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THE 4th INTERNATIONAL CONFERENCE ON PUBLIC HEALTH 2018

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Graduate Studies in Public Health,
Graduate Program, Universitas Sebelas Maret
Jl. Ir Sutami 36A, Surakarta 57126.
Telp/Fax: (0271) 632 450 ext. 208
First website: <http://s2ikm.pasca.uns.ac.id>
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PROCEEDINGS

THE 4th INTERNATIONAL CONFERENCE ON PUBLIC HEALTH

THEME: REACHING THE UNREACHED: IMPROVING POPULATION HEALTH IN THE RURAL AND REMOTE AREAS



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ISBN: 978-602-71484-6-8



THEME:
REACHING THE UNREACHED:
IMPROVING POPULATION HEALTH
IN THE RURAL AND REMOTE AREAS



Best Western Premier Hotel
Solo, Central Java, Indonesia
**August 29-30
2018**

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POPULATION HEALTH IN THE RURAL
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Masters Program in Public Health,
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District Government of Surakarta, Central Java

Date : August 29-30, 2018
Venue : Best Western Premier Hotel, Solo, Indonesia
Website : www.theicph.com
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The 4th International Conference on Public Health

“Reaching the Unreached: Improving Population Health in the Rural and Remote Areas”

Best Western Premier Hotel, Solo, Indonesia

August 29-30, 2018

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ISBN: 978-602-71484-6-8

First Printing: 2018

ISBN 978-602-71484-6-8



Published by:

Graduate Program in Public Health, Universitas Sebelas Maret

Jl. Ir Sutami 36A, Surakarta 57126. Central Java, Indonesia

Telp/Fax: (0271) 632 450 ext.208

First website: [http://: pasca.uns.ac.id/s2ikm](http://pasca.uns.ac.id/s2ikm)

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PREFACE



Prof. Bhisma Murti
Chair, ICPH

Good Morning. Assalamualaikum Wr. Wb. Selamat pagi, salam sejahtera, salam bahagia bagi kita semua. Honorable Rector of Universitas Sebelas Maret, Distinguished international and domestic speakers, Respectable invited guests, and honorable participants from all over Indonesia.

Today and tomorrow we will have an international conference, namely the International Conference of Public Health (ICPH). It is the fourth of its kind, and the current theme reads “Reaching the Unreached: Improving Population Health in the Rural and Remote Areas”. This theme arises from the very basic principle that health is the fundamental human right. Every human being has the basic right to be healthy at the highest possible level, regardless of age, gender, race, ethnics, religion, socio-economic position, and geographical location.

This conference we would like to discuss and recommend some suggestions on how to improve the health of the disadvantaged population, the unreached population, the neglected population, the under-served population, the population in the rural and remote areas.

At this precious occasion, first of all I would like to welcome and appreciate Rector of Universitas Sebelas Maret. This conference aims to contribute to the attainment of the vision of this university to be a world-class university.

Next, I would like to welcome and extend my high appreciation to the distinguished and very well-known invited speakers, both international and domestic, who come from seven countries, including the United Kingdom (Prof. Amanda Howe), Switzerland (Prof. Bettina Borisch), Thailand (Prof. Wongsa Laohasiriwong), the United States of America (Prof. Jessica Gipson), Japan (Prof. Ashir Ahmed), Australia (Prof. Adrian Schoo), and Indonesia (Dr. Arry Pongtiku from Papua, and Dr. Nurmilia Afriliani from Aceh, and Dr. Hanung Prasetya from Solo).

Next, I would like to welcome respectable participants of this conference. I appreciate very much your enthusiasm to participate and attend at this meeting. I have a note that by now the total number of participants attending this meeting is more than 600 people. Participants come from 21 provinces of all 34 provinces of Indonesia, including Aceh, North Sumatera, Riau, Jambi, West Sumatera, South Sumatera, Bengkulu, Lampung, Banten, West Java, Central Java, East Java, Bali, West

Kalimantan, South Kalimantan, North Sulawesi, South Sulawesi, South-East Sulawesi, West Nusa Tenggara, East Nusa Tenggara, and lastly Papua. A few participants come from Malaysia, Thailand, Taiwan, and Canada.

I have to mention participation of six universities with the greatest number of delegates. They are Universitas Sumatera Utara, Universitas Nusa Cendana, Universitas Muhammadiyah Yogyakarta, Universitas Sultan Agung, Universitas Diponegoro, and STIKES Muhammadiyah Kudus.

Let me remind you that the International Conference on Public Health has four programs: Symposium on Day 1, Workshop and Oral Presentation of research work on Day 2, and poster presentation of research work on Day 1 and 2.

Lastly, I have to acknowledge and extend my appreciation to the local governments of Solo city and Karanganyar district for their support for this event. To all respectable participants, honorable speakers and invited guests, I hope you and the population at large can benefit much from this conference. Thank you. Wassalamualaikum Wr.Wb.

Surakarta (Indonesia), August 29, 2018

Prof. Bhisma Murti
Chair, the 4th International Conference
on Public Health.

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BACKGROUND

Access to healthcare services is critical to good health. Yet one billion people (15% of the world population) are unreached in terms of accessing to quality healthcare service. Most of the unreached people are from rural areas in developing countries (Ahmed et al., 2013). Residents in the rural and remote areas face a variety of barriers to healthcare services. People in the rural and remote areas might not be able to get to a hospital quickly in an emergency they need. They also might not want to travel long distances to get routine checkups and screenings (Medline Plus, 2018). In most rural and isolated areas, it can take hours to reach the nearest puskesmas (health centers) due to poor road condition, topography, and a lack of transportation. Particularly for countries with outstretched geographical areas like Australia, China, Canada, Ethiopia, and, Indonesia, ensuring access to timely and quality health care needed is a thorny issue. For example, villagers of Papua (Indonesia) have to make an extra effort to get medical services as the region has geographical challenges with low and high-land forest areas (Figure 1).



Figure 1. Dani tribe woman in their traditional outfits walking in Ugem Village, Baliem Valley, West Papua, Indonesia - circa February 2016. Source: Dreamstime, 2017

Remote and rural areas often face the lack of health workforce like nurses and midwives. Doctors, dentists, and specialists might be unavailable at all. Globally, approximately one half of the population lives in rural areas, but less than 38% of the nurses and less than 25% of the physicians work there (World Health Organization, 2018). Local puskesmas are often run by one nurse or midwife who is responsible for a population of several thousand residents. In effect the access to healthcare services in a country with thousands of islands like Indonesia and other countries with outstretched vast land like in Africa and Australia is vastly unbalanced. Many isolated areas do not have the standard health professional to people ratio.

Figure 2 shows an inactive subhealth center in Dombu village, Marawola Barat, Sigi district, Central Sulawesi, due to the absence of health manpower (Kompas, 2015).



Figure 2. An inactive subhealth center in Dombu village, Marawola Barat, Sigi district, Central Sulawesi, Indonesia, due to the absence of health manpower. Source: Kompas, 2015

Because it can be hard to get care, health problems in remote and rural residents may be more serious by the time they are diagnosed (Medline Plus, 2018). In turn, the critical shortages, inadequate skill mix and uneven geographical distribution of the health workforce pose major barriers to achieving the equitable distribution of population health. Most districts in Papua, like in Puncak district, Papua, are in need for supply of health care facilities and health workforce (Pademme, 2016).

On top of that, people in poor countries tend to have less access to health services than those in better-off countries, and within countries, the poor have less access to health services (Peters et al., 2008). Most villagers living in hard-to-access areas are commonly poor and near-poor, leaving them at risk as it is difficult for them to bear the costs of medical treatment. Getting necessary health services in these settings may lead to time off work and a loss of pay to look after ill relatives, paying transportation and medication costs and perhaps even taking out a loan to cover medical expenses (Wiradji, 2016). For example, due to poverty, sick villagers in remote area in Nias island, North Sumatera, Indonesia, are taken to puskesmas (health center) only after health condition become worse. The ship fare to get Sumatera mainland was Rp 100,000 per person, and the caring family must bear the lodging cost and other expenses. It took 3-6 hours inter-island travel from the farthest island to reach the health facilities (Khalikholic, 2009).

Challenges related to low income, poverty, lower levels of education and higher unemployment negatively affect health status of rural and remote citizens and place them at greater risk for poorer quality of life and poorer

health than those living in urban areas. As a consequence, isolated areas lag behind other easy-to access areas when it comes to community health. Rural populations have poorer levels of health status than their urban counterparts (White, 2013).

For example, in Indonesian underserved isolated areas, the maternal and child mortality rate reportedly remaining high as children in particular are vulnerable to diarrhea, malaria and other infectious diseases (Wiradji, 2016). In rural Canada, in comparison to urban areas, rural areas tend to have higher disability rates, shorter life expectancy, higher infant mortality rates and higher death rates due to injuries, circulatory and respiratory diseases, diabetes and suicide (White, 2013). Likewise, heart disease kills more regional, rural and remote Australians (HealthTimes, 2017).

Although a lack of financial resources or information can create barriers to accessing services, the causal relationship between access to health services and poverty also runs in the other direction (Figure 4). When health care is needed but is delayed or not obtained, people's health worsens, which in turn leads to lost income and higher health care costs, both of which contribute to poverty (Peters et al., 2008).

In order for rural and remote residents to have sufficient healthcare access, it is essential to ensure that necessary and appropriate services are available and obtainable in a timely manner. As the Ministry of Health Regulation (Permenkes) Number 75 Year 2015 on Puskesmas (Health Center) states it, every puskesmas must have a doctor, dentist, nurse, midwife, public health worker, environmental health worker, laboratory technician, dietician, and pharmacist. However, a large number of puskesmas in the remote, country border, and isolated places of Indonesia are lacking in health workforce. About 5 percent of 9,731 puskesmas did not have any doctor in 2016 (Jamsos Indonesia, 2016). In order to fill the shortage of health workers in remote areas, the Ministry of Health has launched "Tim Nusantara Sehat" program since 2015. In 2015 the Ministry of Health assigned "Tim Nusantara Sehat" in two phases. Phase 1 consisted of a total of 1,143 health workers designated to 20 puskesmas in 9 provinces. Phase 2 comprised a total of 553 health workers allocated to 100 puskesmas in 14 provinces (Jamsos Indonesia, 2016).

In May 11, 2016, Ministry of Health signed a Memorandum of Understanding of "Nusantara Sehat" with 27 district governments from 16 provinces. It calls for the local government support for "Tim Nusantara Sehat" in each of their jurisdictions. The local governments are expected to guarantee the life safety of "Tim Nusantara Sehat" on duty, and to provide infrastructure and appropriate housing for the health manpower. The local governments are also expected to issue Surat Izin Praktik (Practice License) for the "Tim Nusantara Sehat" to be able to do clinical practice (Jamsos Indonesia, 2016).

Researchers and community development innovators have attempted to develop models on how to improve access to health care for people living

in the rural and remote areas. White (2013) highlighted the need for population health data that describe not only the health status of the population, but also the social determinants of health and policies underpinning variations in rural and urban health. A population-based health promotion approach has been proposed, which features a pragmatic shift in thinking about population health with health status is determined by a wide range of factors, including income and social status, social support networks, education and literacy, employment/working conditions, social environments, physical environments, personal health practices and coping skills, healthy child development, biology and genetic endowment, health services and gender. All of these factors are influenced by whether an individual lives in a rural or an urban setting.

The broader way of thinking about rural and remote health shifts from the “medical model” that encompasses evidence-based medicine to one of community capacity-building for health that also emphasizes a rural health promotion response. This comprehensive population-based health promotion approach is believed to be effective as healthcare reform for the population health in the rural and remote areas (White, 2013).

White (2013) has carried out a literature review of 30 papers to describe the development and application of an evidence-based Rural Health Framework from a population health approach to guide rural and remote health program, policy and service planning. From the literature the author identified six key elements for rural health population program planning and delivery that can be used to guide the development of rural health programs (Figure 3). These six key elements are adopted with an adjustment of the element order that can be used for rural and remote health population program planning and delivery, as follows (White, 2013)

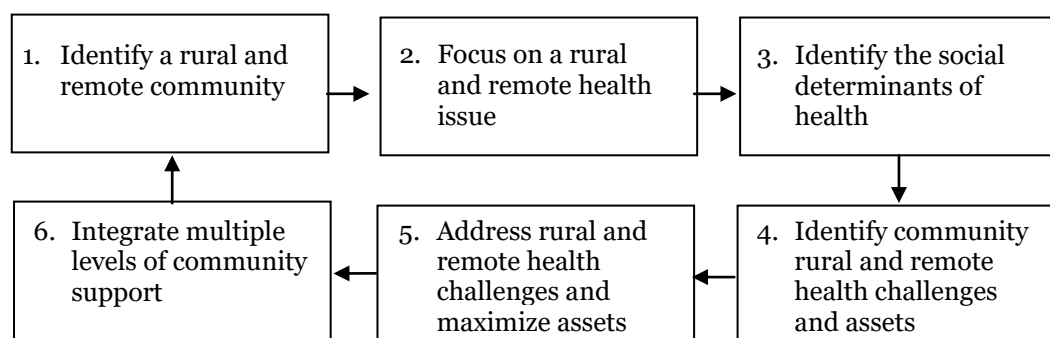


Figure 3. An evidence-based Rural Health Framework from a population health approach to guide rural and remote health program, policy and service planning, based on White (2013)

1. Identify a rural and remote community

A rural and remote population health approach identifies rural and remote areas using a common definition. Each definition emphasizes different criteria such as population size, labour market context, population density, or

settlement context and as such, has important implications for program planning.

2. Focus on a rural and remote health issue

A rural and remote population health approach uses evidence to assess the health status of the population and respond to identified needs. Evidence-informed practice uses population health assessments, surveillance, research and program evaluation to generate evidence. It answers the following questions: How healthy is the rural population? How do we know? What are the community's priorities? Are there any emerging issues? What are the priority populations? How does the health of the population look over time? Is the population health status getting worse or better?

3. Identify the social determinants of health

A rural and remote population health approach considers a full range of factors that influence and contribute to health, including social environments, income and social status, education and literacy, employment/working conditions, physical environment, personal health practices and coping skills, culture, health services, healthy child development, biology and genetic endowment, social support networks and gender.

4. Identify community rural and remote health challenges and assets

A rural and remote population health approach calls for the identification of rural health challenges and assets using a framework based on the social determinants of health. Challenges are informed by population health assessment, surveillance, research, program evaluation and personal experiences. Examples of challenges are access to healthcare services, geographic and social isolation, and poverty. Assets are advantages and attributes within a rural community that are vital to sustainability and growth, such as physical infrastructure (buildings), green space, social aspects of community living, agriculture and volunteerism.

5. Address rural and remote health challenges and maximize assets using good practices for rural and remote program planning and delivery

A rural and remote population health approach involves addressing health challenges and maximizing assets using a framework based on the social determinants of health. This approach contributes in meaningful ways to the development and implementation of strategies to improve health and is based on good practices in minimizing rural health challenges and maximizing assets as identified in the literature review.

6. Integrate multiple levels of community support

A rural and remote population health approach uses multiple levels of support from various sectors and levels that have a vested interest in the health of the target population in every phase of the project. Early collaboration is recommended and includes but is not limited to researchers, health professionals, community organizations, government and other key stakeholders.

Figure 4 depicts a conceptual framework that can be used to assess access to health services in remote and rural areas. This framework describes four

main dimensions of access, each having a supply-and-demand element, and include the following (Peters et al., 2008):

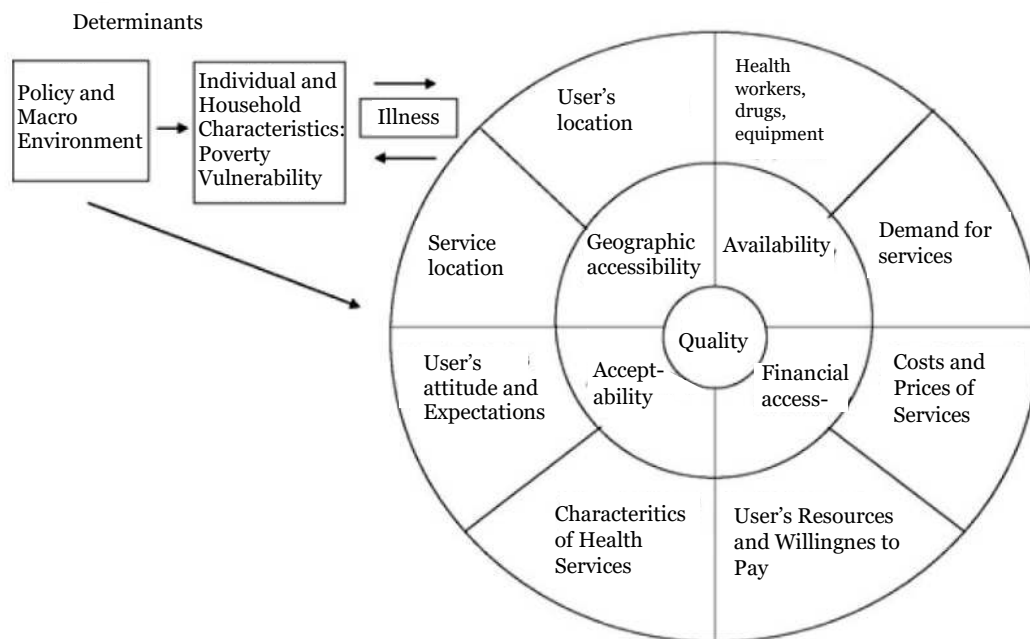


Figure 4. Conceptual framework for assessing access to health services. Source: Peters et al., 2008

1. Geographic accessibility—the physical distance or travel time from service delivery point to the user
2. Availability—having the right type of care available to those who need it, such as hours of operation and waiting times that meet demands of those who would use care, as well as having the appropriate type of service providers and materials
3. Financial accessibility—the relationship between the price of services (in part affected by their costs) and the willingness and ability of users to pay for those services, as well as be protected from the economic consequences of health costs
4. Acceptability—the level of responsiveness of health service providers to the social and cultural expectations of individual users and communities

In Figure 4, quality of care is at the center of the circle of all four dimensions of access to health services, because it is an important component of each dimension and is ultimately related to the technical ability of health services to affect people's health. To the left of the circle are sets of more distal determinants of health service access, shown at the policy or macroenvironmental level, as well as the individual and household levels (Peter et al., 2008).

Policy-makers in all countries, regardless of their level of economic development, struggle to achieve health equity and to meet the health needs of their populations, especially vulnerable and disadvantaged groups. As

noted above, there are a number of challenges including a complex one to ensure people living in rural and remote locations to have access to trained and motivated health workers.

Based on the problem background described above, the 4th International Conference on Public Health is planned to be conducted in Solo, Indonesia, on August 29-30, 2018, to discuss these issues of remote and rural health. The scopes of discussion cover four areas of WHO recommendation with specific issues, as follows:

7. Education:

Targeted student admission policies, location of health professional schools, student exposure to rural and remote community experiences, revision of undergraduate and postgraduate curricula, design of continuing education and professional development

8. Regulatory:

Enhanced scope of practice to increase job satisfaction, thereby assisting recruitment and retention, introduction of different types of health-related workers, compulsory service requirements, provision of scholarship and other education subsidies

9. Financial incentives:

Use of a combination of fiscally sustainable financial incentives (such as hardship allowances, grants for housing, free transportation, paid vacations etc.) sufficient enough to outweigh the opportunity costs associated with working in rural and remote areas (as perceived by health workers) to improve rural retention.

10. Personal and professional support:

Improved living conditions for health workers and their families and investment in infrastructure and services, provision of a good and safe working environment, implementation of appropriate outreach activities to facilitate cooperation between health workers from better served areas and those in underserved areas, support for remote and rural career development programmes, support for the development of professional networks, adoption of public recognition measures.

Researchers have investigated the likely effective interventions to address health issues in rural and remote areas. For example, Verma et al. (2016) conducted a systematic review that aimed to evaluate interventions and strategies used to recruit and retain primary care doctors internationally. The authors identified several tested intervention that are of value for an improvement in recruitment and retention of health workers in rural and remote areas. These interventions, from the strongest to weakest evidence, are as follows: (1) Financial incentives; (2) Recruiting rural students; (3) International recruitment; (4) Rural or primary care focused undergraduate placements; (5) Rural or underserved postgraduate training; (6) Well-being or peer support initiatives; (7) Marketing; (8) Mixed incentives; (9) Support for professional development and academic opportunities; (10) Retainer schemes; (11) Re-entry schemes; (12) Delayed partnership; (13) Specialized recruiter or case managers.

A study by King et al. (2016) reported another evidence with different perspective on the retention of rural health workers in Australia. Through rural clinical schools (RCSs), medical students may undertake an extended block of clinical training in rural Australia. The premise of these placements is that meaningful rural exposure will facilitate rural career uptake. RCSs offer a range of supports to facilitate student engagement in the program. The study aimed to analyze RCS students' perceptions of these supports and impact on intentions to work rurally. The results showed that student perceptions of supports offered by RCSs were generally very positive. Perceptions of financial support were not predictive of rural career intent. Although this does not negate the importance of providing appropriate financial supports, it does demonstrate that student wellbeing is a more important recruitment factor for rural practice.

Ahmed et al. (2013) introduced the application of information and communication technology (ICT) to solve the issues of insufficient healthcare facilities and unavailability of medical experts in rural areas. In line with the recent penetration of mobile phone in developing countries, Ahmed et al. (2013) has introduced a pervasive way to serve the unreached community for preventive healthcare using the ICT. The authors call it a “portable clinic” with a software tool “GramHealth” for archiving and searching patients' past health records. In order to observe the local adoption of the technology, they carried out experiments in three remote villages and in two commercial organizations in Bangladesh by collaborating with local organization. The authors also monitored the usability of the portable clinic and verified the functionality of “GramHealth”. The mobile-phone based remote health consultancy system has some advantages and technical challenges.

REFERENCES:

- Ahmed A, Nakashima N, Inoue S, Nohara Y (2013). Portable Health Clinic: A pervasive way to serve the unreached community for preventive-healthcare. From book: Distributed, Ambient, and Pervasive Interactions: First International Conference, DAPI 2013, Held as Part of HCI International 2013, Las Vegas, NV, USA, July 21-26, 2013. Proceedings (pp.265-274)
- Dreamstime (2017). Dani tribal people in Ugem Village. <https://www.dreamstime.com/editorial-photo-dani-tribal-people-ugem-village-baliem-valley-west-papua-indonesia-circa-february-tribe-woman-their-traditional-outfits-walking-image74189396>. Accessed in May 2018.
- Health Times (2017). Remote Health. <https://healthtimes.com.au/hub/remote-health/52/>. Accessed in May 2018.
- Jamsos Indonesia (2016). 130 puskesmas daerah terpencil diperkuat. http://www.jamsosindonesia.com/newsgroup/selengkapnya/130-puskesmas-daerah-terpencil-diperkuat_9824. Accessed in May 2018.

- Khalikholic (2009). Ribuan puskesmas di daerah terpencil tak ada dokter
<http://khalikholic.blogspot.co.id/2009/03/ribuan-puskesmas-di-daerah-terpencil.html>. Accessed in May 2018.
- Pademme A (2016). Puskesmas Gome butuh penambahan fasilitas.
<http://tabloidjubi.com/16/2016/04/05/puskesmas-gome-butuh-penambahan-fasilitas-2/> Accessed in May 2018.
- Peters DH, Garg A, Bloom G, Walker DG, Brieger WRr, Rahman HM (2008). Poverty and access to health care in developing countries. *Ann. N.Y. Acad. Sci.* 1136: 161–171
- King K, Purcell R, Quinn S, Schoo A, Walters L (2018), Supports for medical students during rural clinical placements: factors associated with intention to practise in rural locations. *Rural and Remote Health* 2016; 16: 3791. Available: www.rrh.org.au/journal/article/3791. Accessed in May 2018.
- Medline Plus (2018). Rural Health Concerns. <https://medlineplus.gov/ruralhealthconcerns.html>. Accessed in May 2018.
- Verma P, Ford JA, Stuart A, Howe A, Everington S, and Steele N (2016) A systematic review of strategies to recruit and retain primary care doctors. *BMC Health Services Research*. 16:126. DOI 10.1186/s12913-016-1370-1
- White D (2013). Development of a rural health framework: implications for program service planning and delivery. *Healthc Policy*. 8(3): 27–41a.
- Wiradji SM (2016). Addressing health issues among underserved communities in isolated areas. <http://www.thejakartapost.com/adv/2016/10/26/addressing-health-issues-among-underserved-communities-in-isolated-areas.html>. Accessed in May 2018.
- World Health Organization (2018). Global policy recommendations: Increasing access to health workers in remote and rural areas through improved retention. http://www.who.int/hrh/retention/Executive_Summary_Recommendations_EN.pdf?ua=1. Accessed in May 2018.



