnerable group in the context of the coronavirus disease 2019 (COVID-19) pandemic. Immigrants in Chile tend to experience multidimensional poverty and layers of social vulnerability. Our analysis aims to describe the perceived social and health-related needs of international migrants during the COVID-19 pandemic in Chile in terms of migration as a social determinant of health and layered social vulnerability. We carried out a qualitative analysis of responses to an open-ended question focused on the social and health-related needs linked to the pandemic included in an online questionnaire disseminated during April 2020 aimed at international migrants residing in Chile. The information gathered was thematically analysed. We included 1690 participants. They expressed needs related to health and others linked to the overall socio-economic and political response, employment, material conditions and psychosocial aspects. They also reported needs related to 'being a migrant'. Additionally, some participants described situations of vulnerability. We analysed their needs and situations of vulnerability identified around the following emerging frames: (a) work and living conditions, (b) regularisation traps and perceived lack of support and (c) and physical and mental health needs. International migrants in Chile report experiencing interrelated layers of social vulnerability during the COVID-19 pandemic, where 'being a migrant' exacerbates physical and mental health risks. The issues revealed are immediate and direct public health challenges, as well as different aspects of social vulnerability linked to migratory status, employment and barriers to accessing healthcare that should be addressed through comprehensive policies and measures.

Keywords: international migrants, social determinants of health, social vulnerability, Latin America, COVID-19

Introduction

Estimating the social and health impact of the coronavirus disease 2019 (COVID-19) pandemic requires a comprehensive approach that involves considering the social determinants of health, among which migration is highly relevant. Migration is a transversal social determinant of health, insofar as

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individual health may be altered before, during and after the migration process and the circumstances of the individual migrant and their context changes (1,2). International migrants are defined as people who move away from their country of usual residence across an international border, temporarily or permanently, and for various reasons (3).

Beyond the direct threat to public health and individual health outcomes posed by the COVID-19 pandemic globally, indirect risks linked to social determinants of health and social vulnerability are becoming apparent in most countries (4). In this context, migrants and their families are often part of marginalised and vulnerable groups in societies and the challenges described in the emerging literature on COVID-19 and migration are multiple, including aspects related to the closure of borders (5), migratory status (6,7), informal or precarious employment as well as unemployment (8,9), lack of social protection, inadequate and overcrowded housing and lack of support networks and discrimination (10).

Vulnerability is a highly significant concept regarding health, and requires special attention in the context of the pandemic. Human vulnerability is an inherent, absolute and permanent characteristic or label, while social vulnerability is defined as constructed, dynamic, layered and modifiable (11). Connected to social vulnerability are social determinants of health, which can be structural, encompassing general socio-economic and political context, the socio-economic position and social class of an individual and their demographic characteristics, and intermediate, including the health system, as well as material circumstances, behaviour, biological aspects and psychosocial factors at the individual level (12).

Migration as a social determinant of health deserves a priority approach in the COVID-19 pandemic. Although the adversity experienced during the pandemic is not unique to the migrant population, and is not experienced equally among all subgroups of international migrants, it is crucial to identify their specific needs to promote adequate, timely and equitable solutions, as preventive and epidemic control approaches should include migrants as a vulnerable population (13).

Chile is a high-income country (14) receiving immigrants predominantly from Peru (27%), Venezuela (18%), Colombia (13%) and Haiti (11%). In 2019, the total number of foreign residents represented approximately 8% of the total population (1,492,522) (15). According to the 2017 National Socioeconomic Survey (CASEN, from the Spanish acronym), 24.6% of foreign-born residents experience multidimensional poverty four percent more than nationals, and 15.8% of the foreign-born population did not have any health insurance affiliation versus only 2.2% for nationals (16). International migrants in Chile face barriers to accessing healthcare, including migratory status, administrative issues, misinformation, costs and discrimination (17,18). Additionally, they may face exacerbated social and health needs compared with nationals, considering their precarious transit conditions, entering the country through nonauthorised crossing-points and difficulties in obtaining temporary or permanent residency (18,19).

Considering that Latin America has become a hotspot of the COVID-19 pandemic (20) and that the region presents high levels of social and health inequality, assessing the situation of international migrants in Chile in the context of the pandemic is of high interest on the global health agenda. The research question guiding our analysis is: what were the perceived social and health-related needs of international migrants facing the COVID-19 pandemic in Chile regarding migration as a social determinant of health and layered social vulnerability? The objective of the analysis is to identify self-perceived dimensions of social and health vulnerability experienced by international migrants in Chile during the COVID-19 pandemic, with the aim of contributing to the generation of primary evidence around migration as a social determinant of health and the related layers of social vulnerability in the context of the pandemic.

Methods

Study design

We carried out a qualitative thematic analysis of written responses to an open-ended question nested within a larger cross-sectional quantitative study with an opinion poll design, which sought to identify (a) the level of knowledge that immigrant populations in Chile had around COVID-19 and prevention measures and (b) their immediate needs

and concerns towards the future as a consequence of the pandemic.

An online questionnaire was available for completion via Google Forms, which is easy to access from any device, between 4 April and 24 April 2020, in Spanish and Haitian Creole.

The questionnaire was based on previous studies about migration and health in Chile and population surveys including migrants. It included 31 multiple-choice questions organised in the following sections: (a) sociodemographic data, (b) migratory process, (c) living conditions, (d) knowledge of COVID-19 based on WHO official information, (e) coping strategies, (f) compliance with prevention measures recommended and implemented in Chile at that time (April 2020), (g) understanding and opinions on the information available regarding the pandemic in Chile at that time.

In addition to these questions, we included an open-ended question, allowing for a qualitative analysis, which is the focus of this paper:

- What do you need to feel calm despite the issue we are currently facing because of COVID-19? (Translated from Spanish)

The original question in Spanish was as follows: *¿Qué necesita para sentirse tranquilo con este problema que enfrentamos hoy de COVID-19?* Its version in Creole was the following: *Kisa ou bezwen pou ou santi'ou trankil ak pwoblèm nap travèse jodia ak KOVID 19?*

All participants ($N = 1690$) answered this question. The question had no word count limit for responses, ranging from one word to several short sentences.

The questionnaire was designed and pilot-tested by one of the authors (BC) with migration experts of partner institutions and eight international migrants from Venezuela, Peru, Colombia and Haiti to assess whether the questions were clear, understandable and culturally relevant. In addition, two multiple-choice questions were modified in order to improve clarity.

Recruitment of participants and data collection

By a nonprobabilistic sampling, participants were recruited by disseminating the questionnaire among social networks, partner organisations and the public healthcare network to reach individuals self-identifying as international migrants residing temporarily or permanently in Chile at the time of the questionnaire. Access to the internet from any device and over 18 years old were the only selection criteria.

Data analysis

The data collected for the selected open question was stored in a Microsoft Excel spreadsheet (Microsoft Corporation, CA, USA) to facilitate the analysis carried out by one author (AB). The first step was a general reading of all the answers to map out broad thematic categories, following the concept-indicator model in open coding or constant comparison of regularly occurring textual material (21). In this process, we identified a proportion of the respondents not directly answering the question, taking the opportunity of an open-ended question to describe the situation they were facing at the time rather than explicitly describing their needs. The second step was making the decision, by two of the researchers (BC and AB), to carry out two processes of codification, one for each type of answer: needs and description of the situation. The third step was performing an inductive coding process, whereby we formulated a scheme of categories and codes and refined it iteratively as the data was reviewed (22). Finally, we defined saturation when no new code emerged from the data (23,24). The fourth step was organising the results in tables by categories, codes and respective supporting quotes.

Ethics

Data were collected voluntarily and entirely anonymously, with no way of identifying the participants. Participants gave their informed consent by ticking the corresponding box before accessing the questions. We informed participants of the purpose of the study, explaining that their participation would contribute to knowing the impact that COVID-19 could have on the population to develop prevention and intervention programmes. Additionally, we notified them that participation entailed completing an online questionnaire, that data would remain strictly confidential and anonymous, and that the collected data were for research purposes. Furthermore, we introduced the entities conducting the survey. Finally, we did not

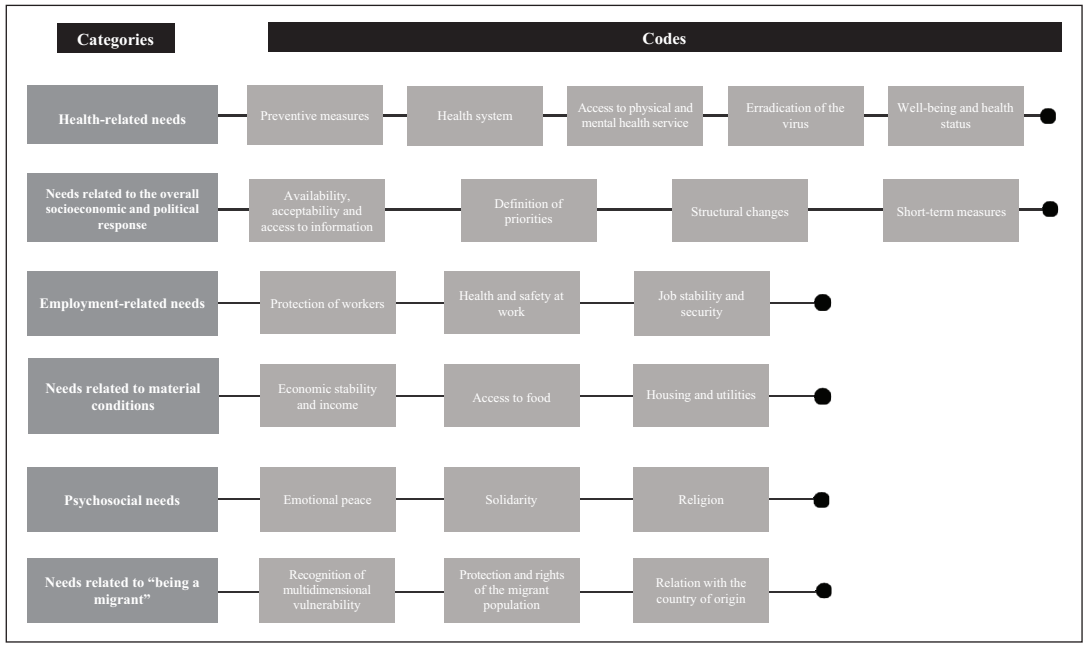

Figure 1. Emerging categories and codes related to expressed needs.

explore sensitive information, such as migratory status, whether they intended to stay in the country and how long, self-perceived discrimination, whether they worked formally or informally, living conditions or income.

Results

Sample description

Of the 1690 total respondents, 67% self-identified as female, 33% male and less than 0.1% other. The average age of the total sample ($N = 1690$) is 38 years, with a standard deviation of 9.84. Most of the respondents were from Venezuela (59.70%), Colombia (13.55%), Haiti (5.38%) and Peru (4.38%), among 35 other countries. Most participants (62.8%) had been in Chile for 1–5 years at the time of response, 16.8% for 6 months to a year, 8.9% for 5–10 years, 7.9% over 10 years and 3.3% for less than 6 months.

Among the respondents, 74% reported university-level education, 24% secondary-level and 2% primary-level. Regarding labour status, 58.5% reported working in either the formal or informal sector, 40.1% reported not being employed but wanting to work and 1.3% reported not working and not wanting to.

Finally, 62.7% reported using public health insurance, 18.5% had no health insurance, 15.4% used private health insurance, 2.4% did not know their health insurance status and 0.8% reported using another type of coverage.

Frames of analysis

On the one hand, the participants expressed a diverse range of needs, some of which were directly health-related (Figure 1). Moreover, several participants took the opportunity of an open-ended question to write about the situation they were facing (Figure 2). Additionally, a small proportion ($n = 13$) of participants reported not needing anything.

We identified three frames of analysis:

- Work and living conditions: consequences of precarious labour and economic instability;

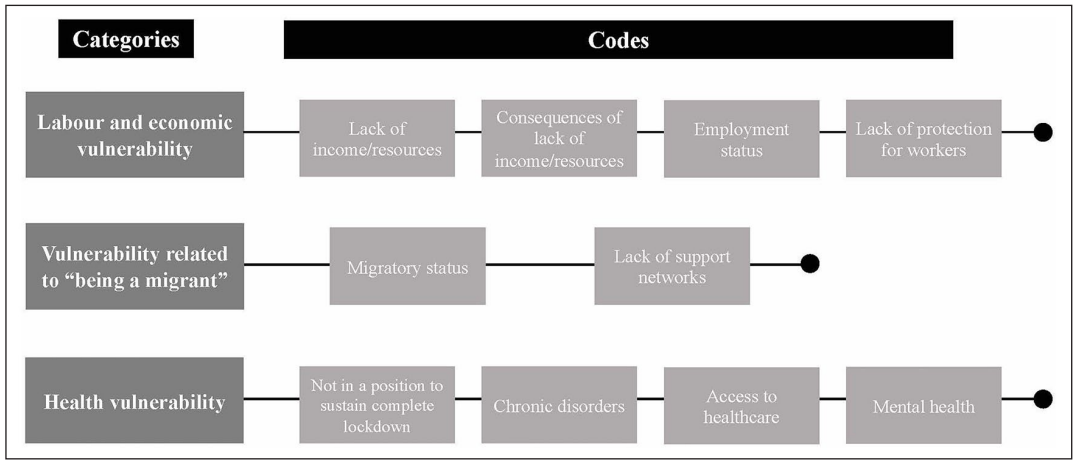

Figure 2. Emerging categories and codes related to described situations.

- Regularisation traps and perceived lack of support to international migrants;
- Physical and mental health needs: access to care and prevention.

For each frame, we described the main results and presented selected supporting data.

Work and living conditions: consequences of precarious labour and economic vulnerability

The participants reported needs around employment, such as health and safety measures at work and measures to protect the job market in general and maintain wages. Others expressed the need to maintain their job or to find one. Additionally, when describing their situation, some participants mentioned losing their job or not finding one, and the lack of social protection for informal and independent workers. For instance, a participant expressed the need for guaranteed job security in case she were to fall ill:

> '(I need) protection for workers, meaning, if I get COVID-19, still receive my salary and not lose my job after.'

Material conditions were often brought up with employment, and needs focused on economic stability and income. Additionally, needs around income or reported loss of income were associated with food security, housing, utilities and affordable medicines. In this context, some participants mentioned specific measures aimed at protecting small and medium enterprises as well as households; for instance, measures linked to social protection, freezing rent and utility payments or actively preventing evictions:

> '(I need) a law to cancel payments for rent and utilities for at least 3 months in order to make sure we can buy food with the little money we make. It would also prevent potential evictions for failing to pay rent. Unfortunately, this would make the situation worse; it is something we cannot control.'

Regularisation traps and perceived lack of support to international migrants

Needs and vulnerability linked to work were also brought up with relation to migration, especially the length of processes to obtain or renew residence permits, leading to difficulties finding a job or falling into the informal market:

> '(I need) support for immigrants who do not have their ID yet or whose (residence) application is still not being processed, who have worked informally, because it seems like we are invisible to everyone.'

With regard to material conditions and migration, the participants mentioned migratory status as well as lack of network and lack of attention towards migrant communities and the strain that they may be experiencing:

> '(I need) support to be able to pay rent at least, because, if we get evicted, we cannot rely on being able to stay with relatives.'

Conversely, needs related to employment and economic stability were mentioned with relation to being able to pay for residency permits:

> '(I need) job stability (. . .) to be able to proceed with the application for the permanent residence permit.'

Physical and mental health needs: access to care and prevention

Many of the needs expressed regarding health referred to increasing prevention measures, including mandatory lockdowns, accessible and affordable protective equipment or promoting collective responsibility and compliance to prevention measures. Moreover, in some cases, these needs were mentioned together with income to sustain a lockdown or buy protective equipment, health and safety at work or general living conditions including overcrowding:

> 'I wish this country could be put under lockdown, complete lockdown, because it is useless for some of us to be quarantined while others are not, at least in my house there are 11 rented rooms, and I am careful and stay home, but everyone else is going out to work and they work with customers, and this is stressing me out as I have a chronic illness.'

In terms of health-related needs and situations of vulnerability linked to migration, access to healthcare was mentioned together with migratory status, lack of knowledge on the Chilean healthcare system or the need to receive further information and general support:

> '(I need) the guarantee that we will all receive good healthcare no matter our economic or migratory status if we get infected.'
>
> 'I do not know how to use the healthcare system, and the only time I tried to use the emergency services at the hospital, they did not even measure my blood pressure; in fact, they made me feel bad for going because "I was not dying". I am scared that something like this could happen again in an even more precarious situation than that one.'

Participants also mentioned that they needed the virus to disappear entirely or partially for their peace of mind. This situation can link to psychosocial needs, where participants report needing to feel calm, secure, safe, or have certainty that things will turn out well. In addition, they mentioned needing mental health support, with participants experiencing stress and anxiety. Furthermore, certain needs related to the country of origin – such as wishing to return, contacting relatives, and ensuring their wellbeing – also were expressed:

> 'All I need is to make sure my parents, who are in Venezuela, stay well (they are over 60).'

Discussion

Our findings suggest that the health and social needs of international immigrants facing the COVID-19 pandemic in Chile are diverse, and reveal different and often interrelated layers of social vulnerability. Migration as a social determinant of physical and mental health is a valuable concept for analysing interrelated layered social vulnerability, considering the social factors that affect health and operate to either include or exclude individuals and communities from adequate healthcare and the resources and experiences that foster health (25). Migrants are often in situations of poverty and social exclusion, working in hazardous environments, and experience poor living conditions, which affect their overall health and wellbeing, as well as experiencing barriers to accessing healthcare and social services (1). This situation is deeply worrying in the context of efforts to achieve universal health coverage and in the context of a global pandemic.

Although some of the instances of vulnerability and needs expressed can reasonably be assumed to be shared by at least a proportion of the local population, such as economic hardship, loss of income and employment, marginalisation and lack of institutional support, we found that a dimension

of social vulnerability experienced by international migrants seems to stem from two main aspects of 'being a migrant': migratory status, which leads to 'regularisation traps', and lack of social support and networks. In the context of the pandemic, a precarious migratory status brought an additional layer of vulnerability linked to limited access to formal support as well as uncertainty surrounding whether the pandemic would slow down residence application processes. The impact of the pandemic on processes of migratory regularisation and subsequent access to social rights was also observed in other countries (26). Additionally, although not explicitly mentioned by the participants, being an international migrant in Chile implies facing structural racism and xenophobia (27) leading to exacerbated social vulnerability and may determine adequate access to critical services such as healthcare.

Regarding healthcare needs, participants expressed uncertainty around access to health services and the need to receive clear instructions on what to do if they fall ill, while reporting not knowing how to navigate the healthcare system. Both results are consistent with previous studies on barriers experienced by migrants to accessing healthcare at the global level (28–30) and in Chile (17,31,32), where the introduction of Decree no. 67 aimed at granting access to public healthcare to international immigrants without an income regardless of their migratory status (33), mitigated administrative barriers to healthcare (34). During the pandemic, similar barriers were identified at the global level (35–37). These needs and concerns call for increased attention to guarantee equitable access to healthcare, especially during the pandemic, as increased demand for healthcare may further exclude vulnerable populations like international migrants.

Additionally, the reported lack of support networks in Chile exacerbated feelings of vulnerability. Although transnational ties usually constitute a source of social support (38), being away from relatives and friends might constitute a source of increased anxiety in the context of the pandemic. Participants expressed needs related to mental health, sometimes in connection with uncertainty related to employment, income, and housing. These findings are highly relevant both in the immediate context of the pandemic and in the longer term, as the adaptation of mental health services is needed, especially for vulnerable populations (39).

Migratory status and adversity perceived as stemming from 'being an international migrant' was also mentioned regarding employment and income. In some cases, migratory status conditioned income or formal employment, and migratory status was conditioned by income or formal employment to pay for the administrative fees for the regularisation process or considering that a range of residence permits in Chile are conditional to employment (40). The needs expressed surrounding economic and job stability point to the social vulnerability of the respondents in the face of the adversity brought by the pandemic (41), which can be further exacerbated by migratory status. In turn, participants reported working in conditions that expose them to potential infection with the virus and reported barriers to health preservation specific to the pandemic context and related to income, such as not being able to afford protective equipment or staying at home.

At the national level, these findings show that international immigrants, albeit a diverse group, are particularly at risk, regarding health and other aspects of their life, in the context of a major crisis. In that sense, in Chile and other countries, the government must guarantee effective and adequate access to culturally appropriate physical and mental healthcare and make prevention measures, including sustaining lockdowns, accessible and not conditional to income or risks of losing a job. These dimensions intertwine with migratory status and lack of social support and networks as sources of social vulnerability and potentially higher physical and mental health risks.

Conclusions

The perceived social and health-related needs of international migrants facing the COVID-19 pandemic in Chile reveal different and interrelated aspects of social vulnerability. Importantly, aspects of being an international migrant such as migratory status and lack of social support and networks may exacerbate already precarious employment conditions, living conditions or regularity of income, which, in turn, can affect their health outcomes and limit their capacity to respond to the adverse conditions emerging from the pandemic.

In that sense, the following recommendations can be made: (a) during the pandemic, migratory

regularisation processes should be facilitated and streamlined, (b) institutional and civil-society-led initiatives to provide social support to isolated and marginalised international migrants should be set up, (c) requirements to receive government monetary and food assistance should not include migratory status, (d) the right to access healthcare regardless of migratory status and country of origin should be explicitly guaranteed and reaffirmed.

Our analysis presents some limitations. First, convenience sampling led to women and university-educated international people being predominant participants. Second, internet access was an exclusionary condition meaning that the questionnaire did not reach the most vulnerable communities of international migrants in Chile, potentially leaving out other needs and aspects of social vulnerability from the analysis. Third, the analysis did not consider respondent subgroups by gender, country of origin or first language, which could have led to a deeper understanding of the needs reported. Finally, we did not distinguish the area of residence of the participants, according to which the needs expressed could have varied.

Despite these limitations, our results may inform the potential health and social risks for other population groups experiencing different forms of social vulnerability in Chile and Latin America, such as indigenous populations, people experiencing higher multidimensional poverty rates, and people in prison or detention (42). The findings are also relevant for policymakers and practitioners globally, where migration containment policies threaten response to COVID-19 (43). Addressing the health of migrants should be addressed equitably and comprehensively in the context of the pandemic (44) and other crises such as climate change. Finally, our results can serve as a basis for future research in migration and social dimensions of the COVID-19 pandemic.

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CRediT author statement

Alice Blukacz: conceptualisation, methodology, formal analysis, writing – original draft, writing – review and editing; Báltica Cabieses: conceptualisation, investigation, writing – original draft, writing – review and editing, funding acquisition; Edward Mezones-Holguín: conceptualisation, writing – original draft, writing – review and editing; José Manuel Cardona Arias: conceptualisation, writing – original draft, writing – review and editing.

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Original Article

The effect of health promotion training provided to elderly individuals during the COVID-19 pandemic on healthy lifestyle behaviors

Filiz Polat[1] and Fatma Karasu[2]

Abstract:
Background: One of the areas most affected by the COVID-19 pandemic is health promotion. In order to improve the quality of life of elderly individuals, it is important to develop and implement effective intervention strategies that can prevent negative health outcomes.
Purpose: The aim of this study is to determine the effect of health promotion training provided to elderly individuals on healthy lifestyle behaviors.
Methods: This study was conducted as a randomized-controlled experimental study. The study was completed with 140 elderly individuals over 65 years of age, including 70 participants in intervention group and 70 participants in control group. The data were collected using the Information Form and the Healthy Lifestyle Behaviors Scale-I. Training was provided to the intervention group as one session a week for three weeks. Percentage, arithmetic mean, and standard deviation as well as chi-square, dependent samples *t*-test, and independent samples *t*-test were used to assess the data.
Findings: While the pretest mean score of the intervention group for the overall Healthy Lifestyle Behaviors Scale-I was 103.90 ± 16.96, their posttest mean score was 136.17 ± 19.60 and it was found that there was a statistically significant difference between the results ($p = 0.000$). While the pretest mean score of the control group for the overall Healthy Lifestyle Behaviors Scale-I was 107.22 ± 21.09, their posttest mean score was 106.57 ± 21.49 and it was found that there was no statistically significant difference between the results ($p = 0.609$).
Conclusion: It was observed that healthy lifestyle behaviors of elderly individuals in the intervention group improved positively.

Keywords: elderly individual, health promotion, healthy lifestyle, training, Turkey

Introduction

The elderly population gradually increases in Turkey as in the whole world (1). Together with increasing advanced age, many health problems such as chronic diseases emerge, along with increasing ratio of limitations and disabilities associated with these problems (2–4). This rapid increase in the elderly population makes the promotion of geriatric health an important issue. Raising the health level of the elderly becomes a health priority (5,6).

Health promotion in the elderly enables a healthier and more productive life at later ages and is also a strategy accepted for enhancing the quality of life (5,7,8). Healthy lifestyle is a person's ability to know and control all behaviors that may affect their health, choose appropriate behaviors for their health, and

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organize their daily life activities. Healthy lifestyle indicates taking responsibility in matters such as adequate and regular exercise, balanced nutrition, positive relations, and stress management (9). The recent studies have demonstrated that it is possible to prevent chronic diseases and reduce medical and social service needs of elderly individuals via public health applications and lifestyle changes (2,10).

Lifestyle, diseases, methods of coping with negative situations, and environmental factors play a key role in determining life expectancy. The COVID-19 pandemic, which can be qualified as a current environmental factor, has posed a great risk especially for individuals over 65 years and those with chronic diseases worldwide (11–13). An immune system weakened with age makes it difficult to fight against coronavirus and may increase the health problems of elderly individuals (14). They may experience exacerbation of heart failure depending on a change in nutrition and fluid consumption, falls caused by muscle weakness related to lack of exercise, weakening in social relations, and decline in cognitive functions. When elderly individuals suffer from a health problem, they may not go to healthcare organizations due to the fear of contracting COVID-19, which may delay the emergency care and treatment (11,15).

COVID-19 is a pandemic affecting health and quality of life from many aspects. One of the most affected areas is health promotion (16). In order to enhance the quality of life of elderly individuals, it is important to develop and implement effective intervention strategies that may prevent negative health outcomes (14). Health promotion programs for the elderly are actions that provide healthy ageing and have visible and provable health-related benefits. Also, these actions provide benefit to society, encourage older adults to maintain a healthy lifestyle for a longer period of time, and restrict public health expenses (17). In the literature, it is stated that although individuals aged 65 years and over gain more benefit from health promotion applications, they have a lower rate of participation (9). Based on this, the aim of the study is to examine the effect of health promotion training provided to elderly individuals on their healthy lifestyle behaviors. Since we encountered no study on health promotion in elderly individuals in situations like the COVID-19 pandemic in the literature, we believe that the present study will fill this gap.

Hypothes of the study

H_1=Health promotion training provided to elderly individuals affects their healthy lifestyle behaviors.

Methods

Design and participants

The study was conducted as a randomized-controlled experimental study. The participants were elderly individuals who were aged ⩾65 years, were at least primary school graduates, had no communication problem, were mentally healthy, were able to use a computer, and had no obstacle for doing exercise. The study was carried out in the digital environment with elderly individuals who were registered with four Family Health Centers (FHCs) in a province of Turkey between October 2020 and April 2021. The aforementioned FHCs were chosen due to the similarities in socio-demographic and cultural characteristics of the participants included in the study in terms of their population.

Sample size

The population of the study consisted of 3064 elderly individuals who were aged 65 years and over and were registered with the four FHCs. The sample of the study was found to be 140 with an assumption of $1-\beta=0.99$ power and $\alpha=0.01$ significance level and $f=0.37$ effect size via the G-Power program (70 participants in the intervention group and 70 participants in the control group).

Randomization

In order to have homogeneous intervention and control groups in the study, a table was prepared, including the FHCs which were assigned to a group using a random number table and were enumerated from 1 to 4. The numbers were written on opaque cards and selected by a person other than the researchers. Numbers 1 and 2 FHCs were included in the intervention group, while numbers 3 and 4 FHCs were included in the control group. The participants were listed for the simple random sampling method and chosen using a random

numbers table. The participants were assigned to the intervention and control groups randomly. As there might be losses in the study (such as withdrawing from the study or not participating in trainings), the study was started with 145 elderly individuals including 73 participants in the intervention group and 72 participants in the control group. The FHCs are located in distant settlements; therefore, it is not possible for them to share with each other or affect one another.

Data collection tools

The Information Form for elderly individuals and the Healthy Lifestyle Behaviors Scale-I were used to collect the data.

***The Information Form*:** The Information Form had 11 questions about socio-demographic characteristics of the elderly individuals (age, gender, marital status, education, employment, financial level, family type, number of children, who they live with, presence of a chronic disease, preventive measures for COVID-19).

***The Healthy Lifestyle Behaviors Scale-I (HLBS)*:** The scale was developed by Walker et al. (18), using Pender's health promotion model. The Turkish validity and reliability study of the scale was conducted by Esin (19). In order to determine the health promotion behaviors of individuals regarding a healthy lifestyle, the scale has 48 items and 6 subscales. Each subscale can be used individually. The subscales are self-realization (13 items), health responsibility (10 items), exercise (5 items), nutrition (6 items), interpersonal support (7 items), and stress management (7 items). The lowest and highest possible scores to be obtained from the 4-point Likert scale (1 = Never, 2 = Sometimes, 3 = Often, 4 = Regularly), in which all items are positive, are 48 and 192, respectively. The total score gives the healthy lifestyle score. Higher scores indicate that participants assess the HLB positively (10). In this study, the Cronbach's alpha coefficient of the scale was found to be .92.

Data collection

The pretest data were collected by applying the Information Form and the Healthy Lifestyle Behaviors Scale-I to the intervention and control groups. The posttest data were collected by applying the Healthy Lifestyle Behaviors Scale-I to the intervention and control groups 12 weeks after the training. The pretest-posttest data were collected by the researchers via Google form in the digital environment between October 2020 and March 2021. It took approximately 20–25 minutes to complete the survey form.

Nursing intervention

The pretest data were collected from the individuals who agreed to participate in the study. Their contact information was received and a mobile training group was created to keep in touch. In order to establish a healthy and continuous communication with the older adults, one of their relatives was also included in the group. A virtual training platform was created using the policy concerning social distancing due to the COVID-19 pandemic and Zoom (Zoom Video Communications, San Jose, California) due to restrictions on individuals aged 65 years and over. A total of six training groups were established. A training program was created specifying the training days and hours of each group. The schedule of healthy lifestyle behaviors training was shared in the mobile training group. Trainings were provided to each group by the researchers for one hour, and two sessions a week. Different subjects were discussed in each session and a 10-minute break was given before starting another session. The trainings lasted for 70 minutes including the break and were provided for three weeks in total (Figure 1). In the trainings, the subjects were taught using PowerPoint presentations. The training subjects were taught in such a way that elderly individuals from all educational levels could understand. Of these individuals, those who were not able to properly use the virtual training platform received support from their relatives. Interventions were made by two researchers. Educational subjects were equally divided among researchers. Each researcher provided training on their own subject. Figure 2 shows the training subjects and the persons providing the training. Figure 3 shows an outline of the content of the training subjects provided to the intervention group.

Control group

No intervention was applied to the control group. During the study, no other training with similar content (individual or group) was presented to the group.

Weeks	Training Subjects	Time	Person giving the training
Week 1	Self-realization	30 minutes	1. Researcher
	Exercise	30 minutes	2. Researcher
Week 2	Nutrition	30 minutes	1.Researcher
	Health responsibility	30 minutes	2.Researcher
Week 3	Interpersonal support	30 minutes	1.Researcher
	Stress management	30 minutes	2.Researcher

Figure 1. Schedule of healthy lifestyle behaviors training.
*A 10-minute break was given after each training session.

Self-realization	It was indicated that in order for the individual to know himself/herself, he/she was to know his/her strong/weak aspects and aspects that are open for improvement and his/her emotions. Stress was laid on the necessity for the individual to appreciate himself/herself, be pleased with himself/herself and believe that he/she is valuable.
Exercise	Information was given concerning the exercises that can be done by elderly individuals, time of daily and weekly exercise and rules to regard when doing exercise. Benefits of continuous and regular exercises for health were discussed.
Nutrition	Physical, mental, spiritual and social benefits of adequate, balanced and healthy nutrition were discussed. Information was given concerning the things to do and food to avoid for healthy nutrition.
Health responsibility	It was indicated that the individual needed to display attitude and behavioral change regarding protective, preventive and health promoting behaviors for his/her health. Stress was laid on the necessity for the individual to know his/her body and himself/herself and go to a doctor or a healthcare organization in negative situations concerning his/her health.
Interpersonal support	It was indicated that the individuals needed to spend time with his/her close friends, establish meaningful and satisfying relations with other people, enjoy appreciating the achievements of others and touching close people like family and friends and solve disagreements with others via discussion and reconciliation.
Stress management	The importance of effective coping methods for the individual not to be affected by stress and for problem solving was emphasized. Methods of coping with stress such as hoping for improvement through distraction, reinterpretation and evaluation, praying, asking a friend for help, forgetting, daydreaming, distancing, and breathing exercises were suggested.

Figure 2. Intervention group training contents.

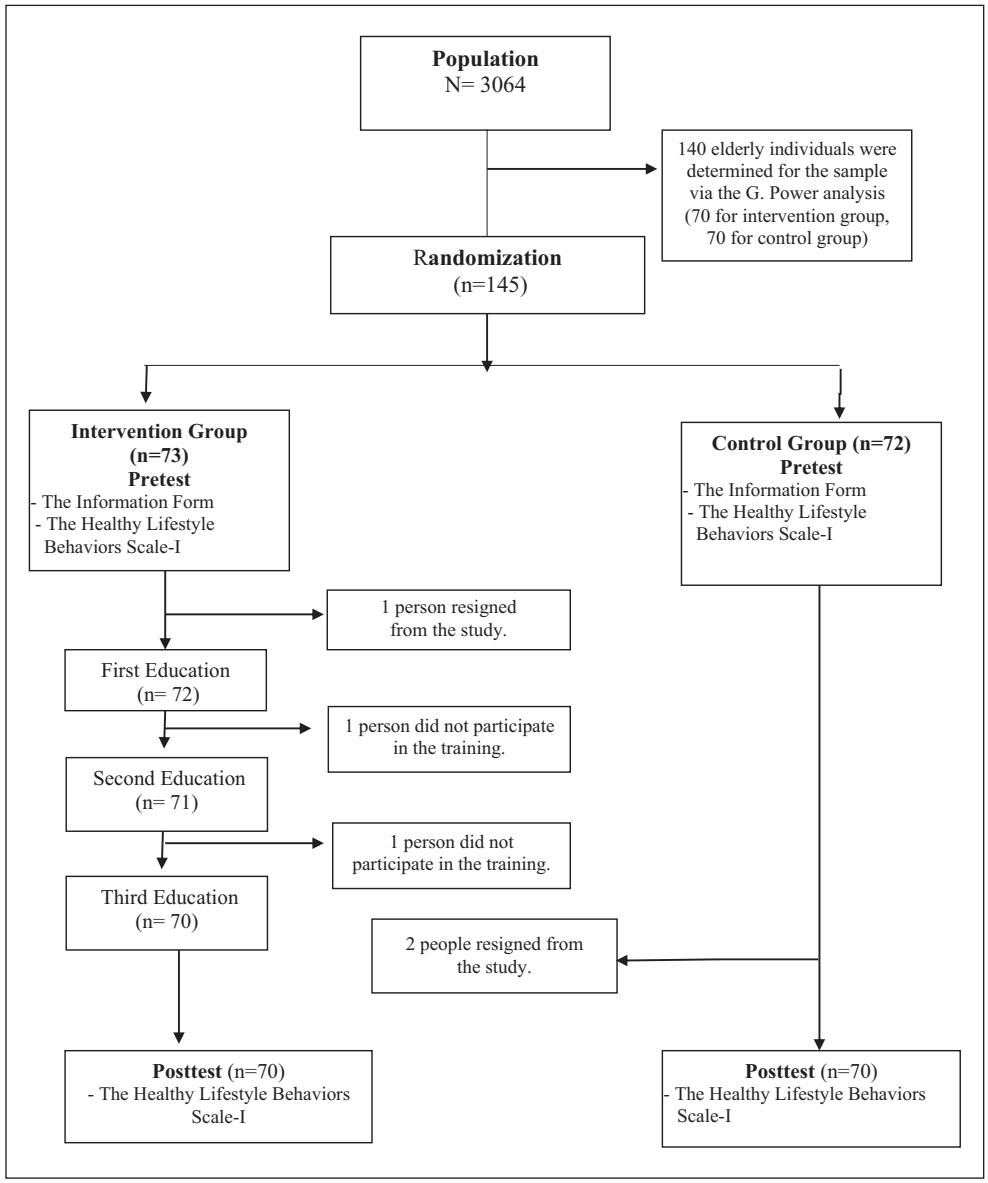

Figure 3. Consort flow chart of the participants.

Training material

A manual was prepared by the researchers in line with the content of training subjects using the literature (20–23). The manual mentioned the things to do to promote health, healthy lifestyle behaviors, and benefits of these behaviors for health.

Data analysis

The data were evaluated using the SPSS 24.0 software. In the data assessment, the chi-square test was used for comparing the control variables in the control and intervention groups. Compatibility of the data to normal distribution was assessed via the

Kolmogorov-Smirnov test and it was determined that the data were normally distributed. The pretest-posttest mean scores of the scale were compared using the dependent samples *t*-test. The independent samples *t*-test was used in comparing the mean scores of the scale between the control and experimental group patients. In order to assess the internal consistency of the scales, the Cronbach's alpha was calculated. The significance level was found to be $p < 0.05$.

Ethical principles

In order to conduct the study, ethics committee approval (Ethics Committee No: 2020/E. 5095) and institutional permission were received from the scientific research ethics committee of a university. Also, approval was received from the Turkish Republic Ministry of Health Scientific Research Platform to conduct the study (Form no: 2021-01-01T19_20_25.xml). The elderly individuals who participated in the study were informed of the study purpose and their questions about the study were answered. They were informed that their personal information was to be kept confidential and not to be used outside the study and they had the right to withdraw from the study anytime. The study was carried out in accordance with the Voluntariness and Protection of Individual Rights Confidentiality ethical principles and an Informed Consent form was received from all participants. No intervention was used in the control group. Following the study, the healthy lifestyle behaviors training manual was sent to the participants in the control group via email.