A. Systems thinking and conceptualising rural health workforce development with optimised access to sustainable health services

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This paper approaches workforce development (with a focus on rural health workforce) by using a complexity systems lens, considers the educational perspective and the role of clinical educators as leaders, and highlights the implications for education and training. Rural health, health workforce and associated needs-based health services can be seen as wicked problems where new interventions can cause new problems. Systems thinking and collaboration are needed to agree on solutions that address multifactorial issues to optimise outcomes. A conceptual model is presented to assist health professionals, policymakers and other decision-makers in making sense of complexity so that they may be able to work towards optimal solutions.

Background

Reasons such as changing populations and associated health needs, medical and technical advancement, new roles, specialisation, political agendas and available resources are making health systems increasingly complex. Systems thinking, innovation, leadership and teamwork are needed to work successfully in this dynamic environment. Consequently, there is an opportunity for programmed education and training to prepare health students as well as professionals through transformative learning to bring about innovation, and optimal and sustainable outcomes for all stakeholders using skills such as systems thinking, communication and leadership. This is particularly relevant in rural areas where access to health professionals and their services is limited by factors such as the ability to recruit and retain sufficient health workforce numbers.

Health professionals generally work in an environment that spans across multiple sectors with many stakeholders and a diversity of interests. Issues that health professionals, particularly the clinical educators who work at the intersection of health services and education, may need to negotiate are matters such as competing health services (e.g., public versus private, acute versus chronic), little or no research culture or organisational support for interprofessional learning and fieldwork placement, competing timetables, bureaucracy, challenging staff/students, high clinical workloads, geographic isolation and limited professional development and career opportunities (particularly for rural health professionals).

To assist health professionals in understanding and preparing for their role in contemporary complex systems there is a need to recognise that education needs to go beyond the acquisition of knowledge and clinical skills alone in order to prepare them for their roles as leaders of change.¹ Enhanced clinical education could optimise health services through best clinical/non-clinical practice (evidence-based research, consumer/stakeholder preferences and competency).

One way that health professionals/clinical educators, can be encouraged to understand and analyse the complexity within which they work, and identify opportunities to optimise impact, is by utilising a micro-meso-macro level framework.

Micro – Clinical micro systems (departmental or sub organisational level)

Clinical microsystems are the small, functional, front-line units that provide health care to discrete subpopulations.² They are the essential building blocks of larger organisations and health systems where patients and providers, including students, meet. The challenge for health professionals is to identify their unique educational and training needs and for clinical educators to be able to integrate provisions of best practice health care and clinical education that is scaffolded by research. Adopting an improvement cycle (identify, plan, implement, evaluate etc.) can enhance outcomes of micro-systems over time.

Meso – Learning organisation (organisational level)

At the meso level, the focus is on organisational context and environment. Evidence-based practice, value for money and commitment to learning are required in an increasingly dynamic and complex health care environment. Learning organisations³ provide the environment that allows people to learn how to work and develop together on a continual basis through shared vision, mental models, personal mastery, teamwork/learning and systems thinking,⁴ and where errors/challenges are seen as learning opportunities.

Macro – Socio-political (community/government level)

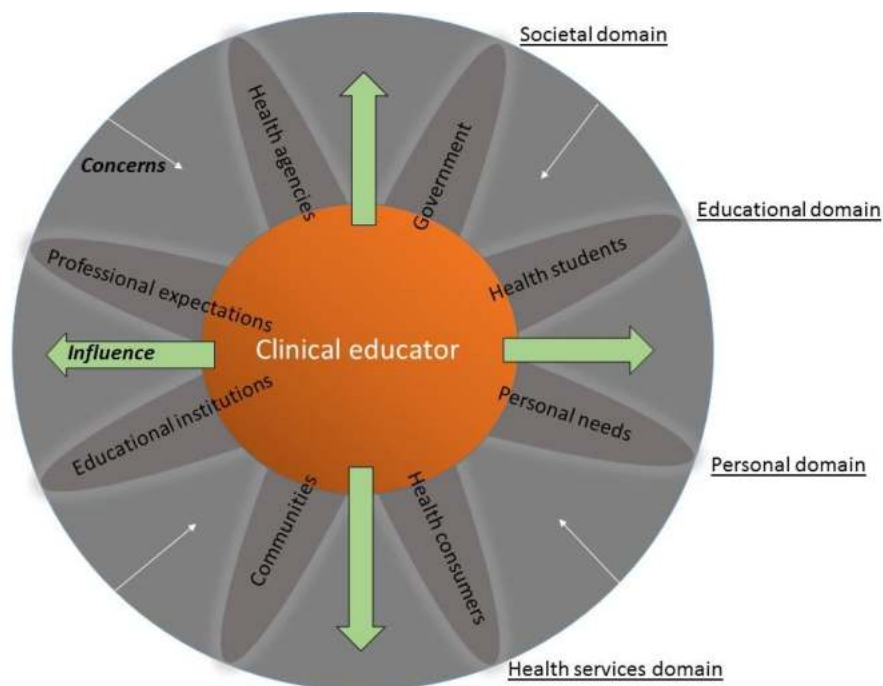
At the macro level, there is a focus on the broader socio-political system of health care and clinical education. Aiming for optimal results requires sys-

tems thinking beyond the departmental and organisational levels, and recognising multiple key stakeholders with their unique capacities and needs to achieve sustainable outcomes based on a win-win approach.

An integrated conceptual model

Illustrating the complexity for clinicians/educators, and assisting them in identifying possible issues and stakeholders, an integrated systems thinking framework can be applied to micro, meso and macro levels that is based on a conceptual model as shown in Figure 1. It outlines four domains, namely: (i) the personal domain that encompasses personal and professional needs and expectations; (ii) the health services domain that represents the health agencies and populations they serve; (iii) the educational domain which includes the educational institutions and their students; and (iv) the societal domain that represents the local community/region and government. This evidence-based model is based on those developed by Schoo and colleagues^{5,6} and Worley.^{7,8} The clinical educator is purposefully positioned at the centre of the model to draw attention to how educators are placed within a broad and complex interconnected system. The four domains model also draws on Covey's⁹ ideas of issues that may be of 'concern' to or that can be 'influenced' by the clinical educator. Concerns are issues largely outside the locus of control of the educator, whereas influence represents issues that can be optimised by actors within the four domains. Since there are tensions within each domain and between the domains, non-clinical skills (e.g., communication and leadership skills) can expand the educator's circle of influence and have a positive impact symbiosis between the domains. Influence can be enlarged by understanding mutual needs, responsibilities and opportunities within the domains and how these may intersect. Shared vision, leadership and collaboration (i.e. aiming for win-win situations) are likely to decrease tension and competition between parties, and optimise influence within and across domains on common issues/concerns stakeholders are facing.

Figure 1. An integrated conceptual model with four domains of concern to the clinical educator



Translation into practice

Systems thinking, recognising stakeholders, processes and issues on micro, meso and macro levels and fostering ownership can help to optimise outcomes through innovation and leading change. Although increasingly complex when moving from micro view to a macro view on health systems, the framework can enhance understanding and achieving sustainable outcomes. Symbiotic relationships, utilising personal and team learning and skill development are important within the context of a learning organisation where challenges are seen as learning opportunities. Educators are able to teach and transfer skills needed to build effective symbiotic relationships that have a positive impact on health workforce and health systems.

Factors to be considered to positively impact on rural health workforce and associated health services include student placement (i.e., rural pathway), collaboration between public and private health services to best serve rural and remote communities, prioritising between acute care and chronic disease management as appropriate for the community and its region, introducing workforce retention strategies (e.g., supporting career pathways through professional development and clinical supervision training), teaching best practice, team and organisational effectiveness training, and developing a positive learning environment and research culture. In relation to the latter, evidence shows a number of benefits for organisations that have a positive research culture,¹⁰ although this is not always present in nursing and allied health.¹¹ Health professionals and clinical educators could ensure that this research culture, best practice and people skills ex-

tend across the disciplines to benefit the organisation, staff, students, consumers and policymakers/decision-makers.

A recent commissioned publication focuses on clinical education and provides more detail on the four domains and three system levels, and implications for education and training.¹²

Informing policy

Research questions and findings could inform policies that support innovation around rural health workforce and health services enhancement. Legitimate questions include: (i) Can evidence-based policy support collaboration between communities, health services, education providers and health professionals to provide effective and sustainable health services? (ii) If so, can regional health needs and individual educational needs of health professionals be reconciled with organisational needs and community needs? (iii) What are the mechanisms underlying outcomes associated with a multi-faceted approach to social capital, social relations and organisational development (e.g., interprofessional collaborative practice, service quality and sustainability, and job satisfaction)?⁵

References:

1. Frenk J, Chen L, Bhutta ZA, Cohen J, Crisp N, Evans T, et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *The Lancet*, 376(9756), 1923-1958. 2010;376(9756):1923-58.
2. Nelson EC, Godfrey MM, Batalden PB, Berry SA, Bothe AE, McKinley KE, et al. Clinical microsystems, Part 1. The building blocks of health systems. *The Joint Commission Journal on Quality and Patient Safety*. 2008;34(7):367-78.
3. Senge P, Kleiner A, Roberts C, Ross R, Roth G, Smith B. *The dance of change: The challenges of sustaining momentum in learning organizations*. London: Nicholas Brealey Publishing; 2000.
4. Senge PM. *The Fifth Discipline: The Art and Practice of the Learning Organisation*. New York: Century Business; 1990.
5. Schoo A, Lawn S, Carson D. Towards Equity and sustainability of rural and remote health services access: Supporting social capital and integrated organisational and professional development. *BMC Health Services Research*. 2016;16(111).
6. Schoo AM, Stagnitti KE, Mercer C, Dunbar J, Schoo AM, Stagnitti KE, et al. A conceptual model for recruitment and retention: allied health workforce enhancement in Western Victoria, Australia. *Rural & Remote Health*. 2005 Oct-Dec;5(4):477. PubMed PMID: 16375575.
7. Worley P. Relationships: a new way to analyse community-based medical education? (Part one). *Education for Health: Change in Training & Practice*. 2002;15(2):117-28.
8. Worley P, Prideaux D, Strasser R, Magarey A, March R. Empirical evidence for symbiotic medical education: a comparative analysis of

- community and tertiary-based programmes. *Med Educ.* 2006; 40(2):109-16.
9. Covey SR. *The 8th habit: From effectiveness to greatness.* New York: Free Press; 2005.
 10. Harding K, Lynch L, Porter J, Taylor NF. Organisational benefits of a strong research culture in a health service: a systematic review. *Aust Health Rev.* 2016;Online(Ahead of print):109.
 11. Barkowski D, McInstry C, Cotchett M. Research culture in a regional allied health setting. *Aust Health Rev.* 2017;Online(Ahead of print):1-7.
 12. Schoo A, Kumar K. The clinical educator and complexity: a review. *Clin Teach.* 2018;15(4):287-93.



A. How to Practice Self-Healing to Reduce and Prevent Occupational Stress in Rural and Remote Areas

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It is a common knowledge that one of determinants of successful work programs as well as high level of productivity of an office or a business is human resources management. Without its role in managing the people under its employment to their best abilities, a business or an organization could not expect them to meet the standard level of performance it sets. As stated by Hasibuan (2013), human capitals are the most valuable asset for a business enterprise or an organization, but in some cases, they are overburdened with demanding expectation to increase their productivity to an extent that is too much for their wellbeing in a workplace which doesn't provide them with necessary supports for such demand such as sufficient job training programs and supporting facilities. This kind of work environment can create a very stressful work experience for the employees. Work-related stress is highly likely to cause deterioration of job performance.

Stress, in its common definition, is the pressure or strain one experiences in his/her life that is too hard for him/her to cope with. This kind of mental strain may be caused by an individual's failure in recognizing his/her own limitations in certain aspects or circumstances in his/her life. Stress can cause adverse effects on one's psychological, emotional and physiological conditions (Carr & Umberson, 2013).

Cooper and Marshall (1975), as quoted by Cooper (2003), explains, "There are, therefore, two central features of stress at work, the interaction of which determines either coping or mal adaptive behaviour and stress-related disease: (1) the dimensions or characteristics of the person and (2) the potential sources of stress in the work environment.

Staal, in agreement with Hariharan & Rath (2008), observes that working conditions which potentially lead to occupational stress are, among others: heavy workload, sweltering or freezing workplace, annoying noises, distract-

ting stench, uncomfortably bright light, filthy work environment, inadequate ventilations, and many others.

Contrary to the aforementioned negative descriptions related to stress, the mental state of stress can have positive impacts on human being. In fact, stress is like two sides of the same coin in terms of its good and bad sides. Stress with positive effect is referred to as *Eustress* whereas that with negative effect is termed *distress* (Gadzella, Baloglu, Masten & Wang, 2012). An individual who experiences distress (the negative stress cycle) tends to show a decrease in work performance, deterioration in health and problems in his/her social interaction.

People living in urban areas generally have greater access to health care services, given the higher availability of health-care professionals and facilities within reasonable distance from their homes. It won't be too much of a challenge for them to find helps whenever they have a health issue to take care of. But, what about those living or working in rural or remote areas? There will be greater challenges in their way when they need to deal with, for example, stress or to perform self-healing.

Before finding a professional help, doing a self-healing is arguably one of the best options to cope with a health problem. Self-healing may comprise a series of simple physical exercise or a do-it-yourself workout session that allow ourselves to take a short healthy break from daily routines. It is about giving ourselves a chance to have an uninterrupted interaction with the energy from our surroundings.

Kinds of activities suggested below can be very helpful as a self-healing practice in dealing with stress, particularly for people situated in rural or remote areas and are far away from health services.

1. Keeping a regular sleeping schedule

Adequate amount of sleep is essential for health and wellbeing. One of detrimental effects of having lack of sleep is stress. Thus, ensuring that you have enough sleep is crucial. Adequate amount of sleep means no less or no more than your body normally needs. Both sleeping too much and sleeping too little can actually be the cause of stress.

2. Setting reasonable standard of performance

Another source of distress is a very demanding standard of performance. To prevent yourself from getting over-stressed, you need to adjust your standard of job performance to the range of your capabilities to attain it. Setting a target that is too high to achieve can cause too much stress.

3. Shouting

One of common things people do when in distress or frustrated is shouting. Shouting and venting our frustration can be an effective way to release your distress. To do stress-releasing shouting without disturbing people around

you, you have to go to a place that is far away from the crowd or to a wide open space such as the mountains or beaches.

4. Taking a bath

Stress that results from exhaustion can be relieved by taking a bath or soaking in a warm bath. This action gives a relaxing effect that can diffuse your tension caused by lengthy and strenuous working hours. Therefore, it is a very helpful practice of self-healing. Moreover, combining it with an aromatherapy will lead you to a faster recovery from such exhaustion-related stress.

5. Having a regular exercise

Regular exercise is another effective self-healing practice to reduce stress. Physical movements of exercise may help you more relaxed and composed. Having enough exercise can help you think more clearly and prevent you from stress.

6. Consuming healthy food

Aside from avoiding causes of distress wherever possible, consuming healthy food is also a good way to keep the stress away.

7. Doing recreational activities that are related to hobbies

Doing positive and pleasurable activities, especially those related to hobbies, such as gardening, taking a walk, watching movies, is another helpful self-healing practice to reduce stress.

8. Reframing

Reframing is a term in neuro-linguistic programming that refers to a way of redefining certain experiences or occurrences in a more positive framework. Seeing the positive sides of events or periods in our lives and not letting our mind focusing on the negative sides can help us maintain our enthusiasm in our daily undertakings and protect ourselves from distress.

9. Being always grateful

God guides us to always be grateful for everything we have in our lives. Living in gratitude is one of the best ways of preventing us from experiencing distress. Together with positive attitude towards life, constant gratitude can be psychologically healing in dealing with stress and can make life seem easier to cope with.

10. Laughing

Remembering or thinking about something funny will make us laugh and surely alleviate any feeling of distress. Therefore, entertaining our mind with funny or hilarious memories or thoughts that get us laughing is recommended as a useful self-healing practice to reduce stress.

11. Meditating

One other option to consider for keeping stress from controlling our emotional, psychological and physiological health is meditation. Meditating, when

done effectively, is a very helpful method to calm nerves and keep all negativity at bay.

12. Listening to music

For those who enjoy music, listening to favorite kinds of music can relieve stress, but you need to keep in mind that listening to sad songs is not recommended when you are feeling down.

13. Acupressure

Application of pressure to the acupoints on specific body meridians is one of therapeutic healing methods that can help reduce stress.

14. Aromatherapy

Aromatherapy is another type of therapeutic healing technique that has a relaxing effect. Inhaling a specific aroma that is used in this therapy can help relieve stress-related tension.

In addition to those abovementioned techniques, there is one other method of dealing with stress that deserves more attention in the present discussion of self-healing, namely Emotional Freedom Technique (EFT). It is an alternative self-healing technique that can be applied to treat various emotional and psychological problems, and it can be particularly helpful for people living in rural or remote areas.

Emotional Freedom Technique, abbreviated as EFT, was developed by Gary Craig based on Dr. Roger Callahan's observation that emotional discomfort is caused by a disruption in the energy system that regulates mind–body relationships (Church, 2013; and Church, 2017).

EFT is a form of psychological acupuncture that uses light tapping with your fingertips instead of inserting needles to stimulate traditional Chinese acupuncture points. The tapping on these designated points on the face and body is combined with verbalizing the identified problem (or target) followed by a general affirmation phrase. Combining these ingredients of the EFT technique balances the energy system and appears to relieve psychological stress and physiological pain. Restoring the balance of the energy system allows the body and mind to resume their natural healing abilities. EFT is safe, easy to apply, and is non-invasive.

Steps to apply EFT:

1. The Set-Up

The purpose of this step is to make sure that the energy pathway in our body is flowing to the proper directions. This state of energy flow is important in neutralizing *psychological reversal* or *psychological opposition* (usually manifested in spontaneous negative thoughts or negative unconscious beliefs).

Some examples of psychological reversal are shown in these following negative thoughts:

- I don't have the strength to give up smoking
- I don't have the confidence to speak in public
- I'm not motivated to study hard; I'm a lazy student

If you find yourself engulfed by negative thoughts such as the above-mentioned examples, take a moment to say a solemn, heartfelt prayer with total surrender to God: "Dear Allah... even though I ___ (your regrets or trouble), I earnestly surrender to You with all my heart and soul"

2. *The Tune-In*

To deal with physical discomfort or pain, you can practice *tune-in* technique by fully feeling the pain followed by focusing your mind on the site or area of pain. While doing these two treatments, say a prayer that emphasizes your total surrender to God: "I completely surrender my everything to You and I give You all my heart, Dear Allah...."

To treat the emotional distress, practice the *tune-in* by focusing your mind on the specific experience(s) or event(s) that have been giving you negative emotion you want to get rid of or transform. Whenever you feel your negative reactions surging up inside you (anger, sorrow, fear, and the like), say the same prayer exemplified previously: "From the bottom of my heart, I completely surrender my everything to You, Dear Allah...."

3. *The Tapping*

In *tapping* step, you lightly tap specific points on your body with two of your fingertips while continually doing the *tune-in*. These specific points are the key points or acupoints of the *major energy meridians* to which several light tappings are applied with the purpose of neutralizing certain emotional disturbances and lingering pain. Once your pain and discomfort have been neutralized, the energy flow in your body goes back to normal and its balance is restored to a healing state.

Tapping points in EFT: Crown (Cr), Eye Brow (EB), Side of the Eye (SE), Under the Eye (UN), Under the Nose (UN), Collar Bone (CB), Under the Arm (UA), and Below Nipple (BN)

To sum up, the key to a successful EFT is focusing your mind and feeling to the health issues targeted by your self-healing treatment, and you are doing it with utmost concentration (*Ke-khusu'-an*), wholehearted attitude (*Ke-ikhlas-an*), and total surrender (*Ke-pasrah-an*).

References:

Carr, D., & Umberson, D. (2013). The social psychology of stress, health, and coping. In DeLameter, J. & Ward, A. (Eds.). *Handbook of Social Psychology* (pp. 465-487). Netherlands: Springer.

- Church D. Clinical EFT as an evidence-based practice for the treatment of psychological and physiological conditions. *Psychology* 2013; 4(8):-646-54. DOI: <https://doi.org/10.4236/psych.2013.48092>.
- Church, Dawson., Stern, Sheri Stern., Boat, Elizabeth Boath., Stewart, Antony ., Feinstein, David Feinstein., Clond, Morgan. (2017). Emotional Freedom Technique to Treat Posttraumatic Stress Disorder in Veterans: Review of the Evidence, Survey of Practitioners, and Proposed Clinical Guideline. *The Permanente Journal / Perm J* 2017; 21: 16-100
- Cooper, Carry L. (2013). *From Stress to Wellbeing Volume 1 The Theory and Research on Occupational Stress and Wellbeing*. Lancaster University. UK
- Gadzella, B. M., Baloglu, M., Masten, W. G., & Wang, Q. (2012). Evaluation of the student life-stress inventory-revised. *Journal of Instructional Psychology*, 39(2), 82-91.
- Hariharan, M., & Rath, R. (2008). *Coping with life stress: The Indian experience*. India: SAGE Publications India Pvt Ltd.
- Hasibuan, Malayu S.P. (2013). *Manajemen Sumber Daya Manusia*. Jakarta: Bumi Aksara
- Staal, M. A. (2004). Stress, cognition, and human performance: A literature review and conceptual framework. *Nasa technical memorandum, 212824*, 9. [http:// humanfactors.arc.nasa.gov/web/library/ publications/publications.php](http://humanfactors.arc.nasa.gov/web/library/publications/publications.php)

Oral Presentation Schedule

International Conference on Public Health

Best Western Premier Hotel, Solo, Indonesia

August 29-30, 2018

Date : Thursday, August 30, 2018

Room : Oral Presentation

NO.	TIME	EPIDEMIOLOGY AND PUBLIC HEALTH (1)	HEALTH PROMOTION AND BEHAVIOR (2)	MATERNAL AND CHILD HEALTH (3)	HEALTH POLICY AND MANAGEMENT (4)	MEDICINE (5)
1	07.30-07.40	Name: Ignasius Tangi Bupu, Pius Weraman, Rafael Paun Title: Knowledge, Preventive Practice, and the Risk of Dengue Hemorrhagic Fever in Kupang, East Nusa Tenggara	Name: Gabriela Advitri Febriani, Setyo Sri Rahardjo, Bhisma Murti Title: Application of Health Belief Model on the Predictors of Screening for Cervical Cancer in Surakarta, Central Java	Name: Ani Yulyanty Foeh, Paula Tibuludji, Ina Debora Ratu Ludji Title: Risk Factors for Neonatal Mortality Due to Birth Asphyxia in East Sumba, East Nusa Tenggara	Name: Suryati Sinurat, Ida Yustina, Destanul Aulia Title: Factors Affecting Patient Compliance to the National Health Insurance Referral System in Medan, North Sumatera	Name: Yulianto, Yufi Aris Lestari, Ulul Azmi, Erik Toga, Muh. Al Amin Title: Effectiveness of Wet Cupping Therapy for Migrain in Mojokerto, East Java
2	07.40-07.50	Name: Mat Yonathan Poy, Hari Rarindo, Sabina Gero Title: Individual, Social, and Environmental Risk Factors of Malaria in Rote Ndao District, East Nusa Tenggara	Name: Maria Paula Marla Nahak, Argyo Demartoto, Bhisma Murti Title: Self-Efficacy in the HIV/ AIDS Preventive Behavior among Lesbians: A Phenomenology Study	Name: Frida S Pay, Intje Picauly, Sabina Gero Title: Effect of Dietary Consumption Pattern, Nutrition Status, and Hemoglobin Level on Academic Achievement among High School Students in Kupang, East Nusa Tenggara	Name: Atika Triwulandari Title: Association between Socialization and the Use of Maternity Waiting Home in East Aceh	Name: Trilaksana Nugroho, Hari Peni Julianti, Dea Amarilisa Adespin, Bambang Hariyana, Ari Budi Himawan Title: Association Between Refractive Error and Decreasing Visus in Pregnant Women
3	07.50-08.00	Name: Elvita Susanti Title: Risk Factors of	Name: Elly Dwi Masita, Rizky Amalia	Name: Roslin E.M. Sormin, Intje Picauly, Ina Debora	Name: Widia Astuti Tanjung, Heru Santosa, Kintoko	Name: Natalia Desy Puringtyas, Ari Tri Astuti

		Diarrhea among Communities Living Nearby Deli River Area, North Sumatera	Title: The Effect of “Three Choreographer-Coach-Consultant” Parenting Role on Perception of Child Obesity among Care Givers	Ludji Title: Factors Associated with Antenatal Care Uptake and Incidence of Low Birth-weight in Kupang, East Nusa Tenggara	Rochadi Title: Work Performance of the Family Planning Field Workers in the Reduction of Total Fertility Rate in Sibolga, North Sumatera	Title: Effect of Kidney Bean Yoghurt on Immune System and Sleep Quality Among Elderly in Yogyakarta
4	08.00-08.10	Name: Adymulianto Manurung, Rahayu Lubis, Kintoko Rochadi Title: Associations of Contact History, Smoking Status, Nutrition Status, and ARV Treatment, with TB HIV Co-Infection among People with HIV/ AIDS	Name: Evi Erlinda Wati, Rahayu Lubis, R. Kintoko Rochadi Title: Multiple Sexual Partners, Condom Use, and Their Associations with HIV Infection among Man who Have Sex with Man in Medan	Name: Saekhol Bakri, Aras Utami, Arwinda Nugraheni, Dodik Pramono, Hari Peni Julianti, Dea Amarilisa Ades-pin Title: Associations of Health Behavior and Environment with Acute Respiratory Infection in Jepara, Central Java	Name: Arie Willyana, Juanita, Destanul Aulia Title: Factors Associated with Adherence to Implementation of Early Breast-feeding Initiation among Midwives at Aceh Tamiang General Hospital, North Sumatera	Name: Heru Priyanto, A. Andrijono Title: Relative Effectiveness of Neoadjuvant Chemotherapy Versus Primary Surgery in Patients with Advanced Ovarian Cancer
5	08.10-08.20	Name: David Simbolon, Erna Mutiara, Rahayu Lubis Title: Spatial Analysis and Risk Factors of Tuberculosis in Dairi District, North Sumatera	Name: Joanita A. M. A. Tukan, Pius Weraman, Ina Debora Ratu Ludji Title: Factors Associated with Patient Satisfaction at Prof. Dr. W. Z Johannes General Hospital, Kupang, East Nusa Tenggara	Name: Hellyyana, Evawany Y. Aritonang, Rahayu Sanusi Title: Association between Chronic Energy Deficiency and Anemia in Pregnant Women in Lhokseumawe, Aceh	Name: Candra Kusuma Negara Title: The Effect of Discharge Planning on Treatment Adherence among the Elderly with Hypertension in Banjarmasin, South Kalimantan	Name: Anny Rosiana Masithoh, Khosyatillah Title: Effect of Dzikir Therapy on Perception of Healing in Post-Surgery Patients in Jepara, Central Java
6	08.20-08.30	Name: Marthen Rachmad Here, Pius Weraman, Hari Rarindo Title: Hygiene Sanitation and Detection of Rhodamin B in Sauce and Formalin in Meatball at Meatball Tavern, Kupang, East Nusa Tenggara	Name: Susy Hariaty Situmorang Title: Association between Emotional Distress and Poor Self-Care among Patients with Type 2 Diabetes Mellitus in Medan	Name: Precilia Mustika Dini Kharisma, Wahyuni Title: Effect of Warm Compress and Deep Breathing Exercise on the Reduction of Primary Dysmenorrhea	Name: Khoirotun Nisa Usawatun Khasanah, Bhisma Murti, Ari N Probandari Title: Health Insurance Status and Perceived Quality of Health Service at Community Health Center, Sumenep, East Java	Name: Rusnoto, Subari Title: The Effect of Frequency and Duration of Hemodialysis on the Quality of Life of Patients with Chronic Renal Failure Undergoing Hemodialysis

7	08.30-08.40	Name: Shela C. Pello, Yeni Damayanti, Juliana MY. Benu Title: Correlation between Subjective Well-Being and Psychological Well-Being among University Students	Name: Zakia Husna Nasution, Zulfendri, Destanul Aulia Title: The Effects of National Health Insurance Perception and Information Access on the Utilization of Health Service in Pematang Siantar, North Sumatera	Name: Nova S. J. Sianturi, Heru Santosa, Lita Sri Andayani Title: The Effect of Husband Support on the Use of Implant Contraceptive among Women of Reproductive Age in Dairi, North Sumatera	Name: Herna Linda, Zulfendri, Juanita Title: Factors Associated with Work Performance of Midwives at Langsa Hospital, Aceh	Name: Sri Karyati, Sukarmin, Jenni Suciyanti Sarbini Title: Application of Dzikir Tahmid Relaxation Therapy to Reduce Blood Sugar Level among Patients with Diabetes Mellitus in Kudus, Central Java
8	08.40-08.50	Name: Tutik Alawiyah, Intje Picauly, Marthen R. Pellokila Title: Meatballs Containing Banana Blossom, Red Bean Flour, and Sweet Potato Flour as an Alternative Supplementary Diet for Children under Five in East Nusa Tenggara	Name: Tri Ratih Agustina Title: Factors Associated with the Uptake of Visual Inspection Acetic Acid among Women in Sidoarjo, East Java	Name: Sri Handayani, Anggorowati, Fery Agusman MM Title: Effect of Family Support on Self Efficacy among Pregnant Women with Anemia	Name: Muhammad Abdullah Nasution Title: Evaluation of the Health Operational Fund Program for Improving Maternal Health Care in Padangsidempuan, North Sumatera	Name: Sukarmin, A. Nor Syafik Title: The Effect of Range of Motion Practice on Vascularity of Feet in Patients with Diabetes Mellitus in Kudus, Central Java
9	08.50-09.00	Name: Marynda Rahmadianisya, Chodidjah, Minidian Fasitasari Title: Validity of Middle Upper Arm Circumference as an Indicator of Nutritional Status in Patients with Cancer Undergoing Chemotherapy	Name: Hari Peni Julianti, Aras Utami, Diah Rahayu Wulandari Title: Health Behavior Associated with Quality of Life among Elderly with Hypertension	Name: Vivin Sari Sukmawati, Wahyuni Title: Effect of Early Mobilization and Jacobson's Relaxation on the Recovery of Psychomotor Function among Post Caesarian Section Women	Name: Anjelina Dwi Yuni-anti, Misnaniarti Title: Willingness to Pay for the National Health Insurance Premium among Traders in Ogan Hilir, South Sumatera	Name: Arwani Title: Effect of Physical Activity on Blood Sugar and Cortisol Level among the Elderly with Depression in Semarang, Central Java
10	09.00-09.10	Name: Wandu Damanik, Nurmaini, Kintoko Rochadi Title: Effectiveness of Lar-	Name: Meidona Nurul Milila, Yulice Soraya Nur Intan Title: Associations of Knowledge and Attitude	Name: Asrika Sari, Heru Santosa, Albiner Siagian Title: Association between Nutritional Status and Age at	Name: Lukman Aryo Seto, Didik Tamtomo, Bhisma Murti Title: Factors Associated	Name: Adelina Enggar Pertiwi, Muttia Amalia, Pritha Maya Savitri Title: The Associations

		va Monitoring Training on Knowledge of Dengue Hemorrhagic Fever Control among Primary School Students in Sibolga, North Sumatera	with Pap Smear Test Utilization	Menarche	with Quality of Health Services and the Contextual Effect of Community Health Center	between Metabolic Syndrome Components and Chronic Renal Disease at Gatot Subroto Hospital, Jakarta
11	09.10-09.20	Name: Betty Saurina Marriany Title: The Impact of Social Stigma and Depression on the Quality of Life of People Living with HIV/AIDS in Pematangsiantar	Name: Novdaly Fillamenta Title: The Effects of Eating Pattern and Physical Activity on the Risk of Obesity among High School Students in Palembang, South Sumatera	Name: Hery Dillak, Intje Picauly, Mindo Sinaga Title: Factors Associated with Complementary Feeding in Malaka Tengah, East Nusa Tenggara	Name: Oldriana Prawiro Hapsari, Iman Permana, Ekorini Listiowati Title: Analysis of Hygiene and Sanitation Practice among Health Workers in the Nutrition Unit, at Muhammadiyah Gamping Hospital, Yogyakarta	Name: Sekplin A. S. Sekeon, Finny Warouw, Eva Mantjoro, Junita M. P. Sampoerno Title: Sleep Quality and Cognitive Disorder among Acute Stroke Patients from Coastal Areas in North Sulawesi
12	09.20-09.30	Name: Ida Sariyani, Linda T Maas, Fazidah Aguslina Siregar, Nurul Aini Suria Saputri Title: Family Support and Its Association with the Risk of Lung Tuberculosis in Subulussalam, Aceh	Name: Vini Vidi Vici Sitinjak Title: Association of Knowledge and Family Support with Premarital Sex among Street Children in Medan, North Sumatera	Name: Cahayu Mesra Hairani Hrp, Asfriyati, Rahayu Sanusi Title: The Association between Body Mass Index and Premenstrual Syndrome among Female High School Students in Padang Lawas, North Sumatera	Name: Sitti Fatmalla Salim, Elsy Maria Rosa Title: The Impact of Workload on Nurse Performance in Intensive Care Unit at Muhammadiyah Gamping Hospital	Name: Nailatun Nadrah, Gerry Silaban, Taufik Ashar Title: Effectiveness of Corrective Work Posture in Alleviating Musculoskeletal Disorder Symptoms among Saleswomen in the Department Store
	09.30-09.45	Coffe Break				
13	09.45-09.55	Name: Katmini, Febrina Dwi Nurcahyanti, Astri Yunita Title: Biopsychosocial Determinants of Preeclampsia in Kediri, East Java	Name: Ririn Fastiningtyas, Zumrotul Choiriyah, Fiki Wijayanti Title: Correlation between Parental and Child Habits in Tooth Brushing in Temanggung, Central Java	Name: Majestika Septikasari Title: Effects of Maternal Nutrition Status, Education, and Family Income on the Risk of Low Birthweight	Name: Zulkarnain, Iman Permana Merita Arini Title: Awareness, Acceptance, and Collaboration of the Health Workers in the Case Management of Tuberculosis and Diabetes Mel-	Name: Pamudji Utomo, Rieva Ermawan Title: Clinical and Radiological Evaluations of the Intramedullary K-Wire Compared with Small DCP 3,5 mm Surgical Fixation

					litus at Type B Hospital, Yogyakarta	in Adult Patients with 1/3 Middle Displaced Clavicle Fracture
14	09.55-10.05	Name: Denisius Umbu Pati, Pius Weraman, Hari Rarindo Title: Factors Associated with Diarrhea in Noebeba, Middle South Timor, East Nusa Tenggara	Name: Sari Irmayani Tanjung Title: Effects of Knowledge and Family Support on Completeness of Immunization in Asahan, North Sumatera	Name: Sri Sayekti Heni Sunaryanti, Titik Anggraeni Title: Determinants of Nutritional Status in Children under Two Years of Age in Sragen, Central Java	Name: Violita Siska Mu-tiaral, Yulita Elvira Silviani Title: Factors Associated with Community Health Worker Performance in North Musi Rawas District, Bengkulu	Name: Pamudji Utomo, Antoni Title: Functional Evaluation of the Reducible Lower Radioulnar Joint Disruption between below Elbow Slab and Percutaneous Ulnoradial Pinning Surgical Treatments in Adult Patients with Galeazzi Fracture
15	10.05-10.15	Name: Santa Ulina Apriani Situngkir, Namora Lumongga Lubis, Fazidah Aguslina Siregar Title: Factors Associated with Hypertension among Elderly in Padang Bulan, Medan, North Sumatera	Name: Venni Yuasnita Damanik Title: The Role of Family Support in the Prevention of Drug Abuse among Adolescents in Simalungun, North Sumatera	Name: Loise Juliyanti Siagian, Asfriyati, Evawany Y Aritonang Title: Effect of Breastfeeding Duration on Menstrual Period Return After Child Birth in Deli Serdang, North Sumatera	Name: Wilda Zulihartika Nasution, Destanul Aulia, Zulhaida Title: The Relationships of Perception and Simplicity of Health Service Procedure with Utilization of the Integrated Family Health Post in South Tapanuli, North Sumatera	Name: Pamudji Utomo, R. Andhi Prijo Sedjati, Haryo Wicaksono Title: Short-Term Evaluation of the Steroid Epidural Injection Method for Patients with Degenerative Lumbar Stenosis
16	10.15-10.25	Name: Maryani Setyowati, Dyah Asri Tunjung-sari Title: Distribution of Typhoid Fever Cases in Genuk Subdistrict, Semarang, Central Java, Using Geographic Information	Name: Frima Elda, Kus-harisupeni Title: Associations of Peer Group and Social Media with Healthy Eating Behavior among Adolescents	Name: Ninik Wahyuni, Aquartuti Tri Darmayanti Title: Factors Associated with Adherence to Taking Iron Tablet among Pregnant Women in Lebak, Banten	Name: Winda Novita, Destanul Aulia, Juanita Title: Relationship of Corporate and Product Images with Utilization of Basic Emergency Obstetric-Neonatal Services in Deli Serdang, North Sumatera	Name: Noer Rachma Title: Effect of Cardiac Rehabilitation on NT-Pro BNP, METs, and Quality of Life, in Patients with Coronary Artery Disease after Undergoing Percutaneous Coronary Intervention

		System				
17	10.25-10.35	Name: Endang Sri Wahyuni Title: Accessibility of People with Physical Disabilities to Sidewalks in Surakarta, Central Java	Name: Meri F. Ernestin, Ina Debora Ratu Ludji, David B. W. Pandie Title: Factors Affecting Vasectomy in Kupang, East Nusa Tenggara	Name: Bijaya Pokharel, Kathy Hegadoren, Elisavet Pathanassoglou Title: Harsh Truth: Do Healthcare Providers Silence Women Who Experience Intimate Partner Violence	Name: Antonia Nogo, Chris Oiladang, Ina Debora Ratu Ludji Title: Factors Associated with the Quality of Care in the Emergency Unit, at Naibonat Hospital, Kupang, East Nusa Tenggara	Name: Nurul Hidayah, Raudhotun Nisak Title: The Effect of Corn Silk Tea on Blood Glucose Level in Patients with Type 2 Diabetes Mellitus
18	10.35-10.45	Name: Ingantaria Barus Title: Association between Family Support and Quality of Life of Women with Cervical Cancer at Dr. Piringadi Medan Hospital, North Sumatera	Name: Diyan M. Kristin, Pius Weraman, Sabina Gero Title: The Associations of Internal Factors, Sources of Information, and Family Role with Premarital Sexual Behavior among Adolescents in Kupang, East Nusa Tenggara	Name: Maria Agustin Nila Werang, Intje Picauly, Paula Tibludji Title: Factors Associated with Fine and Gross Motoric Development in Children under Two Years of Age in East Flores, East Nusa Tenggara	Name: Maria Christina E. Sukartiningsih, Pius Weraman, Rafael Paun Title: Factors Associated with the Use of Antenatal Care in East Sumba, East Nusa Tenggara	Name: Uliyatul Laili, Fauziyatun Nisa Title: Effectiveness of Early Exercise in the Prevention of Constipation in Postpartum Women
19	10.45-10.55	Name: Nonita Florida Br Sembiring Title: Factors Associated with Occupational Accident at Palm Oil Plantation, Riau	Name: Sujono Riyadi, Suminah, Muhammad Akhyar, Bhisma Murti Title: The Effect of Peer Group Social Capital on Smoking Behavior among Adolescents in Kulon Progo, Yogyakarta	Name: Indanah Title: Factors Affecting Self-Care Ability among Children with Mental Retardation	Name: Ahmad Aulia Ghufron, Susanto Title: A Comparative Analysis of Perceived Service Quality and Patient Satisfaction between Muhammadiyah Gamping and Yogyakarta Hospitals	Name: Aplonia Farida Djami, Aloysius Liliweri, Sabina Gero Title: Association between Pre-Post Operative Procedure and Abdominal Surgical Infection
20	10.55-11.05	Name: Rini Astuti Damanik, Namora Lumongga Lubis, Asfriyati Title: Risk Factors of Breast Cancer in Medan, North Sumatera	Name: Nur Khamidah, Yayi Suryo Prabandari, Dety Siti Nurdiati Title: Effectiveness of Multilevel Health Promotion on Exclusive Breastfeeding in Jember, East Java	Name: Wahyuni, Evawany Yunita Aritonang, Sri Rahayu Sanusi Title: Maternal Knowledge, Attitude, and Exclusive Breastfeeding in Labuhanbatu, North Sumatera	Name: Vika Habsari Budi Utami, Arlina Dewi, Ekorini Listiowati Title: The Role of Faculty of Medicine and Health Sciences in the Preparation of Human Resources for Aca-	Name: Endah Mulyani Title: Effect of Green Bean Sprouts Extract on Sperm Quality among Mice Exposed with Monosodium Glutamate

					demographic Health Center Concept at Muhammadiyah Gamping Hospital, Yogyakarta	
21	11.05-11.15	Name: Sri Arini Winarti, Margono Title: Improving Competency of Community Health Workers in Non-Infectious Disease Screening in Sleman, Yogyakarta	Name: Annisa Nuraini, Sudarto Ronoatmodjo Title: Effectiveness of Comic as Learning Media to Enhance Knowledge of Menarche and Menstruation among Female Students in Yogyakarta	Name: Fatwa Sari Tetra Dewi, Septi Kurnia Lestari, Ratri Kusuma Wardani, Agung Nugroho Title: Risk Factors of Injury in Urban and Rural Areas in Sleman, Yogyakarta	Name: Serlie K. A. Littik Title: Association of Maternal Autonomy and Incidence of Illness with Post Neonatal Health Service Utilization in South Central Timor, East Nusa Tenggara	Name: Sumanto Title: Postural Balance and Anti-Gravitation Muscle Strength in Women Who Do Indonesia Healthy Gymnastics
22	11.15-11.25	Name: Sumardiyono, Hartono, Ari Probandari, Prabang Setyono Title: The Effect of Continuous Noise on Blood Cortisol Level in Textile Industry Workers	Name: Nurma Wulandari Title: Family Planning-Village to Promote Healthy and Prosperous Families in Pacitan, East Java	Name: Ani Margawati, Ari Budi Himawan, Dea A Adespin, Arwinda Nugraheni Title: A Qualitative Study on Knowledge and Dietary Intake among Mothers with Stunted Children under Five in Jepara, Central Java	Name: Astri Nurhandini, Zulfendri, Taufik Ashar Title: Effect of Supervision on Compliance with the Standard Precautionary Rules among Nurses at Madani General Hospital, Medan, North Sumatera	Name: Dwi Astuti Dian Andarwati, Bhisma Murti, Endang Sutisna Sulaeman Title: Does Vitamin C Affect HbA1c?
23	11.25-11.35	Name: Yamtana Title: Mitigating Musculoskeletal Disorder Using Occupational Chair among Batik Workers	Name: Dawiyah Siregar, Juanita, R. Kintoko Rochadi Title: Factors Associated with Utilization of HIV Counseling Service at Budi Kemuliaan Hospital, Batam, Riau	Name: Eka Susanti, Rahayu Lubis Title: Determinants of Neonatal Asphyxia at Pilgrimage Hospital in Medan, North Sumatera	Name: Frans Salesman Title: The Effects of Formal Education and Competence Training on Job Performance of Nurses Working at the Hospital	Name: Devita Agustina, Uki Retno Budihastuti, Bhisma Murti Title: Do Smoking, Heavy Physical Activity, and Overweight, Increase the Risk of Male Infertility? A New Evidence from Surakarta, Central Java
24	11.35-11.45	Name: Budi Junarman Sinaga, Rahayu Lubis, Erna Mutiara Title: Hanging Clothes on Wire and Its Associations	Name: Hanna Wijaya, Maria, Meiwati Widagdo, Slamet Sunarno Harjosuwarno Title: Correlation of Knowledge, Attitude, and Healthy	Name: Nurun Nikmah Title: Associations of Maternal Knowledge and Exclusive Breastfeeding with Nutrition Status of Children	Name: Satria Darma, Juanita, R. Kintoko Rochadi Title: BPJS Barrier to Strategic Purchasing of Primary Care Service at Public and	Name: Widya Kaharani Putri, Setyo Sri Rahardjo, Dono Indarto Title: Determinants of Antidiabetic Treatment A-

		with Malaria Incidence in Batubara, North Sumatera	Behavior among Children with Autism in Yogyakarta	under Five in Bangkalan, East Java	Privat Health Facilities in Subulussalam, Aceh	dherence in Patients with Type 2 Diabetes Mellitus
	11.45-13.00	Lunch				
25	13.00-13.10	Name: Tuti Susilowati, Tri Nur Kristina, Muclis Au Sofro Title: Factors Associated with TB-HIV/AIDS Co-Infection in Kedu, Central Java	Name: Ibnu Jafar Ma'ruf Title: Empowerment Model of Stroke Patients with Motoric Aphasia Disorder Through Reading the AI-Quran to Improve the Quality of Life	Name: Yuslina Fanny NB Siahaan, Evawany Y Aritonang, Taufik Ashar Title: Maternal Care Practices, Immunization, and Their Associations with Gastroenteritis among Infants Style in North Tapanuli, North Sumatera	Name: Erman Suryadi, Zulfendri, Destanul Aulia Title: Knowledge, Facilities, and Their Associations with Nurse Adherence to Hand Hygiene at Subulussalam Hospital, Aceh	Name: Ana Damayanti, Didik Tamtomo, Dono Indarto Title: The Effectiveness of Diabetes Self-Management Education Program in Improving Self-Care among Patients with Type 2 Diabetes Mellitus
26	13.10-13.20	Name: Tuti Susilowati, Tri Nur Kristina, Muchlis Au Sofro Title: Effect of Smoking on Survival among HIV/AIDS Patients in Kedu, Central Java	Name: Fattah Hanurawan, Indah Yasminum Suhanti, Aryudho Widyatno Title: Health Promotion Based on the Five Principles "Pancasila" to Manage Aggressive Behavior on Campus in Malang, East Java	Name: Nur Masruroh, Ratna Ariesta Dwi Andriani Title: Effect of Hypno Breastfeeding on Colostrum Ejection Onset in Primiparous Mothers	Name: Delfi Gunawaty, Surya Utama, Juanita Title: The Effect of Motivation on Nurse Performance at Imelda General Hospital, Medan, North Sumatera	Name: Hari Peni Julianti, Aras Utami, Trilaksana Nugroho Title: Association between Adherence to Treatment Management and the Quality of Life of the Elderly with Diabetes Mellitus
27	13.20-13.30	Name: Dahwan, Fazidah Aguslina, Wirsal Hasan Title: The Effects of Nutritional Status and Dwelling Density on the Risk of Pulmonary Tuberculosis Incidence in Medan, North Sumatera	Name: Jeni Nurmawati, Sabina Gero, David B. W. Pandie Title: Factors Affecting the Use of Intra Uterine Device in Kupang, East Nusa Tenggara	Name: Polma Ria Metawati Panjaitan, Heru Santosa, Surya Utama Title: Associations of Education, Knowledge, and Attitude with Antenatal Care Visit in Medan, North Sumatera	Name: Tissa Hasibuan, Lita Sri Andayani, Rahayu Lubis Title: Effectiveness of Persuasive Communication Training for Tuberculosis Drug Supervisors in Medan, North Sumatera	EPIDEMIOLOGY AND PUBLIC HEALTH
28	13.30-	Name: Armaliza Permata	Name: Lambok Nita Situ-	Name: Rukmini	Name: Gayatri Tungga	Name: Ryan Rohmansyah, Muchsin Doewes Title: Relationship of Protein Intake and Weight Training with Muscle Mass among Fitness Center Members Name: Khairin Nabila I,