Strengths and limitations of the study

Reaching the elderly individuals in the digital environment and training them to gain healthy lifestyle behaviors and improve their health in a challenging process such as a pandemic were the main strengths of the study. Another strength was the use of valid and reliable assessment instruments. A limitation of the study was that the participants could not be interviewed face-to-face because it was conducted during the pandemic. Also their personal statements were among the limitations. Additionally, the posttest assessment was performed only once and long-term effects of the training were not assessed.

Results

Comparison of the intervention and control groups in terms of socio-demographic characteristics

In the intervention group, 55.7% of the participants were aged 65–69 years, 65.7% were female, 71.4% were married, 71.4% were primary school graduates, 50.0% were unemployed, 70.0% had an income equal to expense, 52.9% had 3–5 children, 85.7% had a nuclear family, 30.5% lived with their spouse, and 77.1% suffered from a chronic disease. In the control group, 50.0% of the participants were aged 65–69 years, 52.9% were female, 81.4% were married, 68.6% were primary school graduates, 50.0% were retired, 78.6% had an income equal to expense, 41.4% had 3–5 children, 81.4% had a nuclear family, 38.6% lived with their spouse, and 74.3% suffered from a chronic disease. Elderly individuals in the intervention and control groups were homogeneous in terms of socio-demographic characteristics ($p > 0.05$) (Table 1).

Comparison of the pretest-posttest HLBS scores of the control group

In the control group, the pretest mean score for the overall HLBS was 107.22 ± 21.09, whereas its posttest mean score was 106.57 ± 21.49 and no statistically significant difference was found between the results. Upon comparison of the pretest-posttest mean scores of the HLBS Self-realization, Health Responsibility, Nutrition, Interpersonal Support, and Stress Management subscales in the control group, no statistically significant correlation was found between the results ($p > 0.05$). When comparing the pretest-posttest mean scores of the HLBS Exercise subscale in the control group, a statistically significant correlation was found between the results ($p = 0.027$) (Table 2).

Comparison of the pretest-posttest HLBS scores of the intervention group

In the intervention group, the pretest mean score for the overall HLBS was 103.90 ± 16.96 and its posttest mean score was 136.17 ± 19.60 and a statistically significant difference was found between the results ($p < 0.001$). When comparing the

Table 1. Socio-demographic characteristics of the participants ($n = 140$).

	Intervention group		*Control group*		*Test value/p*
	n	%	*n*	%	
Age					
65–69 years	39	55.7	35	50.0	[a]$x^2 = 0.762$; $p = 0.683$
70–74 years	25	35.7	30	42.9	
75–79 years	6	8.6	5	7.1	
Gender					
Female	46	65.7	37	52.9	$x^2 = 2.397$; $p = 0.122$
Male	24	34.3	33	47.1	
Marital status					
Married	50	71.4	57	81.4	$x^2 = 1.943$; $p = 0.163$
Single	20	28.6	13	18.6	
Education					
Primary school	50	71.4	48	68.6	[a]$x^2 = 2.375$;$p = 0.126$
Secondary school	15	21.5	13	18.6	
⩾High school	5	7.1	9	12.8	
Employment					
Employed	5	7.1	5	7.1	[a]$x^2 = 0.769$; $p = 0.681$
Unemployed	35	50.0	30	42.9	
Retired	30	42.9	35	50.0	
Financial status					
Income less than expense	12	17.1	11	15.7	[a]$x^2 = 2.313$; $p = 0$ .315
Income equal to expense	49	70.0	55	78.6	
Income more than expense	9	12.9	4	5.7	
Number of children					
1–2	7	10.0	17	24.3	$x^2 = 5.216$; $p = 0.074$
3–5	37	52.9	29	41.4	
⩾6	26	37.1	24	34.3	
Family type					
Nuclear family	60	85.7	57	81.4	$x^2 = 1.981$; $p = 0.179$
Extended family	10	14.3	13	18.6	
Who they live with					
With spouse	21	30.1	27	38.6	$x^2 = 5.221$; $p = 0.156$
With children	12	17.1	11	15.7	
With spouse and children	19	27.1	24	34.3	
Alone	18	25.7	8	11.4	
Chronic disease					
Yes	54	77.1	52	74.3	$x^2 = 0.155$; $p = 0.693$
No	16	22.9	18	25.7	
Total	70	100.0	70	100.0	

x^2 = Chi-square test.
[a]Fisher's exact test.

pretest-posttest mean scores of the HLBS Self-realization, Health Responsibility, Exercise, Nutrition, Inter-personal Support, and Stress Management subscales in the intervention group, a statistically significant correlation was found between the results ($p < 0.05$) (Table 2).

Table 2. Comparison of the pretest-posttest mean scores of the HLBS total and subscales of the intervention and control groups ($n = 140$).

Scales	*Intervention group*		*Test value/p*		*Control group*		*Test value/p*	
	Pretest	*Posttest*			*Pretest*	*Posttest*		
	$\bar{x} \pm SD$	$\bar{x} \pm SD$	*t*	*p*	$\bar{x} \pm SD$	$\bar{x} \pm SD$	*t*	*p*
Overall HLBS	103.90 ± 16.96	136.17 ± 19.60	–13.966	**<0.001**	107.22 ± 21.09	106.57 ± 21.49	0.514	0.609
Self-realization	31.34 ± 6.77	38.42 ± 6.16	–9.854	**<0.001**	32.01 ± 7.04	31.35 ± 7.12	1.722	0.090
Health responsibility	19.40 ± 5.16	25.87 ± 5.70	–12.271	**<0.001**	20.18 ± 5.27	20.31 ± 5.13	–0.352	0.726
Exercise	6.70 ± 2.24	11.75 ± 3.74	–13.480	**<0.001**	7.71 ± 3.23	8.21 ± 3.41	–2.265	**0.027**
Nutrition	13.74 ± 2.98	18.64 ± 3.30	–12.114	**<0.001**	14.00 ± 3.65	14.10 ± 3.44	–0.491	0.625
Interpersonal support	18.20 ± 3.32	21.32 ± 2.86	–8.414	**<0.001**	18.27 ± 3.39	17.88 ± 3.52	1.448	0.152
Stress management	14.51 ± 3.07	20.14 ± 3.62	–11.376	**<0.001**	15.04 ± 3.50	14.81 ± 3.37	1.239	0.219

t: dependent samples *t*-test; HLBS: Healthy Lifestyle Behaviors Scale-I.
Bold value indicates the Significance level according to Dependent samples *t*-test. $p < 0.05$.

Comparison of the pretest-posttest HLBS scores of the intervention and control groups

No statistically significant difference was found between the pretest mean scores of the overall HLBS, Self-realization, Health Responsibility, Nutrition, Interpersonal Support, and Stress Management subscales in the intervention and control groups ($p > 0.05$). However, a statistically significant difference was found between the posttest mean scores of the overall HLBS, Self-realization, Health Responsibility, Exercise, Nutrition, Interpersonal Support, and Stress Management subscales in the intervention and control groups ($p < 0.05$). It was seen that healthy lifestyle behavior level of the intervention group increased compared to the control group of older adults and healthy lifestyle behaviors of the intervention group improved in a positive direction (Table 3).

Discussion

It was determined that health promotion training provided to elderly individuals during the COVID-19 pandemic had a positive effect on their healthy lifestyle behaviors. Also, the study encouraged a group of elderly individuals to take part in health promotion applications during the pandemic. In the literature, it is indicated that although individuals aged 65 years and over gain more benefit from health promotion applications, they have a lower rate of participation (9,24).

In the study, it was determined that there was a statistically significant difference between the HLBS total mean score and the pretest-posttest mean scores of all subscales in the intervention group and the posttest mean scores increased at the end of the training. This result revealed that the training was effective because the HLBS total and subscale mean scores increased after the online training provided to the elderly individuals. In line with this result, the hypothesis H_1 *'health promotion training provided to elderly individuals affects their healthy lifestyle behaviors'* is supported. In other words, it was determined that the online training provided to the elderly individuals was effective on healthy lifestyle behaviors. The desire of the older adults who participated in the study to be healthier to protect themselves from COVID-19, be more productive during the pandemic, spend more time at home, and

Table 3. Comparison of the pretest-posttest mean scores of the overall HLBS and its subscales of the intervention and control groups ($n = 140$).

Scales	*Pretest*		*Test value/p*		*Posttest*		*Test value/p*
	Intervention group	*Control group*			*Intervention group*	*Control group*	
	$\bar{x} \pm SD$	$\bar{x} \pm SD$	*t*	*p*	$\bar{x} \pm SD$	$\bar{x} \pm SD$	
HLBS Overall	103.90 ± 16.96	107.22 ± 21.09	–1.029	0.305	136.17 ± 19.60	106.57 ± 21.49	8.512	**<0.001**
Self-realization	31.34 ± 6.77	32.01 ± 7.04	–0.575	0.566	38.42 ± 6.16	31.35 ± 7.12	6.283	**<0.001**
Health responsibility	19.40 ± 5.16	20.18 ± 5.27	–0.891	0.375	25.87 ± 5.70	20.31 ± 5.13	6.055	**<0.001**
Exercise	6.70 ± 2.24	7.71 ± 3.23	–2.156	**0.033**	11.75 ± 3.74	8.21 ± 3.41	5.824	**<0.001**
Nutrition	13.74 ± 2.98	14.00 ± 3.65	–0.456	0.649	18.64 ± 3.30	14.10 ± 3.44	7.967	**<0.001**
Interpersonal support	18.20 ± 3.32	18.27 ± 3.39	–0.126	0.900	21.32 ± 2.86	17.88 ± 3.52	6.348	**<0.001**
Stress management	14.51 ± 3.07	15.04 ± 3.50	–0.948	0.345	20.14 ± 3.62	14.81 ± 3.37	8.995	**<0.001**

t: independent samples *t*-test; HLBS: Healthy Lifestyle Behaviors Scale-I.
Bold value indicates the Significance level according to Dependent samples *t*-test.
$p < 0.05$

exercise regularly might have affected the result. Health promoting behaviors are the basic determinant of being healthy and accepted to be one of the basic criteria to protect from most known diseases. In fact, health promotion and prevention of diseases are directly associated with these behaviors (6,25). Health promoting behaviors may play a key role in enhancing health conditions and quality of life, especially in older adults (26). Diseases cannot be prevented without health promotion. Strategies included in the area of health promotion and prevention of diseases result in a healthier and more productive life at later ages (27). It was indicated that the health promotion program applied in the study by Sombateyotha et al. (7) had a positive affect on elderly individuals. Also in their population-based quasi-experimental study, Wang et al. (28) indicated that the health promotion program had important effects on older adults and enabled a healthier lifestyle and physical recovery. The findings are compatible with the literature.

In the study, considering the posttest mean scores, it was determined that the HLBS total and subscale mean scores of the intervention group were higher than the mean scores of the control group and the difference between their mean scores was statistically significant. The desire of the participants to maintain and increase their functions during the pandemic, the difficulties they faced due to COVID-19, their wish to no longer be excluded and socially isolated, their desire to strengthen their immune system, finding the training to be a different pastime during lockdown, the interest and motivation gained from this style of online training since they became acquainted with this for the first time, and their effort to show their success might have affected the result. Elderly individuals struggle to remain healthy not only due to the difficulties of ageing, but also because they have a higher possibility of being excluded and socially isolated than young people (5). In a randomized controlled study conducted by Behm et al. (29) for health promotion, they obtained positive outcomes on behalf of the intervention group. A quasi-experimental study conducted by Chan et al. (30) revealed that the exercise program had promising impacts for promoting the health of older adults. In their study, Franklin and Hunter (31) stated that exercise videos may help home health applications of older adults. In their study, Imamura et al. (32) determined that older men living with

women who have experience in volunteering for health promotion showed fewer depressive symptoms. The researchers stated that regular physical activity was beneficial for the health and welfare of older adults (33,34). Encouragement of a healthy lifestyle and realization of a healthy ageing concept are useful for coping with most health problems caused by ageing (35). This finding obtained from the study is compatible with the literature. Health promotion is an approach aimed at enhancing the health of societies and individuals (27). At the end of the study, the elderly individuals stated that the training gave them an opportunity to take care of themselves more and they socialized, met new people, and made new friends.

Conclusion

In the study, it was determined that health promotion training had a positive effect on healthy lifestyle behaviors of elderly individuals. Those receiving health promotion training had higher healthy lifestyle behavior levels compared to those who did not.

In line with the results, health promotion trainings can add healthy lifestyle behaviors to elderly individuals, increase their quality of life, and reduce the incidence of chronic disease. Therefore, nurses should plan and apply training programs to protect and promote the health of elderly individuals, encourage them to participate in health promotion applications and enhance their performance, independence, and quality of life.

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Author contributions

Study conception and design: FP, FK.
Data collection: FP, FK.
Data analysis and interpretation: FP, FK.
Drafting of the article: FP, FK.
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Data sharing and data availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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Social science approaches to infodemiology: understanding the social, political, and economic context of information

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Abstract: Embedded within the COVID-19 pandemic is the spread of a new pandemic of information – some accurate, some not – that can challenge the public health response. This has been termed an 'infodemic' and infodemic management is now a major feature of the World Health Organization's work on health emergencies. This commentary highlights political, social, and economic aspects of infodemics and posits social science as critical to mitigating the current infodemic and preventing future ones. Infodemic managers should address the wider context of infodemics if we are to understand narratives, help to craft positive ones, and confront the root causes of misinformation rather than just the symptoms.

Keywords: infodemiology, infodemic management, information, misinformation, social science

Introduction

Social scientists have long examined the political, social, and cultural contexts in which information circulates (1). During a disease outbreak, particularly of a new disease such as COVID-19, individuals will seek to understand the threat through diverse interpersonal and official communications and types of media (2). Information should be reliable, factually correct, and appropriate for the context. High-quality information can spread faster than disease, encouraging early adoption of protective behaviours and building trust in reliable sources, as long as it answers people's questions and concerns (3,4). As the pandemic continues, an embedded pandemic of information – some accurate, some not – related to COVID-19 has spread, but amongst this vast flow of information, not all information is equal, not all is equally accurate (5). Misinformation (1) – low-quality information spread in ignorance – and disinformation, which is deliberately misleading (6) may have different intent behind them, but their content and impact may be the same. Furthermore, in spite of the volume, there are still often information gaps that are vulnerable to rumour and mal-actors (7). Data voids (lack of information that is needed or expected (7)) create information voids that rumour, speculation, misinformation, and disinformation can fill, posing a challenge to public health responses. Proactive prevention of rumours and misinformation that can emerge due to information voids is, therefore, at least as important as reactive removal or rebuttal.

During the COVID-19 pandemic, a number of challenging explanations of the disease have emerged, some with a basis in misunderstandings (e.g. that vaccines could affect women's fertility (8), driven by reports that vaccination might temporarily disrupt the menstrual cycle (8,9)), while others are incredible theories, including that 5G wireless technology caused and spread COVID-19 (10) or that the disease was intentionally released by global elites (11).

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Sometimes these theories develop to fill a vacuum when something has gone wrong with public communications, but sometimes they are based on valid grievances (12) or misunderstandings: people communicate low(er)-quality information for a variety of reasons, not all of them nefarious. They may find such information amusing, or mistakenly believe it to be true. They may make a guess when information is sparse that later turns out to be wrong, or because nothing else is available and they are left with the best available. Often, inadvertently, it becomes a problem when that information is amplified or is circulated further by those who do have nefarious motives or by algorithms that are programmed to maximise profit regardless of accuracy. Crucially, social science can help to understand *why* information has spread, as well as *how*.

'Infodemic management' has become an increasing focus of the World Health Organization's work on building preparedness for health emergencies (13). Infodemiology is the study of *infodemics*, while infodemic management is the practice of managing them. We contend that to truly manage infodemics, social science must be an integrated pillar of this effort, bringing understanding of the subtleties of communicative ecology and information ecosystems. The role of social science in infodemiology is more than just risk communication and community engagement and can be wider than Integrated Outbreak Analytics (14). Social science methodologies and conceptual framings can be applied to 'bigger' digital and online data in a variety of ways – for example, by using actor network theory (15) – to help understand the role of algorithms in pushing social media content, or by deepening the understanding of digital intimacy (16) in community dynamics.

What we've learned from past crises

In order to manage infodemics, it is important to understand the context of information. Social science research has documented the context of misinformation during epidemics (1). While misinformation is everywhere, not everyone finds it credible. One common explanation is that some find misinformation plausible because of cognitive biases like confirmation bias (17). However, we all find meaningful patterns in the world around us and make causal inferences based on them. Historical and political experiences of neglect, discrimination, or abuse provide fertile ground for misinformation to gain traction and become 'plausible' (18). During the 2014–2016 West Africa Ebola epidemic, communication and social mobilisation strategies often failed because of their focus on changing 'risky behaviour' related to 'misinformation' (19). As Chandler *et al*. pointed out, these strategies did not take history and context into account (19). Vaccination is another useful case in point, as vaccine misinformation often proliferates from the very outset of vaccination programmes (8). Recently in Northern Nigeria, Muslim leaders interpreted polio vaccination as a way of sterilising Muslims and linked this to experiences of repression by the central government (20). While public health practitioners may not agree with the misinformation, it is important to take communities' concerns seriously and demonstrate good faith efforts to do so. Ultimately all efforts should aim to improve trust between public health response and communities.

Infodemic management and COVID-19

Previous studies have documented the proliferation of information in disease outbreaks, including social media content, academic papers, case trackers, and data to inform public health action. The use and range of social media to keep people informed, to exchange information and experiences, and maintain connections continues to expand (21). The technology that enables these connections and sharing of information is also facilitating the amplification of misinformation. This is exacerbated when world leaders make specific claims about COVID-19, including former US President Trump's comment on the injection of bleach to prevent COVID-19 (22) or Tanzanian President Magufuli's warning against the use of COVID-19 vaccines (23). These claims can be laden with political strategy, as is the case in Brazil where misinformation has been used by President Bolsonaro as a 'political weapon.' His office coordinates the spread of disinformation, both on COVID-19 and to defame public health experts, scientists, and opposition leaders (24). The use of social science approaches to understanding and mitigating epidemics can lay bare the political-economic context of the information ecosystem and may enable us to tackle root causes rather than the misinformation itself.

What we recommend for infodemic management

While mitigating or resolving longstanding issues related to neglect, discrimination, or abuse may take a long time, there are short-term actions that can help to build trust and address the context in which misinformation and information voids can more easily arise.

These actions can inform the practice of infodemic management by integrating social science research findings or working directly with social scientists in-country (14).

1. Use social science and social scientists to understand the socio-economic, political, and historical context in which information is circulating, the specific communicative ecologies in which individuals communicate (25) and the format, timing, and context of both the medium and the message. Local contexts and cultural framings can shape meanings and influence how information is received, interpreted, and shared, and determine which voices are most trusted. Recognising this context will help to identify key influencers and platforms, common ground, potential allies, and the main challenges, which can aid the public health response. This should be part of a multi-disciplinary effort in which evidence from different sources is compiled and analysed together (including from the health system, epidemiologists, communities, the economy, etc.). It should involve engagement from the people who will also use those data across *all* pillars of emergency response (14).
2. Adapt communications, health system response, and service delivery to respond to the concerns of different groups of people, using trusted sources and platforms in a timely and consistent manner (26). While many affected communities face common challenges, they each also have unique needs. It is important to adapt messages to reflect the diversity of audiences – offline and online. Use language, rationales, and justifications that appeal directly to target groups. Consider how different meanings could be attributed to particular phrases or images and what feelings these might evoke. Test all communications outputs (videos, posters, messages) with intended audiences, keeping evaluation and implementation at the centre of thinking. Focus on understanding the role of local news media, advertising platforms, artistic representations, and community platforms as well as online media.
3. Establish dialogue and create feedback systems. At a basic level, people need to be able to express their views, opinions, and concerns and freely ask questions that will be answered by people they trust. Appropriate suggestions should be incorporated into response and future plans to ensure people feel included and heard. It is critical to ensure engagement is ongoing to track and understand shifts in people's perceptions as events unfold, and to identify barriers and enablers of positive health behaviours. Behavioural change is more likely to be successful and sustainable if the community has full ownership in developing solutions from the earliest stages (27).
4. Include diverse groups and listen with an open mind. Engagement should be empathetic rather than judgemental or patronising. Infodemic management needs to engage with multiple stakeholders, including media agencies and platforms through which messages will be disseminated, particularly where these may be pushed by artificial intelligence. Consultations should include representatives of vulnerable and marginalised groups who understand the practical challenges faced by their communities, and the origins of concerns and barriers (28).
5. Be transparent, consistent, and open, particularly about uncertainty, controversy, and mistakes (29). Be honest about what is being done in response to the epidemic. Be open about what is known and unknown, and where there is uncertainty; prepare audiences for the likelihood that advice may change. Be clear about how decisions have been made and transparent about who played a role in decision-making (e.g. pharmaceutical companies, private outsourcing, the role of decentralised authorities, representatives of minorities, etc.). If new information suggests that mistakes have been made, be honest about this and explain what is being done to address them.
6. Offer compelling narratives that build a sense of capability and motivation to act. Develop engagement strategies that explain the truth clearly rather than only dismissing misinformation and debunking myths. The same information reaches

different audiences: understand who these audiences are and what their distinct, and potentially competing concerns may be. Recognise where concerns originate and identify what messages are more likely to generate positive emotional response and a sense of togetherness and solidarity. Social scientists can support infodemic management to engage local communities, build trust, and co-create solutions and messages that are more likely to lead to effective responses.

Conclusion

COVID-19 will not be the last pandemic. We can work to understand the networks of information and how and why people communicate the way they do. We can also work to make public health responses like infodemic management more contextually adapted. These should involve building in assessment of evolving communicative ecologies as a basis for understanding the relationships between social interactions and the technology and media environment in which narrative themes develop. Social science perspectives and approaches – from their more traditional methods of data collection and analysis approaches (e.g. ethnography, interviews), to those which can offer new perspectives on the 'big' data element of infodemiology (e.g. digital geography and actor network theory) – can support greater understanding and unpacking of these evolving communicative ecologies. Ultimately, addressing the root causes of misinformation and information voids can help ensure we will be better prepared to manage the next infodemic.

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Abstracts

‘We can’t reach them’: Pre-exposure prophylaxis, African migrants and the production of ignorance

Sarah Demart

Several years after its launch on the market, we realize that PrEP (pre-exposure prophylaxis) reaches only a few people, including in the global North, which is its main place of distribution. African migrants, the group most affected by the epidemic after men who have sex between men, hardly use it and generally do not know about it. This commentary invites a consideration of the non-use of PrEP by African migrants not as a problem pertaining to the target public, but as an effect of the ignorance produced by the ‘AIDS industry’ in relation to this public. Ignorance is understood here as an active production at the nexus of pharmaceutical, political and epistemic issues that reveals non-research choices, whereas knowledge could be useful for the public concerned.
Keywords: pre-exposure prophylaxis (PrEP), African migrants, HIV/AIDS, categorizations, ignorance, invisibility, Belgium, France. (Global Health Promotion, 2022; 29(3): 151–154)

Representations of mental health in two nationally circulated daily newspapers in Peru

Liliana Hidalgo-Padilla, Lucila Rozas Urrunaga, Peter Busse and Francisco Diez-Canseco

Background: News media is one of the sources that shapes representations of mental health. Only a single study has previously been carried out in Peru analyzing mental health in the news media.
Objective: To describe how mental health is represented in print media with national reach in Peru.
Method: We used the content analysis method. We carried out a search of articles using a list of terms relating to mental health in 30 editions of two nationally circulated newspapers in 2016. We identified 351 articles, from which we extracted information about the mental health terms used, the level of mental health content, the presence of sources cited, the inclusion of personalities and the treatment of these personalities.
Results: 271 articles (77.21%) contained mental health terms but without exploring them, 51 partially (14.53%) addressed mental health and only 29 (8.26%) made it their main theme. Among the 80 articles that dealt with mental health partially or principally, only 32 (40%) cited sources. Finally, of the 59 articles that made reference to specific people, 29 (49.15%) described them in a negative manner.
Conclusions: The written press tends to use mental health terms, but without exploring the theme deeply. The use of sources is infrequent and people experiencing mental health problems are not cited. When they are described, their instability and danger to the community are emphasized. These findings suggest that print media could be contributing to the stigmatization of mental health.
Keywords: mental health, communication, social marketing, educational campaigns, communication through the media, print media, stigma. (Global Health Promotion, 2022; 29(3): 169–177)

Intervention to improve the nutritional value of student snacks in a city on the Mexico–USA border

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The objective of this study was to evaluate the effect of an intervention in nutritional education as a strategy to raise the quality of student snacks in alignment with government standards. We evaluated 12 public primary schools at a middle socioeconomic level. We formed an intervention group (IG) and a control group (CG), following up for two years. In both groups we measured weight, height and waist circumference. We recorded, during five consecutive days, the foods included in the children’s lunchboxes, having first

obtained informed consent from the parents. During the intervention, we gave talks about nutrition in the classroom for the students, and gave the parents pamphlets with recommendations for healthy snacks. In the CG, we only gave out pamphlets, without having contact with the students or their parents. At the end of the intervention, those in the IG were eating fewer calories ($p = 0.001$), proteins ($p = 0.01$) and carbohydrates ($p = 0.008$), and less sugar ($p = 0.0001$), whereas those in the CG were eating fewer carbohydrates and less sugar. Furthermore, those in the IG raised their consumption of wholegrains, vegetables, beans and wholewheat bread. In conclusion, school is the ideal place to enact long-term interventions; nevertheless, it is necessary to promote the involvement of health professionals (nutritionists) with programmes and activities planned throughout the six years of primary school.

Keywords: nutritional education, nutritional status, school age, student snacks, health promotion. (Global Health Promotion, 2022; 29(3): 178–187)

Monitoring the human right to adequate food: a systematic review

Bianca Sarahí Franco-Lares, Laura Leticia Salazar-Preciado and Ana Lilia Lozada-Tequeanes

Objective: To identify the current situation and techniques utilized for monitoring the human right to adequate food (HRAF).

Materials and methods: Our strategy was to search academic databases from 1960, when discussion of HRAF began, up to 1 September 2020. A researcher reviewed titles, summaries and complete texts. The results were summarized and collated by a second researcher.

Results: We identified 739 articles of which only 16 met the inclusion criteria of scientific literature or of a published review in Spanish or English on this theme. These findings indicate that HRAF is not adequately implemented, primarily because it is not considered actionable. Within the reported methodologies, content analysis of instruments and policies was the one most utilized.

Conclusions: The lack of political will, ignorance of HRAF among health officials and the lack of a human rights-based focus prevent HRAF from being realized.

Keywords: human rights, nutritional security, food security, food programmes, food policies, monitoring. (Global Health Promotion, 2022; 29(3): 188–195)

Retuning professional roles for community action during the time of COVID-19: reflections from the Community Health Observatory

Daniel García Blanco, Adrián Carrasco Munera, Cristina Sanz Plaza, Jara Cubillo Llanes and Mariano Hernán García

Introduction: The COVID-19 pandemic has generated new barriers to community action on health, but it has also powered the development of citizen initiatives to respond collectively to the social and health crisis. This context created the COVID-19 Community Health Observatory (OBSCOMCOVID), a space in which people connected to community health to work together to reflect on the key issues for community action in the current context and develop working models for the future.

Objectives: To collate the lessons that professionals involved in OBSCOMCOVID have gathered on community health in the context of the pandemic. To clarify the role of the professional in the development of community action during the time of COVID-19. To identify priority lines of action in relation to the future of community health.

Method: The base material of this study is four talks held by OBSCOMCOVID between July and August 2020 in which 21 professionals in primary care, public health and social intervention participated. We created a thematic analysis of the content of the talks as well as considering the significance of their underlying narratives, triangulating the results after discussion with the principal researcher.

Results: We recognize the collective and social dimensions as fundamental elements for approaching the COVID-19 emergency, and that prioritizing the situation of the most vulnerable is of fundamental importance. We find barriers to community action in health: an emergency and biomedical focus, distancing measures and the overloading of professionals. We identify key issues from the perspective of the professional role: the capacity to listen and link up with the population, and the legitimacy and capacity of action from within as well as outside of institutional settings for empowering community action.
Conclusions: The reorientation of the professional role must prioritize the dynamics of advocacy, the empowerment of community networks and the promotion of training.
Keywords: health promotion, communities, participation, resilience, community research, participatory research, positive factors, protective factors. (Global Health Promotion, 2022; 29(3): 196–206)

Health assets, quality of life and morbimortality in the population of Asturias

Oscar Suárez Álvarez, Maria Theresa Ruíz-Cantero, Marcial Vicente Argüelles, Mario Margolles Martins, Rafael Fernández Cofiño and Carlos Álvarez-Dardet

Introduction: In health promotion, recent years have seen a rise in studies whose theoretical base is grounded in health assets. Despite these studies, there is not enough evidence about the effects that different kinds of assets can have on quality of life and morbimortality in a given population.
Objective: To analyze the relationship between available health assets, and indicators of morbidity, mortality and quality of life in the population of Asturias in 2018.
Methodology: We used an ecological design stemming from municipal data aggregated from the 78 municipalities of Asturias (1,034,960 inhabitants). By applying the definition of health assets as those variables that could produce an improvement in health and wellbeing in individuals and communities, we selected 19 variables of assets grouped into 4 categories: individual, socioeconomic, community and infrastructural. Once we had controlled for variables relating to the demographics of the population, we analyzed the association between assets, and rates of morbimortality and quality of life. We developed five predictive models using multiple linear regression models for the dependent variables: quality of life, chronic illness, mortality due to any cause, mortality due to cardiovascular illnesses and mortality due to cancer.
Results: It was found that three factors – the availability of health resources (beta = 0.474), social coverage (beta = 0.305) and of social support networks (beta = 0.225) – have the greatest influence on the health of the Asturian population. The variables included in the predictive models that had the most impact were quality of life (R2 = 0.650) and mortality due to cardiovascular illness (R2 = 0.544).
Conclusions: Investment in social-health resources and in the enhancement of social support networks in the field of public health can produce important improvements in the health of the Asturian population.
Keywords: health assets, protective factors, health promotion, community-based research, participatory research, public health. (Global Health Promotion, 2022; 29(3): 207–217)

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Aborder la santé mentale à travers l'action intersectorielle dans le contexte de la COVID-19 et de l'agenda 2030 pour le développement durable

Erica Di Ruggiero

La COVID-19 continue de poser des défis à tous les pays du monde. La pandémie a clairement mis en évidence les faiblesses préexistantes de nos systèmes sociaux, économiques et de santé. Les problèmes complexes que les Objectifs de développement durable (ODD) des Nations Unies (ONU) ont demandé à tous les pays de régler de manière exhaustive sont précisément les problèmes qui ont fait que de nombreuses personnes sont plus à risque de contracter la COVID-19, d'en mourir ou dorénavant d'en subir les conséquences. Le Programme de développement durable à l'horizon 2030 s'engage également à « ne laisser personne de côté » (1). Pour ce faire, il faut s'atteler de manière explicite au démantèlement des systèmes d'oppression comme le sexisme, l'hétérosexisme, le capacitisme, le classisme et l'âgisme qui continuent de reproduire socialement les inégalités raciales, de genre, de santé et bien d'autres.

La santé mentale est l'un des nombreux enjeux que la pandémie a remis en lumière. Selon l'Organisation mondiale de la santé (OMS), « la santé mentale correspond à un état de bien-être mental qui nous permet d'affronter les sources de stress de la vie, de réaliser notre potentiel, de bien apprendre et de bien travailler, et de contribuer à la vie de la communauté » (2). La promotion de la santé mentale est essentielle au développement personnel, communautaire et socioéconomique. Les conséquences sociales et économiques d'une mauvaise santé mentale affectent le tissu de sociétés entières (3). Même si cette problématique de la santé mentale n'est pas une nouveauté, la pandémie a accéléré l'attention portée à l'importance de la santé mentale et des inégalités qui s'y rattachent, mais on peut se demander si cette attention sera maintenue et traduite en action durable ?

La réalisation du bien-être mental dans le monde exige des approches croisées, interdisciplinaires et intersectorielles. La santé mentale s'aligne clairement avec l'ODD 3 (bonne santé et bien-être) ; toutefois, elle est influencée par plusieurs autres ODD, et c'est là où il faut mettre l'accent, aux intersections de multiples ODD plutôt que de perpétuer des approches cloisonnées du bien-être mental. En tant que communauté de promotion de la santé, nous sommes bien placés pour concevoir, mettre en œuvre et évaluer des politiques intersectorielles et des initiatives de programme qui agissent sur les déterminants individuels, sociaux, structurels et environnementaux des inégalités de santé mentale. Par exemple, la réalisation de la santé et du bien-être mentaux est étroitement liée à l'ODD 5 (« parvenir à l'égalité des sexes en autonomisant les femmes et les filles ») et à l'ODD 8 (« promouvoir une croissance économique soutenue, partagée et durable, le plein emploi productif et un travail décent pour tous ») (1). La santé mentale des femmes a été profondément affectée par la pandémie, mais elles sont également essentielles aux efforts de rétablissement. Elles représentent plus de 70 % de la main-d'œuvre mondiale dans le domaine de la santé et des soins (4). Elles sont aussi plus susceptibles d'effectuer des soins et des travaux domestiques non rémunérés qui, selon ONU Femmes, représentent entre 10 et 39 pour cent du Produit intérieur brut. Pourtant, une grande partie de ce travail n'est pas officiellement pris en compte, il demeure invisible et ses répercussions sur la santé mentale n'ont pas été convenablement évaluées (5).

Le travail non rémunéré est un phénomène sexiste. Il représente une dimension cruciale, mais sous-évaluée de l'activité économique, avec des bénéfices importants pour le bien-être des

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individus, des familles et des sociétés tout entières. Il peut s'agir de prendre soin d'enfants, d'adultes plus âgés et de personnes handicapées. L'ODD 5 (cible 5.4) souligne son importance en appelant tous les pays à mieux « faire une place aux soins et travaux domestiques non rémunérés, par l'apport de services publics et de politiques de protection sociale. . . » (1).

Des mesures de protection sociale existent et consistent en des politiques et des programmes conçus pour réduire la pauvreté et la vulnérabilité en favorisant des marchés du travail efficaces. Ces mesures comprennent entre autres la sécurité du revenu, les soins de santé à l'enfance et à la famille, et les efforts de promotion des droits de la personne qui plaident pour que les politiques et les lois évoluent de manière progressiste. Selon l'OIT, 71 pour cent de la population mondiale n'a pas accès à la protection sociale incluant par la même occasion deux milliards de travailleurs dans l'économie informelle. Cela signifie que seulement 29 % de la population mondiale ont accès à une sécurité sociale complète (6) et que la situation s'est probablement aggravée pendant la pandémie. La COVID-19 a fait plus de 6,3 millions de morts et a également contribué à ce que l'Organisation internationale du Travail (OIT) a appelé une « perte sans précédent d'emplois et de moyens de subsistance » (7).

La protection sociale est directement liée aux efforts qui visent à atteindre la couverture sanitaire universelle (CSU) (ODD 3). Il est à noter que l'un des principaux fondements de la CSU est la protection financière contre des dépenses de santé qui peuvent s'avérer catastrophiques. Le manque d'accès à la protection sociale peut forcer les gens à aller travailler même lorsqu'ils sont malades, et nous en avons eu d'innombrables exemples pendant la pandémie de COVID-19. Ceux qui n'ont pas le privilège de s'isoler ou de rester à la maison parce qu'ils n'ont pas accès à des congés de maladie payés en raison d'un emploi précaire, ne peuvent pas facilement suivre les conseils de santé publique qui sont dispensés. S'ils tombent trop malades, ils peuvent être exclus socialement, perdre leur revenu, ce qui augmente le risque de pauvreté pour ces travailleurs et leurs familles – le tout entraînant des effets durables sur la santé mentale (7). Nous devons mieux caractériser ceux qui deviennent vulnérables à cause de conditions de travail précaires sous toutes leurs formes, et documenter leurs effets sur la santé et leur incidence sur les femmes et donc sur la santé et le bien-être mentaux. Il faut aussi mieux évaluer les politiques sociales, sanitaires et économiques existantes qui, autrement, ne permettent pas de protéger ceux qui en ont besoin (8).

À mesure que nous rebâtissons des systèmes que l'on voudrait meilleurs et plus résilients, aucune discipline ni aucun secteur ne peut se prévaloir de pouvoir résoudre seul des problèmes aussi complexes que la santé mentale et ses déterminants sous-jacents. On ne peut effectivement y arriver si les secteurs, y compris celui de la santé, continuent de travailler en vase clos. L'action intersectorielle, qui résulte de l'harmonisation des ressources et des stratégies entre différents secteurs pour atteindre un objectif commun, est essentielle si l'on veut progresser vers la réalisation des ODD (8). Sans une attention soutenue, les nations courent le risque de prendre encore plus de retard dans l'atteinte de ces objectifs. Il est primordial de pouvoir mesurer les retombées positives de l'action intersectorielle. De nouveaux modèles d'action intersectorielle sont plus que jamais nécessaires (9). J'ai hâte de voir d'autres articles soumis à *Global Health Promotion* qui se concentrent sur des politiques intersectorielles et des solutions équitables pour répondre à des enjeux comme la santé mentale.

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« On n'arrive pas à les toucher » : la PrEP, les migrant.e.s africain.e.s et la production de l'ignorance

Sarah Demart

Résumé : Quelques années après sa mise sur le marché, on réalise que la PrEP (la prophylaxie pré-exposition) touche peu de monde, y compris dans le Nord global qui est son lieu principal de distribution. Les migrant.e.s africain.e.s, le groupe le plus touché par l'épidémie après les hommes ayant des rapports sexuels entre hommes (HSH), ne l'utilisent quasiment pas et ne le connaissent généralement pas. Cet article invite à considérer la non-utilisation de la PrEP par les migrant.e.s africain.e.s non pas comme un problème tributaire du public cible, mais comme un effet de l'ignorance produite par « l'industrie du sida » à l'endroit de ce public. L'ignorance est ici comprise comme une production active à l'articulation d'enjeux pharmaceutiques, politiques et épistémiques donnant à voir des choix de non-recherche, là où des connaissances pourraient être utiles pour le public concerné.

Mots clés : PrEP, migrants africains, VIH/SIDA, catégorisations, ignorance, invisibilité, Belgique, France

L'usage des traitements antirétroviraux comme outils de prévention constitue un changement de paradigme majeur dans l'épidémie du VIH/sida. Les personnes séropositives ne transmettent plus le virus lorsque leur charge virale devient indétectable et le risque de contracter le virus chez des personnes séronégatives exposées au virus est quasiment nul lorsqu'elles ont recours à un traitement pré-exposition (1).