	13.40	Sari, Rahayu Lubis, Zulfendri Title: The Effects of Hypertension, Smoking, and Obesity on Stroke Incidence in Riau	morang Title: Association between Perceived Seriousness and the Use of Voluntary Counseling and Testing among Men who Have Sex with Men in Pematangsiantar, North Sumatera	Title: Association between Parents Role and Speech Ability of Children	Dewi, Juanita, Zulhaida Title: A Qualitative Study on the Work Performance of Nutrition Technicians in Nutrition Control in Medan, North Sumatera	Shaharuddin MS, Zaenal Abidin Title: Fluoride in Drinking Water and Urine: A Cross-Sectional Study among Secondary School Children in Kuala Kubu Bharu, Selangor, Malaysia
29	13.40-13.50	Name: Marika Julina Hutabarat, Rahayu Lubis, Erna Mutiara Title: The Effect of Maternal Knowledge and Husband Job Type on the Risk of HIV Infection among Housewives in Balige, North Sumatera	Name: Arita Murwani, Santosa, Eni Lestari, Endang Sutisna Sulaeman Title: Health Education, Health Promotion, Public Policy, and Health Related-Quality of Life of the Elderly	Name: Silfia Angela N. Halu, Maria Sriana Banul Title: The Association between Socioeconomic Factors and Selection of Birthplace in Pregnant Women	Name: Ratna Wulandari, Zulfendri, Surya Utama Title: The Role of Medical Committee for the Achievement of Good Clinical Governance at Deli Serdang Hospital, North Sumatera	Name: Annisa Febriana Siregar, Taufik Ashar, Nurmaini Title: Associations of Duration of Exposure and Years of Service with Trans-Trans Muconic Acid Level among Printing Industry Workers in Medan, North Sumatera
30	13.50-14.00	Name: Noor Cholifah, Jarwanto, Dwi Hartinah Title: The Effect of Strawberry Juice on Improving HB Level among Female Adolescents with Anemia	Name: Nesi Novita, Heni Sumastri, Suprida Title: Determinants of Early Marriage in Musi Rawas, South Sumatera	Name: I Gusti Agung Ngrah Suarnawa, Intje Picauly, Mindo Sinaga Title: The Associations of Food Availability, Dietary Pattern, and Family Income with Nutritional Status among Children under Five in Kupang, East Nusa Tenggara	Name: Budi Kusumah, Sri Sundari, Ekorini Listyowati Title: An Evaluation of the Implementation and Adherence to the Clinical Pathway of Dengue Fever at Muhammadiyah Gamping Hospital, Yogyakarta	Name: Indriani, Dwi Lestari Ratna Ningsih, Luluk Rosida Title: Prevalence of Hypertension and Its Associated Factors among Sellers at Traditional Market, Yogyakarta
31	14.00-14.10	Name: Olyvia Glantika, Rahayu Lubis, Asfriyati Title: The Effects of Smoking and Dyslipidemia on Coronary Artery Disease	Name: Novi Adriyanti, Ida Yustina, Zulfendri Title: Resource Mobilization and Preparedness to Control Dengue Haemor-	Name: Dwi Ris Hasanah S, Asfriyati, Fazidah Aguslina Siregar Title: Association between Antenatal Care and Labor	Name: Anisah, Elsy Maria Rosa, Ekorini Listiowati Title: Implementation of the Linen and Laundry Management Policy at	Name: Zakiyuddin, Ambia Nurdin Title: Factors Associated with Treatment Adherence among Pulmonary Tuber-

		among Women at Dr. Pirngadi Hospital, Medan, North Sumatera	rhagic Fever in Medan, North Sumatera	Complication in Medan, North Sumatera	Muhammadiyah Gamping Hospital, Yogyakarta	culosis Patients in Meulaboh, Aceh
32	14.10-14.20	Name: Wahyu Ajisah, Irnawati Marsaulina, Kintoko Rochadi Title: Factors Associated with Housewife Participation in Prevention of Dengue Hemorrhagic Fever Mosquito Breeding Place in Lhokseumawe, Aceh	Name: Pomarida Simbolon, Connie Melva Sianipar Title: Effect of Daily Litter Collection on Health Behavior among Students in Deli Serdang, North Sumatera	Name: Astri Yulia Sari Lubis, Ashar Abilowo, Vina Jayanti, Nurul Aini Suria Saputri Title: Effectiveness of Citrus Fruit in Relieving Nausea During Pregnancy in Tanjungpinang, Riau	Name: Dhanis Ardian Prasetyo, Sri Sundari, Ekorini Listyowati Title: Evaluation of the Implementation and Adherence to the Clinical Pathway of Ischemic Stroke at Muhammadiyah Gamping Hospital, Yogyakarta	Name: Sabinus Kedang, Yustinus Rindu, Rafael Paun Title: Home Environment Factors Associated with Falci-parum Malaria in Lembata, East Nusa Tenggara
33	14.20-14.30	Name: Yanse Hariati Oematam, Hari Rarindo, Jauhari Effendi Title: Factors Affecting Sanitary Condition of Ships Harboring in Kupang, East Nusa Tenggara	Name: Anita Loren Br Gurusinga, Kintoko Rochadi, Abdul Jalil Amri Arma Title: A Qualitative Study on the Factors Influencing the Choice of Working as a Commercial Seks Workers at Bandar Baru, Deliserdang, North Sumatera	Name: Early Wulandari Muis Title: Tumpuroo as a Local Community Health Worker to Support for Family with Children Under Five	Name: Kusumawardhani Nindya, Firman Pribadi Title: A Comparative Unit Cost Analysis of Echocardiography Service between Activity-Based Costing, INA-CBGs, and Hospital Charge at Muhammadiyah Yogyakarta Hospital	Name: Samuel Marganda, Taufik Ashar, Nurmaini Title: Occupational Risk Factors Associated with Perceived Central Nervous System Disorder among Printing Industry Workers in Medan
34	14.30-14.40	Name: Putri Anggrainy, Taufik Ashar, Rodiah Rahmawaty Lubis Title: Difference in Computer-Attributed Vision Problem between Laptop and Desktop Users	Name: Indah Yasminum Suhanti Title: Evaluation on Adult Behavior of Diaper Disposal into the River in Surabaya and Sidoarjo, East Java	Name: Indah Permatasari Sinawangwulan, Yulia Lanti Retno Dewi, CSP. Wekadigunawan Title: Factors Associated with Hemoglobin Level in Pregnant Women	Name: Ratna Widarastuti, Wiwik Kusumawati Title: Effectiveness of Inter-Health Professional Collaboration for an Improved Management of In-Patient Care at an Ni'mah Wangon Hospital	Name: Bona Rina Ria Rajagukguk, Nurmaini, Etti Sudaryati Title: Effect of Coconut Water in Reducing Fatigue among Workers in North Sumatera
35	14.40-14.50	Name: Achmad Zulfa Juniarto, Eka Chandra Herlina, Faizah Fulyani, Aulia Iskandarsyah, Arlina Dewi	Name: Yusuf Alam Romadhon, Muhammad Fannani Title: Effect of Tranquil	Name: Harrys Bachtiar, Uki Retno Budihastuti, Harsono Salimo Title: Does Ambient To-	Name: Shela Sabrina Mutmainnah, Winny Setyongroho Doctor-Nurse Professional	Name: Wilhelmus Olin, Rafael Paun Title: Risk Factors of Malaria in Lembata Dis-

		Title: The Associations between Depression and Anxiety, and Quality of Life of Males with Infertility	Trial on Health: Development of a New Instrument to Measure Tranquility	tabacco Smoke Exposure Increase the Risk of Preterm Birth? A New Multivariate Evidence from Surakarta, Indonesia	Title: Relationship and Health Care Team Communication in the Hospital Setting	trict, East Nusa Tenggara
36	14.50-15.00	Name: Olivia Fabita Wijaya, Sri Wahyuningsih, Maria S.T Title: Factors Associated with Occupational Stress among Workers in the Production Department	Name: Helfi Agustin, Rizki Indah Cahyani, Anita Juniarti, Dini Hartiningsih Title: Effect of Health Promotion on Satisfaction and Health Behavior Change among the Elderly in Rural Areas	Name: Rizqa Kartika Dewi, Uki Retno Budihastuti, Eti Poncorini Pamungkasari Title: Factors Associated with Postpartum Bleeding in Surakarta, Central Java	Name: Tiara Tresnantia, Arlina Dewi, Ekorini Listiowati Title: The Role of General Health Advisory Board in Muhammadiyah Gamping Hospital, Yogyakarta, within the Academic Health Center Concept	Name: Cicilia Windiyarningsih Title: A Study on the Prevalence and Control of Non-Communicable Diseases in Subang, West Java
37	15.00-15.10	Name: Noorce Christiani Berek Title: Factors Associated with Unsafe Behavior among Construction Workers in Kupang, East Nusa Tenggara	Name: Ninik Nurhidayah, Muchammad Syamsulhadi, Sapja Anantanyu, Ari Probandari Title: The Associations of Education Level and Health Status with Leisure Participation among the Elderly	Name: Zummatul Atika, Harsono Salimo, Yulia Lanti Retno Dewi Title: Theory of Planned Behavior on Factors Affecting Exclusive Breastfeeding: A Path Analysis Evidence from Surabaya	Name: Lie Novita Sadeli, Ida Yustina, Destanul Aulia Title: The Effect of Incentives on Satisfaction of Specialists at Imelda General Hospital, Medan, North Sumatera	Name: Rafael Paun Title: Factors Associated with Falciparum Malaria in Lembata, East Nusa Tenggara
38	15.10-15.20	Name: Nurdiana Manurung Title: Effects of Anti Hypertensive Agent and Smoking on Sexual Dysfunction among Males of Reproductive Age in Deli Serdang, North Sumatera	Name: Rosnella Sihombing, R. Kintoko Rochadi, Heru Santosa Title: Association of Husband's Knowledge and Wife's Support with the Use of Long-Acting Male Contraceptive in Pematangsiantar, North Sumatera	Name: Dewi Saptowati, Ambar Mudigdo, Bhisma Murti Title: Theory of Planned Behavior: Associations between Intention, Knowledge, and Use of Visual Inspection Acetic Acid	Name: Dwie Novitaroza, Zulfendri, Nurmaini Title: Role of Human Resource, Facilities, and Infrastructure in Early Warning System of Dengue Haemorrhagic Fever in Dumai, Riau	Name: Erick Zicof, Setyo Sri Rahardjo, Bhisma Murti Title: Maternal Personal Hygiene, Sanitation, Family Size, and the Risk of Diarrhea in Children under Five: A PRECEDE-PROCEED Model in Surakarta
39	15.20-15.30	Name: Gunenthira Rao, Halimatus Sakdiah Min	Name: Yusniar, Lita Andayani, Taufik Ashar	Name: Husniyati Sajalia, Yulia Lanti Retno Dewi,	Name: Sondang Simanjuntak, Ida Yustina, Zul	Name: Dea Linia Romadhoni, Setyo Sri Rahardjo,

		hat, Hayati Kadir Shahr, Firdaus Mukhtar Title: Correlates of Stress among Adult Male Inmates in a Local Prison, Malaysia	Title: Parenting Style, Residence, and Glue Sniffing among Primary School Children in Sibolga, North Sumatera	Bhisma Murti Title: Life Course Factors Associated with Wasting in Children under Five in East Lombok, West Nusa Tenggara	fendri Title: The Relationships of Motivation and Sanction with Hand Hygiene Compliance among Health Workers at Dr. Pirngadi Hospital, Medan, North Sumatera	Dono Indarto Title: Association between Body Mass Index, Type of Occupation, History of Chronic Illness, and Poor Occupational Posture	
	15.30-15.45	Coffe Break					
40	15.55-16.05	Name: Mutiara Nauli, Taufik Ashar, Rahayu Lubis Title: The Associations of Duration of Exposure and Tenure with Urine Hippuric Acid Level among Workers at Printing Industry in Medan, North Sumatera	Name: Bunga Mutiara, Uki Retno Budihastuti, Eti Poncorini Pamungkasari Title: Does Religiosity Curb Risky Sexual Behavior among Adolescents?	Name: Desy Eka Ilmiyah, Uki Retno Budihastuti, Ismi Dwi Astuti Nurhaeni, Ambar Mudigdo Title: Factors Influencing the Uptake of Long-Acting Reversible Contraceptive Method in Boyolali, Central Java	Name: Irwadi, Zulfendri, Destanul Aulia Title: The Associations of Ward Head Direction and Incentive with Nurse Performance at Arun LNG Hospital, Lhokseumawe, Aceh	Name: Arum Kusuma Rini, Eti Poncorini Pamungkasari, Bhisma Murti Title: Does Maternal Schooling Affect the Risk of Child Obesity? A Path Analysis Evidence from Surakarta, Central Java	
41	16.05-16.15	Name: Suryani, Fazidah Aguslina, Wirsal Hasan Title: Effects of Contact History and Family Income on the Risk of Pulmonary Tuberculosis in Padangsidempuan, North Sumatera	Name: Feny Lianawati, Argyo Demartoto, Rita Benya Adriani Title: The Role of Parental Communication and Peer Group in Healthy Sexual Behavior	Name: Alinda Nur Ramadhani, Rita Benya Adriani, Harsono Salimo Title: The Association between Family Support, Social Support, Gross Motoric Skill, and Quality of Life among Children with Cerebral Palsy	Name: Syahrul An, Irnawati Marsaulia, Destanul Aulia Title: Motivation, Supervision, and Adherence to Medical Waste Policy in South Labuhan Batu, North Sumatera	Name: Diana Sayidah, Setyo Sri Rahardjo, Bhisma Murti Title: Risk Factors of Tuberculosis: A New Path Analysis Evidence from Ponorogo, East Java	
42	16.15-16.25	Name: Ricca Nophia Amara, Fazidah Aguslina Siregar, Erna Mutiara Title: Physical Activity, Obesity, Family History, and Their Associations	Name: Saras Vati Manvatarini Sugma, Aris Sudiyanto, Argyo Demartoto Title: Theory of Planned Behavior on Factors Associated with Safe Sex Beha-	Name: Bekti Susilowati, CSP. Wekadigunawan, Bhisma Murti, Setyo Sri Rahardjo Title: Predictors of Intra-Uterine Device Uptake:	Name: Muhammad Arif Budi Prakoso, Elsy Maria Rosa Title: An Analysis of Adherence to Filling Out Surgical Safety Check List for an Im-	Name: Niena Ayu Cahyaningtyas, Aris Sudiyanto, RB. Soemanto Title: Religious Belief and Its Influence on Healthy Ageing among the Elderly in	

		with Hypertension among the Elderly in Aceh Singkil, Aceh	viator among Female Sex Workers in Surakarta, Central Java	Application of Theory of Planned Behavior and Path Analysis	proved Patient Safety at Nur Rohmah Hospital, Gunungkidul, Yogyakarta	Blora, Central Java
43	16.25-15.35	Name: Martinus Sudianto Tambunan Title: The Role of HIV/AIDS Committee at HKBP Balige Hospital in HIV/AIDS Control and Prevention in Toba Samosir, North Sumatera	Name: Ummy Prasetyowati, Didik Tamtomo, Bhisma Murti Title: Health Belief Model on the Determinants of Self-Care among Patients with Type 2 Diabetes Mellitus	Name: Dwi Wijayanti, Harsono Salimo, Yulia Lanti Retno Dewi Title: Factors Associated with Increased Risk of Overweight and Obesity in Children: An Evidence from Boyolali, Central Java	Name: Rini Indrian, Ikhlas Muhammad Jenie, Arlina Dewi Title: Implementation of Case Management for Quality Improvement at Purwokerto Islamic Hospital	Name: Anindiya Ningtyas, Ambar Mudigdo, Bhisma Murti Title: Effect of Circadian Rhythm and Environment Factor on The Risk of Breast Cancer: A New Path Analysis Evidence
44	15.35-16.45	Name: Masrizal, Aulia Rahmi Fitri Yani, Randa Ilham Title: Risk Factors of Filariasis in Children, Bukit Tinggi, West Sumatera	Name: Mulya Tarmidi, Argyo Demartoto, Eti Poncorini Pamungkasari Title: The Role of Health Reproduction Information Center in Improving Pre-Marital Sex Behavior among Adolescents in Bima, West Nusa Tenggara	Name: Alfadefi Khalifatusnisak, Harsono Salimo, Yulia Lanti Retno Dewi Title: Does Exclusive Breastfeeding Prevent Overweight in Children under Five? A Path Analysis Evidence from Kediri, East Java	Name: Indra Peratiwi, Hesteria Friska Armynia Subratha Title: Factors Associated with Sustainability of Integrated Geriatric Health Post in Tabanan, Bali	Name: Kanthi Devi Auningtyas, Setyo Sri Rahardjo, Bhisma Murti Title: Factors Associated with Dengue Fever Preventive Practice Using Theory of Planned Behavior
45	16.45-16.55	Name: Suaidah, Albiner Siagian, Fazidah Aguslina Title: Hypertension, Body Mass Index, and Their Associations with Type 2 Diabetes Mellitus in Deli Serdang, North Sumatera	Name: Harinto Nur Seha, Didik Tamtomo, Endang Sutisna Sulaeman Title: Factors Associated with Completeness and Accuracy of Electronic Medical Record Entry in Community Health Center in Yogyakarta	Name: Ernawati, Endang Sutisna Sulaeman, Dono Indarto Title: Determinants of Mother's Visit for Health Care at Posyandu: A Path Analysis Evidence from Karanganyar, Central Java	Name: Titis Eka Gusti, Didik Tamtomo, Bhisma Murti Title: Associations between Motivation, Facility, and Work Performance among Midwives in Antenatal Care in Central Java	Name: Mei Kusumaningtyas, Didik Tamtomo, Bhisma Murti Title: Type II Diabetes Mellitus, Physical Activity, Injury, and the Risk of Osteoarthritis
46	16.55-17.05	Name: Bagas Suryo Bintoro, Chyi Huey Bai Title: Persistent Hypertension is Associated with Low HDL in Young Adults:	MATERNAL AND CHILD HEALTH Name: Rona Luthfi Fauziyyah, Yulia Lanti Retno Dewi, CSP. Wekadiguna-	Name: Rindra Deviasti, Eti Poncorini Pamungkasari, Bhisma Murti Title: Attitude, Anxiety, Husband Support, and Intra	Name: Nureesa Doloh, Didik Tamtomo, Endang Sutisna Sulaeman Title: The Association between Motivation, Super-	HEALTH POLICY AND MANAGEMENT Name: Heni Rusmitasari, Endang Sutisna Sulaeman, Bhisma Murti

		An Evidence from Taiwan Five Years Population Based Cohort Study	wan, Bhisma Murti Title: Factors Associated with Stunting in Children under Five in Karawang, West Java	Uterine Device Use among Women of Reproductive Age in Mojokerto, East Java	vision, and Work Performance among Nurses in Dr. Moewardi Hospital, Surakarta	Title: Determinants of Job Performance among Nurses at PKU Muhammadiyah Hospital, Yogyakarta
47	17.05-17.15	Name: Anggi Isnani Parinduri, Taufik Ashar, Nurmaini Title: Occupational Factors Affecting Hemoglobin Level among Printing Industry Workers in Medan, North Sumatera	Name: Dewi Indriani, Yulia Lanti Retno Dewi, Bhisma Murti, Isna Qadrijati Title: Prenatal Factors Associated with the Risk of Wasting: A Multilevel Analysis Evidence from Nganjuk, East Java	Name: Nikmah Ayu Ramadhani Amir, Uki Retno Budihastuti, Bhisma Murti Title: Factors Associated with Birthweight	Name: Sri Hartini, Endang Sutisna Sulaeman, Bhisma Murti Title: The Effect of in-Service Training on the Quality of Microscopic Smear for Tuberculosis Examination in Madiun, East Java	Name: Prita Yuliana Irnawati, Harsono Salimo, Yulia Lanti Retno Dewi Title: Does Health Insurance Status Affect Choice of Specialist?
48	17.15-17.25	Name: Noor Alis Setiyadi, Wongsa Loahasiriwong, Suwanna Boonyaleepun, Bhisma Murti Title: Perceived Health Service, Quality of Care, and Multidrug Resistant Tuberculosis: A Case-Control Study in Central Java, Indonesia	Name: Hafari Fajria Nuril Ummah, Eti Poncorini Pamungkasari, Rita Benya Adriani Title: Factors Associated with Birth Preparedness in Wonogiri, Central Java	Name: Yustina Purwaningsih, Yulia Lanti Retno Dewi, Dono Indarto, Bhisma Murti Title: Low Birthweight, Preterm Birth, and Their Associations with the Risk of Asphyxia	Name: Tegar Wahyu Yudha Pratama, Didik Tamtomo, Endang Sutisna Sulaeman Title: Does Employment Status Determine Completeness of Nursing Care Documentation in Medical Record? A Path Analysis Evidence	MATERNAL AND CHILD HEALTH Name: Fatimah Sari, Bhisma Murti, Endang Sutisna Sulaeman Title: Maternal Attitude, Dietary Intake and Nutritional Status of Children Under Two Years of Age in Klaten, Central Java
49	17.25-17.35	Name: Lasmarida Br Silalahi, Zulfendri, Surya Utama Title: Physical, Social, and Cultural Environment Determinants of Filariasis in Tapanuli tengah, North Sumatera	Name: Ana Yuliana, Bhisma Murti, Hanung Prasetya Title: The Effect of Antenatal Class on Birth and Parenting Preparedness: A Path Analysis Evidence from Salatiga, Central Java	Name: Nur Fika Roobiati, Eti Poncorini Pamungkasari, Bhisma Murti Title: The Association of Birthweight and Food Intake with the Risk of Wasting in Children under Five in Boyolali, Central Java	Name: Nurul Wahidah, Endang Sutisna Sulaeman, Uki Retno Budihastuti Title: Factors Associated with Work Performance among Midwives at Community Health Centers in Central Java	

50	17.35-17.45	<p>Name: Hendira Ayudia Sorentia, Tri Adi Kurniawan</p> <p>Title: Factors Associated with Treatment and Control Sustainability among Patients with Lung Cancer</p>	<p>Name: Remita Yuli Kusumaningrum, Bhisma Murti, Hanung Prasetya</p> <p>Title: Factors Associated with Neonatal Asphyxia: A Path Analysis Evidence from Nganjuk, East Java</p>	<p>Name: Nurhayati Agtikasari, RB. Soemanto, Bhisma Murti</p> <p>Title: Rural-Urban Residence and the Propensity of Early Marriage: A Path Analysis Evidence from Lampung</p>		
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SCHEDULE OF INTERNATIONAL CONFERENCE ON PUBLIC HEALTH 2018

Best Western Premier Hotel, Solo, Indonesia
August 29-30, 2018

Symposium Schedule

Date: Wednesday, August 29, 2018

No	Time	Topic	Speaker/Moderator
1	07.30-08.00	Registration	Organizing Committee
2	08.00-08.05	1. Commencement Ceremony 2. National Anthem "Indonesia Raya"	Master of Ceremony
3	08.05-08.10	Aim and Programs of the International Conference on Public Health.	Prof. Bhisma Murti, (Universitas Sebelas Maret, Surakarta, Indonesia).
4	08.10-08.15	Welcoming Address from the Rector of Universitas Sebelas Maret.	Prof. Ravik Karsidi (Rector of Universitas Sebelas Maret, Surakarta, Indonesia).
5	08.15-08.20	Pray	
6	08.20-08.30	Coffee Break	
7	08.30-09.15	Symposium I Policy and Priorities for Ensuring Equity of Access to Primary Health Care in Rural and Remote Areas.	Prof. Bettina Borisch (CEO, World Federation of Public Health Associations (WFPHA). Professor, Institute for Global Health, University of Geneva, Switzerland). Moderator: Prof. Bhisma Murti
8	09.15-10.00	Strategies to Recruit and Retain Skilled and Motivated Healthcare Workers in Remote and Under-Served Areas.	Prof. Amanda Howe (President World Organization of Family Doctors (WONCA) 2016-2018. Professor of Primary Care, Norwich Medical School, University of East Anglia. United Kingdom). Moderator: Prof. Bhisma Murti
9	10.00-10.45	Government Policy to Ensure Equitable Access of Quality Health Care for Rural and Remote Communities in Indonesia.	Dr. Anung Sugihantono, M.Kes Director General, Disease Prevention and Control, Ministry of Health, Jakarta, Indonesia Moderator: Prof. Bhisma Murti
10	10.45-11.30	Health Promotion Strategies to Address Health Issues among	Prof. Adang Bachtiar (Chairman of the Advisory Board, Indonesian Association of Public