Cependant, l'utilisation de ces traitements est loin d'être généralisée. Quelques années après sa mise sur le marché (2012 aux États-Unis, 2016 en France, 2017 en Belgique), on réalise que la PrEP (la prophylaxie pré-exposition) touche peu de monde, y compris dans le Nord global qui est son lieu principal de distribution. Et ce, même en France où le traitement est complètement gratuit (en Belgique, il est remboursé sous certaines conditions). En France et en Belgique, environ 98 % des utilisateurs sont des hommes ayant des rapports sexuels entre hommes (HSH). Les migrant.e.s africain.e.s (2), le groupe le plus touché par l'épidémie, après les HSH, ne l'utilisent quasiment pas et ne le connaissent généralement pas. Cet article invite à considérer la non-utilisation de la PrEP par les migrant.e.s africain.e.s non pas comme un problème tributaire du public cible, mais du point de vue de l'ignorance produite par « l'industrie du sida » à l'endroit de ce public (3). L'ignorance est ici comprise comme une production active à l'articulation d'enjeux pharmaceutiques, politiques et épistémiques donnant à voir des choix de non-recherche, là où des connaissances pourraient être utiles pour le public concerné (4).

La PrEP et les migrant.e.s africain.e.s : « on n'arrive pas à les toucher »

Face au constat de la non-utilisation de la PrEP par les migrant.e.s africain.e.s, la recherche s'est mise à questionner les attitudes des migrant.e.s africain.e.s face à la PrEP (5) ou les freins à son utilisation. La méconnaissance de l'outil est très rapidement ressortie comme un point de départ

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pour questionner d'une part, les prédispositions ou, d'autre part, les conditions de possibilité de parcours d'accompagnement adaptés à ce public et de stratégies d'intervention ciblées (6–8).

Cette littérature montre que si les attitudes des migrant.e.s face à la PrEP sont souvent positives, l'intention d'une utilisation et l'utilisation elle-même demeurent marginales. Cela renvoie aux causes structurelles qui rendent la PrEP inaccessible, telles que l'accès limité, ou le non-accès aux soins des primo-arrivant.e.s, la pauvreté ou l'expérience de traumas. En filigrane, il ressort que les raisons qui conduisent à identifier un groupe comme étant plus susceptible de bénéficier des avantages de la PrEP peuvent être les mêmes qui rendent son utilisation compliquée voire improbable. Par exemple, les femmes victimes de violences domestiques qui ne peuvent négocier l'utilisation du préservatif : si la PrEP permet de s'abstraire du consentement du partenaire, elle nécessite en revanche une disponibilité mentale et matérielle pour prendre soin de soi. Ce qui n'est pas nécessairement le cas dans une situation de dépendance et/ou de violence (5). Ou encore, pour les primo-arrivant.e.s. La migration génère une précarité matérielle et juridique qui surexpose au risque d'infection par le VIH. La PrEP permet d'anticiper des prises de risque liées à cette précarité (négocier un rapport sexuel contre un hébergement), mais elle suppose aussi un management de soi et du quotidien qui n'est pas nécessairement possible lorsque l'on ne sait pas où l'on va dormir, ni ce que l'on va manger. Ce qui conduit Carillon et Gosselin à dire que « les inégalités sociales sont un impensé de la PrEP » (9).

Essais cliniques : de la minorisation du genre et de l'impensé de la migration

L'impensé des inégalités sociales trouve à s'éclairer de la manière dont les femmes, notamment africaines, ont été, et sont incluses dans les essais cliniques sur la PrEP. Pour Patton et Kim (10), la question de l'observance émerge dès 2010–11, au cours des essais menés en Afrique et en Amérique latine. Elle est cependant renvoyée à une question mineure. Les essais pour les femmes, disent-elles, sont interrompus parce qu'ils remettent en cause le succès des résultats pour les HSH et l'approbation du traitement ; ceci, dans un contexte de plaidoyer activiste gay et d'homophobie structurelle. L'absence de résultats convaincants pour les femmes est mis sur le compte de leur manque d'adhérence. Par la suite, les femmes et les migrant.e.s d'origine africaine seront quasiment rendus absent.es des essais et études pour l'implémentation de la PrEP en Europe. C'est le cas d'Ipergay en France (11), de Be-PrEP-ared en Belgique (2,12) ou d'AMPrEP aux Pays-Bas (13). Tandis qu'en Grande-Bretagne, l'essai Proud (2015), qui visait au départ les HSH, les femmes transgenres et les migrant.e.s subsaharien.ne.s, débouche sur un discours de prévention à destination quasi exclusive des HSH (14).

Autrement dit, la distribution globale des essais répartissant grosso modo les HSH dans le Nord et les femmes dans le Sud conduit à ne pas inclure les migrant.e.s hétérosexuel.le.s et donc à ne pas réfléchir à la migration comme facteur de risque et/ou d'adhérence. Comme si au fond, être d'origine africaine était équivalent à être migrant.e d'origine africaine en Europe (15). Rien n'est moins sûr.

La minorisation associative et militante des migrant.e.s

Depuis 2015 (16), on sait qu'environ 40 % des infections des migrant.e.s ont lieu sur le territoire européen. Autrement dit, la migration est un facteur de risque, sur la route comme à l'arrivée.

Le lien entre VIH et migration est, par ailleurs, loin d'être nouveau d'un point de vue épidémiologique. Dès la fin des années 1990, des mouvements associatifs portés par des migrant.e.s prennent forme, en Belgique (17,18) comme en France (19). Cependant, ils ne parviendront pas au même niveau d'institutionnalisation que les associations fondées dans les milieux gay. La place marginale des migrant.e.s, et des femmes en général, dans l'épidémie, et dans les essais ou études de faisabilité menés en Europe, touche donc aussi à la question de la structuration de l'espace associatif ; et en particulier, à la moindre vocalité de ces groupes en termes de plaidoyer et d'interactions avec les pouvoirs publics ou avec les firmes pharmaceutiques. Cette moindre visibilité et vocalité dans l'espace public doit être prise en compte. Car un des effets immédiats est que les éventuels attentes ou besoins qui auraient pu être articulés au moment des essais cliniques n'ont pas été exprimés et/ou investigués et/ou entendus. À plus long terme, c'est la non-inclusion

de ce groupe dans le dispositif de délivrance de la PrEP qui nous conduit à penser, à rebours, l'acceptabilité d'un outil de prévention, voire à la forcer (9).

À l'heure où l'on teste de nouveaux modes d'administration de la PrEP (par injection notamment) et leur acceptabilité théorique auprès de certains groupes (20–22), on ne peut que s'étonner de la répétition de certains schèmes : des essais menées auprès des HSH dans le Nord, auprès des femmes dans le Sud, et l'absence apparemment totale des migrant.e.s, notamment hétérosexuel.le.s dans les essais menés dans le Nord.

Discussion

Cet article sur la non-utilisation de la PrEP par les migrant.e.s propose de déplacer la focale : de « leur » méconnaissance de l'outil vers « notre » ignorance de ce groupe, à différents niveaux du dispositif de délivrance de la PrEP.

De manière paradoxale, on est face à une surdétermination de la migration dans la définition de ce public, et à une invisibilité de la migration comme facteur de risque et/ou d'adhérence à la PrEP. Dans la mesure où le lien entre migration et VIH remonte au moins aux années 1990, il y a lieu de considérer qu'un certain nombre de personnes vivant avec le VIH, ou exposées au VIH, ne sont pas, ou plus, des migrant.e.s, et peuvent être recensées comme nationaux. D'autre part, la migration présente des caractéristiques sociales qui ne sont pas prises en compte dans les essais cliniques, comme si seules l'origine et/ou la sexualité déterminaient le rapport à la PrEP. Autrement dit, la non-utilisation de la PrEP par les migrant.e.s nous demande de réfléchir aux différents niveaux de production d'une ignorance qui, aussi bien à l'étape des essais cliniques qu'à celle des politiques d'implémentation de l'outil, peinent à penser le public cible.

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Résumés

Vers une utilisation ingénieuse des ressources : des voies pour la santé communautaire positive

Laura E. R. Peters, Geordan Shannon, Ilan Kelman et Eija Meriläinen

Les communautés sont des agents puissants et indispensables pour définir et poursuivre leur propre santé, mais les organisations extérieures adoptent souvent des approches de promotion de la santé communautaire qui sont paternalistes et descendantes. À l'inverse, on reproche souvent aux approches ascendantes qui s'appuient sur les atouts de santé communautaire et les mobilisent de pousser les communautés les plus vulnérables et les plus marginalisées à utiliser leurs propres ressources déjà limitées sans réelles opportunités de changement. En tenant compte de ces défauts de la promotion de la santé communautaire, le présent article cherche à savoir comment les communautés pourraient être soutenues de manière plus efficace et plus appropriée pour poursuivre leur propre santé. Cet article examine comment la santé communautaire est comprise, en allant des conceptualisations négatives à positives ; comment elle est déterminée, en allant d'une orientation basée sur les facteurs de risque à la détermination sociale ; et comment elle est promue, en allant des approches descendantes à celles ascendantes. En nous appuyant sur ces éléments de compréhension, nous proposons le concept de « resourcefulness » (ingéniosité, utilisation ingénieuse des ressources) comme approche pour renforcer la santé positive des communautés, et nous discutons de la manière dont ce concept apporte un éclairage sur trois problématiques corrélées en promotion de la santé communautaire : ressources et durabilité, interdépendance et autonomie, diversité communautaire et inclusion. Nous émettons des suggestions pratiques pour permettre aux organisations extérieures d'appliquer le concept de « resourcefulness » comme une approche relationnelle de la promotion de la santé communautaire basée sur le processus et le lieu, en soutenant le fait que ce concept peut ouvrir de nouvelles voies vers une santé communautaire positive à la fois durable et autonome.

Mots clés : atouts/facteurs protecteurs, développement des capacités (y compris des compétences), communautés, empowerment/pouvoir, équité/justice sociale, promotion de la santé, politiques, salutogénèse.
(Global Health Promotion, 2022; 29(3): 5–13)

Indicateurs de santé planétaire pour le niveau local : opportunités et difficultés de l'application de l'indice de planète heureuse à Victoria, en Australie

Rebecca Patrick, Claire Henderson-Wilson, Justin Lawson, Teresa Capetola, Amy Shaw, Mia Davison et Alison Freeman

Les Objectifs de développement durable et le Nouveau programme pour les villes des Nations Unies, de même que l'Accord de Paris sur le changement climatique sont des schémas directeurs pour l'action promotrice de santé qui sous-entendent que la santé humaine est inextricablement liée à la santé de l'environnement. À l'ère de l'Anthropocène, de nouveaux indicateurs sont nécessaires pour promouvoir et mesurer l'engagement communautaire en faveur du bien-être sain et durable des personnes et de la planète. Cette étude a examiné la nécessité d'un système de mesure, tel que l'indice de planète heureuse, qui relie explicitement la santé humaine à la santé de l'environnement pour une échelle d'évaluation au niveau local en Australie. Ce projet a été entrepris à l'initiative d'une coalition internationale de promoteurs de santé plaidant en faveur d'approches de « santé planétaire ». Des méthodes de description qualitative ont orienté la conception de l'étude qui impliquait des entretiens avec des informateurs clés ($n = 17$) et quatre groupes de discussion thématiques ($n = 27$ participants) avec des chercheurs, des praticiens et des responsables politiques en santé et/ou durabilité. L'analyse documentaire des indices de santé et d'environnement ainsi que des mandats politiques est venue renforcer l'analyse. Des techniques d'analyse qualitative de contenu ont été utilisées pour analyser les résultats. Il y avait un vif intérêt pour un indicateur composite local, tel qu'un indice de planète heureuse réajusté (espérance de vie × satisfaction de vivre × ajustement d'équité/empreinte écologique) pour être utilisé au niveau local. Les avantages d'un indice composite étaient : sa capacité à promouvoir l'engagement

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communautaire avec la réflexion sur la santé planétaire ; un outil de plaidoyer pour des politiques conjointes en matière de santé et de durabilité ; justifier les programmes pour la santé et leurs bénéfices conjoints pour l'environnement ; et fournir un mécanisme pour les comparaisons corrélatives entre les administrations locales et les comparaisons nationales. Cependant, les cloisonnements disciplinaires limitent actuellement les partenariats pour la promotion de la santé et la santé planétaire, et un indice composite local pourrait contribuer à réduire ces divisions.

Mots clés : environnement, bien-être, santé planétaire, Indice de planète heureuse, indicateurs. (Global Health Promotion, 2022; 29(3): 14–23)

Perceptions de la participation scolaire et association avec la santé et le bien-être : une comparaison entre des élèves nigériens et irlandais

Yetunde O. John-Akinola, Mary O. Balogun, Adeyimika T. Desmennu, Damilola O. Awobiyi et Saoirse Nic Gabhainn

La participation des élèves à l'école est considérée comme un élément clé de l'approche des écoles promotrices de santé. Cependant, peu d'études ont documenté la relation entre la participation des élèves à l'école et les résultats en termes de santé et de bien-être dans différents contextes géographiques, en particulier en s'intéressant aux contextes de pays en développement et développés. Cette étude a examiné les perceptions qu'avaient des élèves nigériens et irlandais de la participation scolaire, ainsi que leur santé et leur bien-être rapportés. Les données ont été recueillies au moyen de questionnaires auto-administrés auprès de 333 et 231 élèves scolarisés en 4e, 5e et 6e année primaire, à travers 17 écoles au Nigéria et en Irlande. Une analyse de régression logistique a été utilisée pour analyser les données issues des deux pays. Il n'y avait pas de différence statistiquement significative dans les scores moyens de participation aux activités scolaires (moyenne NIG = 22,8, DS 3,5 ; moyenne IRL = 22,3, DS 3,4) et aux événements scolaires (moyenne NIG = 18,8, DS 3,7 ; moyenne IRL = 17,1, DS 3,6). Cependant, les scores de participation aux décisions et aux règles scolaires (moyenne NIG = 17,3, DS 4,7 ; moyenne IRL = 15,8, DS 3,6) et les scores de santé et de bien-être (moyenne NIG = 16,9, DS 1,7 ; moyenne IRL = 15,3, DS 2,4) étaient significativement plus élevés chez les élèves nigériens, tandis que la perception positive de la participation scolaire (moyenne NIG = 24,2, DS 4,1 ; moyenne IRL = 26,2, SD 3,4) était significativement plus élevée chez les élèves irlandais. Les résultats suggèrent que les élèves irlandais et nigériens ont des perceptions positives de leurs écoles, indépendamment de leur localisation et de leur niveau de développement. Cependant, d'autres recherches ayant recours à des approches qualitatives pourraient être nécessaires pour clarifier davantage les aspects des perceptions qu'ont les élèves nigériens de la vie à l'école et de la participation scolaire afin d'étayer ces affirmations.

Mots clés : écoles promotrices de santé, enfants, Nigéria, Irlande, participation scolaire. (Global Health Promotion, 2022; 29(3): 24–30)

Université promotrice de santé : la mise en œuvre d'un poste de guidage intégré pour les maladies non transmissibles (Posbindu PTM) parmi les employés d'une université

Tri Siswati, Margono, Novi Husmarini, Yuliasti Eka Purnamaningrum et Bunga Astria Paramashanti

Les maladies non transmissibles (MNT) continuent à poser problème à l'échelle mondiale et en Indonésie. Les environnements professionnels peuvent exposer les employés à des facteurs de risque comportementaux de MNT. Cette étude visait à développer un poste de guidage intégré pour la détection précoce des MNT (en indonésien, « pos pembinaan terpadu penyakit tidak menular » [Posbindu PTM]) parmi les employés d'une université indonésienne. Posbindu PTM est un programme communautaire axé sur des efforts de promotion et de prévention pour contrôler les MNT dans lequel la communauté a joué un rôle d'agent de changement. Nous

avons mené une évaluation de processus basée sur une approche quantitative à travers une enquête ($n = 313$) et sur une méthode qualitative à l'aide d'entretiens approfondis ($n = 12$) afin de soutenir nos résultats selon lesquels la mise en œuvre de Posbindu PTM était acceptable et réalisable dans un contexte universitaire. La participation élevée au programme Posbindu PTM a montré que celui-ci pouvait encourager les employés de l'université à adhérer aux stratégies de prévention des MNT, de la détection précoce à la consultation et à l'orientation. Tous les participants ont accepté positivement le programme Posbindu PTM pour ses bénéfices en termes de santé, sa flexibilité et les services de qualité fournis par les encadrants. Une planification du programme basée sur les besoins, l'engagement des dirigeants de l'université, des ressources humaines et des moyens adéquats, ainsi qu'une coopération entre les départements, l'hôpital, le centre de santé primaire local et les autorités sanitaires sont autant d'éléments qui ont déterminé le succès de la mise en œuvre du programme Posbindu PTM. À l'inverse, des activités externes ont affecté de manière négative l'adhésion des participants au programme Posbindu PTM. Pour améliorer les performances du programme, il pourrait être nécessaire de l'organiser de manière plus routinière et de développer une application en ligne. Le programme Posbindu PTM est important pour impliquer les employés dans leur propre santé, et pourrait servir de modèle pour la prévention et le contrôle des MNT dans des contextes semblables. Avec la réussite de la mise en œuvre de Posbindu PTM, une autre étape va être nécessaire qui visera à renforcer et à maintenir ce programme pour des universités promotrices de santé.

Mots clés : université promotrice de santé, promotion de la santé sur le lieu de travail, maladies non transmissibles, employés, Posbindu PTM. (Global Health Promotion, 2022; 29(3): 31–39)

Prévention du diabète de type 2 en Afrique subsaharienne, un examen de la littérature

Shannon L. McCrory-Churchill et Ellen Hill

Contexte : Le diabète de type 2 est un facteur significatif dans le fardeau global des maladies non transmissibles (MNT) en Afrique subsaharienne (ASS). Tandis que de nombreuses organisations de santé demandent qu'une plus grande attention soit portée à cette maladie, bien peu de ressources sont allouées à des programmes de prévention basés sur des données probantes. La littérature démontre un manque de documentation sur les programmes de prévention, d'interventions ciblées visant à diminuer le développement du diabète de type 2, et d'exemples de réussite.

Méthodes : Cet examen a suivi les recommandations des lignes directrices PRISMA pour l'écriture et la lecture des revues systématiques et des méta-analyses. Les bases de données explorées incluent : PubMed, Google Scholar, Ovid, Medline, le Library Information System de l'Organisation mondiale de la Santé (OMS), et African Journals Online. Les termes suivants ont été recherchés individuellement et dans de multiples combinaisons : prévention, intervention, diabète de type 2, Afrique subsaharienne, éducation, stratégie, plan stratégique, facteurs de risque. Au total, 253 articles ont été trouvés, parmi lesquels 17 ont été éliminés comme doublons. Sur les articles restants, 78 résumés ont été examinés, parmi lesquels 20 ont été exclus comme ne répondant pas aux critères ; un autre a été exclu parce qu'il n'était pas disponible en anglais ; et un dernier a été exclu pour manque de disponibilité. Après avoir évalué le texte complet des 56 études restantes, nous en avons inclus sept dans l'examen.

Résultats : Au cours de l'examen, les thèmes qui se sont avérés communs à tous les articles étaient le manque de ressources, le manque de stratégies de prévention, et l'augmentation des facteurs de risque. L'examen a mis en évidence le fait que même s'il existe des lignes directrices et des outils de l'OMS ciblant les interventions au niveau des soins primaires pour la prévention et le traitement des MNT, ceux-ci restent sous-utilisés. Les études incluses avaient examiné le niveau de connaissance des membres de la famille, le marketing social et la consommation de sucre, et les stratégies de prévention primaire.

Conclusion : On constate un manque général de documentation sur les interventions qui ciblent la prévention du diabète de type 2 en ASS. D'autres recherches seraient nécessaires sur les interventions, les stratégies de prévention et la mise en œuvre des outils de l'OMS ciblant les MNT.

Mots clés : prévention, diabète de type 2, Afrique subsaharienne, santé mondiale, maladie chronique/maladie non transmissible. (Global Health Promotion, 2022; 29(3): 40–44)

Connaissance et perceptions du trafic d'êtres humains parmi les membres d'organisations communautaires et confessionnelles dans la région de South Los Angeles

Zahra Mobasher, Susie B. Baldwin, Beatriz Navarro, Deanna Bressler-Montgomery, Jan King, Leila Family, Lisa V. Smith et Tony Kuo

Les objectifs de cette étude étaient (1) d'évaluer les connaissances et les perceptions par rapport au trafic d'êtres humains (TEH) parmi les dirigeants et les membres du personnel de 11 organisations communautaires et confessionnelles situées dans la région de South Los Angeles, et (2) d'identifier les manques dans les connaissances sur le TEH et d'informer les organisations communautaires concernant les pratiques exemplaires possibles en promotion de la santé pour aborder ce problème émergent de santé publique. Une enquête auto-administrée a été menée entre le 4 décembre 2015 et le 28 janvier 2016. Des statistiques descriptives ont été générées et un modèle de régression logistique a été élaboré à l'aide de SAS 9.3. Au total, 277 dirigeants et membres du personnel d'organisations communautaires et confessionnelles ont complété l'enquête. Les participants ont démontré des niveaux élevés de connaissances au sujet du TEH, mais leurs connaissances n'étaient pas complètes, car des manques existaient dans la reconnaissance du contexte dans lequel le TEH survient généralement ; dans la compréhension des législations locales qui régissent cette activité ; et dans les manières de suivre les politiques/procédures en la matière lorsque le problème est suspecté. Une majorité d'entre eux (a) estimaient que le Comté de Los Angeles ne comptait pas suffisamment de services pour aider les survivants de TEH, (b) étaient incapables de reconnaître les signes de TEH, et (c) ne savaient pas quelles mesures prendre en cas de suspicion de cette activité criminelle. Une association statistiquement significative a été trouvée entre le niveau d'études des participants et leurs connaissances sur le TEH, ainsi qu'avec leurs croyances et leurs attitudes par rapport à cette violation des droits humains. Les résultats de l'étude suggèrent que, d'une manière générale, les dirigeants et les membres du personnel des organisations communautaires/confessionnelles de la région de South Los Angeles avaient de bonnes connaissances au sujet du TEH. Cependant, des perceptions erronées subsistent ainsi que des manques notables dans les connaissances, ce qui suppose des opportunités pour la santé publique d'éduquer et d'intervenir davantage.

Mots clés : trafic d'êtres humains, action communautaire, organisation communautaire, organisation confessionnelle, sensibilisation du public. (Global Health Promotion, 2022; 29(3): 45–56)

Des messages sur la consommation d'alcool dans les feuilletons coréens : la mondialisation des normes sud-coréennes en matière de boisson

Rubini Pasupathy, Jaesook Gho, Brittany Duhart et Courtney Queen

La Corée du Sud présente des taux de consommation mensuelle d'alcool, de consommation d'alcool à haut risque et de problèmes liés à l'alcool parmi les plus élevés. Les téléspectateurs de feuilletons coréens à travers le monde consomment des messages sur les normes culturelles en matière de consommation d'alcool. Les données sur la représentation de l'alcool dans les feuilletons coréens sont limitées. Le but de cette étude, qui a eu recours à des méthodes intégrées mixtes, était d'examiner la nature de la représentation de la consommation d'alcool dans les feuilletons coréens. Une analyse de contenu a été menée sur une sélection aléatoire de six feuilletons. La représentation de la consommation d'alcool y était omniprésente, avec une référence à l'alcool environ toutes les 12 minutes du programme. Les messages primaires incluaient l'importance rituelle de l'alcool, la surconsommation de l'alcool par les hommes et les femmes, l'alcool comme produit antistress, l'alcool comme facilitateur des relations, l'intoxication comme étant de valence positive, les conséquences irréalistes de l'intoxication, les hommes comme protecteurs fiables pour les femmes intoxiquées, et la non-représentation de la conduite en état d'intoxication. Les résultats de cette étude font progresser notre compréhension de la fréquence de la représentation de l'alcool et des messages prédominants en matière de consommation et d'intoxication alcoolique dans les feuilletons coréens.

Mots clés : alcool, Asie, déterminants de la santé, santé mondiale/mondialisation, santé publique, qualitatif, quantitatif, Corée du Sud. (Global Health Promotion, 2022; 29(3): 57–65)

Eau, assainissement et hygiène en zone périurbaine à Lusaka, en Zambie : photovoice favorise l'évaluation locale au moyen de la théorie écologique

Sikopo Nyambe et Taro Yamauchi

Les facteurs liés à l'eau, à l'assainissement et à l'hygiène (EAH) sont responsables de 11,4 % des décès en Zambie, ce qui fait de l'EAH une préoccupation centrale pour la santé publique. Bien que des épidémies annuelles de maladies dues à l'eau dans les installations périurbaines (bidonvilles) du pays soient liées à de mauvaises infrastructures d'EAH, peu d'études ont analysé et conceptualisé de manière proactive l'EAH en zone périurbaine et ses facteurs de maintien. Notre étude visait à (a) établir la définition des résidents de l'EAH périurbain et leurs priorités en termes d'EAH ; et (b) utiliser la théorie écologique pour analyser l'écosystème d'EAH périurbain, en mettent en évidence ses facteurs de maintien. Notre étude a impliqué 16 jeunes (âgés de 17 à 24 ans) résidant dans la zone périurbaine de Lusaka, en Zambie, dans un exercice avec photovoice. Les participants ont pris des photographies pour répondre à la question cadre : « Qu'est-ce que l'EAH dans ta communauté ? » Ensuite, à travers une contextualisation et une codification de base, les participants ont expliqué leurs photographies et ont fait des affiches pour synthétiser les problèmes et les priorités en termes d'EAH. La contextualisation et la codification des participants ont aussi été soumises à une analyse théorique thématique afin d'identifier les facteurs de causalité ainsi que les acteurs clés, en décomposant l'écosystème d'EAH périurbain au moyen de la théorie écologique à cinq niveaux, qui vont du niveau intrapersonnel à celui des politiques publiques. Au moyen de la théorie écologique, l'EAH périurbain a été défini comme suit : (a) présentant de mauvaises pratiques (niveau intrapersonnel, interpersonnel) ; (b) présentant un risque pour la santé (norme communautaire) ; (c) de qualité inférieure aux normes et non réglementé (politiques publiques, niveau organisationnel) ; et (d) offrant de l'espoir pour le changement (niveau intrapersonnel, interpersonnel). En lien avec ces thèmes, les résultats des participants ont révélé un manque au niveau communautaire, avec des normes, des réglementations et une mise en œuvre au niveau des politiques publiques ayant un impact minimal sur l'EAH périurbain global et la santé publique en raison d'un faible engagement communautaire et d'une mauvaise connaissance des réalités de l'EAH dans les lieux à forte densité. Au lieu d'une approche descendante, les participants ont recommandé d'accroître la collaboration entre les autorités et les résidents, et d'accorder aux résidents un plus grand contrôle et une plus grande autonomie pour intervenir, mettre en œuvre et défendre leurs normes d'EAH périurbain préférées.
Mots clés : photovoice, périurbain, eau, assainissement et hygiène, santé publique, théorie écologique. (Global Health Promotion, 2022; 29(3): 66–76)

Des serviettes hygiéniques réutilisables dans l'Inde rurale : un projet d'amélioration de la qualité en zone isolée destiné aux adolescentes et promouvant la santé et l'hygiène menstruelle durant la pandémie de COVID-19

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La recherche médicale et de santé publique soutient la nécessité constante de la promotion de la santé pour répondre aux besoins relatifs à l'hygiène menstruelle, notamment pour l'éducation à la gestion de l'hygiène menstruelle (GHM) et l'adoption de serviettes hygiéniques réutilisables. Ce projet d'amélioration de la qualité porte sur l'éducation à l'hygiène menstruelle chez les adolescentes du Tamil Nadu, dans l'Inde rurale, et sur la promotion de serviettes hygiéniques réutilisables. Les résultats indiquent une amélioration significative des connaissances en matière de GHM, de la confiance dans la gestion de la période menstruelle, de l'adoption des serviettes hygiéniques réutilisables, ainsi qu'une diminution des jours d'école manqués. Ces résultats soutiennent les recommandations mondiales pour la promotion de la santé en Inde.

Mots clés : adolescents et jeunes, collaboration/partenariats, éducation (y compris éducation pour la santé), santé mondiale/mondialisation, promotion de la santé, santé génésique, milieu rural, assainissement/hygiène.
(Global Health Promotion, 2022; 29(3): 77–85)

Les réseaux sociaux sont-ils, en tant que source d'information principale sur la COVID-19, associés à l'efficacité perçue du port du masque ? Les résultats issus de six pays d'Afrique subsaharienne

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Contexte : Le port du masque comme approche de santé publique pour limiter la propagation de la maladie à coronavirus 2019 (COVID-19) a fait l'objet de débats. Une préoccupation majeure a été la diffusion d'informations erronées au sujet des implications du port du masque via les canaux des réseaux sociaux Nous avons évalué l'association entre les réseaux sociaux comme source d'information principale sur la COVID-19 et l'efficacité perçue du port du masque.
Méthodes : À travers six pays d'Afrique subsaharienne (Botswana, Kenya, Malawi, Nigéria, Zambie et Zimbabwe), nous avons demandé aux participants à quel point ils étaient d'accord sur le fait que le masque était efficace pour limiter la COVID-19. Les réponses étaient réparties en « d'accord » et « pas d'accord ». Les participants ont également indiqué leur principale source d'information, y compris les réseaux sociaux, la télévision, les journaux, etc. Nous avons évalué l'efficacité perçue des masques, et avons utilisé des modèles logistiques multivariables pour estimer l'association entre l'utilisation des réseaux sociaux et l'efficacité perçue du port du masque. Une analyse appariée du score de propension (SP) a été utilisée pour évaluer la solidité des résultats principaux de l'étude.
Résultats : Sur les 1988 participants, 1169 (58, 8 %) utilisaient les réseaux sociaux comme source principale d'information, tandis que 1689 (85,0 %) étaient d'accord sur le fait que les masques étaient efficaces contre la COVID-19. À l'analyse brute, les participants qui utilisaient les réseaux sociaux étaient plus susceptibles d'être d'accord sur le fait que les masques étaient efficaces comparativement à ceux qui ne les utilisaient pas [rapport de cotes (RC) 1,29, intervalle de confiance (IC) à 95 % : 1,01 à 1,65]. Cette association restait significative lorsqu'elle était ajustée en fonction de l'âge, du sexe, du pays, du niveau d'études, de la confiance par rapport à la réponse gouvernementale, de l'attitude vis-à-vis de la COVID-19, et des sources d'information principales alternatives sur la COVID-19 (RC 1,33, IC à 95 % : 1,01 à 1,77). Les résultats étaient similaires dans l'analyse appariée du score de propension.
Conclusion : Les réseaux sociaux restent un canal valable pour la communication des risques durant la pandémie de COVID-19 en Afrique subsaharienne. Malgré les préoccupations au sujet des informations erronées, les réseaux sociaux peuvent être associés à une perception favorable de l'efficacité du port du masque.
Mots clés : interventions non pharmaceutiques, COVID-19, réseaux sociaux, masques, promotion de la santé.
(Global Health Promotion, 2022; 29(3): 86–96)

Le cadrage compte mais diffère : une analyse de réseau sémantique des représentations médiatiques des importations de produits alimentaires après Fukushima à travers trois sociétés chinoises

Xiao Wang, Yi-Hui Christine Huang et Maggie Mengqing Zhang

Il existe un fossé notable entre les experts scientifiques et le public profane concernant la sécurité des produits alimentaires importés des zones de contamination nucléaire au Japon. La manière dont les questions socioscientifiques, telles que les importations de produits alimentaires après Fukushima, sont présentées dans le discours des médias peut avoir des effets sur la manière dont les gens perçoivent et conçoivent les menaces

potentielles, et influencer ensuite les politiques et les réglementations initiées par le gouvernement. Dans cette étude, une analyse de réseau sémantique a été réalisée afin d'examiner les différentes représentations dans les médias des importations de produits alimentaires après Fukushima, à travers des sources de recherche d'informations (médias de masse et médias de recherche) et dans trois sociétés chinoises (Hong Kong, Chine continentale et Taiwan). Nous avons trouvé que la représentation médiatique de la crise différait en fonction des sources et des contextes sociopolitiques. Nous discutons aussi de la manière dont ces facteurs contextuels et spécifiques au canal de diffusion pouvaient affecter l'opinion publique. Ces connaissances peuvent favoriser une prise de décisions éclairée de la part des autorités de réglementation quant aux problématiques de sécurité alimentaire, orienter les efforts de communication des professionnels par rapport à la crise, et plaider en faveur d'une approche plus respectueuse du contexte pour la gestion des crises de santé publique.
Mots clés : sécurité alimentaire, cadrage, représentation médiatique, opinion publique, analyse de réseau sémantique. (Global Health Promotion, 2022; 29(3): 97–108)

Une étude qualitative pour examiner les compétences de littératie en santé chez les personnes âgées d'une communauté défavorisée au Brésil

Andreivna Kharenine Serbim, Lisiane Manganelli Girardi Paskulin, Don Nutbeam et Danielle Marie Muscat

Notre objectif était de décrire les expériences des personnes âgées en matière d'accès, de compréhension, de communication et d'appréciation des informations de santé dans le contexte des soins primaires au sein d'une communauté défavorisée de la région Nord-Est du Brésil. Une étude qualitative au moyen d'entretiens a été menée auprès de 42 personnes âgées dans deux unités de soins de santé primaires de la ville brésilienne d'Arapiraca. Les entretiens semi-structurés ont été guidés par un instrument qualitatif sur la littératie en santé, traduit et adapté pour être utilisé au Brésil. Sur les 42 participants, 30 étaient des femmes et la majorité ($n = 32$) étaient âgés de 60 à 69 ans. L'analyse qualitative a identifié que les participants avaient des difficultés à accéder aux informations de santé, à les comprendre et à les communiquer, souvent dans le contexte d'une maladie chronique. Peu de participants ont démontré une compréhension de leurs problèmes spécifiques de santé, et la plupart avaient des difficultés à expliquer et à interpréter leurs affections de façon plus générale. La plupart des participants ont indiqué qu'ils ne recherchaient pas activement d'informations de santé et cela était accentué par les médecins qui, selon eux, leur fournissaient des informations limitées au sujet du diagnostic et du traitement de leurs affections. Plus de la moitié des participants ont rapporté ne pas comprendre les termes médicaux figurant dans les informations de santé, mais la plupart ont déclaré qu'ils n'entreprenaient aucune action pour améliorer leur compréhension. En conclusion, nous avons observé que les compétences traditionnelles en littératie en santé étaient très médiocres dans cette population de personnes âgées vivant dans une communauté défavorisée du Brésil, avec un grand nombre d'entre elles qui étaient résignées à ne pas recevoir d'informations de santé ou à ne pas se fier à des sources autres que les professionnels de santé. Les résultats de cette étude évoquent la nécessité d'interventions de littératie en santé qui ciblent les adultes vieillissants au Brésil. L'approche qui est susceptible d'être la plus efficace serait une approche à deux niveaux cherchant à réduire les contraintes et les complexités auxquelles sont soumis les patients au sein du système de soins de santé, mais ciblant également les interventions qui visent à développer les compétences et les capacités des individus.
Mots clés : littératie en santé, personnes âgées/personnes vieillissantes, soins de santé primaires, promotion de la santé. (Global Health Promotion, 2022; 29(3): 109–118)

Soins de santé et besoins sociaux des migrants internationaux durant la pandémie de COVID-19 en Amérique latine : une analyse du cas chilien

Alice Blukacz, Báltica Cabieses, Edward Mezones-Holguín et José Manuel Cardona Arias

Les migrants internationaux constituent un groupe particulièrement vulnérable dans le contexte de la pandémie de maladie à coronavirus 2019 (COVID-19). Au Chili, les immigrants font généralement face à une

pauvreté multidimensionnelle et à plusieurs couches de vulnérabilité sociale. Notre analyse vise à décrire les besoins sociaux et de santé perçus des migrants internationaux durant la pandémie de COVID-19 au Chili, en termes de migration comme déterminant social de la santé et des couches de vulnérabilité sociale. Nous avons mené une analyse qualitative des réponses à une question ouverte portant sur les besoins sociaux et de santé liés à la pandémie dans un questionnaire en ligne diffusé durant le mois d'avril 2020 et destiné aux migrants internationaux présents au Chili. Les informations obtenues ont été analysées de manière thématique. Nous avons inclus 1690 participants. Ceux-ci ont exprimé des besoins liés à la santé et d'autres liés à la réponse socioéconomique et politique globale, à l'emploi, aux conditions matérielles et aux aspects psychosociaux. Ils ont également rapporté des besoins liés au fait d'« être un migrant ». En outre, certains participants ont décrit des situations de vulnérabilité. Nous avons analysé leurs besoins et les situations de vulnérabilité identifiées autour des thèmes émergents suivants : (a) le travail et les conditions de vie, (b) les pièges de la régularisation et le manque de soutien perçu, et (c) les besoins en termes de santé physique et mentale. Les migrants internationaux présents au Chili rapportent avoir été confrontés à des couches interconnectées de vulnérabilité sociale durant la pandémie de COVID-19, dans lesquelles le fait d'« être un migrant » accentuait encore les risques pour la santé physique et mentale. Les problématiques mises à jour sont des difficultés immédiates et directes pour la santé publique, de même que différents aspects de vulnérabilité sociale liés au statut migratoire, à l'emploi et à des obstacles pour accéder aux soins de santé ; ils devraient être abordés au moyen de politiques et de mesures globales.
Mots clés : migrants internationaux, déterminants sociaux de la santé, vulnérabilité sociale, Amérique latine, COVID-19. (Global Health Promotion, 2022; 29(3): 119–128)

L'effet d'une formation en promotion de la santé dispensée à des personnes âgées durant la pandémie de COVID-19 sur leurs comportements favorables à un style de vie sain

Filiz Polat et Fatma Karasu

Contexte : La promotion de la santé figure parmi les domaines qui ont été les plus affectés par la pandémie de COVID-19. Afin d'améliorer la qualité de vie des personnes âgées, il est important de développer et de mettre en œuvre des stratégies d'intervention efficaces susceptibles de prévenir les résultats négatifs en termes de santé.
Objectif : Le but de cette étude était de déterminer l'effet d'une formation en promotion de la santé dispensée à des personnes âgées sur leurs comportements favorables à un style de vie sain.
Méthodes : Cette étude a été menée sous la forme d'une étude expérimentale randomisée contrôlée. L'étude a été complétée par 140 personnes âgées de plus de 65 ans, dont 70 ont été affectées à un groupe d'intervention et 70 autres à un groupe de contrôle. Les données ont été recueillies au moyen du formulaire d'information de l'échelle-I d'évaluation des comportements favorables à un style de vie sain (Healthy Lifestyle Behaviors Scale-I). La formation a été dispensée au groupe d'intervention à raison d'une séance par semaine pendant trois semaines. Pour l'évaluation des données, nous avons utilisé les pourcentages, la moyenne arithmétique et la déviation standard, ainsi que le test du khi carré, le test-t pour échantillons appariés et le test-t pour échantillons indépendants.
Résultats : Si le score moyen du groupe d'intervention lors de son pré-test pour l'échelle-I d'évaluation des comportements favorables à un style de vie sain était de $103{,}90 \pm 16{,}96$, son score moyen lors du post-test était de $136{,}17 \pm 19{,}60$ et une différence statistiquement significative entre les résultats a été trouvée ($p = 0{,}000$). Si le score moyen du groupe de contrôle lors de son pré-test pour l'échelle-I d'évaluation des comportements favorables à un style de vie sain était de $107{,}22 \pm 21{,}09$, son score moyen lors du post-test était de $106{,}57 \pm 21{,}49$ et aucune différence statistiquement significative entre les résultats n'a été trouvée ($p = 0{,}609$).
Conclusion : Il a été observé que les comportements favorables à un style de vie sain des personnes âgées du groupe d'intervention s'étaient positivement améliorés.
Mots clés : personnes âgées, promotion de la santé, style de vie sain, formation, Turquie. (Global Health Promotion, 2022; 29(3): 129–139)

Des approches de l'infodémiologie issues des sciences sociales : comprendre le contexte social, politique et économique des informations

Jennifer Cole, Olivia Tulloch, Megan Schmidt-Sane, Tabitha Hrynick et Santiago Ripoll

La pandémie de COVID-19 a entraîné la propagation d'une nouvelle pandémie d'informations – certaines exactes, d'autres pas – qui peuvent poser des défis pour la réponse de la santé publique. Cela a été qualifié d'« infodémie » et la gestion de cette infodémie est aujourd'hui une caractéristique majeure du travail de l'Organisation mondiale de la Santé sur les situations d'urgence sanitaire. Le présent commentaire met en évidence les aspects politiques, sociaux et économiques de l'infodémie et positionne les sciences sociales comme étant essentielles pour atténuer l'infodémie actuelle et prévenir les infodémies futures. Les gestionnaires de l'infodémie devraient aborder son contexte plus large si nous voulons comprendre les récits, aider à en élaborer qui soient positifs, et faire face aux causes fondamentales de la désinformation plutôt qu'à ses seuls symptômes.
Mots clés : infodémiologie, gestion de l'infodémie, information, désinformation, sciences sociales. (Global Health Promotion, 2022; 29(3): 140–144)

Représentations de la santé mentale dans deux quotidiens de diffusion nationale au Pérou

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Contexte : Les médias sont une des sources qui façonnent les représentations de la santé mentale. Seule une étude antérieure réalisée au Pérou a analysé les informations sur la santé mentale dans les médias.
Objectif : Décrire la façon dont la santé mentale est représentée dans la presse écrite nationale au Pérou.
Méthode : La technique d'analyse de contenu a été utilisée. Une recherche d'articles a été effectuée à partir d'une liste de termes liés à la santé mentale dans 30 éditions de deux quotidiens de diffusion nationale de l'année 2016. 351 articles ont été identifiés, à partir desquels on a extrait des informations sur les termes de santé mentale utilisés, le niveau de contenu sur la santé mentale, la présence de sources citées, l'inclusion de personnages et l'appréciation que l'on en faisait.
Résultats : 271 articles (77.21 %) contenaient des termes relatifs à la santé mentale, mais sans être développés, 51 (14.53 %) abordaient la santé mentale de manière partielle, et seulement 29 (8.26 %) en faisaient le thème principal. Parmi les 80 articles traitant de la santé mentale de manière partielle ou principale, seuls 32 (40 %) citaient leurs sources. Enfin, sur les 59 articles qui faisaient référence à des personnages, 29 (49.15 %) les décrivaient de manière négative.
Conclusions : La presse écrite utilise souvent des termes de santé mentale, mais sans développer le sujet en profondeur. Elle n'utilise pas fréquemment des sources vérifiables et les personnes souffrant de troubles mentaux ne sont pas citées. La description qui en est faite met en évidence leur instabilité et leur dangerosité. Ces résultats suggèrent que la presse écrite pourrait contribuer à renforcer la stigmatisation liée à la santé mentale.
Mots clés : santé mentale, communication (y compris marketing social, campagnes éducatives et communication au travers des médias), presse écrite, stigmatisation. (Global Health Promotion, 2022; 29(3): 169–177)

Intervention pour modifier les habitudes alimentaires par rapport aux collations des écoliers d'une ville frontalière entre le Mexique et les États-Unis

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L'objectif de la présente étude était d'évaluer l'impact d'une intervention en éducation nutritionnelle en tant que stratégie visant à modifier la qualité des collations scolaires conformément aux normes gouvernementales.