No	Time	Topic	Speaker/Moderator
		the Indonesian Communities in Isolated and Underserved Areas.	Health Professionals (Ikatan Ahli Kesehatan Masyarakat Indonesia/ IAKMI). Faculty of Public Health, University of Indonesia, Jakarta, Indonesia). Moderator: Prof. Bhisma Murti
10	11.30-12.00	Discussion	Prof. Bettina Borisch Prof. Amanda Howe Dr. Anung Sugihantono, M.Kes Prof. Adang Bachtiar Prof. Adrian Schoo Moderator: Prof. Bhisma Murti
11	12.00-13.00	Lunch	
13	13.00-13.40	Symposium II Thinking and Conceptualizing Rural Health Workforce Development with Optimized Access to Sustainable Health Service	Prof. Adrian Schoo (Professor of Clinical Education, Prideaux Centre for Research in Health Professions Education, Flinders University, Adelaide, South Australia, Australia. Fellow of the Australian and New Zealand Association for Health Professional Educators [ANZAHPE]). Moderator: Prof. Bhisma Murti
14	13.40-14.20	Portable Health Clinic: A Pervasive Way to Serve the Unreached Community for Preventive Healthcare.	Prof. Ashir Ahmed (Associate Professor, Department of Advanced Information Technology, Kyushu University, Fukuoka, Japan. Director, Global Communication Center, Grameen Communications, Dhaka, Bangladesh). Moderator: CSP Wekadigunawan, PhD
15	14.20-15.00	Health is My Right: Lessons Learned from Remote and Isolated Areas of Papua.	Arry Pongtiku, MD, MHM, PhD (Head of Waropen District Health Office, Papua. Chairman of Management Scientists Association in Papua. Vice chair for Traditional/ Complementary Medicine in Papua. Researcher, Author, Health Practitioner, and CSR consultant). Moderator: CSP Wekadigunawan, dr., MPH., PhD
16.	15.00-15.20	Discussion	Prof. Adrian Schoo Prof. Ashir Ahmed

No	Time	Topic	Speaker/Moderator
			Arry Pongtiku, MD, MHM, PhD Moderator: CSP Wekadigunawan, dr., MPH., PhD
17.	15.20-15.30	Coffee Break	
18.	15.30-16.00	Symposium III Community Capacity Building for the Enhancement of Maternal and Child Health in the Under-Served Areas in Low Income Settings.	Prof. Jessica D. Gipson (Associate Professor, Department of Community Health Sciences, Fielding School of Public Health, University of California at Los Angeles, USA). Moderator: CSP Wekadigunawan, dr., MPH., PhD
19.	16.00-16.30	Professional Experience Working in Kalimantan Remote Areas: Challenges and Opportunities for Fulfilling the Unmet Health Care Need of the Unreached	Nurmilia Afriliani, MD Clinic Manager at Alam Sehat Lestari. Graduated from Syiah Kuala University, Banda Aceh. Treating around twenty outpatients every workdays. Mobile clinic visit to remote villages every other months. Moderator: CSP Wekadigunawan, dr., MPH., PhD
20.	16.30-17.00	Accessibility to Health Services among Migrant Workers in the Northeast of Thailand Rural Development.	Prof. Wongs Laohasiriwong (Associate Professor, Master of Rural Development Management, Khon Kaen University, Khon Kaen, Thailand Vice Dean, Faculty of Public Health, Khon Kaen University, Thailand). Moderator: CSP Wekadigunawan, dr., MPH., PhD
21.	17.00-17.20	Discussion	Prof. Jessica D. Gipson Nurmilia Afriliani, MD Prof. Wongs Laohasiriwong Moderator: CSP Wekadigunawan, dr., MPH., PhD
22.	17.00-17.05	Closing day 1	

**SCHEDULE OF INTERNATIONAL CONFERENCE
ON PUBLIC HEALTH 2018**

Best Western Premier Hotel, Solo, Indonesia
August 29-30, 2018

Workshop Schedule

Date: Thursday August 30, 2018

Cluster A

No	Time	Topic	Resource Person
1.	07.30-09.30	How to Apply Path Analysis in Health Studies Using Stata.	Prof. Bhisma Murti (Professor, Masters Program in Public Health, Graduate School, Universitas Sebelas Maret Chairman, ICPH). Moderator: Aqartuty, S.ST, M.KM
2.	09.30-09.45	Coffee Break	
3.	09.45-11.45	How to Conduct Mix-Method Research for a Holistic Understanding of Health Issues.	Prof. Jessica D. Gipson (Associate Professor, Department of Community Health Sciences, Fielding School of Public Health, University of California at Los Angeles, USA). Moderator: Aqartuty, S.ST, M.K.M
4.	11.45-13.15	Lunch	
5.	13.15-15.15	How to Support Organizational, Local and Regional Development, and Utilizing Social Capital, to Achieve Sustainable Models of Rural and Remote Health Care.	Prof. Adrian Schoo (Professor of Clinical Education, Prideaux Centre for Research in Health Professions Education, Flinders University, Adelaide, South Australia, Australia. Fellow of the Australian and New Zealand Association for Health Professional Educators [ANZAHPE]). Moderator: dr. Mardhatillah, M.K.M
6.	15.15-15.30	Coffee Break	
7.	15.30-17.30	Reog	

Cluster B

No	Time	Topic	Resource Person
1.	07.30-09.00	How to Use Self Healing to Reduce and Prevent Occupational Stress in the Rural and Remote Areas.	Dr. Hanung Prasetya (Lecturer, School of Health Polytechnics Surakarta, Ministry of Health, Surakarta, Indonesia Certified Consultant Hypnotist from National Guild Hypnotists, USA. Founder/ Owner Sinergy Mind Health Indonesia. Secretary, ICPH). Moderator: Dyah Ayu Agustin, S.SiT, M.KM
2.	09.00-09.15	Coffee Break	
3.	09.15-10.45	How to Manage Conflict as a Source of Growth and Transformation in Rural Development.	Prof. Wongsu Laohasiriwong (Associate Professor, Master of Rural Development Management, Khon Kaen University, Khon Kaen, Thailand Vice Dean, Faculty of Public Health, Khon Kaen University, Thailand). Moderator: Dyah Ayu A, S.SiT, M.KM
4.	10.45-12.15	How to Introduce and Increase Digital Health Literacy in Underserved Communities.	Prof. Ashir Ahmed (Associate Professor, Department of Advanced Information Technology, Kyushu University, Fukuoka, Japan. Director, Global Communication Center, Grameen Communications, Dhaka, Bangladesh). Moderator: Dyah Ayu A, S.SiT, M.KM
5.	12.15-13.15	Lunch	
6.	13.15-15.15	How to Build Up Personal Leadership Skills to Become Leaders of Teams, Communities, and the Profession.	Prof. Amanda Howe (President World Organization of Family Doctors (WONCA) 2016-2018. Professor of Primary Care, Norwich Medical School, University of East Anglia. United Kingdom). Moderator: Aquartuty, S.ST, M.KM
7.	15.15 -15.30	Coffee Break	
8.	15.30-17.30	Reog	

KNOWLEDGE, PREVENTIVE PRACTICE, AND THE RISK OF DENGUE HEMORRHAGIC FEVER IN KUPANG, EAST NUSA TENGGARA

Ignasius Tangi Bupu¹⁾, Pius Weraman¹⁾, Rafael Paun²⁾

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ABSTRACT

Background: Dengue/dengue hemorrhagic fever (DHF) has been one of the most important resurgent tropical diseases in the past 17 years. Its incidence in East Nusa Tenggara has been increasing since 2011 to 2013. This study aimed to investigate the associations between knowledge, preventive practice, and the risk of dengue hemorrhagic fever in Kupang, East Nusa Tenggara.

Subjects and Method: This was a case control study conducted at 8 Puskesmas (Community Health Center) in Kupang, East Nusa Tenggara, Indonesia, from March to May 2016. A total of 72 subjects were selected for this study by fixed disease sampling, consisting of 36 DHF cases and 36 controls. The dependent variable was DHF. The independent variables were knowledge on DHF and DHF preventive practice including draining, hoarding, and burying. The data were collected by questionnaire and interview. The data were analyzed by a multiple logistic regression.

Results: Poor knowledge on DHF (OR= 4.85; 95% CI= 1.62 to 14.49; p= 0.005) and poor DHF preventive practice (OR= 4.72; 95% CI= 1.60 to 13.91; p= 0.005) were associated with an increased risk of DHF.

Conclusion: Poor knowledge on DHF and poor DHF preventive practice are associated with an increased risk of DHF.

Keywords: knowledge, preventive practice, dengue hemorrhagic fever.

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INDIVIDUAL, SOCIAL, AND ENVIRONMENTAL RISK FACTORS OF MALARIA IN ROTE NDAO DISTRICT, EAST NUSA TENGGARA

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ABSTRACT

Background: Malaria is one of the world's biggest killers. Studies into individual, social, and environmental risk factors of malaria in East Nusa Tenggara, Indonesia, are absent. This study aimed to investigate the individual, social, and environmental risk factors of malaria in East Nusa Tenggara, Indonesia.

Subjects and Method: This was a cross-sectional study conducted at Puskesmas Feapopi, Rote Ndao district, East Nusa Tenggara, Indonesia, from December 2015 to February 2016. A total sample of 310 subjects was selected for this study by multi stage random sampling. The dependent variable was malaria. The independent variables were mosquito repellent use, hanging out of the house in the evening, distance to a breeding place, type of house wall, distance to a stable, and health education on malaria. The data were collected by questionnaire, interview, and observation. Malaria was diagnosed microscopically. The data were analyzed by a multiple logistic regression.

Results: The risk of malaria increased with absence of mosquito repellent use (OR= 4.61; 95% CI= 1.75 to 12.16; p= 0.002), hanging out of the house in the evening (OR= 5.67; 95% CI= 2.32 to 13.82; p<0.001), close to a breeding place (OR= 3.54; 95% CI= 1.50 to 8.33; p= 0.004), semi-permanent house wall (OR= 8.13; 95% CI= 2.99 to 22.07; p<0.001), far from a stable (OR= 0.08; 95% CI= 0.03 to 0.23; p<0.001), and health education on malaria (OR= 0.06; 95% CI= 0.03 to 0.14; p<0.001).

Conclusion: The risk of malaria increases with absence of mosquito repellent use, hanging out of the house in the evening, close to a breeding place, semi-permanent house wall, far from a stable, and health education on malaria.

Keywords: individual, social, environment, risk factor, malaria.

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RISK FACTORS OF DIARRHEA AMONG COMMUNITIES LIVING NEARBY DELI RIVER AREA, NORTH SUMATERA

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ABSTRACT

Background: Diarrheal disease is the second leading cause of death in children under five years old, and is responsible for killing around 525 000 children every year. Interventions to prevent diarrhea, including safe drinking-water, use of improved sanitation and hand washing with soap can reduce disease risk. This study aimed to investigate risk factors of diarrhea among communities living nearby Deli river area, North Sumatera.

Subjects and Method : This was a cross-sectional study conducted in communities living nearby Deli river area, North Sumatera. A total of 96 subjects were selected for this study. The dependent variable was diarrhea incidence. The independent variables were use of toilet, clean water, hand wash, processing of waste, human excreta. The data were collected by questionnaire and analyzed by a multiple logistic regression.

Results : The risk of diarrhea increased with poor use of toilet (PR= 1.67; 95% CI 0.99 to 2.79; p= 0.040), poor use of clean water (PR= 1.66; 95% CI 1.02-2.70; p = 0.035), hand washing without soap (PR= 1.74; 95% CI 1.12 to 2.68; p= 0.002), poor garbage management (PR= 2.50; 95% CI 1.33 to 4.89; p= 0.001), improper human excreta disposal (PR= 1.64; 95% CI 1.04 to 2.60; p= 0.032).

Conclusion: The risk of diarrhea increases with poor use of toilet, poor use of clean water, hand washing without soap, poor garbage management, and improper human excreta disposal.

Keywords: diarrhea, personal hygiene, sanitation.

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ASSOCIATIONS OF CONTACT HISTORY, SMOKING STATUS, NUTRITION STATUS, AND ARV TREATMENT, WITH TB-HIV CO-INFECTION AMONG PEOPLE WITH HIV/AIDS

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ABSTRACT

Background: Tuberculosis (TB) and HIV co-infection causes a heavy burden on health care systems and poses particular diagnostic and therapeutic challenges. Studies into predictors of TB-HIV co-infection is lacking in Indonesia. This study aimed to examine the associations of contact history, smoking status, nutrition status, and ARV treatment, with TB-HIV co-infection among people with HIV/AIDS.

Subjects and Method: This was a cross sectional study conducted in Balige, North Sumatera. A sample of 82 people living with HIV/AIDS were selected for this study, comprising 41 cases with and 41 controls without TB-HIV co-infection. The dependent variable was TB-HIV co-infection. The independent variables were contact history, smoking status, nutrition status, and ARV treatment. The data on HIV/AIDS co-infection were taken from the medical record at HKBP Committee HIV/AIDS service in Balige. Other variables were measured by questionnaire. Data were analyzed by multiple logistic regression.

Results: 82.9% of sample had no contact history, 56.1% had poor nutrition status, 78% were smokers, and 58.5% had irregular ARV treatment. TB-HIV co-infection increased with poor nutrition status (OR= 3.48; p= 0.014), smoking status (OR= 3.39; p= 0.021), and irregular ARV treatment (OR= 10.16; p<0.001).

Conclusion: TB-HIV co-infection increases with poor nutrition status, smoking status, and irregular ARV treatment.

Keywords: TB-HIV co-infection, nutrition status, smoking status, ARV treatment.

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HYGIENE SANITATION AND DETECTION OF RHODAMIN B IN SAUCE AND FORMALIN IN MEATBALL AT MEATBALL TAVERN, KUPANG, EAST NUSA TENGGARA

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ABSTRACT

Background: Food safety and sanitation is an essential part of the food industry. While it is important to be able to deliver food quickly and profitably, the importance of food safety and sanitation cannot be underestimated. Fast food retailers such as meatball tavern are common in Kupang, East Nusa Tenggara. Therefore it is worth studying the food safety and sanitation among the existing fast food retailers. This study aimed to examine hygiene sanitation and detection of rhodamin B in sauce and formalin in meatball at meatball tavern, Kupang, East Nusa Tenggara.

Subjects and Method: This was a cross-sectional study conducted at meatball taverns, Kupang, East Nusa Tenggara, Indonesia. A total of 16 meatball taverns were selected for this study by total sampling. The dependent variables were hygiene sanitation, rhodamine B content in sauce, and formalin content in meatball. The independent variables were selection of foodstuff, food storage, processing place, equipment, food handlers, food transport, and food provision. The data were collected by observation and laboratory examination. The data were described accordingly.

Results: Hygiene and sanitation in food selection and food storage were good (70-100%). Hygiene and sanitation in food handling and processing were fair (50-78%). Hygiene and sanitation of processing places were variable from poor to moderate (36-72%). Hygiene and sanitation of equipment were good (70-100%). Food stewardship was very good (87-100%). Rhodamine B content was absent in sauce. Formalin content was absent in meatball.

Conclusion: Hygiene and sanitation levels in various aspect of food preparation and handling at meatball taverns were variable ranging from poor to very good level.

Keywords: hygiene, sanitation, meatball, tavern, formalin, rhodamin B.

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CORRELATION BETWEEN SUBJECTIVE WELL-BEING AND PSYCHOLOGICAL WELL-BEING AMONG UNIVERSITY STUDENTS

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ABSTRACT

Background: Subjective well-being (SWB) is a self-reported measure of well-being, which comprises three distinct but often related components of wellbeing: frequent positive affect, infrequent negative affect, and cognitive evaluations such as life satisfaction. Psychological well-being (PWB) consists of positive relationships with others, personal mastery, autonomy, a feeling of purpose and meaning in life, and personal growth and development. This study aimed to estimate the correlation between SWB and PWB among university students.

Subjects and Method: This was a cross-sectional study conducted at Psychology Study Program, Faculty of Public Health, Nusa Cendana University, Kupang, East Nusa Tenggara, Indonesia, from March to April 2018. A total sample of 211 students was selected for this study. The study variables were SWB and PWB. The data were collected by pre-tested questionnaire and analyzed by correlation.

Results: SWB was strongly and positively correlated with PWB ($r= 0.71$; $p<0.001$).

Conclusion: Subjective well-being is strongly and positively correlated with psychological well-being.

Keywords: subjective well being, psychological well being.

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MEATBALLS CONTAINING BANANA BLOSSOM, RED BEAN FLOUR, AND SWEET POTATO FLOUR AS AN ALTERNATIVE SUPPLEMENTARY DIET FOR CHILDREN UNDER FIVE IN EAST NUSA TENGGARA

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ABSTRACT

Background: Malnutrition is a major public health problem in East Nusa Tenggara. Banana blossom, red bean, and sweet potato, are three types of local food that can be easily obtained in East Nusa Tenggara. Meatball is one of likeable food among people in East Nusa Tenggara. This study aimed to analyze the potentials of meatballs containing banana blossom, red bean flour, and sweet potato flour as an alternative supplementary diet for children under five years of age in East Nusa Tenggara.

Subjects and Method: This was a descriptive study conducted Kupang, East Nusa Tenggara. The study subjects involved three types of food: banana blossom, red bean flour, and sweet potato flour. The dependent variables included macro nutrition value, protein content, color and scent, and texture and taste. The difference in mean values was tested by one way Anova.

Results: The macro nutrition values of banana blossom, red bean flour, and sweet potato flour, were statistically significant different ($p < 0.001$). The color and scent of the three types of food were also statistically significant different ($p < 0.001$). However, the texture and taste were comparable among the three types of food ($p = 0.070$). The protein content was 50% in banana blossom, 15% in red bean flour, and 35% in sweet potato flour.

Conclusion: Meatballs containing banana blossom, red bean flour, and sweet potato flour, can be used as an alternative supplementary diet to improve nutrition intake for children under five years of age in East Nusa Tenggara.

Keywords: banana blossom, red bean flour, sweet potato flour, meatball, supplementary food.

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VALIDITY OF MIDDLE UPPER ARM CIRCUMFERENCE AS AN INDICATOR OF NUTRITIONAL STATUS IN PATIENTS WITH CANCER UNDERGOING CHEMOTHERAPY

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ABSTRACT

Background: Middle Upper Arm Circumference (MUAC) is the circumference of the left upper arm, measured at the middle point between the tip of the shoulder and the tip of the elbow (olecranon process and the acromium). MUAC is used for the assessment of nutritional status. It is a good predictor of mortality and in many studies, MUAC predicted death in children better than any other anthropometric indicator. This study aimed to validity of middle upper arm circumference as an indicator of nutritional status in patients with cancer undergoing chemotherapy.

Subjects and Method: A cross-sectional study was conducted at Sultan Agung Islamic hospital, Semarang, Central Java. A sample of 52 cancer patients undergoing chemotherapy was selected for this study. The independent variable was body mass index (BMI) served as the gold standard. The dependent variable was middle upper arm circumference (MUAC). Both indicators were measured by anthropometric measurement. Sensitivity and specificity were calculated to indicate validity. BMI and MUAC scores were analyzed by Pearson correlation.

Results: MUAC had a strong and positive correlation with BMI ($r= 0.76$; $p<0.001$). In comparison with BMI, MUAC showed high sensitivity (94.7%) and moderate specificity (75.8%).

Conclusion: MUAC is strongly correlated with BMI with high sensitivity and moderate specificity. It can be used as an indicator of nutritional status in cancer patients undergoing chemotherapy.

Keywords: middle upper arm circumference, body mass index, nutritional status, cancer

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**EFFECTIVENESS OF LARVA MONITORING TRAINING
ON KNOWLEDGE OF DENGUE HEMORRHAGIC FEVER
CONTROL AMONG PRIMARY SCHOOL STUDENTS
IN SIBOLGA, NORTH SUMATERA**

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ABSTRACT

Background: Dengue fever/dengue hemorrhagic fever (DHF) is one of the most important public health problems in tropical developing countries. It also has major economic and societal consequences. This study aimed to assess the effectiveness of larva monitoring training on knowledge of dengue hemorrhagic fever control among primary school students in Sibolga, North Sumatera.

Subjects and Method: This was a quasi-experiment before and after with no controlled design. The study was conducted in elementary school in Sibolga, North Sumatera, in 2018. A sample of 30 students was selected for this study and received training on DHF for four days. The training employed leaflet, video, and photocopied materials. The dependent variable was knowledge on DHF. The independent variable was training on DHF. The data were collected by questionnaire and tested by t-test.

Results: Knowledge on DHF among students increased by Mean= 26.67 (SD= 14.51) after training, and it was statistically significant ($p= 0.037$).

Conclusion: Knowledge on DHF among students increases after training, and it is statistically significant.

Keywords: training, knowledge, dengue hemorrhagic fever

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FAMILY SUPPORT AND ITS ASSOCIATION WITH THE RISK OF LUNG TUBERCULOSIS IN SUBULUSSALAM, ACEH

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ABSTRACT

Background: Tuberculosis (TB) remains a major public health problem in developing countries. This study aimed to examine the association between family support and the risk of lung TB in Subulussalam, Aceh.

Subjects and Method: This was a cross sectional study conducted at Puskesmas (Community Health Center) Penanggalan in Subulussalam, Aceh. A sample of 30 patients was selected for this study. The dependent variable was lung TB. The independent variables were family support, sex, and knowledge. Data on tuberculosis diagnosis status was obtained from the medical record. The other data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: The risk of lung TB was positively associated with weak family support (OR= 4.28; 95% CI= 2.15 to 6.60; p= 0.027), after adjusting for the effects of sex and knowledge.

Conclusion: The risk of lung TB is positively associated with weak family support after adjusting for the effects of sex and knowledge.

Keywords: lung tuberculosis, family support, sex, knowledge.

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BIOPSYCHOSOCIAL DETERMINANTS OF PREECLAMPSIA IN KEDIRI, EAST JAVA

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ABSTRACT

Background: Preeclampsia has remained a significant public health threat in both developed and developing countries contributing to maternal and perinatal morbidity and mortality globally. This study aimed to examine the biopsychosocial determinants of preeclampsia in Kediri, East Java.

Subjects and Method: This was a case control study conducted in Kediri, East Java. A sample of 100 pregnant mothers was selected for this study by fixed disease sampling, consisting of 25 pregnant mothers with preeclampsia and 75 without preeclampsia. The dependent variable was preeclampsia. The independent variables were maternal age, parity, Body Mass Index (BMI), perceived susceptibility, and perceived severity. The data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: Maternal age <20 years (OR= 1.75; p= 0.023), nulliparous (OR= 1.56; p= 0.045), BMI ≥25 (OR= 2.75; p= 0.037), low perceived susceptibility (OR= 2.22 ; p= 0.034), low perceived severity (OR= 2.61 ; p= 0.048) were associated with an increased risk of preeclampsia.

Conclusion: Maternal age <20 years, nulliparous, BMI ≥25, low perceived susceptibility, low perceived severity, are associated with an increased risk of preeclampsia.

Keywords: preeclampsia, maternal age, parity, body mass index, perceived susceptibility, perceived severity.

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FACTORS ASSOCIATED WITH DIARRHEA IN NOEBEBA, MIDDLE SOUTH TIMOR, EAST NUSA TENGGARA

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ABSTRACT

Background: Acute diarrheal diseases remain a leading cause of global morbidity and mortality particularly among young children in resource-limited countries. Large studies are also currently underway evaluating novel and potential easy-to-implement water sanitation and hygiene (WASH) preventive strategies. This study aimed to examine factors associated with diarrhea in Noebeba, South Timor Tengah.

Subjects and Method: This was a cross-sectional study conducted in Noebeba, Middle South Timor, East Nusa Tenggara. A sample of 355 mothers was selected for this study by simple random sampling. The dependent variable was diarrhea. The independent variables were household water container ownership, latrine ownership, maternal knowledge, handwashing practice, trash bin, and food sanitation. The data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: Household water container ownership (OR= 0.21; p= 0.003), latrine ownership (OR= 0.32; p< 0.001), good maternal knowledge (OR= 0.62; p<0.001), and handwashing practice (OR= 0.41; p< 0.001) were associated with a decreased incidence of diarrhea. Trash bin and food sanitation did not show statistical significance with incidence of diarrhea.