Des élèves de 12 écoles primaires publiques de niveau socioéconomique moyen ont été évalués. Un groupe d'intervention (GI) et un groupe de contrôle (GC) ont été formés et suivis pendant deux ans. Le poids, la taille et la circonférence de la taille ont été mesurés dans les deux groupes. Les aliments inclus dans la boîte à lunch des enfants ont été notés pendant cinq jours consécutifs, après signature du consentement éclairé des parents. Au cours de l'intervention, des discussions sur l'alimentation ont été organisées dans la salle de classe pour les écoliers et les parents ont reçu des brochures contenant des recommandations pour une collation appropriée. Dans le GC, on a juste remis des brochures sans qu'il y ait de contact avec les élèves et les parents. À la fin de l'intervention, le GI avait diminué les calories ($p = 0{,}001$), les protéines ($p = 0{,}01$), les glucides ($p = 0{,}008$) et le sucre ($p = 0{,}0001$), alors que dans le GC c'est la teneur en glucides et en sucre qui avait diminué. De plus, le GI avait augmenté la consommation de céréales complètes, de légumes, de haricots et de pain complet. En conclusion, il apparaît que l'école est le lieu idéal pour des interventions sur un long terme, mais il est nécessaire de promouvoir l'intégration de professionnels de la santé (nutritionnistes) dans les programmes et les activités prévus pendant les six années de primaire.

Mots clés : éducation nutritionnelle, état nutritionnel, âge scolaire, collations scolaires, promotion de la santé. (Global Health Promotion, 2022; 29(3): 178–187)

Surveillance du droit humain à une alimentation adéquate : une revue systématique

Bianca Sarahí Franco-Lares, Laura Leticia Salazar-Preciado et Ana Lilia Lozada-Tequeanes

Objectif : Identifier la situation actuelle et les techniques utilisées pour la surveillance du droit humain à une alimentation adéquate (DHAA).

Matériel et méthodes : La stratégie de recherche a couvert les bases de données universitaires depuis 1960, date à laquelle on a commencé à parler du DHAA, jusqu'au 1er septembre 2020. Les titres, résumés et lectures de textes complets ont été révisés par un chercheur. Les résultats ont été synthétisés et recoupés par un deuxième chercheur.

Résultats : 739 articles ont été identifiés et seulement 16 d'entre eux ont répondu aux critères d'inclusion de la littérature scientifique ou de revue publiée en anglais ou en espagnol sur le sujet. Les résultats indiquent que le DHAA n'est pas exercé correctement, principalement parce qu'il est considéré comme non justiciable. Parmi les méthodologies signalées, l'analyse de contenu à la fois des outils et des politiques a été la plus utilisée dans les études incluses.

Conclusions : Le manque de volonté politique, la méconnaissance par les acteurs des ministères de la santé du DHAA et le non-respect / l'absence d'une approche basée sur les droits humains transgressent la réalisation du DHAA.

Mots clés : droits humains, sécurité alimentaire et nutritionnelle, programmes et politiques de nutrition et d'alimentation, surveillance. (Global Health Promotion, 2022; 29(3): 188–195)

Redéfinir les rôles professionnels pour l'action communautaire en temps de COVID-19. Réflexions de l'Observatoire de la santé communautaire

Daniel García Blanco, Adrián Carrasco Munera, Cristina Sanz Plaza, Jara Cubillo Llanes et Mariano Hernán García

Introduction : La pandémie de la COVID-19 a créé de nouveaux obstacles à l'action communautaire en matière de santé, mais a également favorisé le développement d'initiatives citoyennes pour répondre collectivement à la crise sociale et sanitaire. C'est dans ce contexte que s'est créé l'Observatoire de la santé communautaire et de la COVID-19 (OBSCOMCOVID), un espace où les personnes liées à la santé communautaire se retrouvent pour réfléchir sur les clés de l'action communautaire dans le contexte actuel et développer des modèles pour mieux travailler à l'avenir.

Objectifs : Recueillir les apprentissages acquis en matière de santé communautaire dans le contexte de la pandémie par des professionnels impliqués dans l'OBSCOMCOVID. Clarifier le rôle professionnel dans le

développement de l'action communautaire en temps de COVID-19. Identifier des lignes d'action prioritaires pour les prochaines actions communautaires en matière de santé.
Méthode : Le matériel de base de cette étude est constitué des quatre forums de discussion menés par l'OBSCOMCOVID entre juillet et août 2020. Vingt et un professionnels des soins de santé primaires, de la santé publique et de l'intervention sociale y ont participé. Une analyse thématique du contenu et des significations sous-jacentes des récits des participants a été réalisée, en triangulant par la suite les résultats entre les membres de l'équipe de recherche.
Résultats : La dimension collective et sociale est reconnue comme un élément essentiel dans la gestion des situations d'urgence, la priorité étant accordée aux situations de vulnérabilité. Certains obstacles à l'action communautaire en matière de santé sont identifiés : approche biomédicale et d'urgence, mesures de distanciation et surcharge de travail des professionnels. Quant au rôle professionnel, sont inclus dans les éléments essentiels : la capacité d'écoute et de liaison avec la population, la légitimité et la capacité d'action tant à l'intérieur qu'à l'extérieur de ce qui peut être renforcé et mis au service de l'action communautaire.
Conclusions : En matière de réorientation du rôle professionnel, il faut prioriser les dynamiques de plaidoyer, renforcer les réseaux communautaires et promouvoir la formation.
Mots clés : promotion de la santé, communautés, participation, résilience, recherche communautaire/recherche participative, facteurs positifs/protecteurs. (Global Health Promotion, 2022; 29(3): 196–206)

Ressources pour la santé, la qualité de vie et la morbi-mortalité de la population dans les Asturies

Oscar Suárez Álvarez, Maria Theresa Ruíz-Cantero, Marcial Vicente Argüelles, Mario Margolles Martins, Rafael Fernández Cofiño et Carlos Álvarez-Dardet

Introduction : En promotion de la santé, on a constaté ces dernières années une augmentation des recherches utilisant des approches théoriques fondées sur les ressources pour la santé. Malgré les études identifiées, on ne dispose pas de preuves suffisantes sur les effets que différents types de ressources peuvent avoir sur la qualité de vie et sur la morbi-mortalité de la population.
Objectif : Analyser la relation existante entre les ressources pour la santé disponibles et les indicateurs de morbi-mortalité et de qualité de vie de la population asturienne au cours de l'année 2018.
Méthodologie : Approche écologique à partir de données agrégées municipales provenant des 78 communes des Asturies (1 034 960 habitants). En définissant les ressources pour la santé comme étant des variables susceptibles d'améliorer la santé et le bien-être des individus et des communautés, 19 variables de ressources ont été sélectionnées, regroupées en quatre catégories : individuelles, socio-économiques, communautaires et infrastructures. Après avoir contrôlé les variables liées aux caractéristiques démographiques de la population, on a analysé l'association des ressources avec les taux de morbidité, de mortalité et de qualité de vie. Cinq modèles prédictifs ont été développés à partir de modèles de régression linéaire multiple pour les variables dépendantes : qualité de vie, maladies chroniques, mortalité toutes causes confondues, mortalité par maladies cardiovasculaires (MCV) et par cancer.
Résultats : La disponibilité de ressources médicales (bêta = 0.474), de couvertures sociales (bêta = 0.305) et de réseaux de soutien social (bêta = 0.225) constituent les ressources pour la santé qui pèsent le plus dans les résultats de santé de la population asturienne. Les variables incluses dans les modèles prédictifs de la qualité de vie (R2 = 0.650) et de la mortalité par MCV (R2 = 0.544) sont celles qui ont montré le plus de pouvoir explicatif.
Conclusions : Les investissements dans les ressources socio-sanitaires et l'amélioration des réseaux de soutien social qui sont encouragés dans le domaine de la santé publique peuvent entraîner d'importantes améliorations de la santé de la population asturienne.
Mots clés : ressources/atouts/facteurs de protection, promotion de la santé, recherche communautaire, recherche participative, santé publique. (Global Health Promotion, 2022; 29(3): 207–217)

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Abordar la salud mental a través de la acción intersectorial en el contexto de la COVID-19 y de la Agenda 2030 para el Desarrollo Sostenible

Erica Di Ruggiero

La COVID-19 continúa desafiando las naciones del mundo entero. La pandemia ha expuesto las debilidades preexistentes en nuestros sistemas sociales, económicos y de salud. Los graves problemas a los que se referían los Objetivos de Desarrollo Sostenible (ODS) de la Organización de las Naciones Unidas (ONU) cuando les pedían a todos los países abordarlos de manera integral, son exactamente los mismos problemas que ahora están poniendo a las poblaciones en alto riesgo de contraer, fallecer y lidiar con las consecuencias de la larga COVID-19. La Agenda 2030 para el Desarrollo Sostenible también se compromete a "no dejar a nadie atrás" (1). Para esto se requiere una atención explícita al desmantelamiento de los sistemas de opresión como el sexismo, el heterosexismo, la discriminación a las personas con discapacidad, el clasismo y la exclusión por la edad, que continúan reproduciendo socialmente inequidades raciales, de género, de salud y otras.

La salud mental es uno de los muchos problemas que la pandemia ha exacerbado. De acuerdo con la Organización Mundial de la Salud (OMS), "la salud mental es un estado de bienestar mental que les permite a las personas hacer frente a los momentos de estrés de la vida, desarrollar todas sus habilidades, poder aprender y trabajar adecuadamente y contribuir a la mejora de su comunidad" (2). La promoción de la salud mental es fundamental para el desarrollo personal, comunitario y socioeconómico. Las consecuencias sociales y económicas de las afecciones de salud mental impactan el tejido de sociedades enteras (3). Aunque no es nuevo, la pandemia ha acelerado la atención a la importancia de la salud mental y de las desigualdades relacionadas, pero ¿esta atención se mantendrá y será convertida en acción sostenible?

El logro del bienestar mental mundial requiere unos enfoques interdisciplinarios, intersectoriales e interseccionales. La salud mental se alinea claramente con el ODS 3 (buena salud y bienestar), sin embargo, esta también es influenciada por otros ODS, y aquí es donde es necesario hacer énfasis – en las intersecciones de varios ODS, más que en perpetuar los enfoques aislados al bienestar mental. Como comunidad de la promoción de la salud, estamos bien posicionadas/os para codiseñar, implementar y evaluar las iniciativas de políticas y programas intersectoriales que aborden los determinantes individuales, sociales, estructurales y ambientales de las inequidades en salud mental. Por ejemplo, el logro de la salud mental y del bienestar está muy relacionada con el ODS 5 (igualdad de género y empoderamiento de mujeres y niñas) y con el ODS 8 ("promover el crecimiento económico inclusivo y sostenible, el empleo y el trabajo decente para todos") (1). La salud mental de las mujeres se ha visto profundamente afectada por la pandemia, pero ellas son fundamentales para los esfuerzos de recuperación. Ellas constituyen más del 70 % de la fuerza laboral de la salud y la atención sanitaria (4). Asimismo, es más probable que ellas realicen labores domésticas y cuidados no remunerados, que ONU Mujeres estima entre 10 y 39 por ciento del Producto Interno Bruto. Sin embargo, gran parte de este trabajo no se contabiliza formalmente, continúa siendo invisible y sus impactos en la salud mental no se han evaluado de manera adecuada (5).

El trabajo de atención no remunerado es un fenómeno de género. Este representa una dimensión fundamental pero infravalorada de la actividad económica, con dividendos importantes para el bienestar de los individuos, las familias y las sociedades en su conjunto. Dicho trabajo incluye

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los cuidados a los niños, a los adultos mayores y a las personas con discapacidades. El ODS 5 (meta 5.4) subraya su importancia y hace un llamado a todos los países para "reconocer y valorar los cuidados y el trabajo doméstico no remunerados mediante servicios públicos y políticas de protección social. . ." (1).

Las medidas de protección social existen y consisten en políticas y programas diseñados para reducir la pobreza y la vulnerabilidad a través de la promoción de mercados laborales eficientes. Dichas medidas pueden incluir la seguridad del ingreso, la atención infantil y a la familia, y los esfuerzos de derechos humanos que defiendan políticas progresivas y cambios legislativos. De acuerdo con la Organización Internacional del Trabajo (OIT), el 71 por ciento de la población mundial no tiene acceso a la protección social, y dentro de esta se cuentan dos mil millones de trabajadores en la economía informal. Esto significa que solo el 29 por ciento de la población mundial está protegido por un sistema de seguridad social integral (6), y que es probable que la situación haya empeorado durante la pandemia. La COVID-19 ha cobrado más de 6.3 millones de vidas y ha contribuido además a lo que la OIT llama una "pérdida de trabajos y sustentos sin precedentes" (7).

La protección social está relacionada directamente con los esfuerzos para lograr la cobertura sanitaria universal (CSU) (ODS 3). Cabe destacar que uno de los pilares clave para la cobertura universal es la protección financiera contra gastos catastróficos en salud. La falta de acceso a la protección social puede forzar a las personas a ir a su lugar de trabajo incluso si están enfermas. Durante la COVID-19 vimos innumerables ejemplos de esta situación. Quienes no tienen el privilegio de aislarse o quedarse en casa porque no tienen acceso a una licencia remunerada por enfermedad, debido a su precario estatus de empleo, no pueden acatar fácilmente las recomendaciones de salud pública. Si llegaran a enfermar gravemente, se arriesgan a una exclusión social y a la pérdida de sus ingresos, lo cual puede incrementar el riesgo de pobreza para los trabajadores y sus familias, con unos consecuentes efectos en la salud mental (7). Necesitamos caracterizar de mejor manera quiénes son vulnerables por las precarias condiciones de trabajo, en todas sus formas, y documentar las implicaciones de salud y de género en la salud mental y el bienestar así como evaluar las políticas sociales, de salud y económicas ya existentes que de otro modo siguen sin poder proteger a los necesitados (8).

Mientras reconstruimos sistemas mejores y más resilientes, ninguna disciplina o sector puede hacer frente a complejos asuntos como la salud mental y sus determinantes subyacentes. Esto no puede ser efectivamente abordado si sectores como el de la salud continúan trabajando en silos. La acción intersectorial, que resulta de alinear recursos y estrategias entre los sectores para lograr una meta común, es fundamental para progresar en los ODS (8). Sin una atención sostenida, las naciones corren el riesgo de retrasarse aún más en la realización de estos objetivos. La clave es la medición de los cobeneficios de la acción intersectorial. Ahora más que nunca se necesitan nuevos modelos de acción intersectorial (9). Yo anhelo ver más propuestas para publicar en *Global Health Promotion* que se enfoquen en políticas y programas intersectoriales que aporten soluciones equitativas para abordar retos como la salud mental.

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Representaciones de la salud mental en dos diarios de circulación nacional en Perú

Liliana Hidalgo-Padilla[1], Lucila Rozas Urrunaga[2], Peter Busse[3] y Francisco Diez-Canseco[1]

Antecedentes: Los medios de comunicación son una de las fuentes que modelan las representaciones de la salud mental. Sólo un estudio previo realizado en Perú ha analizado las noticias sobre la salud mental en los medios de comunicación.
Objetivo: describir cómo se representa la salud mental en la prensa escrita de alcance nacional en el Perú.
Método: se utilizó la técnica de análisis de contenido. Se realizó una búsqueda de artículos a partir de una lista de términos relacionados con salud mental en 30 ediciones de dos diarios de circulación nacional del año 2016. Se identificaron 351 artículos, de los cuales se extrajo información sobre los términos de salud mental utilizados, el nivel de contenido de salud mental, la presencia de fuentes citadas, la inclusión de personajes y la valoración atribuida a estos.
Resultados: 271 artículos (77.21%) contenían términos referidos a salud mental, pero sin ser desarrollados, 51 (14.53%) abordaban la salud mental de manera parcial, y solo 29 (8.26%) lo hacían como tema principal. Entre los 80 artículos que abordaban la salud mental de manera parcial o principal, solo 32 (40%) citaban fuentes. Finalmente, de los 59 artículos que hacían referencia a personajes, 29 (49.15%) los describían de manera negativa.
Conclusiones: la prensa escrita suele utilizar términos de salud mental, pero sin desarrollar el tema en profundidad. El uso de fuentes es infrecuente y no se cita a personas con afecciones de salud mental. Al describirlas, se destaca su inestabilidad y peligrosidad. Estos hallazgos sugieren que la prensa escrita podría contribuir al fortalecimiento del estigma relacionado con la salud mental.

Palabras clave: salud mental, comunicación (incluyendo mercadeo social, campañas educativas y comunicaciones a través de los medios), prensa escrita, estigma

Introducción

Los trastornos de salud mental constituyen 9 de las 20 causas principales de años vividos con discapacidad y son responsables del 13% de la carga de enfermedad a nivel mundial (1). En Perú, este porcentaje se incrementa a 17.5% (2) y se estima que una de cada cinco personas ha sufrido de algún trastorno psiquiátrico en los últimos 12 meses (3). A pesar de la magnitud del problema, existen enormes brechas en el acceso a servicios de salud mental, ya que sólo dos de cada diez personas que lo requieren consiguen algún tipo de atención (3).

El estigma hacia la salud mental es uno de los fenómenos que limita el acceso a estos servicios, pues influye en que las personas con afecciones de salud

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mental se avergüencen de que se conozca su situación y, en consecuencia, eviten buscar tratamiento (4–8). De otro lado, un estudio realizado en Chile, Bolivia y Perú reveló que el estigma afecta la calidad de vida de las personas con afecciones de salud mental (9).

Asimismo, estudios realizados en Lima (10) y en América Latina y el Caribe (11) indicaron que es común asociar a las afecciones de salud mental con la violencia, imprevisibilidad y discapacidad, así como con comportamientos inapropiados e incoherentes.

Los medios de comunicación son una de las fuentes que modelan la representación de la salud mental (12). Estudios en diferentes países sugieren que los medios suelen representar la salud mental de manera negativa (12–15), destacando su vínculo con la peligrosidad y la criminalidad (16–22), el comportamiento agresivo y la incapacidad para desenvolverse socialmente (12,13,23). Un estudio en Lima, conducido por el Banco Mundial, encontró resultados similares, pero además se identificó que en pocas ocasiones las noticias difundían información sobre prevención y promoción de la salud mental (24). Sólo un estudio realizado en Australia y Nueva Zelanda encontró que las noticias sobre salud mental eran principalmente informativas y no contribuían a perpetuar percepciones negativas sobre estas condiciones (25). Por otro lado, se ha encontrado que cuando la prensa escrita aborda temas de salud mental, es inusual citar fuentes especializadas o brindar información sobre el tratamiento (26).

El presente estudio tiene como objetivo principal describir cómo se representa la salud mental en la prensa escrita de alcance nacional en el Perú, un aspecto poco investigado en este país, con excepción del reporte del Banco Mundial (24). Este estudio intenta expandir el conocimiento sobre el abordaje de la salud mental en la prensa escrita, identificando el tipo de fuentes citadas por los artículos y empleando un enfoque sistemático para establecer cómo se valora a las personas o poblaciones con afecciones de salud mental representadas. Se busca contribuir así a la reflexión sobre el papel de los medios de comunicación frente al estigma vinculado a la salud mental.

Metodología

Diseño

Para este estudio, de diseño descriptivo y retrospectivo, se realizó un análisis de contenido de una muestra de artículos publicados en la prensa escrita peruana. Esta es una técnica pertinente, pues permite determinar el tipo de contenidos sobre salud mental en la prensa escrita (27).

Muestra

La selección de la muestra de artículos tuvo tres etapas. En la primera, se seleccionaron dos diarios impresos de circulación nacional (*Trome* y *El Comercio*) con base en el índice de lectura según el nivel socioeconómico (NSE) en Lima, durante el 2016. Si bien ambos pertenecen al mismo grupo empresarial, la mayoría de lectores del diario *Trome* pertenece a un NSE bajo (84.5%), mientras que los lectores de *El Comercio* están concentrados en un NSE alto o medio (65.6%) (28), por lo que la selección permite hacer una comparación.

En la segunda etapa, se seleccionaron 30 ediciones del año 2016 para cada diario mediante la conformación de un mes compuesto (29). Es decir, para seleccionar el primer día del mes, se eligió al azar el primer día entre enero y diciembre; para seleccionar el segundo día del mes, se eligió al azar el segundo día entre enero y diciembre; y así sucesivamente hasta completar los 30 días. Esta decisión fue tomada a fin de evitar sesgos en la cobertura mediática (29), como por ejemplo un incremento de artículos identificados por el día de la salud mental.

La tercera etapa consistió en la búsqueda y selección de artículos relacionados con salud mental. Se incluyeron en la búsqueda las portadas, editoriales, noticias, artículos de opinión, especiales y consejos de los diarios. Por otro lado, se excluyó contenido exclusivamente publicitario, lúdico o no redactado por el diario (ej. cartas de lectores). Usando el buscador de palabras, se realizó una búsqueda a partir de las raíces de 50 términos relacionados con salud mental incluidos en una lista predeterminada (ver material suplementario 1). Por ejemplo, se realizó una búsqueda de la raíz "esquizo-", lo que permitió encontrar artículos con palabras como "esquizofrenia" y derivados.

Se revisaron 60 ediciones, 30 de cada diario, en las que se identificaron 893 artículos. Después de la lectura de los artículos completos, se encontró que 512 (57.33%) no tenían contenido de salud mental, por lo cual fueron excluidos del análisis (ver material suplementario 2). La muestra final incluyó 351 artículos.

Codificación y análisis

Se diseñó una ficha de codificación sobre la base de investigaciones previas (12,23,25,26,30–32). Inicialmente se realizó un piloto de la ficha a través de la codificación conjunta de 20 artículos pertenecientes a ediciones del 2017 de ambos diarios, lo cual llevó a algunas modificaciones para mejorar el instrumento.

La versión final de la ficha tuvo tres secciones (ver material suplementario 1). La primera sección recopiló información general de los artículos (ej. términos de salud mental, categoría temática del artículo) y permitió clasificarlos con base en el nivel de contenido de salud mental. La segunda sección, en la cual solo se codificaron los artículos que, según el nivel de contenido, trataban la salud mental como tema principal o secundario, extrajo datos sobre el uso de fuentes citadas, la presencia de personajes con afecciones de salud mental y la valoración que se les atribuye. En la última sección, se registraron las observaciones y dudas. La codificación se realizó paralelamente por las dos investigadoras para las tres primeras ediciones y, ante el alto nivel de acuerdo, se decidió dividir las ediciones restantes para la codificación.

Posteriormente se evaluó la valoración de la prensa sobre la salud mental de los personajes o poblaciones (ej. mujeres, niños, etc.) representados en los artículos. Esto se hizo con base en nueve categorías, ocho de ellas extraídas del modelo de Knifton y Quinn (33) para describir la valoración de las personas con esquizofrenia en la prensa escrita (recuperación, culpa, peligrosidad, capacidad, contribución, discriminación, daño autoinfligido y valoración social) y una añadida por sugerencia de un experto en salud mental (estabilidad emocional). Cada categoría contaba con una dimensión positiva y otra negativa que no eran excluyentes entre sí. Se asignó una dimensión positiva, negativa y/o neutra a cada categoría donde se valoraba al personaje o población. Luego se hizo una suma simple de todas las dimensiones positivas y negativas, dando lugar a valoraciones predominantemente negativas, predominantemente positivas o mixtas (en caso de que el número de dimensiones positivas y negativas fuera igual).

La información fue analizada mediante categorías preestablecidas para cada variable, con base en investigaciones previas (12,23,25,26,30–32). La información fue cuantificada para luego analizar las distribuciones de frecuencias y tablas cruzadas.

Resultados

Nivel de contenido de salud mental

De los 351 artículos identificados, 271 (77.21%) contenían términos referidos a salud mental sin desarrollarlos en el texto, 51 (14.53%) abordaban la salud mental de manera parcial, y solo 29 (8.26%) lo hacía como tema principal (ver material suplementario 2). No se encontraron diferencias entre los diarios en ninguna de las áreas codificadas.

Términos y categorías temáticas

En la Tabla 1 se reportan los 10 términos más comunes en los artículos de la muestra y la frecuencia con que aparecieron en los tres niveles de contenido de salud mental, donde se observaron algunas diferencias entre los términos que predominan en cada categoría. En los 271 artículos que contienen términos de salud mental pero no los desarrollan, las palabras "locura" y sus derivados (26%) y "psicología" (20%) son las más comunes. En cambio, en los artículos donde la salud mental se toca de manera parcial ($n = 51$) y principal ($n = 29$), la palabra más común fue "psicología" (37% y 34%, respectivamente), mientras que "locura" se mencionó solo en 14% de artículos de cada una de estas categorías.

Con relación a las ocho categorías temáticas, una quinta parte (21%) del total de artículos se encontró en la categoría "espectáculos" y solo 13% en "salud" (ver Tabla 2). Existen diferencias según el contenido de salud mental del artículo. Entre los artículos que tienen como tema principal la salud mental ($n = 29$), el 45% estaba en la categoría "salud" y 24% en "familia"; mientras que los artículos donde se tocó parcialmente la salud mental ($n = 51$) o que contenían términos sin desarrollar ($n = 271$) se encontraron predominantemente en la categoría "espectáculos" (25% y 20%, respectivamente). Por otro lado, resalta la ausencia de artículos en la categoría "política" y la poca presencia en la categoría "policial" (3%) en los artículos con la salud mental como tema principal.

Tabla 1. Menciones únicas[a] de términos más comunes en los artículos según nivel de contenido de salud mental.

Términos	*Nivel de contenido de salud mental*						*Total (N = 351)*	
	El artículo contienetérminos referidos a salud mental, pero no los desarrolla (*N* = 271)		*El artículo toca parcialmente un tema de salud mental (N = 51)*		*El tema principal del artículo es la salud mental (N = 29)*			
	N	%[b]	*N*	%[b]	*N*	%[b]	*N*	%[b]
Psicología	54	20	19	37	10	34	83	24
Locura	71	26	7	14	4	14	82	23
Emoción	30	11	10	20	9	31	49	14
Enfermo	26	10	9	18	6	21	41	13
Drogadicción	30	11	6	12	2	7	38	11
Alcoholismo o ebrio	27	10	6	12	1	3	34	10
Mental	17	6	10	20	7	24	34	10
Estrés	21	8	5	10	5	17	31	9
Suicidio	18	7	9	18	2	7	29	8
Depresión	9	3	9	18	5	17	23	7

[a]Las menciones únicas se contabilizan cada vez que un término aparece al menos una vez en un artículo. Algunos artículos incluían más de un término.
[b]Los porcentajes corresponden al total de artículos y no al total de observaciones.

Tabla 2. Categoría temática según contenido de salud mental en el artículo.

Contenido de salud mental								
Categoría temática	*El artículo contiene términos referidos a salud mental, pero no los desarrolla (N = 271)*		*El artículo toca parcialmente un tema de salud mental (N = 51)*		*El tema principal del artículo es la salud mental (N = 29)*		*Total (N = 351)*	
	N	%	*N*	%	*N*	%	*N*	%
Espectáculos	54	20	13	25	5	17	72	21
Política	49	18	3	6	0	0	52	15
Educación, tecnología y cultura	42	15	5	10	1	3	48	14
Salud	25	9	7	14	13	45	45	13
Policial	33	12	10	20	1	3	44	13
Deportes	29	11	1	2	2	7	32	9
Familia	15	6	8	16	7	24	30	9
Otros	24	9	4	8	0	0	28	8

Uso de fuentes y valoración de personajes

Los siguientes análisis se realizaron únicamente con los 80 artículos que tenían la salud mental como temática principal o parcial. En total, se identificaron 37 referencias a fuentes, presentes en 32 de los 80 artículos (40%). El 59.5% (*n* = 22) de las referencias provenían de fuentes especializadas (ej. psicólogos(as), estudios científicos), el 24.3% (*n* = 9) de fuentes no especializadas (ej. *coaches* de meditación, policías),

Tabla 3. Frecuencias de valoraciones negativas y positivas de los personajes en artículos que muestran valoración de personajes.

Categoría	*Dimensión negativa (N = 42)*			*Dimensión positiva (N = 42)*		
	Subcategoría	*N*	%[a]	*Subcategoría*	*N*	%[a]
Estabilidad emocional	Inestabilidad emocional	22	52	Estabilidad emocional	1	2
Valoración de la sociedad	Objeto de lástima	12	29	Admirado/a y valorado/a	5	12
Capacidad	Incapaz, extraño	10	24	Talentoso/a	7	17
Culpa	Contribución al mal pronóstico	5	12	Resiliencia	11	26
Daño autoinfligido	Daño a sí mismo/a	14	33	No peligroso/a para sí mismo/a	0	0
Peligrosidad	Peligroso/a	12	29	No peligroso/a	0	0
Recuperación	Pesimismo sobre la recuperación	6	14	Optimismo sobre la recuperación	5	12
Contribución	Carga/carencia de roles sociales	5	12	Roles sociales positivos	2	5
Discriminación	Víctima de abuso social	4	10	Apoyo social	3	7

[a]Algunos artículos incluían más de una categoría. Los porcentajes corresponden al total de artículos y no al total de observaciones.

10.8% ($n = 4$) de fuentes no especificadas (ej. "existen estudios") y solo 5.4% ($n = 2$) de personas con experiencias de salud mental (ej. personas con afecciones de salud mental, amigos o familiares).

Por otro lado, en el 74% ($n = 59$) de los 80 artículos se mencionó a personas o poblaciones específicas con afecciones de salud mental (ej. niños y niñas de padres y madres divorciados). De estos 59 artículos, el 49% ($n = 29$) recibía una valoración negativa, el 14% ($n = 8$) una valoración positiva, el 8% ($n = 5$) una valoración mixta y el 29% ($n = 17$) no mostraba ninguna valoración. La Tabla 3 muestra la frecuencia de las distintas valoraciones positivas y negativas identificadas en los 42 artículos que presentaban valoración. Las valoraciones negativas más frecuentes calificaban a las personas o poblaciones con afecciones de salud mental como emocionalmente inestables, objeto de lástima, peligrosas y proclives al daño autoinfligido. En cambio, las valoraciones positivas más comunes resaltaban que los personajes eran resilientes, talentosos, admirados o tenían posibilidad de recuperarse.

Discusión

Los resultados permiten describir cómo se aborda la salud mental en la prensa escrita. En primer lugar, el estudio encontró que la mayoría de artículos que incluyen términos de salud mental en sus textos no ahondan en el tema, pues tienen un foco distinto. Una posible explicación es el uso coloquial de términos referidos a diagnósticos clínicos (ej. depresión) para hablar de emociones comunes (ej. tristeza) o usarlos como parte de metáforas (19), lo que conduce a su trivialización. Esto podría generar confusión en la población respecto a lo que implica vivir con una afección de salud mental, pues al no profundizar en ella se brinda una imagen imprecisa (12). A su vez, esto tiene implicaciones para la búsqueda de tratamiento, pues estudios previos han identificado que esta se asocia positivamente a un mayor conocimiento sobre el reconocimiento, tratamiento y prevención de dichos problemas (34).

Otro hallazgo destacable es el uso que se hace de ciertos términos relacionados con salud mental para referirse de forma despectiva a una persona con el motivo de destacar su peligrosidad. El uso de este lenguaje en los medios de comunicación es ofensivo y se sugiere evitarlo, pues refuerza el estigma contra las personas con afecciones de salud mental (12,35) al asociar las afecciones de salud mental a contextos indeseables de violencia e incompetencia (36).

Por otro lado, de manera similar a un estudio colombiano (26), se halló que los artículos cuyo tema principal era la salud mental pertenecían a la categoría temática de "salud", pues se orientaban a describir los aspectos clínicos desde una aproximación informativa. Sin embargo, se ha observado que tener más información sobre el tema no es suficiente para

generar actitudes positivas hacia las personas con afecciones mentales (37), por lo que promover narrativas que acerquen al público con historias reales podría contribuir a la reducción de estigma.

Además, el hecho que la categoría "policial" sea la segunda categoría temática más común entre los artículos que tocan la salud mental de manera parcial, confirmaría la práctica periodística, encontrada también en estudios previos, de asociar conductas delictivas o violentas con afecciones de salud mental (14,15,23). Sin embargo, la evidencia muestra que las personas con afecciones de salud mental tienden a ser más comúnmente víctimas que victimarias (19), lo cual conduce a la sobrerrepresentación de estas personas como violentas.

El escaso uso de fuentes de información cuando se alude a la salud mental es una práctica que resta solidez y veracidad a la información presentada en la prensa escrita. Un aspecto positivo es que, entre los pocos artículos que utilizan fuentes, la mayoría son especializadas, resultado similar al encontrado en estudios desarrollados en Perú y Estados Unidos (24,38). No obstante, resulta preocupante la ausencia de personas con experiencia directa o indirecta de afecciones de salud mental como informantes, encontradas en una frecuencia tres veces menor a la de un estudio similar en Canadá (15). Dar visibilidad a estas personas en los medios, ayudaría a difundir perspectivas que discutan tanto las dificultades y barreras en el camino hacia la recuperación, como las habilidades y recursos con los que cuenta esta población. Esto puede contribuir a disminuir los niveles de estigma, pues la evidencia sugiere que las intervenciones que enfatizan la recuperación y fortaleza de personas con afecciones de salud mental es un componente satisfactorio (39).