Conclusion: Household water container ownership, latrine ownership, good maternal knowledge, and handwashing practice, are associated with a decreased incidence of diarrhea.

Keywords: diarrhea, hygiene, sanitation, risk factors

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FACTORS ASSOCIATED WITH HYPERTENSION AMONG ELDERLY IN PADANG BULAN, MEDAN, NORTH SUMATERA

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ABSTRACT

Background: High blood pressure is a global public health problem. High blood pressure is called the “silent killer” because it often kills without warning signs or symptoms, and many people do not realize they have it. The world’s population is ageing. Virtually every country in the world is experiencing growth in the number and proportion of older persons in their population. The incidence of hypertension is greatest among older adults. This study aimed to determine factors associated with hypertension incidence among elderly in Puskesmas Padang Bulan, Medan, North Sumatera.

Subjects and Method: This was a case control study conducted at Puskesmas (community health center) Padang Bulan, Medan, North Sumatera. A sample of 124 elderly persons was selected for this study, consisting of 62 persons with hypertension and 62 persons without hypertension. The dependent variable was hypertension. The independent variables were smoking, obesity, physical activity, fat diet, family history. Blood pressure was measured by sphygmomanometer. The other data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: Hypertension incidence increased with smoking (OR= 5.57; p= 0.007), obesity (OR= 5.30; p= 0.001), lack of physical activity (OR= 4.32; p= 0.001), high fat diet (OR= 5.21; p= 0.023), and family history (OR= 2.21; p= 0.001).

Conclusion: The risk of hypertension in elderly increases with smoking, obesity, lack of physical activity, high fat diet, and family history.

Keywords: hypertension, smoking, obesity, physical activity, fat diet, family history.

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ACCESSIBILITY OF PEOPLE WITH PHYSICAL DISABILITIES TO SIDEWALKS IN SURAKARTA, CENTRAL JAVA

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ABSTRACT

Background: Accessibility refers to the design of products, devices, services, or environments for people who experience disabilities. Sidewalks, like roadways, should be designed to serve all users. This includes children, older people, parents with strollers, pedestrians who have vision impairments, people with physical disabilities (PWDs), people using wheelchairs and other assistive devices. This study aimed to assess accessibility of people with physical disability to sidewalks in Surakarta, Central Java.

Subjects and Method: This was an explorative qualitative study conducted in Surakarta, Central Java. The target population was people with physical disabilities (PWDs). The main variable under study was access to sidewalk. The data were collected by interview, observation, and documentation. The data were analyzed by triangulation method.

Results: The architectural design of the sidewalks was incompatible with the need of PWDs. Most of the streets and sidewalks in Surakarta were not accessible by PWDs.

Conclusion: Most of the streets and sidewalks in Surakarta are not accessible by PWDs. In order to meet the needs of all sidewalk users, designers must have a clear understanding of the wide range of abilities that occur within the population.

Keywords: accessibility, sidewalks, pedestrian, people with physical disabilities

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ASSOCIATION BETWEEN FAMILY SUPPORT AND QUALITY OF LIFE OF WOMEN WITH CERVICAL CANCER AT DR. PIRNGADI MEDAN HOSPITAL, NORTH SUMATERA

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ABSTRACT

Background: The concept of social support has been used in many studies involved health problems and treatment particularly in cancer. As a major influencing factor in emotional adaption onto severe diseases, adequate social support provides perceived feeling that captivates someone by sharing worries or problems. This study was aimed to examine the association between family support and quality of life of women with cervical cancer at Dr. Pirngadi Medan Hospital, North Sumatera.

Subjects and Method: A cross-sectional study was conducted at Dr. Pirngadi general hospital, Medan, North Sumatera, from August to December 2017. A sample of 48 women with cervical cancer was selected for this study. The dependent variable was quality of life. The independent variable was family support. The data were collected by questionnaire and analyzed by chi square.

Results: Family support is positively associated with quality of life of women with cervical cancer (OR= 2.35; CI= 1.70 to 5.43; p= 0.043). Women with strong family support were 2.35 times more likely to have good quality of life than counterparts with weak family support.

Conclusion: Family support is positively associated with quality of life of women with cervical cancer. Family support should be enhanced to improve the quality of life of women with cervical cancer.

Keywords: cervical cancer, family support, quality of life

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FACTORS ASSOCIATED WITH OCCUPATIONAL ACCIDENT AT PALM OIL PLANTATION, RIAU

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ABSTRACT

Background: An occupational accident is a sudden and unexpected accident caused by external factors due to which the employee suffers injuries. According to the International Labour Organization (ILO), more than 337 million accidents happen on the job each year, resulting, together with occupational diseases, in more than 2.3 million deaths annually. This study aimed to determine factors associated with occupational accident at palm oil plantation, Riau.

Subjects and Method: This was a cross sectional study conducted at a palm oil plantation, Riau, North Sumatera, in May 2018. A sample of 50 workers was selected for this study. The dependent variable was occupational accident. The independent variables were human factors (age, gender, work duration, Protective Equipment or PPE, education), management factors (occupational health and safety, standard operational procedure, training and monitoring), and work environment factor. The data were collected by questionnaire and observation. The data were analyzed by a multiple logistic regression.

Results: Human factor, management factor, and work environment factor, were simultaneously associated with occupational accident. Management factor had the highest effect.

Conclusion: Human factor, management factor, and work environment factor, were simultaneously associate with occupational accident at palm oil plantation. Management factor had the highest effect.

Keywords: occupational accident, palm oil plantation, human factor, management factor, work environment factor

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RISK FACTORS OF BREAST CANCER IN MEDAN, NORTH SUMATERA

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ABSTRACT

Background: Breast cancer remains a major public health problem. The incidence is rising in most countries and is projected to rise further over the next 20 years despite current efforts to prevent the disease. Studies in to risk factors of breast cancer in Indonesian population are lacking. This study aimed to determine risk factors of breast cancer in Medan, North Sumatera.

Subjects and method: This was a case-control study conducted at Murni Teguh Memorial Hospital, Medan, North Sumatera. A sample of 100 women of reproductive age was selected for this study, consisting of 50 women with breast cancer and 50 women without breast cancer. The dependent variable was breast cancer. The independent variables were menarche age, use of hormonal contraceptive, obesity, stress level, and family history of breast cancer. The data of breast cancer cases were taken from the medical record. The other data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: The risk of breast cancer increased with late menarche age (OR= 2.91; p= 0.042), use of hormonal contraceptive (OR= 3.09; p= 0.024), obesity (OR= 3.00; p= 0.027), high stress level (OR= 2.37; p= 0.003), and family history of breast cancer (OR= 2.43; p= 0.001).

Conclusion: The risk of breast cancer increased with late menarche age, use of hormonal contraceptive, obesity, high stress level, and family history of breast cancer.

Keywords: breast cancer incidence, risk factors

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IMPROVING COMPETENCY OF COMMUNITY HEALTH WORKERS IN NON-INFECTIOUS DISEASE SCREENING IN SLEMAN, YOGYAKARTA

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ABSTRACT

Background: Non-communicable diseases (NCDs) kill 41 million people each year, equivalent to 71% of all deaths globally. Detection, screening and treatment of NCDs, as well as palliative care, are key components of the response to NCDs. Disease screening is one of the most basic tools of modern public health and preventive medicine. This study aimed to assess the effect of improving competency of community health workers (CHWs) in non-infectious disease screening in Sleman, Yogyakarta.

Subjects and Method: This was a quasi experiment before and after with control design was carried out at 12 Posbindus in Sleman, Yogyakarta. A sample of 60 CHWs was selected for this study by non-probability sampling. The sample was divided into three groups of training: simulation, leaflet, and demonstration. The dependent variable was knowledge on non-infectious disease screening. The independent variable was training. The data were collected by questionnaire and analyzed by one way ANOVA. Changes in knowledge before and after training were tested by paired t-test.

Results: Knowledge score on non-infectious disease screening after training was higher than before training, and it was statistically significant ($p= 0.023$). Knowledge score after training was the highest in the simulation group (Mean= 88.07; SD= 2.45), moderate in the leaflet group (Mean= 87.17; SD= 2.05), and lowest in the demonstration group (Mean= 86.96; SD= 1.99), but they were statistically non-significant ($p= 0.127$).

Conclusion: Training is effective to improve knowledge on non-infectious disease screening among CHWs.

Keywords: non-infectious disease, screening, training, community health workers

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THE EFFECT OF CONTINUOUS NOISE ON BLOOD CORTISOL LEVEL IN TEXTILE INDUSTRY WORKERS

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ABSTRACT

Background: Noise is one of the most important hazardous factors in industrial environments. It can damage auditory, visual, neurological, psychological and hormonal systems, and can deteriorate physiological and cognitive functions. This study aimed to examine the effect of continuous noise on blood cortisol level in textile industry workers.

Subjects and Method: This was cross-sectional study conducted at PT. Iskandar Indah Printing Textile, Surakarta, Central Java. A sample of 75 workers in weaving section was selected for this study by purposive sampling. The sample was ≥ 20 years of age and had work ≥ 1 year. The dependent variable was blood cortisol level. The independent variable was continuous noise. Blood cortisol level was measured by ELISA method. Noise exposure was measured by Sanfix GM1356 sound level meter. Noise exposure was categorized in 3 groups (≥ 85 dBA, 70 to < 85 dBA, < 70 dBA). The data were analyzed by chi square test with odds ratio as the measure of effect.

Results: Workers with noise exposure ≥ 85 dBA were more likely to have an increased blood cortisol level than counterparts with noise exposure 70 to < 85 dBA (OR= 5.76; CI 95%= 1.36 to 24.36; p= 0.012). Workers with noise exposure ≥ 85 dBA were more likely to have an increased blood cortisol level than counterparts with noise exposure < 70 dBA (OR= 7.94; CI 95% 1.88 to 33.49; p= 0.002). Workers with noise exposure 70 to < 85 dBA were more likely to have an increased blood cortisol level than counterparts with noise exposure < 70 dBA (OR= 1.62; CI 95%= 0.45 to 4.20; p= 0.321).

Conclusion: Noise exposure is associated with an increased risk of high blood cortisol level among textile industry workers.

Keywords: continuous noise, blood cortisol, textile industry worker

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MITIGATING MUSCULOSKELETAL DISORDER USING OCCUPATIONAL CHAIR AMONG BATIK WORKERS

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ABSTRACT

Background: Work-related musculoskeletal disorders (WMSDs) are a common health problem throughout the world and a major cause of disability in the workplace. Awkward working posture, such as commonplace in batik industry, is a main risk factor for developing WMSDs. This study aimed to assess the effect of occupational chair on mitigation of musculoskeletal disorder among batik workers.

Subjects and method: This was a quasi-experiment study before and after with no control design conducted at a batik factory. A sample of 50 batik workers was selected for this study. The dependent variable was WMSDs. The independent variable was type of chair, which was 'dingklik' (short chair without backrest, armrest, and hard seat) before intervention, and occupational chair (chair height= 28.39 cm; chair length= 39.74 cm; chair width= 39.73 cm; chair back height= 42.46 cm; chair back width= 39 cm) after intervention. The data of WMSDs were collected by survey instrument of skeletal muscle disorders from the Indonesian Ergonomic Association (PEI). The other data were collected by questionnaire and observation. The data were analyzed by a logistic regression.

Results: Batik workers sitting on 'dingklik' had WMSDs, including pain, ache, and uncomfortable neck, shoulder, hip, and knee. Batik workers sitting on occupational chairs had no WMSDs.

Conclusion: Occupational chair is effective to prevent work-related musculoskeletal disorders (WMSDs) among batik workers.

Keywords: work-related musculoskeletal disorders, dingklik, occupational chair, batik worker

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HANGING CLOTHES ON WIRE AND ITS ASSOCIATION WITH MALARIA INCIDENCE IN BATUBARA, NORTH SUMATERA

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ABSTRACT

Background: The majority of the mosquito and parasite life-history traits that combine to determine malaria transmission intensity are environmental dependent. Earlier evidence suggests that certain malaria vectors can spend large parts of their adult life resting indoors. This study aimed to examine the practice of hanging clothes on wire and its association with malaria incidence in Batubara, North Sumatera.

Subjects and Method: This was a case control study conducted in Batubara, North Sumatera in March 2018. A total of 176 people aged ≥ 15 years consisting of 88 cases of malaria and 88 controls were selected for this study. The dependent variable was malaria incidence. The independent variable was hanging clothes on wire. The data were collected by questionnaire and analyzed by a logistic regression.

Results: Hanging clothes on wire was associated with an increased risk of malaria (OR= 3.33; 95% CI= 1.65 to 6.73; p= 0.001).

Conclusion: Hanging clothes on wire increases the risk of malaria.

Keywords: malaria, hanging clothes, wire.

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FACTORS ASSOCIATED WITH TB-HIV/AIDS CO-INFECTION IN KEDU, CENTRAL JAVA

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ABSTRACT

Background: TB-HIV co-infection is one of the current biggest public health challenges in the world. Although there is a breadth of information on TB-HIV co-infection among settled populations elsewhere, to our knowledge, there are no published reports on the determinants of TB-HIV co-infection from Central Java, Indonesia. This study aimed to determine the factors associated with TB-HIV/AIDS co-infection in Kedu, Central Java.

Subjects and Method: This study was a case control study conducted at general hospital in Kedu, Central Java. A sample of 152 patients with HIV was selected for this study consisting those with and without TB-HIV co-infection. The dependent variable was TB-HIV/ AIDS co-infection. The independent variable were education level, history of TB contact, BCG immunization status, opportunistic infection, adherence to treatment, drug taking supervisor support, and community health worker support. The data were collected from medical record and questionnaire. The data were analyzed by a multiple logistic regression.

Results: TB-HIV/AIDS co-infection was associated with low education (OR= 4.70; CI= 95%; 2.11 to 10.47 p= 0,001), history of TB contact (OR= 3.75; CI= 95%; 1.26 to 5.72; p= 0.01), absence of BCG immunization (OR= 3.59; CI= 95%; 1.07 to 6.23; p= 0.033), opportunistic infection (OR= 3.42; CI= 95%; 1.23 to 5.89; p= 0.010), non-adherence to treatment (OR= 5.15; CI= 95%; 1.50 to 7.16; p= 0.001), lack of drug taking supervisor support (OR= 4.61; CI= 95%; 1.94 to 10.50; p= 0.001), and lack of community health worker support (OR= 4.51; CI= 95%; 1.94 to 10.50; p= 0.001).

Conclusion TB-HIV/AIDS co-infection is associated with low education, history of TB contact, absence of BCG immunization, opportunistic infection, non-adherence to treatment, lack of drug taking supervisor support, and lack of community health worker support.

Keywords: risk factors, Tuberculosis-HIV/AIDS co-infection

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THE EFFECTS OF NUTRITIONAL STATUS AND DWELLING DENSITY ON THE RISK OF PULMONARY TUBERCULOSIS INCIDENCE IN MEDAN, NORTH SUMATERA

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ABSTRACT

Background: Tuberculosis (TB) remains a leading cause of morbidity and mortality in developing countries, including Indonesia. This study aimed to determine the effects of nutritional status and dwelling density on the risk of pulmonary TB incidence in Medan, North Sumatera.

Subjects and Method: This was a case control study conducted at Pulmonary Disease Hospital, Medan, North Sumatera, from January to June 2018. A sample of 116 patients was selected for this study, consisting 58 patients with TB and 58 patients without TB. The dependent variable was TB incidence. The independent variables were nutritional status and dwelling density. Data on TB case were obtained from the medical record. Nutritional status was measured by Body Mass Index (BMI). Dwelling density was measured by observation. The other data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: The risk of lung TB increased with low nutritional status (OR=3.07; 95% CI= 1.40 to 6.73; p= 0.005) and dense dwelling (OR= 2.83; 95% CI= 1.29 to 6.21; p= 0.009).

Conclusion: The risk of lung TB increases with low nutritional status and dense dwelling.

Keywords: nutritional status, dwelling density, lung tuberculosis

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THE EFFECTS OF HYPERTENSION, SMOKING, AND OBESITY ON STROKE INCIDENCE IN RIAU

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ABSTRACT

Background: Global health has entered a stage where the recognition that tackling non communicable diseases (NCDs) including stroke is not only a clinical and public health issue but also an important challenge for global economic development. A stroke happens when blood stops flowing to any part of the brain. Strokes can be large or small, and the effects of stroke depend on the part of the brain affected and the extent of damage. The effects of stroke can include communication problems, tiredness and fatigue, emotional changes and pain. This study aimed to assess the effects of hypertension, smoking, and obesity, on stroke incidence in Riau.

Subjects and Method: This was a case-control study conducted at Rokan Hulu General Hospital, Riau, in June 2018. A sample of 100 patients was selected for this study, consisting 50 patients with stroke and 50 patients without stroke. The dependent sample was stroke incidence. The independent variables were hypertension, smoking, and obesity. Hypertension was measured by sphygmomanometer. The smoking data was measured by questionnaire. The obesity data were measured by Body Mass Index (BMI). The data were analyzed by a multiple logistic regression.

Results: Of 100 patients sampled, 72% had hypertension, 74% were smokers, and 68% had obesity. Stroke incidence increased with hypertension (OR= 5.44; 95% CI= 2.21 to 13.40; $p < 0.001$). It also increased with smokers (OR= 1.83; 95% CI= 0.78 to 4.63; $p = 0.207$) and obesity (OR= 1.71; 95% CI= 0.69 to 4.24; $p = 0.246$) although it was statistically non-significant.

Conclusion: The risk of stroke incidence increases with hypertension. The increased risk of stroke with smoking and obesity is statistically non-significant in this study.

Keywords: stroke, hypertension, smoking, obesity

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THE EFFECT OF MATERNAL KNOWLEDGE AND HUSBAND JOB TYPE ON THE RISK OF HIV INFECTION AMONG HOUSEWIVES IN BALIGE, NORTH SUMATERA

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ABSTRACT

Background: HIV continues to be a major global public health issue, having claimed more than 35 million lives so far. In 2017, 940,000 people died from HIV-related causes globally. There were approximately 36.9 million people living with HIV at the end of 2017 with 1.8 million people becoming newly infected in 2017 globally. Previous study reported that there are two types of men: “adventurous” ones and “loyal” ones. The adventurous ones were said to go from work to the street, and to forget their homes. Housewives living with an adventurous type of husband are hypothesized to have a higher risk of HIV infection. This study aimed to examine the effect of maternal knowledge and husband job type on HIV infection among housewives in Balige, North Sumatera.

Subjects and Method: This was a case control study conducted at AIDS HKBP Balige committee, North Sumatera. A sample of 90 housewives was selected for this study, consisting of 45 housewives with positive HIV and 45 housewives with negative HIV. The dependent variable was HIV infection. The independent variables were maternal knowledge and husband job type (in-town versus out-of-town job type). Data on HIV infection status were obtained from the medical record. The other data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: The risk of HIV infection increased with poor maternal knowledge (OR= 3.43; 95% CI= 1.81 to 6.49; $p < 0.001$) and out-of-town husband job type (OR= 2.50; 95% CI= 0.95 to 6.52; $p = 0.063$).

Conclusion: The risk of HIV infection increases with poor maternal knowledge and out-of-town husband job type.

Keywords: HIV infection, maternal knowledge, husband job type

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THE EFFECT OF STRAWBERRY JUICE ON IMPROVING HB LEVEL AMONG FEMALE ADOLESCENTS WITH ANEMIA

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ABSTRACT

Background: Anemia in adolescents is a public health problem. Female adolescents are at higher risk to have anemia, particularly iron deficiency anemia, than male adolescents because they have a menstrual cycle every month. This study aimed to examine the effect of strawberry juice (*Fragaria vesca*) on improving haemoglobin (Hb) level among female adolescents with anemia.

Subjects and Method: This study was a quasi-experiment before and after with control group design conducted at MTS Nurul Amin Tawangharjo, Kudus, Central Java. A sample of 40 female adolescents was selected for this study, consisting of 20 adolescents receiving strawberry juice and 20 adolescents receiving no-strawberry juice. The independent variable was strawberry juice. The dependent variable was Hb level. Hb level was measured by cyanmet photometer method. The data were analyzed by t-test.

Results: The increase in Hb level scores before and after intervention in the strawberry juice group was higher than in the control group, and it was statistically significant ($p= 0.005$).

Conclusion: Strawberry juice is effective to increase Hb level among female adolescents.

Keywords: strawberry juice, hemoglobin level, female adolescents

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THE EFFECTS OF SMOKING AND DYSLIPIDEMIA ON CORONARY ARTERY DISEASE AMONG WOMEN AT DR. PIRNGADI HOSPITAL, MEDAN, NORTH SUMATERA

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ABSTRACT

Background: Coronary artery disease (CAD), also known as ischemic heart disease, is the most common type of heart disease. Globally, CAD is the leading cause of death and is predicted to remain so for the next 20 years. Each year, approximately 3.8 million men and 3.4 million women die from CAD. In 2020, it is estimated that this disease will be responsible for a total of 11.1 million deaths globally. This study aimed to examine the effects of smoking and dyslipidemia on CAD among women at Dr. Pirngadi hospital, Medan, North Sumatera.

Subjects and Method: This was a case control study conducted at Dr. Pirngadi General Hospital, Medan, North Sumatera. A sample 124 women ≤ 45 years of age was selected in this study. The dependent variable was coronary artery disease. The independent variables were smoking and dyslipidemia. The CAD and dyslipidemia data were obtained from the medical record. The smoking data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: The risk of coronary artery disease increased with smoking (OR= 3.76; 95% CI= 1.66 to 8.53; $p= 0.002$) and dyslipidemia (OR= 5.32; 95% CI= 2.31 to 12.22; $p < 0.001$).

Conclusion: The risk of coronary artery disease increases with smoking and dyslipidemia.

Keywords: coronary artery disease, smoking, dyslipidemia

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FACTORS ASSOCIATED WITH HOUSEWIFE PARTICIPATION IN PREVENTION OF DENGUE HEMORRHAGIC FEVER MOSQUITO BREEDING PLACE IN LHOKSEUMAWE, ACEH

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ABSTRACT

Background: Dengue fever is the most important tropical infectious disease after malaria, with an estimated 100 million cases of dengue fever, 500,000 cases of dengue hemorrhagic fever (DHF), and 25,000 deaths annually. This study aimed to determine factors associated with housewife participation in prevention of DHF mosquito breeding place in Lhokseumawe, Aceh.

Subjects and Method: This was a cross-sectional study conducted at Muara Dua, Lhokseumawe, Aceh. A sample of 72 housewives was selected for this study. The dependent variable was prevention of DHF breeding place. The independent variables were maternal knowledge, attitude, and education. The data were collected by questionnaire. The data were describe in percent and tested by chi square.

Results: Seventy five percent of the sample resided in endemic areas. Sixty eight percent of the sample knew that DHF is transmitted by mosquito. Fifty percent of the sample knew that DHF can be prevented by mosquito bleeding source reduction, closing, and modification (RCM). However, only 37.5% of the sample did RCM. As much as 12.5% of the sample had low participation, 69.4% moderate participation, and 18.1% good participation in the prevention of DHF. Housewife participation in DHF prevention was affected by knowledge, attitude, and education.

Conclusion: Only around 18% of housewives under study in the endemic area participated in DHF prevention. Participation in DHF prevention is affected by maternal knowledge, attitude, and education.

Keywords: dengue hemorrhagic fever, breeding place, prevention, maternal knowledge, attitude, education.

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FACTORS AFFECTING SANITARY CONDITION OF SHIPS HARBORING IN KUPANG, EAST NUSA TENGGARA

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ABSTRACT

Background: Ship Sanitation Certificates (SSCs) are of particular importance for the prevention and control of public health risks on board ships on international voyages. This study aimed to analyze factors affecting sanitary condition of ships harboring in Kupang, East Nusa Tenggara.

Subject and Method: This was an cross sectional study conducted in ship harboring, Kupang. A samples of 96 ship harboring sailors were selected for this study by simple random sampling. The dependent variable was ship sanitary condition. The independent variables were sailor knowledge and attitude, and ship facility. The data were collected by questionnaire and analyzed by a logistic regression.

Results: Ship sanitary condition was positively associated with sailors good knowledge (OR=3.54; CI 95%=1.50 to 8.33; p=0.004), favorable attitude (OR =2.26; CI 95%=1.63 to 5.14; p<0.001), and ship facility (OR =5.67; CI 95%=2.32 to 13.83; p<0.001).

Conclusion: Ship sanitary condition is positively associated with sailors good knowledge, favorable attitude, and ship facility.

Keywords: sanitation, knowledge, attitude, facility, sailors

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DIFFERENCE IN COMPUTER-ATTRIBUTED VISION PROBLEM BETWEEN LAPTOP AND DESKTOP USERS

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ABSTRACT

Background: Occupational health is a key component of an industry. This is because a strong safety culture boosts productivity, employee morale, and employee retention. A strong ergonomics integration prevents injuries and increases productivity. They make the workplace safer and reduce costs. Ergonomics also must be incorporated and seen as a value. It needs to be built into a corporate culture and be integrated into everything any company does on a daily basis, including that in the administrative office where workers frequently use computers. This study aimed to analyze difference in computer-attributed vision problem between laptop and desktop computer users.

Subjects and Method: This was a cross sectional study conducted in North Sumatera. A sample of 60 subjects consisting of 30 laptop users and 30 desktop users were selected for this study by purposive sampling. The dependent variable was vision problem. The independent variable was computer type. The data were collected by questionnaire and tested by Mann Whitney test.

Results: Among the laptop users, 80% experienced neck pain, 77% eye strain, and 70% low back pain. Among the desktop-computer user, 50% experienced neck pain, 77% eye fatigue, and 33% eye irritation. Mean score of complaints in the laptop user group was 2.54 units higher than the desktop-computer user group ($p=0.001$).

Conclusion: Laptop users experienced more complaints than desktop-computer users. Workers using computers are suggested to have regular break to allow body organs to take a rest. Workers are also suggested to work at an ample distance between eyes and computer screen. Employers are responsible for providing a safe and healthful workplace for their workers.

Keywords: vision problem, computer-attributed, laptop, desktop computer, ergonomomy

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THE ASSOCIATIONS BETWEEN DEPRESSION AND ANXIETY, AND QUALITY OF LIFE OF MALES WITH INFERTILITY

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ABSTRACT

Background: Earlier studies have reported that anxiety and depressive symptoms have a significant and negative impact on quality of life. Empirical studies on this research question, however, are lacking in Indonesia. This study aimed to examine the associations of depression and anxiety with quality of life of males with infertility.

Subject and Methods: This was a cross-sectional study conducted at a private hospital in Semarang, Central Java. A sample of 213 men with infertility was selected for this study. The dependent variable was quality of life. The independent variables were depression and anxiety. Infertility data were obtained from the medical record. Quality of life was measured by fertility quality of life (FertiQol). Depression and anxiety were measured by hospital anxiety and depression scale (HADS). Strength of correlation was measured by Spearman correlation coefficient.

Results: Depression and anxiety were correlated with all domains in the quality of life of males with infertility.

Conclusion: Depression and anxiety are correlated with all domains in the quality of life of males with infertility.

Keywords: quality of life, FertiQol, depression, anxiety, male, infertility

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FACTORS ASSOCIATED WITH OCCUPATIONAL STRESS AMONG WORKERS IN THE PRODUCTION DEPARTMENT

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ABSTRACT

Background: Occupational stress is one of the major health hazards of the modern workplace. Occupational stress and stressful working conditions have been linked to low productivity, absenteeism, and increased rates of accidents on and off the job. This study aimed to determine the factors associated with occupational stress among workers in the production department of a plant in Jakarta.

Subjects and Method: This was a cross sectional study conducted at the production department of a plant, Jakarta. A sample of 72 workers was selected for this study. The dependent variable was occupational stress. The independent variables were noise, self-esteem, interpersonal conflict, uncertainty, job opportunity, physical burden, mental workload, and supervisor support. Occupational stress was measured by NIOSH generic job stress questionnaire. Noise was measured by sound level meter (Noise Pro Quest Model DLX). The other data was collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: Occupational stress increased with low self-esteem (OR=6.43; 95% CI= 1.30 to 31.83), strong interpersonal conflict (OR= 2.03; 95% CI= 0.49 to 8.45), job uncertainty (OR= 1.30; 95% CI= 0.27 to 6.20), lack of job opportunity (OR= 6.65; 95% CI= 1.40 to 31.59), strong physical burden (OR= 9.64; 95% CI=1.96 to 47.46), high mental workload (OR= 12.82; 95% CI=2.21 to 74.32), and weak supervisor support (OR= 8.89; 95% CI= 1.7 to 42.22). Occupational stress decreased with low noise (OR=0.17; 95% CI= 0.04 to 0.77).

Conclusion: Occupational stress increases with low self-esteem, strong interpersonal conflict, uncertainty, lack of job opportunity, strong physical burden, high mental workload, and weak supervisor support. It decreases with low noise.

Keywords: occupational stress, risk factor, worker

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FACTORS ASSOCIATED WITH UNSAFE BEHAVIOR AMONG CONSTRUCTION WORKERS IN KUPANG, EAST NUSA TENGGARA

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ABSTRACT

Background: Earlier studies have shown that about 90% of accidents in the work settings occur because of unsafe behavior and human errors. If workers do not have the right knowledge, favorable attitude, and proper behavior toward safety measures in a safe workplace, all efforts for an accident-free workplace will be in vain. This study aimed to determine factors associated with unsafe occupational behavior among construction workers in Kupang, East Nusa Tenggara.

Subjects and Method: This was a cross sectional study carried out in Kupang, East Nusa Tenggara. A sample of 200 construction workers were selected at random for this study. The endogenous variables were perceived benefit, favorable attitude, and unsafe occupational behavior. The exogenous was good knowledge. The data were collected by questionnaire and analyzed by a path analysis model.

Results: Good knowledge increased perceived benefit ($b = 0.25$; 95% CI = 0.06 to 0.56; $p = 0.038$). Perceived benefit increased favorable attitude ($b = 0.56$; 95% CI = 0.25 to 0.86; $p < 0.001$). Favorable attitude decreased unsafe occupational behavior ($b = -0.56$; 95% CI = -0.32 to -0.80; $p < 0.001$).

Conclusion: Good knowledge, perceived benefit, and favorable attitude, respectively, decrease unsafe behavior among the construction workers in the work settings.

Keywords: good knowledge, perceived benefit, favorable attitude, respectively, unsafe behavior, construction workers.

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**EFFECTS OF ANTI HYPERTENSIVE AGENT AND SMOKING
ON SEXUAL DYSFUNCTION AMONG MALES OF
REPRODUCTIVE AGE IN DELI SERDANG,
NORTH SUMATERA**

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ABSTRACT

Background: Older antihypertensive drugs (central-acting, β blockers, diuretics) have traditionally been considered to cause erectile dysfunction, while the newer ones (calcium antagonists, angiotensin-converting enzyme [ACE] inhibitors, and angiotensin receptor blockers [ARBs]) have either neutral effects or may even be beneficial with respect to sexual function. In addition to the well-established harmful effects of smoking (i.e coronary artery disease and lung cancer), the past three decades have led to a compendium of evidence being compiled into the development of a relationship between cigarette smoking and erectile dysfunction. Empirical studies into this issue are scanty in Indonesian male population. This study aimed to determine effects of anti hypertensive agent and smoking on sexual dysfunction among males of reproductive age in Deli Serdang, North Sumatera.

Subjects and Method: This was a cross sectional study carried out at Puskesmas (Community Health Center) Pancur Batu, Deli Serdang, North Sumatera. A sample of 128 males of reproductive age who visited Puskesmas Pancur Batu was selected for this study. The dependent variable was sexual dysfunction. The independent variables were use of anti hypertensive drug and smoking. Data on use of anti hypertensive drug were taken from the medical record. The other variables were measured by questionnaire. The data were analyzed by a multiple logistic regression.

Results: Use of anti hypertensive drug (OR= 4.11; p= 0.045) and smoking (OR= 5.65; p= 0.022) were associated with an increased risk of sexual dysfunction.

Conclusion: Use of anti hypertensive drug and smoking are associated with an increased risk of sexual dysfunction.

Keywords: anti hypertensive drug, smoking, sexual dysfunction.

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CORRELATES OF STRESS AMONG ADULT MALE INMATES IN A LOCAL PRISON, MALAYSIA

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ABSTRACT

Background: Prison is a place of confinement especially for lawbreakers which can have an impact on mental health including stress. Yet, very few studies examined stress among prison inmates. This study aimed to determine the prevalence and correlates of stress among adult male inmates in a local prison in Malaysia.

Subjects and Methods: A cross sectional study was conducted at a medium security prison in peninsular Malaysia. A sample of 460 inmates was selected for this study. The dependent variable was stress. The independent variables were sociodemographic characteristics, biological influence, psychological factor, childhood related history and offence related history. Stress was measured by pretest and validated Cohen's Perceived Stress Scale, which was categorized into high and low stresses. The data were collected by questionnaire and in-depth review. The data were analyzed by chi-square and logistic regression.

Results: The mean (SD) age of respondents was 38.33 (8.90) years. The prevalence of stress among the inmates was 55.2%. After adjusting for the covariates, stress was associated with depression (aOR= 4.03; CI 95% 2.64 to 6.15; p<0.001), age (aOR= 2.35; CI 95% 1.57 to 3.53; p<0.001), and history of childhood labor (aOR= 1.80; CI 95% 1.03 to 3.15; p= 0.040).

Conclusion: More than half of the study subjects experience stress, with depression being the strongest predictor. Further study is needed to understand the causal relationship between the two for effective intervention can be in place for this vulnerable group.

Keywords: stress, adult, male, inmate, prison

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**THE ASSOCIATIONS OF DURATION OF EXPOSURE
AND TENURE WITH URINE HIPPURIC ACID LEVEL
AMONG WORKERS AT PRINTING INDUSTRY
IN MEDAN, NORTH SUMATERA**

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ABSTRACT

Background: Hippuric acid has been recognized for many decades as a constituent of the urine. In addition, hippuric acid in 24-hour urine collections is a potential biomarker for fruit and vegetable consumption. As previous studies have shown, fasting plasma hippuric acid significantly increased after a 12-week healthy diet enriched in bilberries, whole-grain products and fatty fish compared to a control group, while no changes occurred in a whole-grain enriched diet group. This study aimed to estimate the associations of duration of exposure and tenure with hippuric acid level among workers at printing industry in Medan, North Sumatera.

Subjects and Method: This was a cross sectional study conducted at printing industry in Medan, North Sumatera. A total of 16 workers were selected for this study. The dependent variable was urine hippuric acid level. The independent variables were duration of exposure and tenure. The correlations between urine hippuric acid and duration of exposure and tenure were measured by Pearson correlation coefficient (r).

Results: Urine hippuric acid level decreased with duration of exposure ($r = -0.25$; $p = 0.047$) and tenure ($r = -0.19$; $p = 0.002$).

Conclusion: Urine hippuric acid level decreases with duration of exposure and tenure.

Keywords: urine hippuric acid, duration of exposure, tenure.

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EFFECTS OF CONTACT HISTORY AND FAMILY INCOME ON THE RISK OF PULMONARY TUBERCULOSIS IN PADANGSIDIMPUAN, NORTH SUMATERA

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ABSTRACT

Background: Tuberculosis (TB) remains one of the world's deadliest communicable diseases. In 2016, 10.4 million people fell ill with TB, and 1.7 million died from the disease (including 0.4 million among people with HIV). Over 95% of TB deaths occur in low and middle-income countries. Seven countries account for 64% of the total, with India leading the count, followed by Indonesia, China, Philippines, Pakistan, Nigeria, and South Africa. Given that most deaths from TB are preventable, the death toll from the disease is still unacceptably high and efforts to combat it must be accelerated. This study aimed to determine the effects of contact history and family income on the risk of pulmonary TB in Padangsidempuan, North Sumatera.

Subejcts and Method: This was a case control study conducted at several Puskesmas (Community Health Center) in Padangsidempuan, North Sumatera. A total of 90 patients consisting of 45 TB cases and 45 controls were selected for this study. The dependent variable was pulmonary TB. The independent variables were contact history and family income. Pulmonary TB cases were determined by sputum acid fast tuberculosis (AFT) bacilli test. The other data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: The risk of pulmonary TB increased with history of TB contact (OR= 4,01; 95% CI= 1.67 to 9.66; p= 0.002) and low family income (OR= 2.53; 95% CI= 1.07 to 5.9; p= 0.033).

Conclusion: The risk of pulmonary TB increases with history of TB contact and low family income.

Keywords: pulmonary tuberculosis, tuberculosis contact, family income.

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PHYSICAL ACTIVITY, OBESITY, FAMILY HISTORY, AND THEIR ASSOCIATIONS WITH HYPERTENSION AMONG THE ELDERLY IN ACEH SINGKIL, ACEH

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ABSTRACT

Background: Hypertension is an important global health challenge due to its high prevalence and resulting cardiovascular disease and chronic kidney disease. This study aimed to examine the associations of physical activity, obesity, family history, with hypertension among the elderly in Aceh Singkil, Aceh.

Subjects and Method: This was a case control study carried out in Aceh Singkil, Aceh. A sample of 132 elderly was selected for this study, consisting 66 elderly with hypertension and 66 elderly without hypertension. The dependent variable was hypertension. The independent variables were physical activity, obesity, and family history. Hypertension data was measured by sphygmomanometer. The other data were collected by questionnaire. The data were analyzed by a multiple logistic regression model.

Results: Hypertension was associated with physical inactivity (OR= 5.12; 95% CI= 2.41 to 10.86; $p<0.001$), obesity (OR= 3.30; 95% CI= 1.61 to 6.74; $p<0.001$), and family history (OR= 7.73; 95% CI= 3.56 to 16.78; $p<0.001$).

Conclusion: Physical inactivity, obesity, and family history, are associated with an increased risk of hypertension.

Keywords: physical activity, obesity, family history, hypertension

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THE ROLE OF HIV/AIDS COMMITTEE AT HKBP BALIGE HOSPITAL IN HIV/AIDS CONTROL AND PREVENTION IN TOBA SAMOSIR, NORTH SUMATERA

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ABSTRACT

Background: There were approximately 36.7 million people worldwide living with HIV/AIDS at the end of 2016. Of these, 2.1 million were children (<15 years old). An estimated 1.8 million individuals worldwide became newly infected with HIV in 2016 about 5,000 new infections per day. This study aimed to evaluate the role of HIV/AIDS committee at HKBP Balige hospital in HIV/AIDS control and prevention in Toba Samosir, North Sumatera.

Subjects and Method: This was a qualitative study conducted at HKBP Balige Hospital, Toba Samosir, North Sumatera. Several key informants were selected from HIV/AIDS committee, religious leaders, health practitioners, health promotion staff, and people living with HIV/AIDS. The dependent variable was HIV/AIDS control and prevention. The independent variable was HIV/AIDS committee. The data were collected by in-depth interview, focus group discussion, and document review. The data were analyzed by content analysis.

Results: HIV/AIDS Committee of HKBP Balige had played its important role in several collaborative initiatives: (1) Socialization of HIV/AIDS control and prevention measures with the assistance of religious groups; (2) Mental and religious coaching; (3) Basic HIV and AIDS Counseling; (4) Healthy Life Campaign; (5) HIV/AIDS Mobile Clinics to places with high potential of transmission; (6) Social assistance and rehabilitation.

Conclusion: HIV/AIDS Committee of HKBP Balige has played its important role in several collaborative HIV/AIDS control and prevention initiatives in North Sumatera.

Keywords: HIV/AIDS Committee, HIV/AIDS control and prevention.

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RISK FACTORS OF FILARIASIS IN CHILDREN, BUKITTINGGI, WEST SUMATERA

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ABSTRACT

Background: Lymphatic filariasis remains a major global public health problem and is 1 of the World Health Organization's 6 diseases targeted for global eradication. Filariasis is a chronic infectious disease caused by filarial worm infection and can lead to disability in the affected. This study aimed to determine the risk factors of lymphatic filariasis in children in Bukittinggi, West Sumatera.

Subjects and Method: This was a case control study conducted in Bukittinggi, West Sumatera. A sample of 80 children was selected for this study, consisting of 40 filariasis cases and 40 controls. The dependent variable was filariasis infection. The independent variables were maternal education, maternal knowledge, use of mosquito net, use of mosquito repellent, hanging clothes, use of wire net, presence of house ceiling, animal reservoir. Filariasis data was obtained from the medical record. The other data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: The risk of filariasis infection in children increased with low maternal education (OR= 1.20; 95%CI= 0.36 to 3.93), poor maternal knowledge (OR= 2.00; 95% CI= 0.89 to 4.45), non-user of mosquito net (OR= 1.14; 95% CI= 0.41 to 3.15), non-user of mosquito repellent (OR= 1.25; 95% CI= 0.49 to 3.16), hanging clothes habit (OR= 7.00, 95% CI= 1.59 to 30.30), non-user of wire net (OR= 1.37; 95% CI= 0.55 to 3.41), non-user of house ceiling (OR= 4.00; 95% CI= 1.12 to 14.17), presence of animal reservoir (OR= 1.25; 95% CI= 0.58 to 2.67).

Conclusion: Low-quality housing is associated with an increased risk of filariasis infection. Poor preventive practices of mosquito bite is also associated with an increased risk of filariasis infection.

Keywords: filariasis, infection, risk factor.

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HYPERTENSION, BODY MASS INDEX, AND THEIR ASSOCIATIONS WITH TYPE 2 DIABETES MELLITUS IN DELI SERDANG, NORTH SUMATERA

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ABSTRACT

Background: Diabetes mellitus (DM) is a major public health problem worldwide. Current global estimates indicate that this condition affects 415 million people and is set to escalate to 642 million by the year 2040. Type 2 DM is a metabolic disease that occurs due to abnormalities in insulin secretion. This study aimed to analyze the associations of hypertension and body mass index with type 2 DM in Deli Serdang, North Sumatera.

Subjects and Methods: This was a case-control study conducted in Deli Serdang, North Sumatera. A sample of 92 patients was selected for this study consisting 46 patients with type 2 DM and 46 patients without type 2 DM. The dependent variable was type 2 DM. The independent variables were hypertension and body mass index. Type 2 DM and hypertension data were obtained from the medical record. The other data were collected by questionnaire. The data were analyzed by multiple logistic regression.

Results: Type 2 DM was associated with hypertension (OR= 3.56; p= 0.004) and BMI ≥ 25 (OR= 5.66; p<0.001).

Conclusion: Type 2 DM is associated with hypertension and BMI ≥ 25 .

Keywords: type 2 DM, hypertension, body mass index

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PERSISTENT HYPERTENSION IS ASSOCIATED WITH LOW HDL IN YOUNG ADULTS: AN EVIDENCE FROM TAIWAN FIVE YEARS POPULATION BASED COHORT STUDY

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ABSTRACT

Background: Hypertension (HT) is one of major risk factor for cardiovascular disease (CVD) and its combination with other risk factors, i.e. dyslipidemia, could worsen the health. The burden of CVD is now shifting to younger age, and its development is even in the earlier life period. Young adults with rare health check and lack of awareness in CVD risk factor may result in suboptimal management. This study aimed to investigate the association of persistent HT and low HDL level in 5 years follow up among young adults aged 15-25 years.

Subjects and Methods: This study was done using Tw3SHH, a Taiwan population based cohort study (2002 to 2007), among young adults 15-25 years of age. HT was defined as the SBP>120mmHg and/or DBP>80 mmHg and/or respondent was told of having HT by medical personnel. HT development was classified based on their HT status in 2002 and 2007: “Non-HT (no HT both in 2002 and 2007)”, “Improved HT (HT in 2002 and no HT in 2007)”, “Worsened HT (no HT in 2002 and HT in 2007)”, and “Persistent HT (HT both in 2002 and 2007)”. HDL was grouped based on NCEP-ATP III, and the low HDL defined as HDL<40mg/dl. Exercise, fatty food consumption and smoking status were based in self-reported questions. The data were analyzed by a multiple logistic regression model to estimate the association of persistent HT and low HDL level in 5-years. Covariates were sex, age, smoking habit, exercise habit, fatty food consumption, and HbA1C.

Results: About 9.35% of 727 study subjects had persistent HT. Compared to non-HT group, persistent HT group had higher risk of having low HDL level (crude OR= 3.70; CI 95%= 1.90 to 7.2; p=<0.001; adjusted OR= 2.44; CI 95%= 1.18 to 5.03; p= 0.015). This association persisted (crude OR= 4.90; CI 95% 2.29 to 10.49; p=<0.001; adjusted OR= 2.89; CI 95%= 1.34 to 6.24; p= 0.007) in subgroup analysis among study subjects without low baseline HDL.

Conclusion: Persistent HT is associated with low HDL level in 5 years follow up among young adults 15-25 years of age. Although universal screening in lipid profile among children and youth is still controversial, awareness to this condition should be raised.

Keywords: cardiovascular, hypertension, dyslipidemia, HDL, young adult

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OCCUPATIONAL FACTORS AFFECTING HEMOGLOBIN LEVEL AMONG PRINTING INDUSTRY WORKERS IN MEDAN, NORTH SUMATERA

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ABSTRACT

Background: Use of organic compound such as hydrocarbon benzene in printing process may cause air pollution in the workplace and thereby affect the health and safety of workers. Benzene may damage blood formation and reduce hemoglobin level. This study aimed to analyze the effect of occupational factors on hemoglobin level among printing industry workers in Medan, North Sumatera.

Subjects and Methods: This was a cross sectional study carried out at a printing industry in Medan, North Sumatera. A sample of 50 printing industry workers were selected for this study. The dependent variable was hemoglobin level. The independent variables were length of exposure and years of service. Hemoglobin level was measured by a portable hemoglobin meter. The other data were collected by questionnaire. The data were analyzed by a multiple linear regression.

Results: Hemoglobin level reduced with length of exposure ($b= 0.27$; $p= 0.001$) and years of service ($b= 0.15$; $p= 0.022$) among printing industry workers.

Conclusion: Hemoglobin level is affected by length of exposure and years of service among printing industry workers.

Keywords: hemoglobin level, length of exposure, years of service

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PERCEIVED HEALTH SERVICE, QUALITY OF CARE, AND MULTIDRUG RESISTENT TUBERCULOSIS: A CASE-CONTROL STUDY IN CENTRAL JAVA, INDONESIA

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ABSTRACT

Background: Tuberculosis (TB) remains a leading cause of morbidity and mortality in developing countries, including Indonesia. Drug resistance, in combination with other factors, results in even more increased morbidity and mortality due to tuberculosis. Globally, there were about 0.5 million cases of multidrug-resistant tuberculosis (MDR-TB). The WHO reported an alarming rise of not only MDR-TB but also of extreme drug-resistant tuberculosis (XDR-TB) globally. This study aimed to determine the associations of perceived health care behavior and perceived quality of care with MDR-TB in Central Java, Indonesia.

Subjects and Method: This was a case-control study conducted in Surakarta, Central Java, Indonesia, from August 2017 to January 2018. A sample of 309 subjects was selected for this study, consisting of 81 MDR-TB cases and 228 non MDR-TB controls. The dependent variable was MDR-TB. The independent variables were perceived health provider behavior and perceived quality of care. MDR-TB data were obtained from medical record. The other variables were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: The risk of MDR-TB increased with unfavorable perceived provider behavior (OR= 2.80; 95% CI= 1.64 to 5.09; p<0.001) and perceived poor quality of health service (OR= 1.90; 95% CI= 1.15 to 3.37; p= 0.013) received by the patients.

Conclusion: The risk of MDR-TB is associated with unfavorable perceived provider behavior and perceived poor quality of health service received by the patients.

Keywords: perceived provider behavior, perceived quality of health service, MDR-TB

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PHYSICAL, SOCIAL, AND CULTURAL ENVIRONMENT DETERMINANTS OF FILARIASIS IN TAPANULI TENGAH, NORTH SUMATERA

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ABSTRACT

Background: Lymphatic filariasis impairs the lymphatic system and can lead to the abnormal enlargement of body parts, causing pain, severe disability and social stigma. According to World Health Organization, in 2000 over 120 million people were infected, with about 40 million disfigured and incapacitated by the disease. Lymphatic filariasis can be eliminated by stopping the spread of infection through preventive chemotherapy with safe medicine combinations repeated annually for at least 5 years. More than 6.7 billion treatments have been delivered to stop the spread of infection since 2000. Tapanuli Tengah district ranked third in the incidence of filariasis in North Sumatera. The total number of filariasis cases was 22 cases. This study aimed to examine the physical, social, economic, and cultural environment determinants of filariasis in Tapanuli Tengah, North Sumatera.