La valoración predominantemente negativa de personas o poblaciones con afecciones de salud mental coincide con lo observado en estudios a nivel mundial (12,24), en los que se les representa como emocionalmente inestables, objetos de lástima y peligrosas para sí mismas o para otras personas (12,18,40). Otras investigaciones revelan que estas representaciones afectan profundamente la autoestima, la motivación para buscar ayuda, la adherencia al tratamiento y la recuperación (18,41). Por el contrario, valoraciones positivas en la prensa, como las que resaltan la resiliencia en personas con afecciones de salud mental, ayudan a ofrecer una representación más completa y diversa de sus experiencias, resaltando actitudes de reafirmación y la posibilidad de la recuperación, el empoderamiento y la autodeterminación (4).

Finalmente, los resultados de este estudio indican que, en los artículos con contenido parcial o principal de salud mental, la prensa escrita incluye elementos que contribuyen a reforzar el estigma sobre quienes tienen afecciones de salud mental. Si bien se esperaba encontrar contrastes entre los dos diarios debido a las diferencias de su público objetivo como en estudios anteriores (19,20,42), la ausencia de estas en las dimensiones que analizamos sugeriría que existe un mensaje similar sobre salud mental, independientemente del estrato socioeconómico del lector.

Implicaciones

Este estudio evidencia la necesidad de diseñar actividades dirigidas a periodistas y comunicadores, en las que se les invite a cuestionar la actual cobertura y representación de la salud mental en los medios, transformando la forma en que se comunica este contenido (43,44). Como parte de este esfuerzo, se debe involucrar a personas con experiencias de salud mental en la cocreación de guías para el adecuado abordaje del tema y en las actividades de sensibilización con periodistas. Asimismo, se debe promover su inclusión como fuentes de información e invitarlas a escribir artículos periodísticos, lo que les otorgaría más control sobre sus narrativas y evitaría representaciones sesgadas. Un ejemplo es *Radio Descosidos*, una iniciativa radial en Lima que tiene a personas con afecciones de salud mental como locutores y que ha dado resultados satisfactorios para cuestionar las preconcepciones sobre los "pacientes psiquiátricos" (45).

Por otro lado, particularmente en Perú, estos hallazgos representan un llamado a profesionales de salud y tomadores de decisiones para impulsar campañas de comunicación que acompañen la reforma de salud mental (46,47), con el fin de cuestionar los prejuicios en torno a la salud mental y la búsqueda de tratamiento.

Limitaciones y sugerencias para futuras investigaciones

Nuestro estudio analiza una muestra pequeña de artículos de dos diarios de circulación nacional, por lo que sus resultados presentan una imagen parcial

del abordaje de la salud mental en medios. En próximos estudios, sería importante incluir más diarios en el análisis, así como otros medios de comunicación, una tarea que se facilitaría integrando métodos computacionales automatizados para la selección de la muestra y el análisis del contenido. En particular, cabe prestar atención al contenido de medios digitales, ya que estos se han posicionado como fuentes importantes de consumo de información y tienen una fuerte influencia en la opinión pública. Existen ya varios estudios enfocados en el Norte global que vienen analizando su rol en la diseminación de estereotipos sobre la salud mental (36,48), pero aún existe un vacío al respecto en los países del Sur global.

Otra limitación es la falta de un análisis cualitativo sobre los marcos discursivos desde los cuales se articulan las noticias sobre salud mental. Así, futuras investigaciones podrían optar por emplear este tipo de análisis, desarrollando así una caracterización más detallada de las personas con afecciones de salud mental en los medios de comunicación. Igualmente, un enfoque mixto que combine ambos tipos de análisis permitiría definir un panorama más completo. Finalmente, también resultaría interesante indagar cómo los y las periodistas y comunicadores entienden la salud mental con el propósito de diseñar actividades de sensibilización y formación.

Conclusiones

La presente investigación colabora con cerrar una brecha importante de información en el Perú y en América Latina (26) y analiza fuentes primarias de la prensa escrita para identificar las representaciones de la salud mental en la prensa escrita. El uso de términos relacionados con la salud mental escrita sin desarrollo del tema, la falta de citado de fuentes de información y la valoración predominantemente negativa de las personas o poblaciones con alguna afección de salud mental sugieren que la prensa escrita peruana contribuye al fortalecimiento del estigma vinculado a la salud mental. Es recomendable que los sectores de comunicaciones y de salud tomen acciones para ejercer el uso responsable de plataformas de difusión masiva de información con el objetivo de reducir el estigma de la salud mental a través de la difusión de información fiable y objetiva.

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Material complementario

Este artículo tiene material complementario disponible en línea

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Intervención para modificar hábitos alimentarios en los refrigerios de escolares de una ciudad fronteriza México / Estados Unidos

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Resumen: El objetivo del presente estudio fue evaluar el efecto de una intervención en educación nutricional como estrategia para modificar la calidad de los refrigerios escolares de acuerdo con los estándares gubernamentales. Se evaluaron alumnos de 12 escuelas primarias públicas de nivel socioeconómico medio. Se formó un grupo intervención (GI) y un grupo control (GC), con seguimiento durante dos años. En ambos grupos se tomaron mediciones de peso, estatura y circunferencia de cintura. Se registró, durante cinco días consecutivos, los alimentos incluidos en la lonchera de los niños, previa firma de un consentimiento informado de los padres. Durante la intervención se realizaron pláticas sobre alimentación en el salón de clase para los escolares y a los padres de familia se les entregaron folletos sobre recomendaciones de un refrigerio adecuado. En el GC solo se entregaron folletos sin tener contacto con alumnos y padres de familia. Al final de la intervención, el GI disminuyó calorías ($p = 0.001$), proteínas ($p = 0.01$), carbohidratos ($p = 0.008$) y azúcar ($p = 0.0001$); mientras que en el GC disminuyó el contenido de carbohidratos y azúcar. Además, el GI aumentó el consumo de cereales integrales, verduras, frijoles y pan integral. En conclusión, la escuela es el lugar ideal para realizar intervenciones a largo plazo, sin embargo, es necesario promover la incorporación de profesionales de la salud (nutriólogos) con programas y actividades planeadas durante los seis años de primaria.

Palabras clave: educacion nutricional, estado nutricional, edad escolar, refrigerios escolares, promoción de la salud

Introducción

La Organización Mundial de la Salud (OMS) indicó que el sobrepeso (SBP) y la obesidad (OB) representan un problema de salud pública que afecta principalmente a países de ingreso medio y bajo (1). En el 2016, más de 340 millones de niños y adolescentes (5 a 19 años) presentaban SBP u OB en el mundo (2). En México, la Encuesta Nacional de Salud y Nutrición [ENSANUT, 2018] reportó una prevalencia de SBP y OB de 35.5% en niños (5 a 11 años) (3). En la zona norte de México del 2016 al 2017 la prevalencia de SBP y OB en escolares fue de 36.1% (4), en Reynosa, Tamaulipas (zona norte colindante con E. U.), la prevalencia fue mayor en este grupo de edad (45% en el 2013 y 44.7% en el 2015) (5,6) sobrepasando la media nacional.

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Las causas del SBP y la OB pueden ser diferentes factores, como una dieta poco saludable que incluye alimentos densamente energéticos (7) consumidos en el recreo por la población escolar. Además del desconocimiento de los padres de familia sobre una lonchera saludable (8).

Diversas investigaciones han identificado el tipo y contenido nutricional de alimentos que los niños llevan de casa para consumir durante el recreo. Evans *et al.* (9) indicaron que en el Reino Unido la mayoría de los refrigerios contenían alimentos como bebidas azucaradas, confitería, alimentos salados y en menor frecuencia verduras y fruta. En este mismo país, Stevens y Nelson (10) evaluaron refrigerios y reportaron un consumo alto de pan blanco, papas fritas, aperitivos salados, confitería, refrescos de dieta, menos verduras y bebidas como agua o té. En América Latina, en el 2019 en Ecuador, Da Costa *et al.* (11) evaluaron el contenido del refrigerio escolar y reportaron una ingesta de alimentos no saludables: jugos envasados o refrescos, snacks y dulces. En Perú, en el 2018 evaluaron el cumplimiento de loncheras categorizadas como saludables y solo el 5.4% se consideró saludable (12). En México, reportaron una frecuencia elevada de bebidas azucaradas y alimentos industrializados como parte de los refrigerios de los niños (13). Estos estudios confirman que los refrigerios de los escolares se caracterizan por ser ricos en grasas saturadas, azúcares y sodio. Por lo tanto, sugieren realizar intervenciones y programas de educación nutricional a niños y padres de familia, con el objetivo de mejorar la calidad de los refrigerios escolares (14), por medio de la promoción de la salud en el entorno escolar para garantizar el desarrollo integral e inclusivo de los niños y potencializar estilos de vida saludables (15,16). El presente trabajo tuvo como objetivo evaluar el efecto de una intervención en educación nutricional como estrategia para modificar la calidad de los refrigerios escolares de acuerdo con los estándares gubernamentales.

Métodos

Participantes

La muestra estuvo integrada por 12 escuelas públicas seleccionadas por conveniencia. Se formaron dos grupos al azar: grupo control (GC) ($n = 6$ escuelas con 711 niños) y grupo intervención (GI) ($n = 6$ escuelas con 858 niños), del área urbana de Reynosa, Tamaulipas, México, de nivel socioeconómico medio (17). Se incluyeron niños de ambos sexos de 8 a 11 años de nivel primaria. Se excluyeron los niños con algún aparato ortopédico, discapacidad mental, física o con problemas metabólicos.

Procedimiento

El programa de prevención de obesidad en escuelas primarias se realizó con un seguimiento de dos años en los que se incluyó: (a) evaluación inicial, (b) promoción de la salud por medio de educación nutricional (como intervención) y (c) evaluación final. La intervención tuvo una duración total de 14 semanas, divididas en dos periodos: periodo I (2015–2016 niños de tercero y cuarto grado) y periodo II (2016–2017 cuando estaban en cuarto y quinto grado). Las evaluaciones inicial y final se realizaron a través de medidas antropométricas (peso y talla) y revisión de los refrigerios escolares antes del recreo.

Mediciones antropométricas

Las mediciones se realizaron al inicio y al final de la intervención por medio de las técnicas de medición de peso y talla de acuerdo con la Norma Oficial Mexicana NOM-047-SSA2-2015 (18), con una báscula de bioimpedancia (Tanita modelo BF-689) para medir el peso corporal y un estadiómetro (SECA 213) para la estatura. En el diagnóstico del estado nutricio por edad y sexo se utilizó el puntaje Z del índice de masa corporal (IMC) con el apoyo del software AnthroPlus, considerando como bajo peso $\leqslant -2$DE, peso normal -1.99DE $\leqslant 1$DE, sobrepeso > 1DE $\leqslant 2$DE, y obesidad > 2 DE (19).

Refrigerios escolares

Para evaluar los refrigerios se utilizó una lista de cotejo previamente validada a partir de la concordancia en la evaluación de 30 loncheras por parte de tres evaluadores diferentes (6). Por observación directa se registraron los alimentos que llevaron de casa tanto el GI como el GC, con un seguimiento de cinco días consecutivos antes y después de la intervención. El contenido de los refrigerios se clasificó como adecuado cuando cumplieron con todos los criterios de los

lineamientos generales para el expendio y distribución de alimentos, establecidos por la Secretaría de Educación Pública (SEP) en el 2014: ≤249 kcal, fruta y verdura, cereal integral, oleaginosas y leguminosas, agua simple potable a libre demanda (20).

Intervención nutricional

El presente estudio toma como base la Teoría Cognitivo Social de Bandura, la cual propone que el aprendizaje es concebido como una adquisición de conocimiento a través del procesamiento cognitivo de la información, por lo que una parte sustancial de la adquisición de conocimientos se basa en su contexto social, con interacciones entre las características personales, los patrones de comportamiento y los factores ambientales (21). Esta teoría plantea que el aprendizaje de los individuos se obtiene a través de: (i) la observación y/o (ii) la instrucción directa. La comprensión de los procesos de aprendizaje de los individuos permite que puedan direccionar su conducta/comportamiento hacia un determinado objetivo (22). En el presente estudio se busca generar un cambio cognitivo para la selección de alimentos en escolares a través de la instrucción directa.

Con base en el aprendizaje social de Bandura se realizó una aproximación a través de la investigación-acción participativa, que busca solucionar problemas concretos de una comunidad, lo que hace que el proceso tenga un alto nivel de relevancia social (23,24). En el presente estudio la "instrucción directa" de aprendizaje se realizó a través de pláticas informativas como espacios de aprendizaje y participación, dirigidas a los padres y tutores cuyo objetivo fue incrementar sus conocimientos sobre nutrición para promover el cambio en la composición de los refrigerios que los niños llevan de casa y fomentar el uso de este conocimiento adquirido como punto de referencia a la hora de preparar refrigerios (20).

En el GI se impartieron pláticas de orientación alimentaria (de 20 minutos) de acuerdo con los criterios de la NOM-043-SSA2-2012 (25) y se realizaron actividades complementarias en el salón clase (Tabla 1), dirigidas por una nutrióloga, una vez a la semana por 7 semanas consecutivas. Se publicaron carteles con información de refrigerios saludables en el salón de clase, en los patios y en la entrada de la escuela (26). Se enviaron folletos y ejemplos de refrigerios saludables a los padres de familia. Para el GC la información se entregó al profesor del aula, sin tener contacto con el alumno.

Análisis de datos

Se calcularon los puntajes Z de IMC y se clasificaron en categorías. Se analizó la asociación entre categorías de peso y sexo con la prueba Chi-cuadrada. Se calculó el contenido de calorías, proteínas, grasa total, grasa saturada, carbohidratos y azúcar de los alimentos contenidos en las loncheras con el programa Nutritionist pro (v.7.3, Axxya Systems). Las variables antes mencionadas se examinaron para identificar normalidad con la prueba de Shapiro–Wilks, las variables que no siguieron un patrón de normalidad se expresaron como cuartiles. Para observar diferencias de macronutrientes y calorías entre los grupos control e intervención se utilizó la prueba de Mann–Whitney y para diferencias pre- y posintervención dentro de los grupos se utilizó la prueba de Wilcoxon para muestras pareadas. Se calculó el porcentaje de estudiantes que traían en sus loncheras diferentes alimentos y preparaciones, para diferencias entre los grupos control e intervención y pre- y posintervención se utilizó la prueba de Chi-cuadrada con significancia de $p < 0.05$ y para categorizar como adecuado el refrigerio antes y después de la intervención en ambos grupos, se calculó el porcentaje de estudiantes que traían en sus loncheras: ≤249 kcal, frutas y verduras, agua, cereales integrales y/o leguminosas y/o oleaginosas. Se utilizó la prueba de Chi-cuadrada con significancia de $p < 0.05$ para identificar las diferencias. Los análisis estadísticos se llevaron a cabo con el programa SPSS (Statistical Package for the Social Sciences, v.20).

Resultados

En este estudio participaron 1569 escolares de tercero y cuarto año de primaria. En la Tabla 2 se presentan los datos generales basales de los grupos. El promedio de edad (± desviación estándar) fue de 8.8 ± 0.7 años, el 47.8% fueron niñas. El 70% y el 64% de los niños del GI y GC llevaron lonchera a la escuela durante la semana de revisión. Al final de la intervención los porcentajes fueron menores, 42% y 38% para el GI y el GC respectivamente. En cuanto al estado nutricio, el sexo masculino presentó mayor obesidad ($p < 0.05$).

Tabla 1. Temas de intervención por semana "Programa de prevención de obesidad en escuelas primarias".

Ciclo 2015–2016		*Ciclo 2016–2017*	
Semana	*Actividad salón de clase*	*Semana*	*Actividad salón de clase*
1	Tema: cuentos frutas y verduras (diapositivas). Actividad: identificar la moraleja de los cuentos (opinión de niños). Folleto: refrigerio saludable día lunes. Folleto sobre el contenido de azúcar en las galletas. Cartel: alimentos recomendados en los refrigerios.	1	Tema: cuento sobre nutrición y alimentación. Actividad: identificar la moraleja del cuento y sus opiniones.
2	Tema: la manzana de la salud. Actividad: los niños participan identificando los grupos de alimentos, colorean grupos de alimentos. Folleto: refrigerio saludable día martes. Folleto sobre el consumo de agua. Cartel: comparación de la composición nutricional de las bebidas azucaradas y agua.	2	Tema: guía alimentaria el plato del bien (grupos de alimentos). Actividad: relacionar los alimentos con el grupo al que pertenecen.
3	Tema: grupos de las frutas y verduras. Actividad: identificar frutas y verduras y colocar su nombre. Folleto: refrigerio saludable día miércoles. Folleto: importancia del consumo de carne, pollo, pescado, huevo. Cartel: refrigerio saludable vs. refrigerio no saludable.	3	Tema: características nutricionales de los alimentos (vitaminas, minerales). Actividad: unir con una línea la figura del alimento que corresponde.
4	Tema: importancia del consumo de frutas y verduras. Actividad: dibujar la línea de cada fruta hacia su sombra, encontrar frutas y verduras. Tarea: diario de alimentos. Folleto: refrigerio saludable día jueves. Folletos: importancia de comer cereales, harinas y granos.	4	Tema: características nutricionales de los alimentos (carbohidratos, fibra, proteínas, grasas). Actividad: resolver crucigrama de grupos de alimentos.
5	Tema: identificar con el grupo del diario de alimentos los alimentos que consumieron durante la semana. Actividad: leer adivinanzas en grupo y resolver sopa de letras de frutas y verduras. Folleto: refrigerio saludable día viernes. Folleto: importancia del consumo de frutas y verduras.	5	Tema: función de los colores en las frutas. Actividad: relacionar los alimentos con el antioxidante.
6	Tema: importancia sobre el consumo de agua. Actividad: identificar los beneficios del consumo de agua. Folleto: refrigerio saludable día sábado. Folleto: importancia de consumir lácteos.	6	Tema: función del color de las verduras. Actividad: dibujar frutas y verduras preferidas y mencionar una función de acuerdo con el color.
7	Tema: consumo de bebidas azucaradas. Actividad: identificar los efectos de las bebidas azucaradas. Folleto: refrigerio saludable día domingo. Folleto: ideas para ayudar a incluir más verduras en los refrigerios.	7	Tema: importancia del desayuno Actividad: elaborar un desayuno saludable.

Tabla 2. Diferencias en datos generales basales entre grupo de intervención y control.

	Intervención	*Control*	*Niños*	*Niñas*	*Total*
Edad (años) (media, DE)	8.8 ± 0.7	8.8 ± 0.8	8.8 ± 0.7	8.8 ± 0.7	8.8 ± 0.7
Niñas (%)	49.8	45.3	–	–	47.8
Puntaje Z de IMC (media, DE)	0.90 ± 1.5	0.91 ± 1.3	1.05 ± 1.5	0.74 ± 1.3	0.90 ± 1.4
Bajo peso (%)	1.3	1.5	1.5	1.4	1.4
Peso normal (%)	54	51	49	57	52.5
Sobrepeso (%)	21	21	19	23.4	21
Obesidad (%)	23.3	26.5	30.5**	18.1	25
Lonchera (%)	70.4*	64.4	66.0	69.5	67.7

*Chi-cuadrada = 6.4, $p = 0.01$.
**Chi-cuadrada = 33.1, $p = 0.0001$.

Tabla 3. Cambios en cuartiles del contenido nutrimental de las loncheras entre la pre- y la posintervención.

	Intervención (N = *315*)			*Control* (N = *212*)		
	Pre P50 (P25–P75)	*Pos P50 (P25–P75)*	*Valor de p*	*Pre P50 (P25–P75)*	*Pos P50 (P25–P75)*	*Valor de p*
Calorías (kcal)	525 (376–658)	489 (334–612)	0.001	538 (385–679)	510 (375–687)	0.89
Proteínas (g)	19 (14–26)	18 (12–24)	0.01	20 (14–27)	20 (13–28)	0.66
Carbohidratos (g)	66 (49–87)	57 (41–72)	0.008	67 (50–90)	59 (44–81)	0.001
Azúcar (g)	20 (7–28)	17 (0–28)	0.0001	17 (0–28)	10 (0–26)	0.02
Grasa (g)	22 (15–31)	20 (13–27)	0.06	23 (15–31)	22 (15–33)	0.66
Grasa saturada (g)	7 (4–9)	6 (4–8)	0.08	7 (4–9)	7 (4–10)	0.36

Diferencias pre y pos, dentro de cada grupo se utilizó la prueba de Wilcoxon con significancia de $p \leqslant 0.05$.
Diferencias entre grupo intervención y control, se utilizó la prueba de Mann–Whitney significancia $p \leqslant 0.05$.

Al inicio del estudio no se observaron diferencias entre grupos en el contenido de macronutrientes de las loncheras. En la Tabla 3 se muestran los escolares que permanecieron en la intervención con los cambios en cuartiles del contenido nutrimental de las loncheras pre- y posintervención. En el GI, al comparar la evaluación pre- y posintervención, disminuyeron las calorías, proteínas y el azúcar, con una tendencia a la disminución de la grasa total y saturada; mientras que en el GC pre vs. pos, disminuyó el contenido de carbohidratos y azúcar. Al comparar los grupos pos intervenidos y poscontrol se observó disminución de calorías ($p = 0.03$), proteínas ($p = 0.009$), grasa total ($p = 0.007$), grasa saturada ($p = 0.003$) y azúcar ($p = 0.05$) en el GI.

En la Tabla 4 se presentan los criterios de la norma de la SEP 2014 donde se comparó la pre- y la posintervención y se observó que en ambos grupos aumentó la proporción de refrigerios con menos de 249 calorías, frutas y verduras; sin embargo, el GI aumentó el consumo de agua y cereales integrales. Al comparar el grupo pos intervención con el grupo poscontrol, el GI aumentó el número de loncheras que traían cereales integrales y/o leguminosas ($p = 0.001$).

En la Tabla 5 se observó que en el GI disminuyó el porcentaje de galletas, leche, yogur con azúcar y tacos. En ambos grupos disminuyeron las bebidas azucaradas, fruta, sándwiches, queso, jamón, mayonesa, huevo, chorizo y salchicha, pan blanco y tortilla de harina y solo el GI aumentó la verdura, los frijoles y el pan integral. Al comparar el posintervención con el poscontrol se observaron diferencias significativas en la frecuencia de consumo de frijoles (16.8% vs. 3.3%; Chi-cuadrada 22.9; $p = 0.0001$) y tacos (27.9% vs. 40.6%; Chi-cuadrada 9.14; $p = 0.003$).

Tabla 4. Cambios en el contenido de las loncheras pre- y posintervención según criterios de la norma de la SEP, 2014.

Contenido de loncheras	*Intervención (*N = *315)*			*Control (N = 212)*		
Según la Norma SEP	*Pre % (*N*)*	*Pos % (*N*)*	*Valor de* p	*Pre % (*N*)*	*Pos % (*N*)*	*Valor de* p
≤249 kcal	10.2 (32)	14.9 (47)	0.0001	5.7 (12)	11.8 (25)	0.007
Fruta y/o verdura	20.7 (65)	26.7 (84)	0.0001	33.4 (71)	38.2 (81)	0.001
Agua	7.3 (23)	8.6 (27)	0.0001	2.8(6)	4.2 (9)	0.23
Con cereales integrales y/o leguminosas y/o oleaginosas*	39.0 (123)	40.3 (130)	0.0001	41.5 (88)	37.3 (79)	0.002
Lonchera adecuada: cumplió con todos los criterios de la norma	1.9 (6)	2.2 (7)	–	4.2 (9)	0.0 (0)	–

*Ninguna lonchera traía oleaginosas.
Chi cuadrada con significancia $p \leq 0.05$.
SEP = Secretaría de Educación Pública.

Discusión

Al contrastar por sexo se observó que los niños presentan mayor obesidad que las niñas (30.5% vs. 18.1%, respectivamente; $p = 0.0001$). Al comparar la prevalencia combinada de SBP y OB (46%) del total de la muestra, se observó que supera la reportada por ENSANUT, 2018 (3) y la prevalencia de la zona norte de México (36.1%) reportada en 2016 a 2017 (4). Sin embargo, las prevalencias de SBP y de OB son similares a las encontradas por Aviña-Barrera *et al.* (5) en escolares de esta misma zona con una prevalencia del 45%.

Respecto al contenido de energía y macronutrientes, no se observó diferencia entre el GI y el GC en condiciones basales. Resultados similares reportó el estudio realizado por Díaz-Ramírez *et al.* (26), quienes indicaron que los niños superan la recomendación de consumo en energía y macronutrientes. Nathan *et al.* (27) indican que los escolares consumen entre un tercio y hasta la mitad de su ingesta diaria de energía en los alimentos que ingieren dentro del centro escolar.

Un estudio realizado en preescolares venezolanos identificó que el 74.14% de ellos no desayunaban y que el refrigerio sustituía al desayuno. Solo el 13% cumplía con la recomendación adecuada para calorías. Los autores mencionan que, al no desayunar en el hogar, se presentaban dos situaciones: la familia incluía grandes cantidades de alimentos en la lonchera o presentaban déficit en el contenido nutricional (28). El presente estudio no identificó si los escolares desayunaron en casa, sin embargo, Castillo-Ruiz *et al.* (29) mencionan que el 30% de los niños en Reynosa no desayunan.

Díaz-Ramírez *et al.* (26) indicaron que después de la intervención, el 19% de los niños del GI cumplieron con los criterios de un refrigerio adecuado, en comparación con el 10% del GC ($p = 0.002$). Además, el GI incrementó la ingesta de vegetales (niños 7.3 a 9.8%, $p = 0.001$ y de niñas 8.0 a 11.3%, $p = 0.05$), mientras que en el GC el consumo disminuyó (12.1 al 9.3%, $p = 0.001$), en cuanto al contenido de grasa y azúcar ($p = 0.003$, $p = 0.002$), fue menor en el GI. Al comparar entre los grupos posintervenidos y poscontrol en el presente estudio se observó una tendencia a la disminución de calorías, proteínas, grasa total, grasa saturada y azúcar en el GI. Alemán-Castillo *et al.* (30) realizaron una intervención para mejorar la calidad de los refrigerios, con duración de tres meses, y reportaron que el GI incrementó el consumo de fruta/verdura ($p = 0.024$), mientras que el GC lo disminuyó ($p = 0.014$), en el consumo de bebidas azucaradas disminuyó en el GI ($p = 0.008$). En el presente estudio, de acuerdo con la norma 2014 de México, el GI aumentó el porcentaje de niños que llevaron refrigerios que cumplían con la recomendación, además de incrementar el contenido de cereales integrales con respecto al GC (Tabla 4). Antwi *et al.* (31) evaluaron el efecto de una intervención en educación nutricional (EN) durante seis semanas sobre el conocimiento, la actitud y las prácticas dietéticas, e indicaron que el GI presentó puntuaciones de conocimiento nutricional más altas

Tabla 5. Diferencias en la frecuencia de contenido de alimentos en las loncheras pre- y posintervención.

	Intervención			*Control*		
Alimento o preparación	*Pre* % (N)	*Pos* % (N)	*Valor de* p	*Pre* % (N)	*Pos* % (N)	*Valor de* p
Sándwich	57.5 (181)	54.9 (173)	0.0001	60.4 (128)	49.5 (105)	0.0001
Jamón	54.6 (172)	53.0 (167)	0.0001	62.7 (133)	50.0 (106)	0.0001
Mayonesa	45.4 (143)	44.4 (140)	0.0001	49.5 (105)	42.0 (89)	0.0001
Pan blanco	44.4 (140)	41.9 (132)	0.0001	50.0 (106)	37.3 (79)	0.0001
Bebidas azucaradas	42.0 (89)	29.7 (63)	0.0001	41.6 (131)	38.4 (121)	0.006
Huevo	41.9 (132)	40 (126)	0.0001	48.6 (103)	43.3 (90)	0.0001
Queso	37.8 (119)	35.2 (111)	0.0001	41.5 (88)	32.1 (68)	0.0001
Tacos	33.7 (106)	27.9 (88)	0.0001	38.2 (81)	40.6 (86)	0.0001
Chorizo, salchicha	23.2 (73)	15.2 (48)	0.0001	25.9 (55)	14.2 (30)	0.01
Pan integral	20.6 (65)	21.3 (67)	0.0001	18.9 (40)	16.0 (34)	0.0001
Tortilla de harina	20.4 (176)	12.9 (111)	0.0001	18.8 (134)	11.5 (82)	0.0001
Fruta	15.5 (49)	10.2 (32)	0.0001	23.6 (50)	14.6 (31)	0.07
Galletas, barras, pastelitos	14.9 (47)	11.7 (37)	0.0001	13.7 (29)	13.7 (29)	–
Frijol	14.3 (45)	16.8 (53)	0.0001	12.7 (27)	3.3 (7)	0.05
Tortilla de maíz	13.3 (42)	12.7 (40)	0.0001	20.8 (40)	19.8 (42)	0.005
Leche/yogur con azúcar, con vainilla, chocolate o fresa	14.0 (44)	8.3 (26)	0.0001	9.4 (20)	4.7 (10)	–
Verdura	10.2 (32)	11.1 (35)	0.0001	14.6 (31)	14.6 (31)	–
Pollo	7.3 (23)	3.5 (11)	–	9.9 (21)	8.0 (17)	–
Carne	7.0 (20)	8.3 (26)	–	12.3 (26)	9.9 (21)	–
Fritos	6.3 (20)	6.7 (21)	–	8.5 (18)	10.8 (23)	–
Papa	6.0 (19)	6.3 (20)	–	7.5 (16)	3.8 (8)	–
Queso fresco	6.0 (19)	3.2 (10)	–	8.0 (17)	4.2(9)	–
Flautas, tacos fritos, quesadillas fritas, empanadas	5.4 (17)	2.9 (9)	–	1.9 (4)	5.2 (11)	–
Dulces	5.1 (16)	2.9 (9)	–	1.9 (4)	1.4 (9)	–
Bebidas azucaradas carbonatadas	2.9 (9)	2.2 (7)	–	3.8 (8)	2.8 (6)	–
Atún	2.2 (9)	0.6 (2)	–	0.9 (2)	3.8 (8)	–
Margarina	2.1 (18)	0.6 (5)	–	3.4 (24)	0 (0)	–
Hamburguesa	1.9 (6)	1.9 (6)	–	0.9 (2)	1.9 (4)	–
Pizza	1.9 (6)	1.9 (6)	–	0.9 (2)	1.9 (4)	–
Leche sin azúcar y yogur bajo en grasa	1.6 (5)	1.3 (4)	–	1.9 (4)	1.9 (4)	–
Arroz o pasta	1.6 (5)	1.0 (3)	–	1.9 (4)	1.9 (4)	–
Postres, gelatina, flan, arroz con leche	1.3 (4)	1.3 (4)	–	0.9 (2)	1.9 (4)	–
Hotcakes	1.2 (10)	0.9 (8)	–	1.1 (8)	0.4 (3)	–
Tamal	0.9 (8)	0.5 (4)	–	0.6 (4)	0.8 (6)	–
Mermelada	0.5 (4)	0.2 (2)	–	0.6 (4)	0.4 (3)	–

Nota pie de tabla: – No suficientes datos.
Chi-cuadrada con significancia $p \leqslant 0.05$.

(8.8 ± 2.0 vs. 5.9 ± 2.1, $p < 0.0001$). Sin embargo, no se observó un aumento en la diversidad dietética.

Roberts-Gray *et al.* (32) realizaron una intervención de seis semanas y reportaron un incremento en el número de porciones de verduras (0.17, $p < 0.001$) y cereales integrales (0.30, $p < 0.018$) en comparación con el GC. En el 2018, Roberts-Gray *et al.* (33) realizaron otra intervención aumentando a 28 semanas y reportaron que el 14% de niños aumentaron el consumo de verduras ($p = 0.006$) y cereales integrales

($p=0.010$). Sweitzer *et al.* (34) realizaron una intervención con los padres de preescolares, a los que les fueron enviados folletos a casa, integraron actividades padre-hijo, y docente-escolar dentro de la escuela, por 26 semanas, al cabo de las cuales los autores observaron que el GI aumentó las porciones de verduras y cereales integrales. Resultados similares se reportan en el presente estudio, en donde se observó aumento en el consumo de verdura y cereales integrales. En este sentido, la Teoría Cognitivo Social permitió extrapolar su aplicación al presente estudio. Por instrucción directa (intervención), se lograron cambios cognoscitivos en los procesos alimentarios. Dicha intervención fue de utilidad para disminuir el consumo de pan blanco y se observó una mayor frecuencia de niños que llevaron pan integral, frijol y verduras. Aunque se observaron efectos positivos a través de la intervención para la generación de procesos cognitivos de alimentación saludable, no alcanzó a impactar en que los niños incrementen la frecuencia de frutas en sus loncheras, así como tampoco se logró reducir el contenido de grasas. Aunque se observaron efectos positivos después de la intervención, se considera necesario establecer "refuerzos" tal como propone la Teoría Cognitivo Social.

Limitaciones

Se evaluaron las porciones de alimentos que los padres enviaron a sus hijos, pero no se evaluó el número de porciones de alimentos consumidos de la dieta total, se observó que las escuelas del GC mostraron mucho entusiasmo en el proyecto, lo que pudo afectar los resultados.

Conclusión

Con base en la Teoría de Bandura, aplicada en intervenciones nutricionales, se desarrolla un proceso de aprendizaje en los escolares acerca de cómo alimentarse saludablemente, generando cambios cognoscitivos en los procesos alimentarios con impacto positivo en la población. Es relevante establecer "refuerzos" en la promoción de la salud para mejorar los hábitos alimentarios de los escolares.

Declaración de conflicto de intereses

Ningún conflicto declarado.

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Ética de la investigación

Este estudio forma parte de un proyecto desarrollado por la Universidad Autónoma de Baja California (UABC), Facultad de Medicina y Psicología campus Tijuana, titulado "Programa de prevención de obesidad en escuelas primarias" implementado en la Cd. de Reynosa, Tamaulipas. El protocolo de este estudio fue aprobado por el Comité de Ética de la Facultad de Medicina y Psicología, de la Universidad Autónoma de Baja California, con número de solicitud 366968, y número UTN U1111-1160-8672.

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Monitoreo del derecho humano a la alimentación adecuada: revisión sistemática

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Resumen:
Objetivo: identificar la situación actual y técnicas utilizadas para el monitoreo del derecho humano a la alimentación adecuada (DHAA).
Material y métodos: la estrategia de búsqueda abarcó bases de datos académicas desde el año 1960, fecha en la cual se comenzó a hablar sobre el DHAA, hasta el 1 de septiembre del 2020. Los títulos, resúmenes y revisión de textos completos fueron revisados por un investigador. Los resultados fueron sintetizados y cotejados por un segundo investigador.
Resultados: se identificaron 739 artículos y solo 16 cumplieron con los criterios de inclusión de literatura científica o de revisión publicada en español o inglés sobre el tema. Los hallazgos indican que el DHAA no se ejerce adecuadamente, principalmente por considerarse como no justiciable. Dentro de las metodologías reportadas, el análisis de contenido tanto de instrumentos como de políticas fue lo más utilizado entre los estudios incluidos. Conclusiones: la falta de voluntad política, el desconocimiento de los actores en los ministerios de salud sobre el DHAA y el incumplimiento/falta de un enfoque basado en derechos humanos (EBDH) transgreden la realización del DHAA.

Palabras clave: derechos humanos, seguridad alimentaria y nutricional, programas y políticas de nutrición y alimentación, monitoreo

Introducción

El derecho humano a la alimentación adecuada (DHAA) está consolidado dentro de la Declaración Universal de Derechos Humanos (1948), ya que constituye uno de los pilares fundamentales para la vida. El Consejo Económico y Social de las Naciones Unidas menciona que el derecho a la alimentación se cumple cuando: "Todo hombre, mujer o niño(a), ya sea sólo o en común con otros, tiene acceso físico y económico, en todo momento, a la alimentación adecuada, o a medios para obtenerla. El derecho a la alimentación adecuada no debe interpretarse, por consiguiente, en forma estrecha o restrictiva asimilándolo como un conjunto de calorías, proteínas y otros elementos nutritivos concretos. El derecho a la alimentación adecuada tendrá que alcanzarse progresiva y sostenidamente. No obstante, los países tienen la obligación básica de adoptar las medidas necesarias para mitigar y aliviar el hambre" (1).

A pesar de la importancia de este derecho a la alimentación adecuada, se ha establecido que representa el derecho humano (DH) más violado a nivel mundial, esto a pesar de que cada vez se tiene

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mayor conciencia sobre lo que se necesita para su realización y el impacto negativo que su no cumplimiento representa tanto a nivel individual como a nivel colectivo (2). Lo anterior radica en la importancia de este DH ya que interfiere con la capacidad de sociedades enteras de alcanzar su potencial económico, en las/os niñas(os) impide el óptimo crecimiento y desarrollo tanto intelectual como físico, y en los adultos opaca el intelecto y disminuye la productividad; además de relacionarse de manera muy clara y preocupante con un sinfín de padecimientos y enfermedades crónicas en toda la población, particularmente en poblaciones vulnerables (3).

Se considera que el contenido básico del DHAA debe contemplar los siguientes elementos: 1) disponibilidad de alimentos, es decir, que estos sean suficientes tanto en calidad como en cantidad para cubrir y satisfacer las necesidades nutricias, pero que éstos sean además inocuos y aceptables a la cultura de las personas; y 2) la accesibilidad de alimentos (económica y física): lograr que dicha accesibilidad sea sostenible y que no limite u obstaculice el disfrute de otros DH (1).

La Organización de las Naciones Unidas para la Alimentación y la Agricultura (FAO) contempla los siguientes desafíos en el monitoreo de este DH: a) poca comprensión del concepto de DHAA, b) limitaciones institucionales, c) compromisos políticos y sensibilidades, d) sistemas de información frágiles y, e) poca capacidad para monitorear el DHAA (4). En este escenario y debido a la complejidad en el monitoreo de este DH, el objetivo del presente trabajo fue identificar la situación actual y técnicas utilizadas para el monitoreo del DHAA.

Metodología

Se realizó una revisión de literatura en las siguientes bases de datos: EBSCO, Web of Science, PubMed, Scielo y Lilacs. Se utilizaron algunos descriptores registrados en la base de datos Medical Subject Headings (MeSH) (5) de la National Library of Medicine (NLM) de Estados Unidos (EU) y de Descriptores en Ciencias de la Salud (DeCS) (6) creado por la Biblioteca Regional de Medicina, centro especializado de la Organización Panamericana de la Salud y la Organización Mundial de la Salud.

La búsqueda se realizó filtrando a partir del año 1960, fecha en la cual se comenzó a hablar sobre el DHAA, y se concluyó el 1 de septiembre del 2020. Otras especificaciones para la selección fueron: literatura centrada en el DHAA en seres humanos, y documentos publicados en inglés y español. Los términos utilizados, sus combinaciones y número de artículos encontrados y seleccionados por base de datos relacionados con el objetivo de este trabajo, se presentan en los Tabla I y II.

Se revisaron todos los trabajos identificados y se incluyeron estudios científicos en su mayoría transversales y literatura publicada o disponible de revisión de políticas. Los artículos seleccionados como relevantes en el tema se clasificaron en cuatro categorías según el objetivo del trabajo en cuestión: 1) análisis de políticas nutricionales desde la perspectiva del DHAA, 2) evaluación del DHAA con enfoque basado en derechos humanos (EBDH), 3) percepciones del DHAA por parte de la población y 4) género y DHAA.

Resultados

La revisión de la literatura permitió identificar a través del título, entre 739 artículos en las bases de datos revisadas (EBSCO, Web of Science, PubMed, Scielo y Lilacs) con la combinación de los términos utilizados. De estos, una vez revisado el resumen y eliminado los artículos repetidos al conjuntar los resultados de todas las bases de datos, se obtuvo un total de 37 artículos sobre el tema de interés; número que disminuyó al encontrar disponible el trabajo en un idioma distinto al inglés o al español. Al final, se analizaron 16 artículos (Figura 1).

Las características de los 16 estudios incluidos en la revisión se encuentran como material complementario (Cuadro III). La mayoría de los estudios incluidos fueron realizados en Uganda (*n*=6), otros tomaban lugar en México (*n*=2), Estados Unidos (*n*=2), Canadá (*n*=2), Venezuela (*n*=2), Brasil (*n*=1) y Nueva Zelanda (*n*=1).

Análisis de políticas y programas nutricionales desde la perspectiva del DHAA

Se incluyeron ocho estudios que realizaban un análisis de contenido de políticas de diferentes países (7–14). Entre ellos, uno realizado en México, analizó

Tabla I. Estrategia de términos de búsqueda con palabras clave en inglés para diferentes bases de datos sobre investigaciones relacionadas con el DHAA, en el período 1960 a 2020*.

Palabra	*EBSCO*		*Web of Science*		*PubMed*	
	Resultado de artículos	*Selección de artículos*	*Resultado de artículos*	*Selección de artículos*	*Resultado de artículos*	*Selección de artículos*
"Human right to adequate food"	38	9	46	10	14	5
(Right to adequate food) AND gender	5	1	48	1	13	0
(Right to adequate food) AND public policy	10	4	53	6	42	3
(Right to adequate food) AND food security	58	10	171	14	50	8
(Right to adequate food) AND food insecurity	35	9	51	6	60	9
Total	146	33	369	37	179	25

*No se excluyeron los trabajos que compartieron términos.

Tabla II. Estrategia de términos de búsqueda con palabras clave en español para diferentes bases de datos sobre investigaciones relacionadas con el DHAA, en el período 1960 a 2020*.

Palabra	*Scielo*		*Lilacs*	
	Resultado de artículos	*Selección de artículos*	*Resultado de artículos*	*Selección de artículos*
"Derecho humano a la alimentación adecuada"	5	0	7	3
Derecho a una alimentación adecuada AND género	4	1	7	2
Derecho a una alimentación adecuada AND políticas públicas	4	2	11	2
Derecho a una alimentación adecuada AND seguridad alimentaria	9	2	90	7
Derecho a una alimentación adecuada AND inseguridad alimentaria	3	0	21	2
Total	25	5	136	16

*No se excluyeron los trabajos que compartieron términos.

instrumentos internacionales y encontró que se recomienda establecer programas especiales para grupos socialmente vulnerables como: las personas sin posesión de tierra para sembrar/cultivar, las poblaciones pobres o que viven en zonas propensas a desastres naturales, o los pueblos indígenas despojados de sus tierras ancestrales; también para prevenir la discriminación en el acceso a los alimentos o a los recursos para producirlos, se debe hacer énfasis en las mujeres (9).

Otro de los estudios, realizado en Nueva Zelanda (12), analizó cómo fortalecer y acelerar la implementación estatal de las restricciones sobre la comercialización de alimentos y bebidas no saludables para los niños(a) y, encontró en los instrumentos de monitoreo de DH los siguientes elementos clave: el interés del niño(a) debe estar por encima de todos los demás intereses; los derechos a la salud y la alimentación adecuada no pueden realizarse sin entornos saludables que los apoyen; se

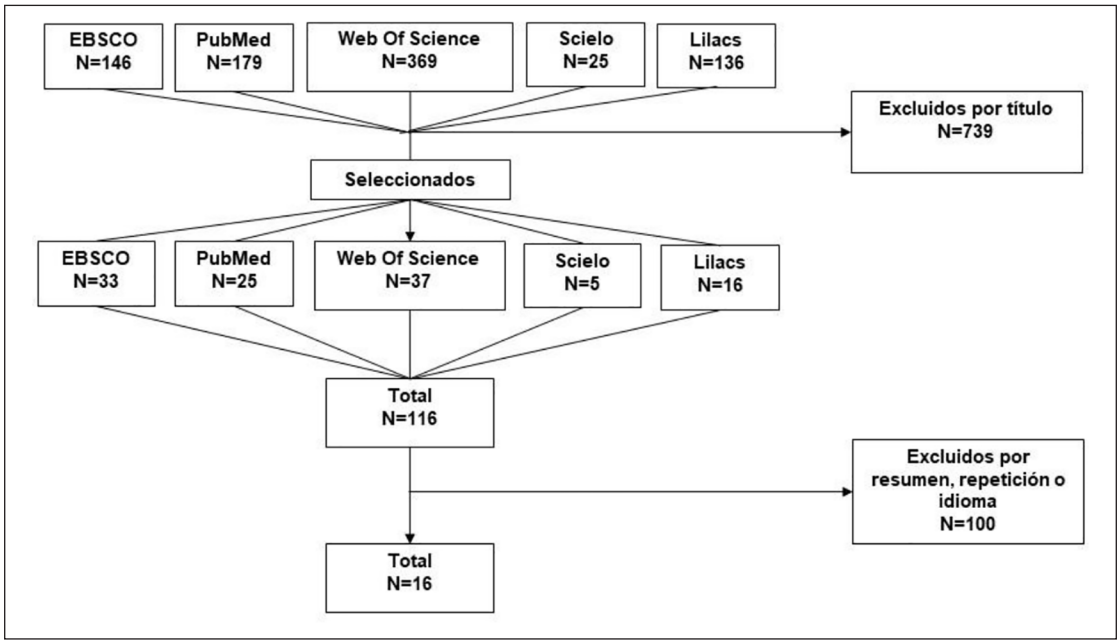

Figura 1. Flujo de búsqueda bibliográfica de DHAA.

debe proteger a los niños(as) de la explotación económica; y que la comercialización persuasiva de alimentos y bebidas no saludables debe reconocerse explícitamente como una amenaza para los derechos a la salud y la alimentación adecuada en los instrumentos de monitoreo de DH.

Estudios realizados en Venezuela y México (10,11), identificaron situaciones similares, tales como que a mayor marginación, menor calidad de vida, lo que se deriva de la mala nutrición y de las condiciones sociales. Por otro lado, en Venezuela, (10) se identificó un limitado acceso a programas alimenticios por los grupos socioeconómicamente más vulnerables y que el ingreso es menor al costo de la canasta normativa básica de alimentos para esa población.

Por otro lado, la perspectiva de DHAA fue identificada en el Programa Nacional de Alimentación Escolar (PNAE), en Brasil (8), como piedra angular en la no discriminación del alumnado inscrito en la red pública de educación básica, así como en la inclusión de empresarios de familias rurales por la determinación de un porcentaje fijo del fondo establecido utilizado en la adquisición de alimentos directamente de éstos.

En el 2017, uno de los estudios llevado a cabo en Canadá (7), identificó la falta de voluntad política y la escasa aplicación de sanción judicial como un impedimento significativo para el reconocimiento y la implementación concreta del DHAA, y concluyó que se requieren términos de implementación de las estructuras legales necesarias para hacer valer la alimentación adecuada como un derecho justo.

Sobre el DHAA en situaciones de refugiados prolongados, se incluyó un estudio realizado en Uganda (13). En este, en los hallazgos reportados, se incluye que, a pesar de la asistencia alimentaria brindada, se identificó por parte de los refugiados cantidades inadecuadas de alimentos, monotonía de la dieta y casos de inseguridad alimentaria (IA), así como alimentos en mal estado. La falta de acceso a una alimentación adecuada contribuye a que los refugiados experimenten una marginalidad económica y social, lo que a su vez les exige que apliquen estrategias de supervivencia y afrontamiento perjudiciales para acceder a los alimentos.

Por último, en este apartado, se incluyó un estudio que analizaba el DHAA en situaciones de desastres en Uganda (15) y se encontró que el gobierno no

consideró la gestión de desastres como una prioridad y que el marco institucional para la preparación y gestión de desastres era inadecuado, aunado a que el parlamento no había instituido las medidas necesarias para garantizar el DHAA de los ugandeses durante situaciones de desastre.

Evaluación del DHAA con enfoque basado en derechos humanos (EBDH)

Dos de los estudios que evaluaron el EBDH, uno realizado en Estados Unidos y otro en Uganda (16,17), encontraron desconocimiento del mandato y la autoridad del Ministerio de Agricultura y del Ministerio de Salud, como competentes responsables de garantizar el DHAA y la política de seguridad alimentaria, así como incumplimiento del EBDH para la buena gobernanza. Se encontró también una inadecuada incorporación de los instrumentos de monitoreo de DH ratificados en la legislación nacional, lo que indica una falta de compromiso del Estado y de cumplimiento de las normas de DH. Además, en ambos países, el DHAA se interpreta como mero objetivo político o principio rector no justiciable.

Con relación a la adopción del EBDH en organizaciones no gubernamentales (ONG), se encontró que, aunque en su mayoría están familiarizadas con el concepto, trabajando principalmente con minorías étnicas, religiosas y grupos vulnerables en el desarrollo comunitario y el medio ambiente, la comprensión, la profundidad y el alcance de la adopción del EBDH varía según los temas tratados y el tipo de ONG estatal o internacional, yendo desde lo muy básico hasta lo más complejo en su implementación.

Percepciones del DHAA por parte de la población

En esta sección, se incluyeron cuatro estudios realizados en Uganda y Canadá (18–21), que analizaron la percepción del DHAA por parte de la población. Los hallazgos refieren que los bancos de alimentos, de acuerdo con la población usuaria, no son adecuados para satisfacer las necesidades o preferencias alimentarias y lo que realmente requieren es un sistema alimentario donde se tenga libertad y opción de comprar alimentos cada semana sin preocupación de acceso o diversidad de éstos (19).

Con relación a percepciones por parte de población despojada de tierras para cultivo/siembra, se encontró que la mayoría refirió que el gobierno tenía la obligación de proporcionar ayuda alimentaria; sin embargo, al presentarse la situación de emergencia, la respuesta del gobierno no fue satisfactoria para esta población (18). También se documentó que ante un acceso insuficiente y poca variedad de alimentos, entre las estrategias de afrontamiento de la inseguridad alimentaria se encontró: solicitar pedir prestados alimentos o pedir la ayuda de otras personas/instituciones para hacer frente a la situación (21).

En ese mismo sentido, un estudio realizado en Uganda (20), encontró que, de acuerdo con los encargados del ministerio de alimentación y nutrición, el DHAA no era un mandato ni obligación del estado. Asimismo, en este mismo estudio se reportó que no está establecida ninguna legislación específica que defina explícitamente las funciones del DHAA de las instituciones pertinentes y que la mayoría de los instrumentos legales identificados no son explícitos sobre el DHAA ni específicos sobre los titulares y los roles institucionales.

Género y DHAA

Finalmente, en este apartado se revisaron dos de los estudios, uno realizado en Venezuela y otro en Estados Unidos (14,22), en los cuales se analizó la relación del género con el DHAA, con especial atención a la feminización de la pobreza y la violencia como barreras para la ejecución del mismo. Los hallazgos (14) señalan que situaciones como ser jefas o responsables del hogar, la segregación y discriminación laboral, así como el embarazo precoz, vulneran la ejecución del DHAA de la mujer. Situación similar fue encontrada por el estudio en Estados Unidos (22), donde la discriminación y violencia estructural y cultural refuerza la posición inferior de la mujer dentro del hogar y la comunidad, por tanto, vulnera su DHAA; sin embargo, se encontró como estrategia de afrontamiento y empoderamiento el resistir a la dominación de los hombres y, por tanto, dejar a su pareja y permanecer solteras.

Discusión

La revisión de la literatura tanto en inglés como en español demuestra que hay escasos esfuerzos por organizar o sistematizar la información con respecto

al DHAA. A diferencia de las investigaciones existentes sobre el DHAA, el presente estudio recaba investigaciones originales dirigidas al monitoreo de este derecho. A pesar de su conocida importancia y urgencia en su cumplimiento por medio de diversos tratados y acuerdos internacionales, la investigación sobre este derecho suele centrarse en elementos que son parte fundamental del DHAA y que se consideran como más factibles de evaluar o monitorear, como la seguridad alimentaria y la desnutrición. Esto podría deberse al hecho de que al ser un derecho socio-económico y no civil-político, se tiene la creencia que no puede ser transformado en derechos legales, debido a que no puede practicarse o justiciarse (23), por lo que se opta por evaluar su cumplimiento y ejercicio desde otros enfoques. Sin embargo, debido a que este derecho se ve trasgredido principalmente en poblaciones vulnerables, se establece como crítico el abordaje desde un enfoque de DH para poder abordar de manera integral sus necesidades (24),

Los instrumentos internacionales sobre DH incluyen desde recomendaciones para establecer programas y asegurar el DHAA en población vulnerable, hasta el análisis de políticas actuales y la situación del DHAA. Los hallazgos indican que en diferentes situaciones este derecho no se ejerce adecuadamente, debido a que es considerado como no justiciable; además de la identificación de la falta de voluntad política como uno de los factores que dificultan el cumplimiento de este DH (7). Aunado a lo anterior, el género fue identificado como un factor que interfiere en la ejecución del DHAA para las mujeres que son jefas de familia (14).

Se identificaron diversas metodologías para monitorear el cumplimiento de DHAA, así como la percepción de este DH. La metodología de análisis de contenido tanto de instrumentos como de políticas fue una de las más utilizada entre los estudios incluidos en la presente revisión (7–9,12,13). Con relación a lo anterior, la aplicación de grupos focales y entrevistas semiestructuradas fueron técnicas realizadas en la mayoría de los estudios incluidos que buscaban explorar la percepción de diversos actores clave (16–22).

Por otro lado, 6 de los 16 estudios incluidos fueron realizados en Uganda (13,15,17,18,20,21). En dicho país, desde la ratificación de la convención de Derechos Económicos, Sociales y Culturales en 1987, se han realizado una serie de esfuerzos desde hace unas décadas, tomando en cuenta diversos sectores relevantes a la ejecución del DHAA y la liberación del hambre; sin embargo, al igual que en muchas naciones, aún existe una brecha importante entre las políticas y prácticas necesarias para su cumplimiento (25).

Dentro de las limitaciones a considerar en el presente estudio están, la estrategia de búsqueda utilizada, ya que solo incluyó estudios originales publicados en revistas revisadas por pares y referenciados en bases de datos electrónicas, excluyendo literatura "gris" y documentos oficiales de organismos internacionales. Además, todos los estudios incluidos en la presente revisión fueron transversales, lo que dificulta la ejecución de inferencias de tipo causal o de la evaluación del efecto de intervenciones para su posible mejora.

A pesar de las limitaciones mencionadas, la presente revisión proporciona una visión general de la situación actual del DHAA, así como de las metodologías utilizadas para monitorearlo y los temas o formas de conceptualización más comunes. Por tanto, con relación a lo encontrado, pueden identificarse las posturas o situaciones que más comúnmente vulneran el DHAA, así como las oportunidades para evaluar, monitorear y fortalecer el cumplimiento de este DH.

Conclusiones

A pesar de que el DHAA se establece en la Declaración Universal de DH y que se incluye en diversos tratados y acuerdos internacionales, así como su reconocimiento en las constituciones y políticas de la mayoría de países, la evidencia señala que la falta de voluntad política, el desconocimiento de los actores presentes en los ministerios de salud sobre el DHAA y el incumplimiento o falta de un EBDH transgreden la ejecución de este DH con efectos sumamente preocupantes particularmente en los grupos de población más vulnerable y en zonas socialmente desfavorecidas.

Si tomamos en cuenta que el DHAA es considerado como el DH más violentado a nivel mundial (2), pero que, además, este es inherente a la vida y a la dignidad humana y que se estima que atraviesa la totalidad de los demás DH, se establece entonces que su ejecución y ejercicio son un imperativo a nivel mundial no solo como un DH, sino como una obligación ética y moral que compete a todos los actores sociales.

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Material complementario

Este artículo tiene material complementario disponible en línea.

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Resintonizar roles profesionales para la acción comunitaria en tiempos de la COVID-19. Reflexiones desde el Observatorio de Salud Comunitaria

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Resumen:

Introducción: La pandemia de la COVID-19 ha generado nuevas barreras a la acción comunitaria en salud, pero también ha potenciado el desarrollo de iniciativas ciudadanas para responder colectivamente a la crisis social y sanitaria. En este contexto se crea el Observatorio de Salud Comunitaria y COVID-19 (OBSCOMCOVID), un espacio en el que personas vinculadas a la salud comunitaria se encuentran para reflexionar sobre las claves de la acción comunitaria en el contexto actual y desarrollar modelos de trabajo para el futuro.

Objetivos: Recopilar los aprendizajes adquiridos sobre salud comunitaria en el contexto de la pandemia por profesionales implicados en el OBSCOMCOVID. Clarificar el rol profesional en el desarrollo de la Acción Comunitaria en tiempos de la COVID-19. Identificar líneas prioritarias de actuación en relación con la acción comunitaria en salud a futuro.

Método: El material base de este estudio son los cuatro conversatorios realizados por el OBSCOMCOVID entre julio y agosto del 2020. En ellos participaron 21 profesionales de Atención Primaria, Salud Pública e Intervención Social. Se realizó un análisis temático del contenido manifiesto y significados subyacentes en las narrativas de las personas participantes, triangulando posteriormente los resultados entre el equipo investigador.

Resultados: Se reconoce la dimensión colectiva y social como elemento esencial en el abordaje de la emergencia, priorizando las situaciones de vulnerabilidad como elemento fundamental. Se detectan algunas barreras para la acción comunitaria en salud: enfoque biomédico y de emergencia, medidas de distanciamiento y sobrecarga de profesionales. Se identifican claves desde el rol profesional: capacidad de escucha y de vinculación con la población, legitimidad y capacidad de acción tanto dentro como fuera de lo institucional que se pueden potenciar y poner al servicio de la Acción Comunitaria.

Conclusiones: La reorientación del rol profesional debe priorizar las dinámicas de abogacía, potenciar las redes comunitarias y promover la formación.

Palabras clave: promoción de la salud, comunidades, participatición, resiliencia, investigación comunitaria / investigación participativa, factores positivos/protectores

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Introducción

En los últimos años hemos podido ver cómo la salud comunitaria ha ido aumentando su relevancia como una de las dimensiones clave de la promoción de la salud, tanto a nivel formativo como en la práctica. Es importante diferenciar la salud comunitaria de los procesos de intervención sobre la misma, a los que muchas veces nos referimos como "hacer salud comunitaria" (1), pero que es más apropiado identificar con el término de acción comunitaria en salud (AC), definida como la dinamización de las relaciones sociales de cooperación en un determinado espacio de convivencia con el triple objetivo de (2):

- Mejorar las condiciones de vida de quienes habitan el espacio de convivencia.
- Reforzar los vínculos y la cohesión social, incluyendo colectivos en situación de exclusión.
- Potenciar las capacidades de acción individual y colectiva en procesos de mejora de la salud y el bienestar.

La situación de emergencia secundaria a la pandemia de la COVID-19 ha trastocado en gran medida el panorama de la AC. El refuerzo de las dimensiones biomédicas de la atención sanitaria y las medidas de confinamiento y distanciamiento han reconfigurado la manera de relacionarse, bloqueando en muchas ocasiones la capacidad de intervenir de manera directa por parte de profesionales y de la administración (3).

Al mismo tiempo la crisis actual también ha potenciado el desarrollo de redes e iniciativas ciudadanas para responder colectivamente al deterioro de las condiciones de vida (4). Esto abre una ventana de oportunidad para potenciar la AC sobre una base de participación ciudadana, como han señalado diferentes organismos nacionales e internacionales (5,6).

Este fue el punto de arranque del Observatorio de Salud Comunitaria y COVID-19, creado en mayo del 2020 por un grupo de personas vinculadas a la salud comunitaria desde la Atención Primaria, la Salud Pública y las redes vecinales. Se presentó como "un espacio diverso y plural en el que entender mejor los puntos clave de la salud comunitaria y reflexionar en torno a ideas que sirvan para comprender lo que ocurre en diferentes contextos y desarrollar modelos de trabajo para el futuro".

A partir de ese momento se han desarrollado 4 fases de trabajo del Observatorio:

Fase 1 (mayo-junio 2020): Formación del observatorio, definición de objetivos y modo de funcionamiento.
Fase 2 (julio-agosto 2020): Conversatorios temáticos sobre acción comunitaria en salud y COVID-19 a partir de las experiencias de personas participantes.
Fase 3 (agosto 2020-marzo 2021): Elaboración y difusión de un manifiesto como herramienta de incidencia pública.
Fase 4 (octubre 2020-actualidad): Conversatorios temáticos a partir de experiencias de otros agentes comunitarios.

En el presente trabajo analizamos los conversatorios desarrollados en la Fase 2 con los siguientes objetivos:

- Recopilar aprendizajes adquiridos sobre salud comunitaria en el contexto de pandemia por profesionales implicados en el OBSCOMCOVID.
- Clarificar el rol profesional en el desarrollo de la AC en tiempos de la COVID-19.
- Identificar líneas prioritarias de la acción comunitaria en salud a futuro.

Materiales y métodos

La captación de participantes en el Observatorio se hizo partiendo de redes profesionales vinculadas a la salud comunitaria existentes previamente, como el Programa de Actividades Comunitarias de Atención Primaria (PACAP) y la Alianza de Salud Comunitaria. Además se realizó una campaña de difusión del OBSCOMCOVID mediante videos y una página de presentación alojada en la web de la Alianza de Salud Comunitaria. La participación siempre ha estado abierta a cualquier persona interesada y ha sido facilitada gracias a que los encuentros, de unas 2 horas de duración y quincenales, han sido en formato virtual y con fechas y horarios consensuados previamente. La

Tabla 1. Participantes.

Conversatorio	*Mujeres*	*Hombres*	*Total*
1: Grupos vulnerables	9	5	14
2: Enfoque y herramientas	6	6	12
3: Conexión de Atención Primaria con la comunidad	10	1	11
4: La acción comunitaria en tiempos de la COVID-19	7	4	11
Total participantes individuales	13	8	21
Comunidades de origen			
Madrid	4	2	6
Murcia		1	1
Galicia	2		2
Baleares	3		3
Asturias		1	1
Aragón	1	3	4
Andalucía	2	1	3
Extremadura	1		1
Edad			
Menores de 30 años	2	1	3
30 a 50 años	7	4	11
Mayores de 50 años	4	3	7
Ámbito			
Atención Primaria	9	4	13
Salud Púbica	4	3	7
Intervención Social		1	1
Profesión			
Médica/o	11	4	15
Enfermera	2		2
Técnico de acción comunitaria		3	3
Profesor		1	1

convocatoria de los conversatorios se ha realizado vía correo electrónico y redes sociales. En las primeras fases del proceso la mayor parte de las personas participantes eran profesionales de Atención Primaria y Salud Pública (ver tabla 1).

En el presente trabajo se parte desde una perspectiva socioconstructivista (7), en la que se reconoce la generación colectiva de significados a través del lenguaje y la interacción social. Se trata de un estudio cualitativo, sustentado en técnicas de etnografía virtual o investigación en línea, en las que el desarrollo de la comunicación de grupo se apoyó en medios electrónicos audiovisuales, utilizando un sistema de comunicación sincrónica. Se emplearon foros o conversatorios en formato de grupo de discusión en línea (8) que permitieron expresarse utilizando la plataforma Zoom.

El material de este estudio son los cuatro conversatorios temáticos realizados entre julio y agosto del 2020, que abordaron las siguientes temáticas:

- Grupos vulnerables.
- Enfoque y herramientas para la Acción Comunitaria en salud.
- Conexión de Atención Primaria con la comunidad.
- Acción Comunitaria en tiempos del COVID-19.

Se ha realizado un análisis temático del contenido manifiesto y significados subyacentes en las narrativas de las personas participantes, lo que permitió definir el modelo emergente del estudio (9). Después de una primera lectura de las transcripciones se realizó una codificación inicial, relacionada con categorías previamente definidas a partir del modelo teórico utilizado (modelo de acción comunitaria en salud (10)). Las categorías

que surgieron durante la exploración de narrativas también se incluyeron en el análisis y contribuyeron al desarrollo del modelo emergente, que abarcó las siguientes dimensiones:

- Redefinición de la Salud Comunitaria en el contexto actual de emergencia.
- Abordaje de las realidades de vulnerabilidad.
- Dificultades y aprendizajes en la práctica de la Salud Comunitaria en el momento actual.
- Roles de los diferentes agentes de Salud Comunitaria.
- Medios de transformación, incidencia y formación.

Posteriormente se realizó un proceso de triangulación de resultados entre el equipo investigador.

Se contó con el permiso de las personas participantes para analizar las grabaciones de los conversatorios, y se realizó una devolución de los resultados confirmando con ellas la autorización para publicarlos.

Resultados

Dimensión colectiva y social del abordaje de la emergencia (ver Tabla 2)

Se señala la invisibilización que sufre la salud comunitaria en estos momentos, especialmente al inicio de la pandemia, dado el predominio del enfoque biomédico y centrado en las conductas individuales. Se identifica el espacio social y comunitario como abandonado desde las administraciones e instituciones, ya que solo se apela a intervenciones en él a partir del ámbito individual, sin que desde espacios institucionales se asuman suficientes responsabilidades al respecto.

La visibilización de las dimensiones comunitarias y sociales de la actual pandemia, más allá de los padecimientos individuales de las personas afectadas por la enfermedad, se señala como uno de los grandes retos.

La necesidad de poner en primera línea la cuestión de la salud mental es identificada por las personas participantes en el estudio, pero no tanto desde una perspectiva individualista como desde el reconocimiento del duelo social actualmente en proceso.

Sin embargo, hay también ejemplos que muestran que la participación comunitaria en salud sí ha sido posible durante la pandemia (11). Desde la perspectiva de las personas implicadas en el OBSCOMCOVID se resalta la importancia de la acción comunitaria desarrollada en estos meses desde las redes vecinales. Esto señala la oportunidad de repensar los espacios de participación y el papel que cada cual puede jugar en estas acciones comunitarias. Se identifican dos funciones clave de las redes vecinales: por un lado, como vía de acceso a las situaciones de mayor vulnerabilidad, ya que muchas veces la primera respuesta que se les da a estas viene desde ámbitos informales o asociativos; por otro, como espacios de afrontamiento colectivo más allá de la gestión individualista de las dificultades que plantea la situación actual.

Sobre lo que ha favorecido una adecuada respuesta comunitaria, se señala la importancia de la trayectoria previa a la pandemia, así como la capacidad de definir objetivos comunes, como una de las claves de las experiencias de trabajo en red que mejor han funcionado en el territorio.

Priorización de la vulnerabilidad (ver Tabla 3)

Una de las cuestiones que más movilizó el diálogo fue la de cómo llegar a las realidades más excluidas, con dos tipos de discursos, uno centrado en la coordinación de recursos para la detección de estas situaciones y otro apostando por esperar la movilización de las propias personas afectadas. En ambos casos se destaca la importancia de mostrarse accesibles y de escuchar al entorno comunitario, así como el necesario respeto a la autonomía de las personas o colectivos afectados.

Se remarca la preocupación por los colectivos o situaciones que puedan estar quedándose fuera de las dinámicas puestas en marcha, y el papel de las redes vecinales para identificar los procesos de exclusión y barreras existentes. También se reconoce al centro de salud como un lugar clave de escucha y encuentro con realidades muy diversas, incluso con algunas que quedan fuera del radar de recursos más enfocados a la atención de la vulnerabilidad.

Se destaca también cómo la culpabilización de las personas o grupos en vulnerabilidad puede ser un mecanismo generador de exclusión, haciendo evolucionar el discurso desde las poblaciones *en riesgo*, a las que de alguna manera hay que proteger, hasta las poblaciones *de riesgo*, de las que hay que protegerse.

Tabla 2. Dimensión colectiva y social del abordaje de la emergencia.

Invisibilización institucional de la salud comunitaria	"La atención está centrada en lo biológico en los cuerpos, como si no hubiera nada más en la comunidad y en la gente. Pues esto como que cercena la posibilidad de entrar (en lo comunitario). Por eso también me parecía muy, muy sugerente lo de cómo conectar más allá del fonendo". (KH.3.1)
La importancia de la elaboración colectiva	"Lo que hace la fuerza es lo colectivo y lo comunitario es trabajar desde lo colectivo, ese que tenemos al lado. Eso es lo que hace la base". (WH.2.9)
	"Esa tormenta de sentimientos que se dan en el duelo son diversos, contradictorios y necesitan ser expresados, escuchados, contenidos y evitando que queden silenciados y también en la pura expresión catártica, ¿no? Y que precisamente por eso, las actividades grupales y comunitarias proporcionan un sostén para compartir estos sentimientos que favorece su elaboración". (FB.4.5)
La capacidad de organización ciudadana y aparición de redes de apoyo vecinales como respuesta	"Desde la comunidad sí que se ha inyectado mucha, mucha fuerza en muchas redes que también creo que están empezando a perder fuerza, porque es todo muy agotador también en la comunidad". (DT.3.4)
	"La comunidad como agencia sanadora, de ahí la importancia de la salud comunitaria". (KH.4.6)
Las redes vecinales como agentes en la detección y manejo de situaciones de vulnerabilidad	"Para llegar a grupos vulnerables también la comunitaria es indispensable. Hablar con grupos de migrantes o ahora los jóvenes que somos todos malvados, pues en realidad el abordaje comunitario me parece básico". (DT.4.12)
Mejor respuesta comunitaria en comunidades con trayectoria previa y objetivos comunes	"Lo que ha funcionado muy bien son las comunidades que estaban funcionando antes de la pandemia, que han tenido una capacidad de reorganizarse y actuar mucho más eficaz que cualquier ente público". (Us.1.20)
	"Muchas veces falla ese foco común, tener unos objetivos comunes, porque muchas veces estamos muy en el corto plazo, todas las organizaciones, los servicios sociales y estamos en la acción inmediata y ahora, en solucionar a veces necesidades básicas que son urgentes. Pero yo creo que para eso hace falta tener objetivos intermedios. O sea, estar en los objetivos a corto plazo, pero tener un objetivo a medio plazo con el que trabajar políticas públicas". (KH.2.10)

Tabla 3. Priorización de la vulnerabilidad.

La dificultad de detección de realidades de vulnerabilidad desde el CS	Desde el centro de salud tenemos la falsa sensación de que de que sí estábamos llegando y estamos conociendo personas en situación de vulnerabilidad. Cuando hablamos con las ONGs nos dicen que para nada. (Tv.1.7)
	A mí lo que me preocupa en cuanto a la vulnerabilidad en esta época Covid es a quién nos estamos dejando fuera. Porque estructuralmente estamos dejando gente fuera (. . .) Esta desinformación que tenemos ahora de dónde buscamos información sobre vulnerables y qué hacemos con esos colectivos quizás viene un poco de eso, de esa tendencia del sistema que dice: ¿qué más da que mueran pobres? ¿Qué más da que mueran viejos en residencias? (Be.1.8)
La coordinación de recursos para la detección de las realidades de vulnerabilidad	Está la duda de quién se está fijando y cómo se están detectando ahora mismo, cuáles son los grupos vulnerables, qué estructura hay. . . ¿Hay alguna estructura que haya surgido en la Comunidad Autónoma o en los Ayuntamientos? ¿Quién está en esa labor de identificar qué necesidades y vulnerabilidades hay? (FS.1.4)

(Continued)

Table 3. (Continued)

La escucha desde el espacio comunitario como herramienta de detección de vulnerabilidades	Quizás acercarnos más a esas asociaciones como puente para llegar a esos colectivos que quizás nos estamos dejando fuera, porque a algún sitio llegan. No siempre llegan a redes vecinales donde todos participamos y tal, sino que es un sitio de "yo voy y me das lo que necesito". Que hay veces que hay muchas personas que necesitan eso y ya está. (DT.1.9) A veces también hay que esperar a que te pidan ayuda, a que te llamen los que quieran ser ayudados, ¿no? Porque quieres hacer, hacer, hacer, hacer y a lo mejor la persona pues no quiere que te metas ahí. Estar para cuando quiera la gente llegar ahí. (Tb.1.12)
El Centro de Salud como lugar de encuentro con realidades diversas	En consulta también vamos a recoger mucha información, muchos indicadores de poblaciones que por no estar estructuradas o por no estar movilizadas o por no ser el objeto de intervención de una entidad, sí que pueden quedar fuera. Bueno, sí que van a dar pistas sobre cuáles son los efectos que todo esto de la pandemia puede tener sobre ellos. (Ub.1.13)
La culpabilización de grupos vulnerables desde los medios y la Institución	Se está reduciendo todo a hablar de poblaciones de riesgo como poblaciones que puedan generar brotes. (. . .) Se está incurriendo en esta idea de que se atiende al otro porque si no nos va a provocar una infección. Ahora, a lo mejor nos planteamos que haya sanidad universal, pero porque tenemos que controlar una epidemia, no porque estemos reconociendo un derecho. (FS.1.1) En el barrio hubo un brote y se ha estigmatizado por ese brote a esos trabajadores, a esas personas del locutorio y ha salido en todos lados y se ha señalado a esas personas. (Lb.1.12)

Barreras para la práctica de la acción comunitaria (ver Tabla 4)

Son varios los elementos identificados como bloqueadores de las acciones comunitarias tal y como se llevaban a cabo previamente a la pandemia. Por un lado, se señala que la COVID-19 ha ocupado todo el espacio tanto a nivel mediático como social y profesional, determinando una situación de emergencia y un enfoque predominantemente biosanitario. Esto, junto con las medidas de confinamiento y distanciamiento físico, ha llevado a una situación de parón de muchas de las dinámicas comunitarias que se venían desarrollando anteriormente.

Al mismo tiempo se señala una situación de impotencia y sobrecarga que ha provocado agotamiento profesional en gran parte del personal sanitario. En muchos lugares esto ha favorecido el aislamiento y la desconexión de los profesionales respecto a la ciudadanía.

Rol profesional y acción comunitaria en la actualidad (ver Tabla 5)

Las experiencias vividas desde que comenzó la pandemia han permitido destacar algunos elementos clave que clarifican el papel de los profesionales con relación a la Acción Comunitaria. Estos elementos se relacionan fundamentalmente con la capacidad de vincularse con las personas y comunidades atendidas, apoyándose en la confianza y credibilidad que tiene el personal sanitario.

Se señala la importancia de restablecer la capacidad de escucha a la ciudadanía desde el ámbito profesional, dificultada por las restricciones de movilidad y de encuentro personal en estos meses, pero que supone una de las claves para poder entender mejor lo que está pasando. Para facilitar esta escucha es importante no caer en un papel excesivamente intervencionista que anule la capacidad de expresión del vecindario. En este sentido se destaca la importancia de mostrarse disponible para acoger las cuestiones e iniciativas que surjan.

También se reflexiona sobre la cuestión del poder asociado a los perfiles sanitarios. Este poder puede vivirse como algo que distancia de la comunidad, pero también como una herramienta que puede y debe ser utilizada al servicio de la AC para ganar visibilidad y capacidad transformadora. La cuestión del poder es compleja y genera dificultades de manejo, sobre todo por la dificultad de profesionales con un perfil comunitario para reconocerlo. Se apunta como

Tabla 4. Barreras para la práctica de la acción comunitaria.

La pandemia como amenaza y oportunidad para la AC	Yo al principio la pandemia la vi como una gran oportunidad para darle un vuelco y una mejora para la atención primaria y para la comunitaria. Y he ido evolucionando en verlo como justo lo contrario, como una gran amenaza. (NT.4.11)
La situación de emergencia y el enfoque biomédico como barreras para la AC	Yo no puedo escuchar, no puedo detectar, no puedo pensar en coordinarme, no puedo generar alianzas si no reflexiono. Mientras, en una situación de emergencia tan brutal, la reflexión es mínima, porque tú tienes que actuar, cada uno en su escenario. (CC.1.20)
	Hacer comunitaria en mi entorno, ahora mismo, pues nos la prohibieron, entre comillas. Como no hacemos caso, no acatamos lo que dice nuestra dirección de Atención Primaria, pues hacemos lo que queremos, pero prohibida esta, ¿vale? Oficialmente. (MR.4.8)
Las medidas de confinamiento y distanciamiento físico	Un gran reto es cómo llevar la comunitaria a medidas de distanciamiento social. . . Yo creo que ese es el gran reto de cómo hacer comunitaria ahora. (Cm.4.7)
La sobrecarga y agotamiento de las profesionales provoca desconexión de la comunidad	Y no sé yo si la excusa del no tengo tiempo que teníamos antes de la pandemia. . . Ahora la verdad es que ya no, no es que no tenga tiempo, es que estoy estirado como un chicle y ya no es tiempo, ya es. . . no tengo fuerzas. (OQ.4.8)
	Estamos más de espaldas a la comunidad ahora. Como que bastante tenemos con reclamar desde el ámbito sanitario, por nuestras condiciones, por el tema de seguridad. . . Tenemos muchísimas cosas por las que movilizarnos en el ámbito sanitario, propias, y entonces cuesta mucho el salir afuera, a realidades mucho más jodidas pero que nos quedan más fuera. (EH.2.4)

Tabla 5. Rol profesional y acción comunitaria en la actualidad.

La credibilidad y la confianza en el profesional sanitario son claves para la vinculación con personas y comunidades	Tiene mucho valor la relación del profesional con las personas, sea en la consulta o sea en la calle, el grado de confianza y credibilidad que se puede llegar a adquirir. Y eso es un trabajo que hoy por hoy es difícil que nos puedan quitar, salvo que nos agotemos. (FB.3.11)
La escucha activa desde el ámbito profesional es indispensable en la AC	Si conseguimos que en nuestras decenas o centenas de llamadas a casos y contactos preguntemos sus condiciones de vida, empaticemos con ellos, les preguntemos si tienen quién les compre la comida y les digamos un recurso en el caso de que no, o quién les compre los medicamentos y tal, ya hemos hecho mucho. (OQ.4.12)
Evitar la apropiación del proceso comunitario y construir en clave de promoción y de aumento de la capacidad de la comunidad para controlar su propia salud	Que los profesionales tengamos un enfoque más hacia fuera y no centrípeto. Que no asimilemos, ni medicalicemos, ni que individualicemos, sino que al revés, le demos más capacidad a la gente. Ese enfoque salutogénico, pero que posiblemente se puede hacer de muchas maneras y cada centro de salud tiene que buscar su propio camino para conseguir eso. (KH.4.19)
Reconocimiento del "curriculum oculto" comunitario de profesionales de Atención Primaria	Terminan sabiendo que ellos son expertos en comunitaria, incluso la que dice que va a venir la población a jodernos. Hasta esa es experta en comunitaria, porque es que es lo que ve cada día, aunque no quiera. Es curriculum oculto. (NI.3.15)

(Continued)

Table 5. (Continued)

Posicionar la capacidad de acción profesional al servicio de la dinámica colectiva	Podemos hacer muchas cosas en comunitaria también. Desde legitimar las cosas, las redes que están en marcha, que ya es algo muy sencillo, pero creo que puede ayudar mucho a la gente que está trabajando en el territorio, que se ha organizado en el territorio. Poner el foco en lo que la gente puede hacer. (KD.4.15)
La investigación como espacio de resistencia y militancia	A mí me parece fundamental la investigación, los que podamos hacer investigación de alguna manera (. . .), la investigación como espacio de resistencia. Pero no la investigación para ver qué bien escribo, qué majo que soy, sino como militancia. (CC.1.23)
	Si nosotros hacemos investigación, porque tenemos las herramientas, los medios o los conocimientos, aprovechar de la comunidad, de utilizar estas herramientas para dar más visibilidad a lo comunitario, lo que pasa en la comunidad y a las problemáticas que se pueden encontrar allí. (DT.2.3)

posible solución la identificación de propuestas desde espacios vecinales sobre cómo usar el poder y los conocimientos técnicos que se tienen como profesionales, de manera que sean un recurso más a ser utilizado dentro de la AC. Ponerse al servicio de la AC resitúa de manera clara el rol profesional: debe enfocarse en la promoción y aumento de la capacidad de la comunidad para controlar su propia salud. Posicionarse al servicio de la dinámica colectiva supone además un reconocimiento de la capacidad de acción y decisión vecinal, lo que permite que esta gane legitimidad y visibilidad hacia otros ámbitos.

En cuanto a las dinámicas en las que desempeñar el rol profesional, se destacan fundamentalmente dos en el momento actual, dadas las dificultades para mantener encuentros comunitarios como se hacía previamente a la pandemia: la asistencia en la consulta y la investigación. La consulta se sigue viendo como un espacio privilegiado de contacto individual y colectivo. Es el "pasar consulta mirando a la calle", el primer nivel de AC que en estos momentos se convierte en el eje clave en el que el profesional puede apoyarse para comprender mejor la realidad e intervenir sobre el territorio. En relación con la investigación, se apuntan experiencias concretas desarrolladas en estos meses que muestran cómo puede ser un campo importante de acción desde perfiles científico-técnicos (12).

Abogacía, redes comunitarias y la formación como prioridades de actuación (ver Tabla 6)

Se realiza una interpelación de cara a identificar y desarrollar herramientas que permitan avanzar hacia una mayor capacidad transformadora en el contexto actual. Así, se señala como prioritario el desarrollo de acciones de incidencia institucional para responder a las necesidades de salud comunitaria de la población. Sin embargo, para conseguir desarrollar la capacidad de incidencia necesaria es clave también el fortalecimiento de las redes de acción comunitaria conjuntamente con los colectivos vecinales, así como la profundización en dinámicas formativas sobre salud comunitaria con profesionales.

Cuando se habla de incidencia dentro de los conversatorios se hace fundamentalmente con la perspectiva de incidir "hacia arriba", a quienes tienen capacidad de gestión. Se identifica con el modelo de abogacía por la salud, en el que se encuentran muchas concordancias con la AC en salud.

En cuanto al mensaje a transmitir, se señala la importancia de no dejarse atrapar en la particularización de casos cuando se habla de situaciones que abarcan realidades muy amplias, así como conseguir cambiar la actual narrativa culpabilizadora sobre determinados grupos y colectivos.

En relación con los medios para el fortalecimiento comunitario, se remarca que las redes deben ir consolidándose y disponer de un marco de acción a largo plazo, que no se quede en salvar el día a día. Para ello es importante generar una dinámica de diálogo entre iguales en el que se aborden de manera amplia las cuestiones que afectan a la salud. Para que esto sea posible es importante que se pongan medios que permitan una adecuada comprensión mutua.

En cuanto a la formación de profesionales, se apunta como paso previo la promoción de dinámicas

Tabla 6. Abogacía, redes comunitarias y la formación como prioridades de actuación.

Desarrollar herramientas para intervenir de manera más adecuada	Cuando hablamos del tema este de las bajas laborales, de situaciones de desamparo, o de cortes de luz, o lo que sea. . . ¿Qué es lo que se puede hacer en esas situaciones? Sería super interesante hacer una formación donde poder identificar qué herramientas hay, incluso modelos de documentos o de lo que sea, de ver que sí se pueden hacer las cosas. Recuperar experiencias concretas que nos den pistas. . . (EH.2.14)
Incidencia "hacia arriba" haciendo abogacía por la salud	Se empuja para que arriba vayan haciendo cosas, vayan teniendo en cuenta lo que desde abajo expresan que es necesario. (FS.1.19)
Acabar con la narrativa culpabilizadora	Yo creo que es importante que lo hagamos nosotros desde esa narrativa, olvidando el culpabilizar a los barrios pobres, migrantes, jóvenes y quien toque en ese momento por "vamos a mejorar la salud de los que tenemos alrededor". (DT.4.14)
Poner los medios para una comprensión mutua entre agentes comunitarios	Yo creo que quizás esta estrategia que hay que seguir es una de diálogo entre iguales y hacia un objetivo común. Es decir, poner sobre la mesa cuáles son los problemas que hay en el barrio a nivel sanitario, educacional, económico, laboral, etc. Ser quienes podamos poner, por un lado, cuáles son los problemas a nivel sanitario, que no de salud solamente, ponerlos en la mesa junto al barrio, que el barrio ponga el resto de problemas. Nosotros contamos qué nos están contando también en la consulta y juntas elaborar una estrategia común. (Be.2.5)
Desarrollar una formación apoyada sobre las necesidades expresadas	De cara tanto a la formación como a hacer procesos de cambio o de revolución, hay que ver qué narrativa tiene la gente en el proceso, porque si no lo que generamos son resistencias (. . .) Ese mapa emocional que tiene la gente que le ha llevado a estar así. (CC.3.20)
Evitar las visiones engañosas sobre la acción comunitaria en las formaciones	Si alguien sale del curso, el primero de iniciación, y quiere hacer ya la agenda comunitaria en su equipo, montar cuatro proyectos, estar ahí haciendo RCP con los colegios. . . he dado el curso mal. Que se tome el Amalgato comunitario. Porque la gente en la calle ha trabajado muchas cosas, es preferible que dejes a una asociación trabajar tranquilamente y no jodas (. . .) Porque hay una cosa que es la participación, porque hay una cosa que es el respeto, porque hay una cosa que es no hacer daño, porque hay una cosa que es tu equipo. . . Esto no consiste en hacer, consiste en ver qué hacemos entre todos. (. . .) (CC.3.25)

de diálogo para favorecer la expresión y comprensión mutua en torno a lo que se está viviendo. Por otro lado, se señala el papel esencial que pueden jugar las Unidades Docentes multiprofesionales de cada zona, al ser espacios que permiten llegar de manera global más allá de quienes están más motivados. En cuanto a contenidos formativos, se echan de menos materiales y recursos que ayuden a orientar la acción, especialmente en el campo de los determinantes sociales en salud.

Al mismo tiempo se plantea que estas dinámicas formativas deben ajustarse a la realidad y que, aunque deben motivar a la acción, es importante que no infundan ni un optimismo desproporcionado que pueda llevar a engaños sobre la complejidad del reto, ni den lugar a propuestas que quemen las etapas necesarias para la AC.

Discusión

La revisión de los conversatorios analizados permite identificar una visión compartida sobre el contexto actual y los retos que este supone en el campo de la salud comunitaria, señalando de manera prioritaria la necesidad de que la acción comunitaria tenga una finalidad transformadora y se enfoque en la dinamización de las relaciones de cooperación con enfoque de equidad.

A lo largo de los conversatorios se plantea de manera reiterada la cuestión de si el contexto actual

de emergencia es una amenaza para la salud comunitaria o por el contrario una oportunidad para poner sobre la mesa y clarificar la importante interrelación entre los determinantes sociales y los procesos de salud y enfermedad (13,14); este es un debate abierto que no llega a resolverse, por lo que futuros estudios podrían profundizar en ello.

El OBSCOMCOVID, en su propuesta de partida, pretendía establecer vínculos concretos con diferentes redes vecinales que han sido clave en el afrontamiento comunitario de la pandemia. Este objetivo se recuerda en varios momentos de los conver-satorios, y consideramos que investigaciones futuras deberían profundizar en esta perspectiva de manera generalizada, así como en las claves de relación entre el colectivo profesional y la ciudadanía. Sin embargo, el análisis realizado por los participantes en las primeras reuniones de constitución del Observatorio señaló, como elemento fundamental y previo al encuentro con otros agentes comunitarios, la necesidad de reflexionar sobre lo que el contexto actual ha provocado en los profesionales, así como los miedos e incertidumbres que el tiempo de pandemia les ha generado, para desde ahí poder clarificar cuál debe ser el rol profesional dentro de una acción comunitaria global. Posiblemente este hecho se haya visto favorecido porque la mayor parte de las participantes fueron profesionales del mundo sanitario. Esto es en cierta medida una limitación, pero debe entenderse como fase dentro de un proceso de diálogo más amplio. En esta fase el Observatorio se constituyó como espacio de apoyo entre pares donde poder explorar soluciones a desafíos compartidos, como se hacía en formaciones específicas en tiempos prepandémicos (15), favor-eciendo una autonomía de reflexión que prepara el terreno al diálogo colectivo con otros agentes comunitarios desarrollado en fases posteriores (16). Sí que debe señalarse como limitación la escasa participación de profesionales de otros ámbitos sanitarios diferentes de la medicina, especialmente la enfermería. A la luz de los resultados obtenidos es fundamental reconocer el lugar estratégico que ocupan las y los profesionales: por un lado, dentro del entramado institucional y administrativo; por otro, con una cercanía a la población que facilita la escucha y el trabajo en común con las iniciativas ciudadanas.

El reconocimiento de los aportes específicos a la acción comunitaria realizados por las y los profesionales de Atención Primaria y Salud Pública debe ser una de las guías que permita redefinir el papel y los recursos que estas necesitan, algo urgente en un momento de grave crisis tras años de abandono (17) y especialmente importante en un momento como el actual en el que se señala la "fatiga pandémica" como uno de los principales retos a abordar y frente al cual son claves la escucha y la buena comunicación entre ciudadanía e instituciones (18,19).

Algo que se apunta también en varios momentos de los conversatorios, es la necesidad de abordar la cuestión de las relaciones de poder entre profesionales y ciudadanía, de manera que se pueda avanzar en una línea clara de promoción de la salud, entendiendo esta como el aumento del control sobre la propia salud (20).

Conclusiones

En el presente análisis se pone de manifiesto que uno de los grandes retos en el momento actual es conseguir potenciar las iniciativas vecinales en marcha con las aportaciones de profesionales e instituciones. Para ello es clave el reconocimiento de la dimensión colectiva y social del abordaje de la emergencia; la priorización de un foco claro sobre las situaciones de vulnerabilidad, y la reorientación del rol profesional hacia una acción comunitaria en la que primen las actitudes de abogacía, potenciadoras de las redes comunitarias y facilitadoras de la formación.

Esto ha llevado al propio OBSCOMCOVID a definir como siguientes pasos la elaboración de un manifiesto, publicado en septiembre del 2020, para hacer un llamamiento a las instituciones sobre la necesidad de un enfoque comunitario frente a la COVID-19 (21), y abrir el diálogo a otros agentes comunitarios a través de nuevos conversatorios temáticos desarrollados a partir de octubre del 2020.

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Activos de salud, calidad de vida y morbimortalidad de la población en Asturias

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Resumen:
Introducción: en promoción de la salud se ha detectado en los últimos años un incremento de investigaciones con enfoques teóricos basados en activos de salud. Pese a los estudios identificados, no se dispone de suficiente evidencia sobre los efectos que diferentes tipos de activos pueden tener en la calidad de vida y en la morbimortalidad de la población.
Objetivo: analizar la relación entre los activos de salud disponibles con indicadores de morbilidad, mortalidad y calidad de vida de la población asturiana en el año 2018.
Metodología: diseño ecológico a partir de datos agregados municipales procedentes de los 78 municipios de Asturias (1.034.960 habitantes). Tras aplicar la definición de activos de salud como aquellas variables que pudieran redundar en una mejora de la salud y del bienestar de los individuos y de las comunidades, se seleccionaron 19 variables de activos agrupados en cuatro categorías: individuales, socioeconómicas, comunitarias e infraestructura. Una vez controladas las variables relacionadas con las características demográficas de la población, se analizó la asociación de los activos con las tasas de morbimortalidad y de calidad de vida. Se desarrollaron 5 modelos predictivos a partir de modelos de regresión lineal múltiple para las variables dependientes: calidad de vida, enfermedades crónicas, mortalidad por todas las causas, mortalidad por enfermedades cardiovasculares (ECV) y por cáncer.
Resultados: la disponibilidad de recursos sanitarios (beta = 0.474), coberturas sociales (beta = 0.305) y redes de apoyo social (beta = 0.225) constituyen los activos de salud con mayor peso explicativo en los resultados de salud de la población asturiana. Las variables incluidas en los modelos predictivos de calidad de vida ($R^2 = 0.650$) y de mortalidad por ECV ($R^2 = 0.544$) son las que mostraron una mayor capacidad explicativa.
Conclusiones: la inversión en recursos sociosanitarios y la mejora de redes de apoyo social impulsados desde el ámbito de la salud pública pueden producir importantes mejoras en la salud de la población asturiana.

Palabras clave: activos / factores protectores, promoción de la salud, investigación comunitaria / investigación participativa, salud pública

Introducción

En el campo de la promoción de la salud, el desarrollo de nuevos enfoques positivos basado en los activos de salud (1) constituye un pilar básico de la construcción de nuevos modelos teóricos de salud. Estos enfoques han crecido alejados del abordaje de los problemas de salud desde una perspectiva de

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prevención o tratamiento de la enfermedad para tratar de identificar y de reforzar factores positivos como el sentido de coherencia (SOC) en una dimensión más individual, o el capital social en una dimensión más comunitaria.

Diversos autores (2,3) han conceptualizado estos activos de salud como cualquier factor o recurso que pueda potenciar la capacidad de los individuos, las comunidades o las poblaciones para mantener o mejorar la salud y el bienestar.

Desde los años 90 se han desarrollado diferentes trabajos basados en la dinamización y estudio de los activos de salud que podrían tener importantes aplicaciones en el campo de la salud pública. Tal y como plantean Morgan y Ziglio (2,3), uno de sus principales exponentes fue el modelo del Asset-Based Community Development Institute (ABCD) (4,5) desarrollado por McKnight y Kretzmann.

A pesar del desarrollo de numerosas propuestas teóricas desde los modelos salutogénicos (6,7) así como las aplicaciones propuestas por Antonovsky (8) al campo de la promoción de la salud, solo disponemos de evidencias parciales acerca de cómo algunos de estos activos de salud pueden influir en la salud de la población (9–11).

Estos estudios parecen señalar cómo la mortalidad evitable y la esperanza de vida pueden estar influenciadas por el desarrollo de diferentes tipos de intervenciones intersectoriales en el ámbito de la gobernanza pública y cómo estos mecanismos de gobernanza pueden influir en una mejor salud poblacional.

El estudio llevado a cabo en el año 2016 por Mays (10) indica que el desarrollo de redes multisectoriales en el ámbito de la salud pública se asocia a menores tasas de mortalidad por diferentes causas (ECV, diabetes, cáncer e influenza); mientras que el estudio llevado a cabo en el año 2014 por Ciconne (11) parece indicar que la puesta en marcha de diferentes tipos de iniciativas en modelos de gobernanza se asocia a una mayor esperanza de vida al nacimiento y en buena salud.

Actualmente, existen numerosas fuentes de información y datos, pero al día de hoy no disponemos de estudios en la literatura científica que analicen y cuantifiquen esta relación entre activos y resultados de salud desde un punto de vista poblacional.

En el año 2010, la Consejería de Salud y Servicios Sanitarios de Asturias inició el proyecto denominado Observatorio de Salud en Asturias (OBSA) en colaboración con el Instituto de Salud Poblacional de la Universidad de Wisconsin. El OBSA recopila información con carácter anual desde el año 2011 de diversas variables relacionadas con la salud de la población en Asturias.

El modelo teórico del que parte el Observatorio es un modelo de determinantes de salud que han utilizado varios autores en la literatura científica mundial, como Terris; Solar e Irwin (12), Dahlgren y Whitehead (13), Wilkinson y Marmot (14). Desde este proyecto se ha desarrollado una propuesta empírica de monitorización de información acerca de los activos y determinantes de la salud, así como de los resultados de salud de la población en el ámbito geográfico de Asturias (15) y de Estados Unidos, a través del proyecto County Health Rankings (16).

El presente estudio permitirá avanzar en esta línea de investigación, tratando de aportar información en este campo de conocimiento. Numerosos autores (7,17) han señalado las necesidades de desarrollar una mayor cantidad de estudios empíricos que permitan cuantificar la relación entre los activos y los resultados de salud de la población.

Mejorar la evidencia disponible permitirá identificar los factores más importantes de promoción de la salud, así como identificar los activos que podrían reducir las desigualdades en salud de la población y mejorar sus resultados medidos en términos de reducción de morbimortalidad y mejora de la calidad de vida. Avanzar en este nuevo enfoque permitirá complementar las acciones desarrolladas en el campo de la promoción de la salud con modelos de acción basados en activos (2,3).

En este marco de trabajo nos planteamos como objetivo explorar la asociación entre los activos de salud disponibles y los datos de morbilidad, mortalidad y calidad de vida de la población asturiana en el año 2018.

Metodología

Diseño: Estudio ecológico. Estos tipos de diseños usan medidas de las características de la población en su conjunto y permiten describir la relación entre los problemas de salud y determinadas características de la población, permitiendo así la generación de hipótesis etiológicas.

Población

Los datos incluidos en el presente estudio hacen referencia a la población residente en el Principado

de Asturias. El informe de indicadores claves del Sistema Nacional de Salud (18) sitúa a Asturias, en el contexto español, como una de las comunidades con menores tasas de pobreza, ocupando el cuarto puesto entre 17 comunidades autónomas (CC. AA) y como una de las comunidades con mayor inversión en gasto sanitario público en el ámbito de la salud, ocupando el tercer puesto en el *ranking* nacional de CC. AA.

Disponemos de datos agregados de los 78 municipios, procedentes de 6 fuentes de información, que se toman como población de estudio y unidad de análisis. Los datos incluidos en el estudio recogen información de 1.034.960 habitantes.

De los 78 municipios, 18 (23%) tienen menos de 1.000 habitantes, 41 (53%) cuentan entre 1.000 y 10.000 habitantes, 15 (18%) cuentan con más de 10.000 y menos de 50.000 habitantes y tan solo 4 de los 78 municipios (5%) tienen 50.000 o más habitantes. Estos últimos 4 municipios agrupan al 60% de la población asturiana.

Variables objeto de análisis

Para llevar a cabo la selección de las variables incluidas en el estudio, se tomó como referencia una propuesta inicial de 75 dimensiones que contenían toda la información institucional disponible sobre activos de salud a nivel municipal. Se seleccionaron un total de 29 variables para la realización del presente estudio, entre las que se incluían 5 variables demográficas, 19 variables de activos de salud y 5 variables relacionadas con los resultados de salud en la población.

Los autores seleccionaron las variables utilizando una escala tipo Likert que permitía evaluar criterios de disponibilidad, fiabilidad y validez para cada variable. Esta herramienta fue elaborada *ad hoc* y cada variable podía obtener una puntuación de 0 a 2 puntos para cada criterio (disponibilidad, fiabilidad y validez) hasta llegar a un máximo de 6 puntos por cada variable. Finalmente, se seleccionaron aquellas variables que presentaban una mayor puntuación.

En la Tabla 1 se incluyen las variables objeto de análisis (demográficas, activos de salud, resultados en salud), fuente de información, año de referencia, descripción del numerador y denominador para el cálculo de cada variable, y sus estadísticos descriptivos para el conjunto de la población estudiada (media, mediana, desviación estándar, mínimos y máximos).

En función de la información estadística disponible en nuestra comunidad y siguiendo el marco teórico desarrollado por Kretzman y Mcknight (4,5) y adaptado posteriormente para nuestro contexto por Cofiño (19) y Botello (20) se organizaron todas las variables relacionadas con activos de salud en cuatro categorías: activos individuales, infraestructura, activos comunitarios y activos socioeconómicos. Como variables dependientes se estudiaron la calidad de vida de la población, la prevalencia de enfermos crónicos y la mortalidad. Para el indicador de mortalidad se estudió la mortalidad para ambos sexos por todas las causas y la mortalidad específica para cáncer y enfermedades cardiovasculares (ECV). Estas dos causas suponen un 58% de la mortalidad total en el Principado de Asturias (21). La información fue recogida en el año 2018 y se muestra el último dato disponible para cada variable.

Fuentes de información

Para realizar el estudio se utilizaron las siguientes fuentes de información: Colegio Asturiano de Politólogos y Sociólogos (CAPS), Sociedad Asturiana de Estudios Económicos e Industriales (SADEI, Consejería de Presidencia y Participación Ciudadana del Principado de Asturias), Historia Clínica Electrónica en Atención Primaria (HCE OMIAP, Servicio de Salud del Principado de Asturias), Encuesta de Salud en Asturias 2017 (ESA17, Consejería de Salud del Principado de Asturias), Tarjeta Sanitaria Individual (TSI, Consejería de Salud del Principado de Asturias), Observatorio de Salud en Asturias (OBSA, Consejería de Salud del Principado de Asturias).

Análisis de los datos

Se revisó la base de datos para depurar errores e inconsistencias. Se realizó un análisis bivariante con el objetivo de identificar la relación entre las variables dependientes e independientes. Para ello, se consideraron variables independientes las sociodemográficas y los activos de salud y como variables dependientes las relacionadas con los resultados de salud.

Después de comprobar la normalidad de la muestra mediante el test de Kolmogorov-Smirnov se

Tabla 1. Variables incluidas en el estudio.

	Variables demográficas	*Fuente de información**	*Año*	*Descripción (numerador y denominador)*	*Estadísticos descriptivos*				
Variables demográficas	*Demográficas*				*Media*	*Mediana*	*DE*	*Mín.*	*Máx.*
	Tamaño del municipio	SADEI	2017	Habitantes empadronados en el municipio	13.268,7	2.347,0	4.0207,9	140	272.365
	Índice de envejecimiento	SADEI	2017	Población > 64 años* × 100/Población < 16 años	378,0	304,8	227,2	122,8	1.372,7
	Tasa de mayores de 75 años	SADEI	2017	Total de Población > 75 años * × 1.000/Total Población	16,8	16,2	4,1	8,9	27,8
	Tasa de natalidad por 1.000 hab.	SADEI	2017	Total de nacimientos* × 1.000 /Total de Población	4,7	5,0	1,8	0,0	8,5
	Tasa de población de 15-29 años por 1.000 hab.	SADEI	2017	Población de 15 a 29 años* × 100/Total Población	107,4	109,8	15,8	64,1	150,3
Activos de Salud	Individuales				Media	Mediana	DE	Mín.	Máx.
	Apoyo social percibido	ESA17	2017	Población que afirma tener apoyo cuando lo necesita (=SI)* × 100/Total de población encuestada	92,7	92,1	3,0	88,6	100
	Participación electoral	SADEI	2016	Población que afirma participar en las elecciones generales (=SI)* × 100/Total de población con derecho a voto	66,2	66,4	5,4	50,9	77,1
	Participación en actividades solidarias	ESA17	2017	Población que afirma participar en actividades solidarias (=SI)* × 100/Total de población encuestada	18,8	16,3	9,0	8,7	40,0
	Valoración de la vida social	ESA17	2017	Población que valora su vida social como satisfactoria o muy satisfactoria* × 100/Total de población encuestada	83,7	87,3	7,6	53,3	100
	Renta disponible por habitante	SADEI	2017	Renta regional disponible de las transferencias sociales en especie/Total de población	15.497,7	15.609,0	934,2	12.585	17.141
	Comunitarios				Media	Mediana	DE	Mín.	Máx.
	Actuaciones comunitarias registradas	OBSA	2017	Número total de activos registrados en la web del OBSA	19,9	6	34,2	0	202
	Asociaciones activas	Ayuntamientos locales	2017	Número total de asociaciones incluidas en los registros municipales	56,9	15	152,2	0	1050

(Continued)

Table 1. (Continued)

Variables demográficas	*Fuente de información**	*Año*	*Descripción (numerador y denominador)*	*Estadísticos descriptivos*				
Infraestructura				Media	Mediana	DE	Mín.	Máx.
Valor de producción	SADEI	2014	Valor de todos los bienes y servicios creados durante un periodo contable determinado/1.000€	460.523	66.913	1.416.700	1.376	8.653.882
Número de licencias de IAE	SADEI	2017	Número total de altas en el Impuesto de Actividades Económicas	1.524,9	370	4.323,5	7	29.684
Presupuesto de ingresos	SADEI	2016	Total de presupuesto de ingreso en € asignado a cada municipio/1.000€	1.264,3	2.645,9	35.768,4	232,6	225.215,4
Presupuesto de gastos	SADEI	2016	Total de presupuesto de gasto en € asignado a cada municipio/1.000€	11.660	26.45,9	35.768,4	232,6	213.362
Tasa de recursos sanitarios	SADEI	2015	Número total de profesionales sanitarios* × 1.000€/Total de Población	4,7	3,8	3,7	0	22,7
Equipamientos sanitarios	SADEI	2015	Número total de dispositivos de atención primaria y hospitalaria con presencia física en el municipio	5,8	2	16,1	0	105
Equipamientos educativos	SADEI	2017	Número total de centros educativos no universitarios con presencia física en el municipio	7	2	16,9	0	107
Socioeconómicas				Media	Mediana	DE	Mín.	Máx.
Porcentaje de población desempleada	SADEI	2017	Población desempleada* × 100/Total de Población	9,2	9,2	2,7	3,3	14,8
Nivel de estudios bajos	ESA17	2017	Población con nivel máximo de estudios primarios o inferiores* × 100/Total de población	80,5	81,5	2,1	73,2	83,4
Personas en clases sociales bajas	ESA17	2017	Población en clases sociales VI y VII* × 100/Total de población	51,6	54,2	7,3	26,2	75,0
Perceptores de Salario social básico (SSB)	TSI	2018	Total de personas beneficiarias de SSB* × 100/total de población	17,2	15,0	12,6	0	79,2
Familias monomarentales / monoparentales	ESA17	2017	Total de familias con un solo progenitor* × 100/Total de población	20,7	20,5	2,9	16,7	31,2

(Continued)

Table 1. (Continued)

	Variables demográficas	*Fuente de información**	*Año*	*Descripción (numerador y denominador)*	*Estadísticos descriptivos*				
Resultados de salud	Morbilidad				Media	Mediana	DE	Mín.	Máx.
	Calidad de vida	CAPS	2017	Puntuación estandarizada de un índice sintético de calidad de vida	–0,015	–0,101	0,43	–0,79	1,41
	Prevalencia de enfermos crónicos	HCE	2015	Población con al menos una enfermedad crónica* × 100/Total de población	56,8	56,6	4,7	46,1	68,7
	Mortalidad				Media	Mediana	DE	Mín.	Máx.
	Mortalidad por todas las causas	SADEI	2013–17	Sumatorio de *éxitus* por todas las causas* × 1.000/Población media del periodo	78,2	75,5	18,6	44,5	125,4
	Mortalidad por cáncer	SADEI	2013–17	Sumatorio de *éxitus* por cáncer* × 1.000/Población media del periodo	20,0	19,1	5,2	6,3	41,8
	Mortalidad por Enfermedades Cardiovasculares (ECV)	SADEI	2013–17	Sumatorio de *éxitus* por ECV* × 1.000/ Población media del periodo	26,9	25,0	8,4	11,7	51,1

*SADEI: Sociedad Asturiana de Estudios Económicos e Industriales (Consejería de Presidencia y Participación Ciudadana del Principado de Asturias). ESA17: Encuesta de Salud en Asturias 2017 (Consejería de Salud del Principado de Asturias). TSI: Tarjeta Sanitaria Individual. (Consejería de Salud del Principado de Asturias). OBSA: Observatorio de Salud en Asturias (Consejería de Salud del Principado de Asturias). CAPS: Colegio Asturiano de Politólogos y Sociólogos. HCE: Historia Clínica Electrónica en Atención Primaria.

analizó la mortalidad por todas las causas mediante la prueba de correlación de Pearson, seguida de la mortalidad causas específicas: ECV y cáncer mediante la correlación de Spearman. Se muestran todas las correlaciones bivariadas con $p < 0.01$.

A partir de los resultados obtenidos en el análisis bivariante se construyeron cinco modelos de regresión lineal múltiple con el objeto de identificar las variables con mayor peso explicativo para cada una de las cinco variables resultado en salud objeto de estudio (calidad de vida, enfermedades crónicas, mortalidad por ECV, cáncer, y por todas las causas). Para realizar este análisis se incluyeron aquellas variables en las que se identificó una relación estadísticamente significativa ($p < 0.01$) con alguna de las cinco variables resultado.

Para la construcción de los modelos predictivos se utilizó el método pasos sucesivos para identificar los factores asociados a las variables resultados en salud. Mediante esta técnica de análisis, además de cuantificar la capacidad explicativa de las variables incluidas en el modelo, también se pretendió controlar el efecto de terceras variables confusoras de carácter demográfico que pudieran afectar la interpretación de los resultados obtenidos.

Los cinco modelos predictivos elaborados se ajustaron por las siguientes variables: tamaño del municipio, índice de envejecimiento, tasa de mayores de 75 años por 1.000 habitantes, tasa de natalidad por 1.000 habitantes, tasa de población de 15 a 29 años por 1.000 habitantes. En la descripción de resultados de los modelos predictivos se incluyeron las variables con mayor capacidad explicativa.

Para el análisis de los datos se utilizó el programa de análisis estadísticos IBM Statistics SPSS V.22.

Resultados

En la Tabla 2 se describen las correlaciones bivariadas de las variables estudiadas y los indicadores de morbilidad y mortalidad monitorizados.

La calidad de vida es la dimensión que muestra un mayor nivel de relación con 17 variables, con correlaciones significativas al nivel 0.01. Quince de ellas muestran una relación positiva (tamaño del municipio, tasa de natalidad por 1.000 habitantes, tasa de población de 15-29 años por 1.000 habitantes, apoyo social percibido, participación electoral, renta disponible por habitante, actuaciones comunitarias registradas, asociaciones activas, valor productivo, licencias del Impuesto de Actividades Económicas (IAE); presupuesto de ingresos y gastos, tasa de recursos sanitarios, perceptores Salario Social Básico (SSB) y familias monoparentales) y 2 negativas (índice de envejecimiento y clases sociales bajas VI y VII).

La prevalencia de enfermedades crónicas se relaciona con 11 variables: es positiva con el índice de envejecimiento, y negativa para el tamaño del municipio, tasa de natalidad por 1.000 habitantes, asociaciones activas, valor productivo, licencias IAE, presupuesto de ingresos y de gastos, tasa de recursos sanitarios, porcentaje de población desempleada y clases sociales bajas VI y VII.

La mortalidad por todas las causas se relaciona de manera positiva con el índice de envejecimiento, como en el caso anterior, y con las clases sociales bajas VI y VII. El resto de las relaciones entre las variables son negativas, tanto en las variables individuales de participación electoral, valoración vida social y renta disponible por habitante, como en las variables de infraestructuras: valor productivo, licencias IAE, presupuesto de gastos, tasa de recursos sanitarios y los equipamientos educativos y en la variable socioeconómica perceptores de SSB.

La mortalidad por ECV se relaciona con todas las variables demográficas (relación positiva para el índice de envejecimiento) y de infraestructuras (relación negativa en todos los casos). También se relaciona negativamente dentro de las dimensiones individuales con la participación electoral y la renta disponible por habitante, así como con las asociaciones activas en la comunidad. La mortalidad por ECV además, se relaciona de forma negativa con la percepción de SSB.

La mortalidad por cáncer se relaciona con 6 variables, siendo positiva con el índice de envejecimiento y negativa con la tasa de población de 15-29 años por 1.000 habitantes, participación electoral, renta disponible por habitante, valor productivo y tasa de recursos sanitarios.

En la Tabla 3 se detallan los principales resultados. Se muestran las variables con mayor capacidad explicativa y se incluye el coeficiente de determinación ajustado (R^2) para cada variable dependiente, así como los coeficientes estandarizados beta y su significación estadística para cada una de las 5 variables dependientes. Mediante los coeficientes estandarizados beta en la Tabla 3 se pueden observar la magnitud de esta asociación y el tipo de relación (positiva o negativa).

Tabla 2. Matriz de correlaciones* para las variables seleccionadas y resultados de salud (morbimortalidad y calidad de vida).

	Calidad de vida	*Enfermos crónicos*	*Mortalidad total*	*Mortalidad por ECV*	*Mortalidad por cáncer*
Demográficas					
Tamaño del municipio	0.586	–0.358	–	–0.444	–
Índice de envejecimiento	–0.619	0.545	0.502	0.663	0.456
Tasa de natalidad por 1.000 hab.	0.407	–0.385	–	–0.364	–
Tasa de población de15–29 años por 1.000 hab	0.336	–	–0.464	–0.462	–0.352
Individuales					
Apoyo social percibido	0.331	–	–	–	–
Participación electoral	0.382	–	–0.502	–0.411	–0.349
Valoración vida social	–		–0.296	–	–
Renta disponible por hab.	0.615	–	–0.457	–0.528	–0.322
Comunitarias					
Actuaciones comunitarias registradas	0.422	–			
Asociaciones activas	0.555	–0.394	–	–0.455	–
Infraestructura					
Valor productivo	0.618	–0.390	–0.319	–0.406	–0.316
Licencias IAE	0.594	–0.378	–0.301	–0.392	–
Presupuesto de ingresos	0.594	–0.371	–	–0.397	–
Presupuesto de gastos	0.603	–0.378	–0.296	–0.398	–
Tasa de recursos sanitarios	0.654	–0.487	–0.453	–0.389	–0.301
Equipamientos sanitarios	–	–	–	–0.362	–
Equipamientos educativos	–	–	–0.306	–0.381	–
Socioeconómicas					
% Población desempleada	–	–0.347	–	–	–
Clases sociales bajas (VI,VII)	–0.352	0.308	0.295	–	–
Perceptores SSB	0.553	–	–0.344	–0.484	–
Familias monomarentales /monoparentales	0.493	–	–	–	–

*Se muestran todas las correlaciones significativas al nivel 0.01 (bilateral).

Tabla 3. Resumen de los modelos de regresión lineal múltiple para el estudio de las variables asociadas a indicadores de morbilidad y mortalidad.

Modelo	*Coeficientes estandarizados Beta*	*Sig.*	*Intervalo de confianza para B al 95%*	
			Límite inferior	*Límite superior*
Calidad de vida ($R^2 = 0.650$, $F = 48.7$, $p < 0.001$)				
(Constante)		0.000	5.817	2.181
Tasa de recursos sanitarios	0.577	0.000	0.050	0.081
Perceptores SSB	0.362	0.000	0.007	0.017
Apoyo social percibido	0.262	0.000	0.018	0.057

(Continued)

Table 3. (Continued)

Modelo	*Coeficientes estandarizados Beta*	*Sig.*	*Intervalo de confianza para B al 95%*	
			Límite inferior	*Límite superior*
%Enfermedades crónicas (R^2= 0.413, F= 19.3, $p < 0.001$)				
(Constante)		0.000	53.612	59.263
Índice de envejecimiento	0.415	0.001	0.004	0.013
Tasa de recursos sanitarios	0.377	0.002	0.736	0.176
Mortalidad ECV (R^2= 0.544, F= 32.04, $p < 0.001$)				
(Constante)		0.000	17.545	26.551
Índice de envejecimiento	0.599	0.000	0.012	0.026
Perceptores SSB	0.252	0.021	0.320	0.028
Mortalidad por cáncer (R^2= 0.322, F=26.16, $p < 0.001$)				
(Constante)		0.000	5.539	13.781
Tasa de >75 por 1.000 habitantes	0.579	0.000	0.373	0.855
Mortalidad por todas las causas (R^2= 0.522, F= 29.3, $p < 0.001$)				
(Constante)		0.000	57.839	74.720
Índice de envejecimiento	0.613	0.000	0.027	0.055
Tasa de recursos sanitarios	0.232	0.030	1.763	0.092

Las variables incluidas en el modelo explicativo de calidad de vida son las que presentan una mayor capacidad explicativa (R^2 = 0.650) de la morbilidad de la población asturiana, seguidas de las enfermedades crónicas (R^2 = 0.413).

En el caso de las variables relacionadas con la mortalidad total y por causas específicas, el modelo con mayor capacidad explicativa es el relacionado con la mortalidad por enfermedades cardiovasculares (R^2 = 0.544), seguido de la mortalidad total (R^2 = 0.522) y la mortalidad por cáncer (R^2 = 0.322).

Discusión

Los hallazgos derivados del presente trabajo muestran una importante relación estadística entre los activos de salud estudiados y la morbimortalilidad y la calidad de vida de la población asturiana. La disponibilidad de recursos sanitarios se identificó como una variable relacionada con todos los resultados de salud incluidos en el presente estudio (prevalencia de enfermos crónicos, mortalidad y calidad de vida), mostrando una elevada capacidad explicativa como factor protector.

En el caso de la calidad de vida, los recursos sanitarios disponibles constituyen la variable que presenta una mayor magnitud de asociación seguida de las variables perceptoras de SSB y del apoyo social percibido. Por otra parte, el envejecimiento de la población es la variable que presenta una mayor fuerza de asociación con las variables dependientes de morbimortalidad, seguida de los recursos sanitarios disponibles y de la cobertura de ayudas sociales de SSB.

En aquellos municipios con una menor disponibilidad de recursos sanitarios y prestaciones sociales se identificó una mayor prevalencia de enfermos crónicos, así como una mayor mortalidad por todas las causas. De igual manera se identificó una asociación positiva entre la tasa de recursos sanitarios disponibles, las coberturas sociales y el apoyo social percibido en relación con la calidad de vida de la población residente en el municipio. Estas dos últimas dimensiones sociales demostraron un importante valor predictivo en la calidad de vida de la población y en la mortalidad por enfermedades cardiovasculares.

El tamaño de la muestra y las fuentes de información utilizadas permitieron obtener información de alta calidad que abarca un número importante de variables analizadas desde una perspectiva ecológica para estudiar la relación de los activos con los que cuenta la población con sus resultados de salud. Estos hallazgos permitieron identificar sobre qué variables

se puede incidir desde una perspectiva de activos de salud para mejorar la salud de la población.

A pesar de las fortalezas del estudio se identificaron diferentes limitaciones. Cabe señalar, en primer lugar, la utilización de variables ecológicas. Trabajar con datos agrupados de la población podría generar pérdidas en el rendimiento estadístico (22) de las mismas. La realización de nuevos estudios a partir de datos individuales podría permitir aumentar la precisión de los datos obtenidos y el desarrollo de nuevos modelos predictivos más precisos. Es necesario seguir trabajando en la identificación, la medición y la incorporación de nuevas variables predictivas sobre las que posteriormente sea posible desarrollar actuaciones desde un enfoque positivo de salud basado en activos.

Otra de las dificultades identificadas es la propia delimitación conceptual de unos de los principales elementos de estudio: los "activos de salud". Si bien este término ha tenido diferentes aproximaciones conceptuales a partir de varios trabajos de investigación (1,2) es necesario delimitar los términos a los que hace referencia con el objeto de que la búsqueda de trabajos originales sea lo más inclusiva posible. Para el presente estudio se seleccionaron variables como activos en función de la información disponible, teniendo en cuenta criterios de fiabilidad y validez de las variables seleccionadas y en función de los marcos teóricos previamente establecidos (8,12,14). Por otro lado, la propia delimitación conceptual del "activo" puede implicar que ciertos elementos funcionen como activo en un contexto y en otro no, con lo que será necesario contextualizar el medio en el que se llevan a cabo los diferentes trabajos de investigación.

La tercera de las limitaciones hace referencia a la propia disponibilidad de datos que permiten desarrollar el trabajo. Los datos disponibles provienen de numerosas fuentes de información que disponen de datos actualizados en periodos temporales diferentes y no se encuentran desagregados por la variable sexo, datos no disponibles en el momento de realización del estudio.

La última de las dificultades hace referencia al anacronismo entre las variables objeto de estudio, ya sean estas de activos o de resultados de salud. Aunque se trate de buscar diferentes correlaciones entre los términos objeto de estudio (activos y resultados de salud), es necesario tener en cuenta que son los activos actuales los que condicionarán resultados futuros, por lo que cabe esperar que los niveles de ajuste en algunos casos no sean los esperados.

A pesar de las limitaciones, los hallazgos identificados en el presente trabajo son consistentes con los de otros estudios previos realizados (10,11).

En consonancia con lo esperado, el envejecimiento de la población, especialmente en los grupos etarios de mayores de 75 años, constituye una de las variables con mayor peso explicativo en la salud de la población, pero se han identificado otro tipo de variables sobre las que es posible intervenir desde el ámbito de la salud pública.

El desarrollo de diferentes modelos predictivos de morbimortalidad puede orientar la planificación de actuaciones en el campo de la salud pública a partir de variables, no solo relacionadas con la enfermedad y el envejecimiento de la población, sino con otras magnitudes socioeconómicas que pueden tener un impacto importante en la salud de la población. Sobre estas variables es posible establecer planes de acción en el campo de la salud pública que permitan mejorar a medio y largo plazo la salud de la población asturiana. Es posible orientar las actuaciones en el campo de las políticas sanitarias, no solo al desarrollo de estrategias de prevención, sino también a la mejora de aquellos factores, tales como los determinantes sociales de la población, que en su conjunto pueden ayudar a mejorar y/o mantener la salud de la población.

Esperamos que los resultados obtenidos a través de la presente investigación puedan ser útiles tanto para otros investigadores, como para gestores y planificadores en el campo de la salud pública, y que ayuden a mejorar la comprensión acerca del complejo universo de interacción de variables sociosanitarias con los resultados de salud de la población.

En el campo de la investigación, el desarrollo de otros diseños permitiría analizar el impacto de estos factores desde otros enfoques tales como estudios multinivel (23) o estudios de tipo analítico o experimental.

En el campo de la salud pública, el desarrollo de acciones intersectoriales que incidan en mejoras de recursos sanitarios, coberturas sociales, así como en la creación y desarrollo de redes de apoyo social podrían producir importantes efectos positivos en mejoras en la calidad de vida de la población y en la reducción de su morbimortalidad.

El fortalecimiento de un enfoque de salud positivo basado en potenciar mecanismos facilitadores de salud y bienestar puede facilitar un abordaje de los problemas

de salud desde sus causas iniciales y orientar el desarrollo de diferentes políticas de salud pública basadas en activos de salud, permitiendo identificar activos que reduzcan las desigualdades en salud y en definitiva mejorar la calidad de vida de la población.

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Resúmenes

Recurrir al ingenio: el camino para una salud positiva en la comunidad

Laura E. R. Peters, Geordan Shannon, Ilan Kelman y Eija Meriläinen

Las comunidades son agentes poderosos y necesarios para definir y buscar su propia salud, pero con frecuencia, organizaciones externas adoptan enfoques de promoción de la salud comunitaria autoritarios y descendentes. Por el contrario, los métodos ascendentes, que aprovechan y movilizan los activos de salud de la comunidad, son a menudo criticados por hacer que las comunidades más vulnerables y marginadas utilicen sus propios recursos limitados sin oportunidades reales de cambio. Teniendo en cuenta dichas fallas de la promoción de salud comunitaria, este artículo indaga cómo las comunidades pueden ser apoyadas de manera más efectiva y apropiada en la búsqueda de su salud. El artículo hace una reseña de cómo es entendida la salud comunitaria, desde las conceptualizaciones negativas hacia las positivas; cómo esta se determina, desde una orientación al factor de riesgo hacia una determinación social, y cómo esta es promovida, desde los enfoques descendentes hacia aquellos ascendentes que surgen de las bases. A partir de estos conocimientos, ofrecemos el concepto de "ingenio" como una forma de fortalecer la salud positiva para las comunidades, y planteamos cómo se involucra con tres tensiones interrelacionadas en la promoción de la salud comunitaria: recursos y sostenibilidad, interdependencia y autonomía, y diversidad comunitaria e inclusión. Dejamos, asimismo, unas sugerencias prácticas para que las organizaciones externas apliquen el ingenio como un enfoque procesual, local y relacional a la promoción de la salud comunitaria, con el argumento de que este ingenio puede forjar nuevos caminos hacia una salud positiva comunitaria sostenible y autosuficiente.

Palabras clave: activos/factores de protección, capacitación (competencias), comunidades, empoderamiento/poder, igualdad/justicia social, promoción de la salud, normas/políticas, salutogénesis. (Global Health Promotion, 2022; 29(3): 5–13)

Indicadores de la salud planetaria para el ámbito local: oportunidades y desafíos de aplicar el Índice del Planeta Feliz en Victoria (Australia)

Rebecca Patrick, Claire Henderson-Wilson, Justin Lawson, Teresa Capetola, Amy Shaw, Mia Davison y Alison Freeman

Los Objetivos de Desarrollo Sostenible de las Naciones Unidas, la Nueva Agenda Urbana y el Acuerdo de París sobre el Cambio Climático son planes de acción para la promoción de la salud que estipulan que la salud humana está unida de manera inextricable a la salud ambiental. En el Antropoceno se requiere de nuevos indicadores para promover el compromiso comunitario con el bienestar saludable y sostenible de las personas y del planeta, y para medir dicho bienestar. Este estudio explora la necesidad de una medición tal como el Índice del Planeta Feliz que, de forma explícita, relaciona la salud humana con la salud ambiental para una escala de nivel local en Australia. El proyecto surgió de una coalición internacional de promotores de la salud que defienden los enfoques hacia una "salud planetaria". El diseño del estudio se basó en métodos de descripción cualitativa con entrevistas a informantes clave ($n = 17$) y cuatro grupos focales ($n = 27$ participantes) con académicos, profesionales y legisladores de la salud y/o de la sostenibilidad. El análisis se completó con documentación de índices de salud y medio ambiente y con mandatos normativos. Otras técnicas de análisis cualitativo de contenidos se utilizaron para interpretar los resultados. Hubo un fuerte interés por un indicador compuesto a nivel local, como el Índice reescalado del Planeta Feliz (expectativa de vida x satisfacción de vida x ajuste de igualdad / huella ecológica) para utilizar en el ámbito local. La importancia del índice compuesto se resume en: su capacidad para promover el compromiso comunitario con el pensamiento de salud planetaria; una herramienta de promoción y defensa por una política conjunta de salud y sostenibilidad; para justificar programas de beneficios mutuos para la salud y el medio ambiente, y para ofrecer un mecanismo para las comparaciones correlativas entre gobiernos locales y nacionales. Sin embargo, los silos disciplinarios limitan actualmente las alianzas para la promoción de la salud y la salud planetaria, y un índice compuesto local podría ayudar a superar estas divisiones.

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Palabras clave: medio ambiente, bienestar, salud planetaria, Índice del Planeta Feliz, indicadores. (Global Health Promotion, 2022; 29(3): 14–23)

Percepciones de la participación escolar con relación a la salud y al bienestar: comparación entre alumnos nigerianos e irlandeses

Yetunde O. John-Akinola, Mary O. Balogun, Adeyimika T. Desmennu, Damilola O. Awobiyi y Saoirse Nic Gabhainn

La participación escolar por parte de los alumnos se considera un valor clave del enfoque de la promoción de la salud escolar. Sin embargo, pocos estudios han documentado la relación entre la participación de los estudiantes y los resultados de salud y bienestar en diferentes espacios geográficos, especialmente al mirar los contextos de países desarrollados y de aquellos en desarrollo. Este estudio investigó las percepciones de alumnos nigerianos e irlandeses sobre la participación en la escuela y su relación con salud y bienestar. Los datos se recolectaron a partir de cuestionarios respondidos por los mismos encuestados, 333 y 231 estudiantes de escuela primaria de 4º, 5º y 6º grados, en 17 establecimientos de Nigeria y de Irlanda. Se utilizó la regresión logística para analizar los datos de los dos países. No hubo una diferencia estadísticamente significativa en la media para la participación en las actividades escolares (NIG media = 22.8, SD 3.5; IRL media = 22.3, SD 3.4) y en los eventos escolares (NIG media = 18.8, SD 3.7; IRL media = 17.1, SD 3.6). Sin embargo, los puntajes de participación en las decisiones y normativas escolares (NIG media = 17.3, SD 4.7; IRL media = 15.8, SD 3.6) y en la salud y el bienestar (NIG media = 16.9, SD 1.7; IRL media = 15.3, SD 2.4) fueron significativamente más altos entre los estudiantes nigerianos, mientras que una percepción positiva de participación escolar (NIG media = 24.2, SD 4.1; IRL media = 26.2, SD 3.4) fue significativamente más alta entre los alumnos irlandeses. Los resultados sugieren que los estudiantes irlandeses y los nigerianos tienen una percepción positiva de sus escuelas, independientemente de su ubicación y de sus niveles de desarrollo. No obstante, se podría requerir de una futura investigación que utilice un enfoque cualitativo para aclarar mejor las dimensiones de las percepciones de los estudiantes sobre la vida escolar y la participación entre los alumnos nigerianos, con el fin de fundamentar estas afirmaciones.

Palabras clave: escuelas promotoras de la salud, niños, Nigeria, Irlanda, participación escolar. (Global Health Promotion, 2022; 29(3): 24–30)

Universidad promotora de la salud: implementación de un programa de orientación sobre enfermedades no transmisibles (Posbindu PTM) para empleados universitarios

Tri Siswati, Margono, Novi Husmarini, Yuliasti Eka Purnamaningrum y Bunga Astria Paramashanti

Las enfermedades no transmisibles (ENT) continúan siendo un desafío, tanto en el mundo como en Indonesia. Los espacios laborales pueden poner a los empleados en riesgo de adquirir ENT por factores comportamentales. Este estudio tuvo como objetivo desarrollar un programa de orientación integrado para la detección temprana de ENT (en indonesio, 'pos pembinaan terpadu penyakit tidak menular' [Posbindu PTM]) destinado a los empleados de una universidad de Indonesia. Posbindu PTM es un programa de base comunitaria que se orienta hacia los esfuerzos de promoción y prevención para controlar las ENT allí donde la comunidad actúa como agente de cambio. Dirigimos un proceso de evaluación basado en un enfoque cuantitativo a través de una encuesta ($n = 313$) y un método cualitativo utilizando entrevistas en profundidad ($n = 12$) con el fin de apoyar nuestro hallazgo de que Posbindu PTM era aceptable y viable para implementar en un contexto universitario. La alta participación en Posbindu PTM mostró que el programa puede animar a los empleados

universitarios a unirse a las estrategias de prevención de ENT desde la detección temprana hasta los procesos de asesoramiento y referencia. Todos los participantes aceptaron Posbindu PTM de manera positiva, por sus beneficios para la salud, la flexibilidad del programa y la calidad del servicio ofrecido por los responsables. El éxito en la implementación de Posbindu PTM estuvo determinado por la planificación del programa basada en las necesidades, el compromiso de los líderes universitarios, los recursos humanos y la facilitación adecuados, así como la cooperación entre los departamentos, la clínica y el centro de salud primario local y el departamento de salud. Por el contrario, actividades externas afectaron de manera negativa a los participantes para unirse a Posbindu PTM. Se requiere una programación más frecuente y una aplicación en línea que ayude a mejorar el desempeño del programa. Posbindu PTM es importante para comprometer a los empleados con su salud y puede servir como modelo para la prevención y el control de ENT en ambientes similares. Con el éxito de la implementación de Posbindu PTM, se requiere una fase adicional para empoderar y apoyar el programa Posbindu PTM dirigido a las universidades promotoras de la salud.

Palabras clave: universidad promotora de la salud, promoción de la salud en el entorno laboral, enfermedades no transmisibles, empleados, Posbindu PTM. (Global Health Promotion, 2022; 29(3): 31–39)

Prevención de la diabetes tipo 2 en el África subsahariana. Revisión

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Antecedentes: La diabetes tipo 2 es un factor significativo en la carga total de enfermedades no transmisibles (ENT) en el África subsahariana. Mientras que muchas organizaciones de salud hacen un llamado para incrementar la atención hacia esta enfermedad, se asignan muchos menos recursos a los programas de prevención basados en evidencia. La literatura demuestra una falta de información sobre programas de prevención, intervenciones enfocadas en disminuir el desarrollo de la diabetes tipo 2, e historias de éxito.
Métodos: Esta revisión siguió las recomendaciones estipuladas para revisiones sistemáticas y metaanálisis (Preferred Reporting Items). Las bases de datos fueron PubMed, Google Scholar, Ovid, Medline, el sistema de información de la biblioteca de la Organización Mundial de la Salud (OMS) y African Journals Online. Los siguientes términos fueron buscados de manera individual y en combinaciones múltiples: prevención, intervención, diabetes tipo 2, África subsahariana, educación, estrategia, plan estratégico, factores de riesgo. En total, se encontraron 253 artículos y se eliminaron 17 por ser duplicados. De aquellos, se revisaron 78 resúmenes y se excluyeron 20 por no cumplir con los criterios; uno más fue también excluido porque no estaba disponible en inglés, y otro por falta de disponibilidad. Finalmente, los 56 textos completos restantes fueron evaluados y siete fueron incluidos en la revisión.
Resultados: A través de la revisión, el tema común de los artículos fue una falta de recursos, de estrategias de prevención y un incremento de los factores de riesgo. La revisión puso de relieve el hecho de que mientras hay orientaciones de la OMS y guías enfocadas a las intervenciones del nivel primario de atención para la prevención y el tratamiento de las ENT, estas continúan subutilizadas. Estudios incluidos analizaban el nivel de conocimientos de los miembros de la familia, el *marketing* social y el consumo de azúcar, así como las estrategias de prevención primarias.
Conclusión: Hay una falta general de información sobre las intervenciones enfocadas a la prevención de la diabetes tipo 2 en el África subsahariana. Se advierte la necesidad de ampliar la investigación sobre las intervenciones, las estrategias de prevención y la implementación del paquete de orientaciones de la OMS dirigido a las ENT.

Palabras clave: prevención, diabetes tipo 2, África subsahariana, salud mundial, enfermedad crónica/enfermedad no transmisible. (Global Health Promotion, 2022; 29(3): 40–44)

Conocimientos y percepciones del tráfico humano entre los miembros de organizaciones comunitarias y de fe en el Sur de Los Ángeles

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Los objetivos de este estudio fueron: (1) evaluar el conocimiento y las percepciones del tráfico humano entre los líderes y el personal de 11 organizaciones de base comunitaria y de fe en el Sur de Los Ángeles y (2) identificar las brechas en el conocimiento del tráfico humano e informar a las organizaciones comunitarias con relación a las mejores prácticas posibles en promoción de la salud para abordar este problema de salud pública. Se realizó una encuesta autoadministrada durante el periodo comprendido entre el 4 de diciembre del 2015 y el 28 de enero del 2016. Se generaron estadísticas descriptivas y se construyó un modelo de regresión logística utilizando SAS 9.3. Un total de 277 líderes y miembros de organizaciones basadas en la comunidad y en la fe respondieron la encuesta. Los participantes demostraron altos niveles de conocimiento sobre el tráfico humano, pero su conocimiento no era exhaustivo, pues hubo vacíos al reconocer el contexto en el cual el tráfico de personas normalmente se presenta, en comprender las leyes locales que gobiernan esta actividad, y la forma de seguir las políticas/los procedimientos relacionados cuando se sospecha que el problema existe. Una mayoría (a) creía que no hay suficientes servicios en el Condado de Los Ángeles para ayudar a los sobrevivientes del tráfico humano, (b) no podía reconocer los signos del tráfico de personas, y (c) no sabía qué pasos seguir si sospechaban que esta actividad criminal estaba teniendo lugar en su presencia. Se encontró una asociación estadísticamente significativa entre la educación y el conocimiento de los participantes sobre el tráfico humano, y con sus creencias y actitudes hacia esta violación de los derechos humanos. Los hallazgos del estudio sugieren que, en general, los líderes y miembros de las organizaciones comunitarias y de fe en el Sur de Los Ángeles tienen un buen conocimiento sobre el tráfico humano. Sin embargo, aún persisten notables lagunas y percepciones erróneas en la comprensión del problema, lo que sugiere oportunidades para que la salud pública amplíe la educación y las intervenciones al respecto.

Palabras clave: tráfico humano, acción comunitaria, organización de base comunitaria, organización basada en la fe, conciencia pública. (Global Health Promotion, 2022; 29(3): 45–56)

Mensajes de consumo de alcohol en los dramas coreanos: la globalización de las normas de Corea del Sur sobre la bebida

Rubini Pasupathy, Jaesook Gho, Brittany Duhart y Courtney Queen

Corea del Sur tiene una de las tasas más altas de consumo de alcohol mensual, de consumo de alto riesgo y de problemas relacionados con el alcohol. La audiencia mundial que tienen los dramas coreanos está expuesta a los mensajes sobre las normas culturales relacionadas con el consumo de alcohol, pero los datos sobre la representación del alcohol son limitados. Este estudio integrado de métodos mixtos tuvo como propósito explorar el carácter de esta representación del consumo de alcohol en los dramas coreanos. Se realizó un análisis de contenido en una selección aleatoria de seis series dramáticas y se encontró que el consumo de alcohol es frecuente, con una referencia a la bebida cada 12 minutos de programación, aproximadamente. Los principales mensajes incluyen la importancia ritual del alcohol, el exceso del consumo entre hombres y mujeres, el licor como un calmante para el estrés y como un facilitador para entablar una relación, la intoxicación como un valor positivo, las consecuencias irreales de la intoxicación, los hombres vistos como cuidadores confiables de mujeres intoxicadas, y la falsa imagen de conducir en estado de embriaguez. Los resultados de este estudio amplían nuestra comprensión de la frecuencia con la que aparece el alcohol y los mensajes que prevalecen sobre el consumo y la intoxicación en los dramas coreanos.

Palabras clave: alcohol, Asia, determinantes de la salud, salud mundial/globalización, salud pública, cualitativo, cuantitativo, Corea del Sur. (Global Health Promotion, 2022; 29(3): 57–65)

Agua periurbana, saneamiento e higiene en Lusaka (Zambia): fotovoz para empoderar la valoración local a través de la teoría ecológica

Sikopo Nyambe y Taro Yamauchi

El agua, el saneamiento y la higiene (conocidos bajo la sigla en inglés WASH) son factores responsables del 11.4 % de muertes en Zambia, lo que los convierte en una preocupación importante para la salud pública. A pesar de los brotes anuales de enfermedades transmitidas por el agua en los suburbios periurbanos de la nación, relacionados con procesos deficientes de saneamiento e higiene, hay pocos estudios que los hayan analizado y conceptualizado de manera proactiva, así como a sus factores de mantenimiento. Nuestro estudio se enfocó en (a) establecer la definición que los residentes tienen del agua, del saneamiento y de la higiene periurbanos y sus prioridades, y (b) utilizar la teoría ecológica para analizar el ecosistema periurbano WASH, resaltando los factores de mantenimiento. Nuestro estudio involucró a 16 jóvenes (de entre 17 y 24 años) que habitan en el área periurbana de Lusaka (Zambia), en un ejercicio de fotovoz. Ellos tomaron fotografías que respondían a la pregunta central "¿Qué es WASH en su comunidad?" Luego, a través de la contextualización y de una codificación básica, los participantes narraron las historias de sus fotografías y realizaron afiches para resumir los problemas y las prioridades relacionadas con el agua, el saneamiento y la higiene. Con un análisis temático teórico de la contextualización y la codificación se identificaron los factores causales y los actores clave, diseccionando el ecosistema periurbano WASH mediante la teoría ecológica de cinco niveles, desde los niveles intrapersonales hasta los de las políticas públicas. En este sentido, el WASH periurbano, según la teoría ecológica, fue definido como: (a) malas prácticas (intrapersonal, interpersonal), (b) un peligro para la salud (norma de la comunidad), (c) de baja calidad y sin regulación (políticas públicas, organizacionales), y (d) ofrece esperanza de cambiar (intrapersonal, interpersonal). Con relación a estos temas, los hallazgos de los participantes revelaron un vacío en la comunidad, con estándares, regulaciones e implementaciones a nivel de políticas públicas que tienen un bajo impacto en el conjunto periurbano WASH y en la salud pública, debido a la escasa participación de la comunidad y al deficiente conocimiento de las realidades WASH de las localidades altamente pobladas. Más que un enfoque descendente, los participantes recomendaron incrementar la colaboración gobierno-habitantes y ofrecer a los residentes más apropiación y empoderamiento para la intervención, la implementación y la defensa de los mejores estándares de WASH periurbano.

Palabras clave: fotovoz, periurbano, agua, saneamiento e higiene, salud pública, teoría ecológica. (Global Health Promotion, 2022; 29(3): 66–76)

Toallas higiénicas reutilizables en India rural: un proyecto remoto de mejora de la calidad para niñas adolescentes que promueve la salud y la higiene menstrual durante la pandemia de la COVID-19

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La investigación médica y de salud pública apoya los requerimientos de la promoción de la salud para responder a las necesidades de higiene menstrual, incluidas la educación en gestión de la higiene menstrual y la adopción de toallas sanitarias reutilizables. Este proyecto de mejora de la calidad se enfoca en la educación sobre la menstruación, dirigida a niñas adolescentes en la región rural de Tamil Nadu (India), y en la promoción de las toallas higiénicas reutilizables. Los resultados indican una mejora significativa en el conocimiento de la gestión de la higiene menstrual, un aumento en la confianza para manejar la menstruación, la adopción de las toallas sanitarias reutilizables y una disminución en los días de ausencia escolar. Estos hallazgos apoyan las recomendaciones generales de la promoción de la salud en India.

Palabras clave: jóvenes y adolescentes, colaboración/alianzas, educación (educación para la salud), salud mundial/globalización, promoción de la salud, salud reproductiva, rural, saneamiento/higiene. (Global Health Promotion, 2022; 29(3): 77–85)

¿Las redes sociales, como principal fuente de información sobre la COVID-19, están asociadas a la eficacia percibida de las mascarillas? Encuesta en seis países del África subsahariana

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Antecedentes: El uso de mascarillas como un método de la salud pública para limitar la propagación de la enfermedad por el coronavirus 2019 (COVID-19) ha sido un tema de debate. Una inquietud mayor es la difusión de desinformación en las redes sociales sobre las implicaciones de estos cubrebocas. Evaluamos la asociación entre los medios sociales, como principal fuente de información, y la eficacia percibida de utilizar las mascarillas.
Métodos: En seis países del África subsahariana (Botsuana, Kenia, Malaui, Nigeria, Zambia y Zimbabue) se les preguntó a los participantes si estaban de acuerdo con que el uso de las mascarillas faciales es efectivo para limitar la propagación de la COVID-19. Las respuestas fueron divididas en "estoy de acuerdo" y "no estoy de acuerdo". Igualmente, indicaron su principal fuente de información, entre redes sociales, televisión, periódicos, etc. Evaluamos la eficacia percibida de las mascarillas y utilizamos modelos logísticos multivariados para estimar la asociación entre el uso de las redes sociales y la eficacia percibida de portar un tapabocas. Se utilizó un puntaje de propensión para evaluar la solidez de los hallazgos.
Resultados: De 1988 participantes, 1169 (58.8%) utilizaron las redes sociales como principal fuente de información, mientras que 1689 (85%) estuvieron de acuerdo con que las mascarillas faciales son efectivas contra la COVID-19. En el análisis crudo, los encuestados que utilizaron las redes sociales fueron más propensos a estar de acuerdo con que el uso de mascarillas era efectivo, comparados con aquellos que no lo estuvieron [relación de probabilidades (OR) 1.29, 95% de intervalo de confianza (CI): 1.01–1.65]. Esta asociación continuó siendo significativa cuando se ajustó por edad, sexo, país, nivel de educación, confianza en la respuesta gubernamental, actitud hacia la COVID-19 y principales fuentes alternativas de información sobre la COVID-19 (OR 1.33, 95% CI: 1.01–1.77). Los hallazgos fueron similares en el análisis del puntaje de propensión.
Conclusión: Las redes sociales siguen siendo un canal viable de comunicación de riesgos durante la pandemia de la COVID-19 en el África subsahariana. A pesar de las inquietudes sobre la desinformación, estas redes pueden ser asociadas con una percepción favorable de la eficacia del uso de mascarillas faciales.

Palabras clave: intervenciones no farmacéuticas, COVID-19, redes sociales, mascarillas faciales, promoción de la salud. (Global Health Promotion, 2022; 29(3): 86–96)

El encuadre es importante, pero varía: análisis de la red semántica de las representaciones en los medios de la comida posFukushima en tres comunidades chinas

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Existe una brecha evidente entre los expertos científicos y el público no científico con relación a la seguridad que ofrecen los alimentos importados desde las áreas contaminadas por el desastre nuclear en Japón. La manera como estas inquietudes socio-científicas son enmarcadas en el discurso mediático puede tener repercusiones en la forma como la gente percibe y comprende las potenciales amenazas y, a su turno, influye en las políticas y regulaciones gubernamentales. En este estudio se realiza un análisis de la red semántica para examinar las diferentes representaciones mediáticas de la comida producida e importada después del accidente de Fukushima, a través de una búsqueda de fuentes de información (medios masivos y de búsqueda) y de tres comunidades chinas (Hong Kong, China continental y Taiwán). Encontramos

que la representación mediática de la crisis difiere entre las fuentes y los contextos sociopolíticos. También se discute cómo estos factores relacionados con el canal y con el contexto pueden afectar la opinión pública. Este conocimiento puede mejorar la toma de decisiones informada de las autoridades legislativas acerca de la seguridad alimentaria, orientar los esfuerzos de comunicación de los profesionales de crisis y hacer un llamado para abordar un enfoque más acorde con el contexto para la gestión de crisis de la salud pública.

Palabras clave: seguridad alimentaria, encuadre, representación mediática, opinión pública, análisis de red semántica. (Global Health Promotion, 2022; 29(3): 97–108)

Estudio cualitativo para explorar las habilidades en alfabetismo para la salud de las personas mayores de una comunidad desfavorecida en Brasil

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Nuestro objetivo es describir las experiencias vividas por las personas mayores con relación al acceso, la comprensión, la comunicación y a la valoración de la información en salud, en un contexto de atención primaria en una comunidad desfavorecida del Nororiente de Brasil. Se realizó un estudio de las entrevistas cualitativas a 42 personas mayores en dos centros de atención primaria de la ciudad de Arapiraca (Brasil). Las entrevistas semiestructuradas fueron guiadas por un instrumento cualitativo de alfabetismo para la salud, traducido y adaptado para su uso en Brasil. De los 42 participantes, 30 fueron mujeres y la mayoría ($n = 32$) tenían entre 60 y 69 años. El análisis cualitativo identificó que los participantes tenían dificultades para acceder, comprender y comunicar la información relacionada con la salud, muchas veces en el contexto de enfermedades crónicas. Pocos participantes demostraron una comprensión de temas de salud más específicos y muchos tuvieron dificultades al explicar e interpretar las condiciones de salud de manera más general. Muchos también indicaron que no buscan activamente información de salud y esto se agrava porque se reportó que los médicos les ofrecen información limitada acerca de los diagnósticos y del tratamiento de las condiciones de salud. Más de la mitad de los participantes dijeron no comprender los términos médicos incluidos en la información de salud, pero la mayoría admitió no tomar acciones para aclarar las dudas. En conclusión, observamos que las habilidades tradicionales del alfabetismo para la salud son muy escasas en esta población de personas mayores brasileñas que viven en una comunidad desfavorecida, donde muchos se resignan a no recibir la información de salud o dependen de otras fuentes que no son los profesionales de la salud. Los hallazgos de este estudio describen la necesidad de intervenciones de alfabetismo para la salud enfocadas a las personas mayores de Brasil. Probablemente sea más efectivo un enfoque de dos niveles que busque reducir las demandas y complejidades que se les imponen a los pacientes dentro del sistema de salud, y que también se dirija a las intervenciones para desarrollar sus habilidades y capacidades.

Palabras clave: alfabetismo para la salud, ancianos/adultos mayores, atención primaria de salud, promoción de la salud. (Global Health Promotion, 2022; 29(3): 109–118)

Atención médica y necesidades sociales de los migrantes internacionales durante la pandemia de la COVID-19 en Latinoamérica: análisis del caso chileno

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Los migrantes internacionales son un grupo particularmente vulnerable en el contexto de la pandemia de la enfermedad por el coronavirus 2019 (COVID-19). Los inmigrantes en Chile tienden a experimentar una pobreza multidimensional y diferentes niveles de vulnerabilidad social. Nuestro análisis busca describir las necesidades sociales y de salud percibidas entre los migrantes internacionales durante la pandemia de la

COVID-19 en Chile, en términos de migración como un determinante social de la salud y de vulnerabilidad social estratificada. Realizamos un análisis cualitativo de las respuestas a una pregunta abierta enfocada en las necesidades sociales y de salud relacionadas con la pandemia, incluida en un cuestionario en línea enviado en abril del 2020 a los migrantes internacionales residentes en Chile. La información recopilada se analizó temáticamente. Incluimos 1690 participantes, quienes expresaron sus necesidades relacionadas con la salud y otras vinculadas a la respuesta general socioeconómica y política, al empleo, a las condiciones materiales y a los aspectos psicosociales. También reportaron necesidades relacionadas con "ser un migrante". Además, algunos participantes describieron situaciones de vulnerabilidad. Analizamos sus necesidades y las situaciones de vulnerabilidad identificadas en torno a los siguientes marcos emergentes: (a) trabajo y condiciones de vida, (b) trampas de regularización y falta de apoyo percibida, y (c) necesidades de salud física y mental. Los migrantes internacionales en Chile reportaron experimentar niveles interrelacionados de vulnerabilidad social durante la pandemia de la COVID-19, cuando "ser un migrante" exacerba los riesgos de salud física y mental. Estos temas resultan desafíos inmediatos y directos para la salud pública, y revelan diferentes aspectos de la vulnerabilidad social relacionada con el estatus migratorio, el empleo y las barreras para acceder a la atención en salud, que deberían ser abordados mediante políticas y medidas más amplias.

Palabras clave: migrantes internacionales, determinantes sociales de la salud, vulnerabilidad social, Latinoamérica, COVID-19. (Global Health Promotion, 2022; 29(3): 119–128)

El efecto de la formación en promoción de la salud impartida a adultos mayores durante la pandemia de la COVID-19, en sus hábitos de vida saludables

Filiz Polat y Fatma Karasu

Antecedentes: Una de las áreas más afectadas por la pandemia de la COVID-19 es la promoción de la salud. Con el fin de mejorar la calidad de vida de las personas mayores, es importante desarrollar e implementar unas estrategias de intervención efectivas que puedan prevenir los resultados negativos de salud.
Objetivo: El propósito de este estudio es determinar el efecto de la capacitación en promoción de la salud impartida a los adultos mayores en sus hábitos de vida saludables.
Métodos: Este estudio fue realizado como un análisis experimental controlado aleatorizado, con 140 adultos mayores, de más de 65 años, incluyendo 70 participantes en un grupo de intervención y 70 en un grupo de control. Los datos se recopilaron utilizando el Formulario de Información y la Healthy Lifestyle Behaviors Scale-I. Al grupo de intervención se le ofreció una capacitación a razón de una sesión semanal, durante tres semanas. Para evaluar los resultados se utilizaron el porcentaje, la media aritmética y la desviación estándar, así como pruebas de chi cuadrado, pruebas t de muestras dependientes y pruebas t de muestras independientes.
Hallazgos: Mientras que la media de la prueba previa del grupo de intervención para la Healthy Lifestyle Behaviors Scale-I fue de 103.90 ± 16.96, su prueba posterior tuvo un puntaje medio de 136.17 ± 19.60 y se encontró que hubo una diferencia estadísticamente significativa entre los resultados ($p = 0.000$). En el grupo de control, la puntuación media de la prueba media para la Healthy Lifestyle Behaviors Scale-I fue de 107.22 ± 21.09, el puntaje promedio de su prueba posterior fue 106.57 ± 21.49 y no se encontró una diferencia estadísticamente significativa entre los resultados ($p = 0.609$).
Conclusión: Se observó que los hábitos de vida saludables de las personas mayores en el grupo de intervención mejoraron de manera positiva.

Palabras clave: personas mayores, promoción de la salud, estilo de vida saludable, capacitación, Turquía. (Global Health Promotion, 2022; 29(3): 129–139)

Cómo abordan las ciencias sociales la infodemiología: comprender el contexto social, político y económico de la información

Jennifer Cole, Olivia Tulloch, Megan Schmidt-Sane, Tabitha Hrynick y Santiago Ripoll

Incrustada en la pandemia de la COVID-19 se propaga ahora la nueva pandemia de información – alguna exacta, otra no –, que puede desafiar la respuesta de la salud pública. Esta se ha definido con el término de "infodemia" y la gestión infodémica es ahora uno de los principales objetivos del trabajo de la Organización Mundial de la Salud durante las emergencias de salud. Este comentario resalta los aspectos políticos, sociales y económicos de la infodemia y propone a las ciencias sociales como fundamentales para mitigar la infodemia actual y prevenir las futuras. Los encargados de analizar y combatir la infodemia deberían abordar su contexto más amplio si queremos comprender las narrativas, ayudar a elaborar otras positivas y confrontar las raíces que causan la desinformación en lugar de solo quedarse en los síntomas.

Palabras clave: infodemiología, gestión de la infodemia, información, desinformación, ciencias sociales. (Global Health Promotion, 2022; 29(3): 140–144)

"No los/las podemos tocar": la PrEP, los/las migrantes africanos(as) y la producción de la ignorancia

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Algunos años después de haber sido lanzada al mercado, se ha hecho evidente que la profilaxis previa a la exposición (PrEP) no llega a todo el mundo, incluso en el Norte global, su principal punto de distribución. Los/las migrantes africanos(as), el grupo más vulnerable a la epidemia, después de los hombres que tienen relaciones sexuales con hombres, no la utilizan tan a menudo y ni siquiera casi la conocen. Este artículo invita a considerar la no utilización de la PrEP por los/las migrantes africanos(as) no como un problema dependiente del público objetivo, sino como un efecto de la ignorancia producida por "la industria del sida" en este público. La ignorancia se entiende aquí como una producción activa en la articulación de aspectos farmacéuticos, políticos y epistémicos que muestran opciones no investigativas donde el conocimiento podría ser útil para el público interesado.

Palabras clave: profilaxis previa a la exposición (PrEP), migrantes africanos, VIH/sida, categorizaciones, ignorancia, invisibilidad, Bélgica, Francia. (Global Health Promotion, 2022; 29(3): 151–154

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