Subjects and Method: This was a qualitative study carried out in Lumut Maju village, Tapanuli Tengah, North Sumatera. A total of 23 informants were selected for this study, consisting of filariasis patients, family members, and personnel from the health and related sectors. The dependent variable was filariasis incidence. The independent variables were physical, social, economic, and cultural environments, and the local government. The data were collected by in-depth interview, direct observation, focus group discussion, and document review. The data were analyzed by thematic analysis.

Results: The incidence of filariasis is determined by the interaction of host-agent-environment conditions favorable for the transmission of filariasis. The physical environment conditions in Lumut Maju village could be described as follows: (1) Several swamps; (2) Several rivers and bushes (3) Some plantations; (4) High humidity of climate. The social, economic, and cultural environment conditions could be described as follows: (1) Common habit of people to go out at night; (2) Rare use of protective work clothes; (3) Low household income; (4) Local belief in mystical things. The local government involvement was as follows: (1) Non existence of regent regulation on infectious diseases control and prevention, including filariasis; (2) Uneven distribution of health workers and health facilities.

Conclusion: The incidence of filariasis in Lumut Maju village, Tapanuli Tengah, North Sumatera, is closely related to the conditions of physical, social, economical, and cultural environments, as well as the local government policy.

Keywords: filariasis, physical, social, economical, cultural environment, local government policy.

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FACTORS ASSOCIATED WITH TREATMENT AND CONTROL SUSTAINABILITY AMONG PATIENTS WITH LUNG CANCER

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ABSTRACT

Background: Treatment and control program for patients faces a mutual challenge like non-adherence. Non-adherence is a multifaceted concept. The focus may be not only on taking drugs but also on timing, discontinuation, and persistence. Non-adherence is also affected by patient-provider relationship as well as systemic-organizational factors. This study aimed to explore factors associated with the sustainability of treatment and control program among patients with lung cancer, using Uncertainty Management Theory (UMT).

Subjects and Method: This was a qualitative study with phenomenology approach carried out at RA. Kartini Hospital, Jepara, Central Java. A sample of 22 patients who were diagnosed with lung cancer was selected for this study. The dependent variable was treatment and control sustainability. The independent variables were doctor's response, clarity about treatment, waiting time, consultation time, consistency of information, bureaucracy, distance, and income. The data were collected by in-depth interview and analyzed by thematic analysis.

Results: Overall, patients were satisfied with the doctor's response to questions, clarity about treatment options, length of time spent with each physician, and consistency of information clinicians. The complexity of bureaucracy, long waiting time, dimension of interval, and the distance traveled to complete each stage of treatment, affected the sustainability of treatment and control program. These things were trigger the uncertainty of the patient. This study also found that patients who were uncertain about their illness chose to avoid treatment and control, and thereby tended to be non-compliant with the clinical guideline. Patients were also concerned with the travel cost to get treatment and examination. The health insurance also has limited coverage of the costs.

Conclusions: Patients diagnosed with lung cancer decide not to continue treatment because of the complexity of bureaucracy, distance, long waiting time, prolonged treatment procedure, and travel cost.

Keywords: lung cancer, treatment and control program, sustainability, patients

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RELATIONSHIPS OF PROTEIN INTAKE AND WEIGHT TRAINING WITH MUSCLE MASS AMONG FITNESS CENTER MEMBERS

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ABSTRACT

Background: The current era of modernization requires someone to look athletic, one of them is by making muscle mass formation, especially in men. Many things are done to fulfill these desires, including weight training. Weight training is a common type of strength training for developing the strength and size of skeletal muscles. Protein intake is also important for the development of skeletal muscles. This study aimed to examine the relationship of protein intake and intensity of weight training with muscle mass among fitness center members.

Subjects and Method: This was a cross sectional study conducted at Victory fitness center, Yogyakarta. A sample of 31 fitness members was selected for this study. The dependent variable was muscle mass. The independent variables were percent of protein intake and intensity of weight training. Muscle mass was measured by midline and skinfold. Percent of protein intake was measured by 24 hour-food recall and the data were analyzed by Nutrition Survey 2008. Intensity of weight training was measured by observation. The data were analyzed by a multiple linear regression.

Results: Protein intake was low in 19 (61.29%) subjects. Intensity of weight training was low in 15 (48.3%) subjects. Muscle mass was small in 17 (54.8%) subjects. Muscle mass increased with high percent of protein intake ($b= 0.35$; $p= 0.044$) and high intensity of weight training ($b= 0.98$; $p= 0.037$).

Conclusion: Muscle mass increases with weight training and protein intake among fitness center members.

Keywords: muscle mass, protein intake, weight training, fitness member

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FLUORIDE IN DRINKING WATER AND URINE: A CROSS-SECTIONAL STUDY AMONG SECONDARY SCHOOL CHILDREN IN KUALA KUBU BHARU, SELANGOR, MALAYSIA

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ABSTRACT

Background: This study aimed to determine the levels of fluoride in drinking water and levels of urinary fluoride, to determine whether fluoride in both drinking water and urine were under the acceptable range stated by NDWQS and NIOSH Method 8308 respectively, to determine any significant difference in urinary fluoride between gender, and to determine the relationship between fluoride levels in drinking water and urinary fluoride among study subjects.

Subjects and Methods: A cross-sectional study was conducted in Kuala Kubu Bharu, Selangor, Malaysia. A sample of secondary school children aged 14-years-old at a selected school were selected based on several criteria, including living at least 6 years on the same area and not having any health problems. Then a briefing was given to selected study subjects before distribution of a set of questionnaire were made. After obtaining parents' permission, a set of high-density polyethylene bottle (HDPE) and urine collection container was given to study subjects for drinking water and urine samples collection for 2 consecutive days. Both samples were analyzed using a HACH Brand Direct Reading Spectrophotometer model DR/ 1900 by Method 8029 which was accepted by the US EPA for reporting of drinking water and wastewater analysis purposes.

Results: Fluoride levels in drinking water ranged between 0.41 to 0.59 ppm with a median of 0.46 (SD=0.04). Fluoride level in urine ranged between 0.45 to 2.29 ppm with a mean 1.48 (SD=0.43). There was no significant difference in urinary fluoride between genders. Also, there was no significant relationship between fluoride levels in drinking water and urinary fluoride levels among study subjects. The median value fluoride in drinking water obtained was 0.46 which was still in the range of NDWQS standards. Urinary fluoride was within the range stated by NIOSH.

Conclusion: Levels of fluoride in both drinking water and urine in Kuala Kubu Bharu, Selangor, Malaysia, were within the acceptable limit.

Keywords: fluoride, drinking water, urinary fluoride, secondary school children, Kuala Kubu Bharu

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ASSOCIATIONS OF DURATION OF EXPOSURE AND YEARS OF SERVICE WITH TRANS-TRANS MUCONIC ACID LEVEL AMONG PRINTING INDUSTRY WORKERS IN MEDAN, NORTH SUMATERA

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ABSTRACT

Background: Trans, trans-Muconic acid is a metabolite of benzene in humans. The determination of its concentration in urine is used as a biomarker of occupational or environmental exposure to benzene. Benzene, also known as benzol, is a colorless liquid with a sweet odor. Benzene evaporates into air very quickly and dissolves slightly in water. Benzene is used in various industries including printing industry to make other chemicals. Benzene in the eyes may cause general irritation and damage to cornea. People who breathe benzene for long periods may experience harmful effects in the tissues that form blood cells, especially the bone marrow. This study aimed to analyze the associations of duration of exposure and years of service with trans-trans muconic acid level among printing industry workers in Medan, North Sumatera.

Subjects and Method: This was a cross sectional study carried out at printing industry in Medan, North Sumatera. A sample of 16 printing workers were selected for this study. The dependent variable was trans-trans muconic acid level. The independent variables were age, sex, duration of exposure, and years of service. The data were collected by questionnaire and analyzed by a multiple linear regression.

Results: The associations of age and sex with trans-trans muconic acid was stastically non-significant. The associations of duration of exposure and years of service with trans-trans muconic acid were stastically significant. The longer duration of exposure and the longer years of service, the higher trans-trans muconic acid level indicating the higher benzene level.

Conclusion: Trans-trans muconic acid level is associated with duration of exposure and years of service.

Keywords: age, sex, duration of exposure, years of service, trans-trans muconic acid

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EFFECT OF SMOKING ON SURVIVAL AMONG HIV/AIDS PATIENTS IN KEDU, CENTRAL JAVA

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ABSTRACT

Background: Human Immuno-Deficiency Virus (HIV) continues to be a major global public health issue. In 2016, an estimated 36.7 million people were living with HIV (including 1.8 million children) – with a global HIV prevalence of 0.8% among adults. Despite the recent declines in global HIV/AIDS mortality, today, HIV/AIDS remains one of the leading global causes of both mortality and burden. This study aimed to estimate the effect of smoking on survival among HIV/AIDS patients in Kedu, Central Java.

Subjects and Methods: This was a cohort study conducted at Kedu, Central Java. A sample of 152 HIV patients was selected for this study. The dependent variable was death. The independent variable was smoking. HIV data were taken from medical record. The other data were collected by questionnaire. The data were analyzed by a Cox Proportional Hazard Model.

Results: Mean age of the sample was 33 years, 69.7% were male, 53.3% had high education, 69.8% were smoker, and 10.5% died. The risk of mortality increased with smoking (HR=2.82; 95% CI= 1.05 to 7.56).

Conclusion: Smoking increases the risk of dying among patients of HIV/AIDS.

Keywords: HIV/AIDS, smokers, survival

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PREVALENCE OF HYPERTENSION AND ITS ASSOCIATED FACTORS AMONG SELLERS AT TRADITIONAL MARKET, YOGYAKARTA

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ABSTRACT

Background: Hypertension is an important global health challenge due to its high prevalence and resulting cardiovascular disease and chronic kidney disease. Hypertension is the leading preventable risk factor for premature death and disability worldwide. Earlier studies reported that the prevalence of hypertension is increasing in low and middle-income countries, while it is steady or decreasing in high-income countries. This study aimed to estimate the prevalence of hypertension and its associated factors among sellers at traditional market, Yogyakarta.

Subjects and Method: A cross sectional study was conducted in a traditional market, Yogyakarta. A sample of 320 traditional sellers aged 20 to 80 years were selected for this study by simple random sampling. The dependent variable was hypertension. Blood pressure was measured by sphygmomanometer. A subject was defined to have hypertension if systolic blood pressure (BP) was ≥ 140 mmHg and/or diastolic blood pressure was ≥ 90 mmHg. The independent variables were age, gender, education, income, and Body Mass Index (BMI). BMI was measured by weight scale and microtoise. A subject was defined as overweight if BMI ≥ 25 , and obese if BMI ≥ 30 . The other variables were measured by questionnaire. The data were analyzed by a multiple logistic regression.

Results: The prevalence of hypertension cases in this sample was 56.3%. Of the hypertension cases in this sample, 29.4% were male, 64.6% low educated, 54.7% low income, and 32.9% residents of Yogyakarta. Hypertension was positively associated with older age, female, low education, low income, and overweight/obese.

Conclusion: Hypertension increases with older age, female, low education, low income, and overweight/ obese.

Keywords: hypertension, risk factors

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**FACTORS ASSOCIATED WITH TREATMENT ADHERENCE
AMONG PULMONARY TUBERCULOSIS PATIENTS
IN MEULABOH, ACEH**

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ABSTRACT

Background: Tuberculosis (TB) remains a major global health problem, with at least three million deaths annually. Each year there are nearly 10 million new cases, of which four to five million are smear positive and, thus, highly contagious. This study aimed to analyze factors associated with adherence to TB treatment among pulmonary tuberculosis patients.

Subjects and Methods: A cross sectional study was carried out at Pahlawan Community Health Center, West Aceh. A sample of 40 TB patients were selected for this study by exhaustive sampling. The dependent variable was adherence to TB treatment. The independent variables were drug supervisor, knowledge, motivation, and family support. TB status data were taken from medical record. The other data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: Adherence to TB treatment was associated with active drug supervisor (OR = 3.38; p= 0.017), good knowledge (OR= 2.64; p= 0.029), strong motivation (OR = 4.48; p= 0.017), and strong family support (OR =3.11; p= 0.011).

Conclusion: Adherence to TB treatment is associated with active drug supervisor, good knowledge, strong motivation, and strong family support.

Keywords: TB treatment, adherence, drug supervisor, knowledge, motivation

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HOME ENVIRONMENT FACTORS ASSOCIATED WITH FALCIPARUM MALARIA IN LEMBATA, EAST NUSA TENGGARA

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ABSTRACT

Background: Malaria remains a global public health problem. Approximately 40% of the world's population lives in more than 140 countries at risk of malaria, including Indonesia. The strategies employed to prevent and control malaria have been effective in reducing the burden of disease. Yet, as analyses of health outcomes become more refined, it is increasingly evident that poor and marginalized populations might not be benefiting from investments in malaria prevention and control. This study aimed to estimate home environment factors associated with *Falciparum* malaria infection in Lembata, East Nusa Tenggara.

Subjects and Method: This was a case control study conducted in Lembata, East Nusa Tenggara. A sample of 226 subjects was selected for this study, consisting of 113 *Falciparum* malaria cases and 113 controls. The dependent variable was *Falciparum* malaria infection. The independent variables were sunlight, distance to breeding place, house ventilation, use of wire net, and use of bed-net. Data on *Falciparum* malaria infection were taken from the medical record. The other data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: The risk of *Falciparum* malaria infection decreased with sunlight penetrating breeding place (OR= 0.13; 95% CI= 0.02 to 0.66; p= 0.014), distance to breeding place (OR= 0.45; 95% CI= 0.22 to 0.95; p= 0.036), house ventilation (OR= 0.18; 95% CI= 0.08 to 0.39; p<0.001), used of wire net (OR= 0.15; 95% CI= 0.04 to 0.61; p= 0.008), and use of bed-net (OR= 0.09; 95% CI= 0.02 to 0.50; p= 0.006).

Conclusion: The risk of *Falciparum* malaria infection decreases with sunlight penetrating breeding place, distance to breeding place, house ventilation, use of wire net, and use of bed-net.

Keywords: malaria, *falciparum*, house, environment

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OCCUPATIONAL RISK FACTORS ASSOCIATED WITH PERCEIVED CENTRAL NERVOUS SYSTEM DISORDER AMONG PRINTING INDUSTRY WORKERS IN MEDAN

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ABSTRACT

Background: Toluene is a colorless, water-insoluble liquid, aromatic hydrocarbon, with the smell associated with paint thinners. Toluene is used in the printing of colored illustrations in media such as catalogues and magazines. Studies on male employees in the printing industry found that both high and low exposure to toluene were associated with an imbalance of sexual hormones in serum samples. This study aimed to analyze the occupational risk factors associated with perceived central nervous system disorder attributable to toluene exposure among printing industry workers in Medan, North Sumatera.

Subjects and Method: This was a cross sectional study conducted at a printing industry in Medan, North Sumatera. A sample of 50 printing industry workers was selected for this study. The dependent variable was perceived central nervous system disorder attributable to toluene. The independent variables were age, smoking, years of service, history of illness, alcohol consumption, and personal protective equipment (PPE). The data were collected by questionnaire and analyzed by a chi-square test.

Results: Perceived central nervous system disorder attributable to toluene exposure was statistically associated with age and smoking, but was not statistically associated with years of service, history of illness, alcohol consumption, and PPE.

Conclusion: Perceived central nervous system disorder is statistically associated with age and smoking among printing workers.

Keywords: perceived central nervous system disorder, toluene, age, smoking, printing workers.

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EFFECT OF COCONUT WATER IN REDUCING FATIGUE AMONG WORKERS IN NORTH SUMATERA

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ABSTRACT

Background: Coconut (*Cocos nucifera L*) is regular part of the diets of many people in the tropics and subtropics. Its sugar content and mineral composition makes it an ideal rehydrating and refreshing drink. Coconut water is believed to be useful in preventing and relieving many health problems, including dehydration, constipation, digestive problems, fatigue, heatstroke, diarrhea, kidney stones, and urinary tract infections. This study aimed to examine the effect of coconut water in reducing fatigue among workers in North Sumatera.

Subjects and Method: A quasi-experiment one group before and after design was carried out at Chips Factory, Tadukan Raga, Deli Serdang, North Sumatera. A sample of 20 workers was selected for this study. The dependent variable was fatigue. The independent variable was the consumption of 2 liter coconut water. The data were collected by questionnaire and analyzed by paired t-test.

Results: Fatigue decreased 46.01% after consumption of 2 liter coconut water and it was statistically significant.

Conclusion: Coconut water consumption decreases fatigue among workers.

Keywords: coconut water, fatigue

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RISK FACTORS OF MALARIA IN LEMBATA DISTRICT, EAST NUSA TENGGARA

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ABSTRACT

Background: Provincial Health Office of East Nusa Tenggara reported that the annual parasite incidence (API) in 2016 was 5.46 new cases per thousand populations, distributed in 22 districts. Lembata district is an endemic area with the highest API in the province. This study aimed to determine the risk factors of malaria in Lembata district, East Nusa Tenggara.

Subjects and Method: A case control study was carried out in Lembata district, East Nusa Tenggara. A sample of 800 patients was selected for this study, consisting of 400 malaria cases with positive laboratory result and 400 with negative laboratory result. The dependent variable was malaria incidence. The independent variables were education, knowledge, attitude, behavior, housing, and swamp. Data of malaria case were obtained from the medical record. The other data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: Malaria incidence increased with low education (OR= 2.24; 95% CI= 1.09 to 4.63; $p= 0.029$), poor knowledge (OR= 3.94; 95% CI= 2.67 to 5.81; $p<0.001$), negative attitude (OR= 6.62; 95% CI= 4.45 to 6.05; $p= 0.042$), unhealthy behavior (OR= 3.97; 95%CI= 2.63 to 5.43; $p<0.001$), poor housing (OR= 3.53; 95%CI= 2.30 to 5.43; $p< 0.001$), and close to swamp (OR= 2.80; 95% CI= 1.33 to 3.28; $p= 0.023$).

Conclusion: Malaria incidence increases with low education, poor knowledge, negative attitude, unhealthy behavior, poor housing, and close to swamp.

Keywords: malaria, education, knowledge, attitude, behavior, housing, swamp

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A STUDY ON THE PREVALENCE AND CONTROL OF NON-COMMUNICABLE DISEASES IN SUBANG, WEST JAVA

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ABSTRACT

Background: According to Basic Health Research, in 2013 non-communicable diseases (NCDs) with high prevalence were: (1) hypertension (10.5%), (2) stroke (6.6%), (3) asthma (5%), (4) chronic obstructive pulmonary disease (COPD) (4%), (5) diabetes mellitus (1.3%), (6) cancer (1%), (7) coronary heart disease (0.5%). This study aimed to describe the prevalence and control of NCDs in Subang, West Java.

Subjects and Method: A survey was carried out in Subang, West Java. A sample of health personnel was selected for this study. The data were collected by in depth-interview. Input data (man, money, material, method, and machine), process data (NCDs management), and outcome data (NCDs prevalence) were obtained from document review.

Results: In 2016, prevalence of hypertension was 9.27%, diabetes mellitus 3.81%, obesity 1.19%, COPD 0.50%, stroke 0.07%, breast cancer 0.01%, osteoporosis 0.66%, and asthma 1.76%. As many as 63.1% of all NCDs patients were women, 58% were older than 55 years, 32.6% aged 45 to 54 years, 9.4% aged 18 to 45 years.

Conclusion: Most of all NCDs patients in Subang, West Java are women aged ≥ 18 years. Control program of NCDs showed that human resource input of NCDs is limited, NCDs financial is sufficient, medication for NCDs is sufficient. NCDs guidebook and NCDs technical guidelines are not available at Cipunagara health center.

Keywords: non-communicable diseases, prevalence, control

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FACTORS ASSOCIATED WITH FALCIPARUM MALARIA IN LEMBATA, EAST NUSA TENGGARA

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ABSTRACT

Background: Lembata district, East Nusa Tenggara, is a malaria endemic area. In 2016, as many as 27,976 clinical suspect cases were reported. As many as 6,562 malaria cases were confirmed, of which 444 were *Plasmodium falciparum* cases, 6,116 were *Plasmodium vivax* cases, and 2 mixed cases. Annual Parasite Incidence (API) was 46.60 new cases per thousand populations. This study aimed to determine the factors associated with *Falciparum* malaria in Lembata, East Nusa Tenggara.

Subjects and Method: This was a case control study carried out in Lembata, East Nusa Tenggara. A sample of 226 people was selected for this study, consisting of 113 *Falciparum* malaria cases and 113 controls. The dependent variable was *Falciparum* malaria. The independent variables were age, fever, convulsion, and diarrhea. Malaria case was diagnosed by anamnesis, clinical and laboratory examinations. The other data were collected by questionnaire, interview, and observation. The data were analyzed by a multiple logistic regression.

Results: *Falciparum* malaria was associated with younger age (OR= 2.88; 95% CI= 1.47 to 5.07; $p < 0.001$), high fever (OR= 5.88; 95% CI= 4.21 to 7.45; $p = 0.001$), convulsion (OR= 4.90; 95% CI= 2.09 to 7.63; $p < 0.001$), and diarrhea (OR= 3.76; 95% CI= 1.16 to 8.75; $p = 0.023$).

Conclusion: *Falciparum* malaria is associated with younger age, high fever, convulsion, and diarrhea.

Keywords: malaria, *Falciparum*, fever, convulsion, diarrhea

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MATERNAL PERSONAL HYGIENE, SANITATION, FAMILY SIZE, AND THE RISK OF DIARRHEA IN CHILDREN UNDER FIVE: A PRECEDE-PROCEED MODEL IN SURAKARTA

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ABSTRACT

Background: Running counter to the widely accepted hypothesis, an earlier study in Indonesia reported that overall poor mother's food-hygiene practices did not contribute to the occurrence of diarrhea in Indonesian children. This study aimed to determine the associations between maternal personal hygiene, sanitation, family size, and the risk of diarrhea in children under five, using a PRECEDE-PROCEED model.

Subjects and Method: This was a cross sectional study carried out in Surakarta, Central Java, Indonesia, from February to April 2018. A sample of 200 children under five years of age were selected for this study by fixed disease sampling, comprising 100 children with diarrhea and 100 children without diarrhea. The dependent variable was diarrhea. The independent variables were maternal personal hygiene, sanitation, and family size. The data were collected by questionnaire. Data on diarrhea status were taken on medical record at Puskesmas (Community Health Center). The data were analyzed by multiple regression model.

Results: Diarrhea in children under five was negatively associated with good maternal personal hygiene (OR= 0.13; 95% CI= 0.06 to 0.29; $p < 0.001$), good sanitation (OR= 0.22; 95% CI= 0.11 to 0.46; $p < 0.001$), and family size ≥ 4 (OR= 2.55; 95% CI= 1.28 to 5.10; $p = 0.008$). Nagelkerke $R^2 = 39.4\%$.

Conclusion: The risk of diarrhea in children under five is associated with poor maternal personal hygiene, poor sanitation, and family size ≥ 4 .

Keywords: personal hygiene, sanitation, family size, diarrhea, children under five

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ASSOCIATION BETWEEN BODY MASS INDEX, TYPE OF OCCUPATION, HISTORY OF CHRONIC ILLNESS, AND POOR OCCUPATIONAL POSTURE

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ABSTRACT

Background: Good posture is important for an individual health as well as appearance. Poor occupational posture may cause negative impacts such as soreness & pain, poor circulation, negative mood, increased stress, carpal tunnel syndrome, less motivation, poor digestion, and fatigue. The purpose of this study was to determine the association between body mass index, type of occupation, history of chronic illness, and poor occupational posture.

Subjects and Method: This was a cross-sectional study conducted at Dr. Moewardi hospital, Surakarta, Central Java, from April to May 2018. A sample of 116 patients was selected for this study by fixed disease sampling. The dependent variable was occupational posture. The independent variables were body mass index, type of occupation, and history of chronic illness. Occupational posture data were measured by Rapid Entry Body Assessment (REBA) questionnaire. The other variables were measured by questionnaire. The data were analyzed by a multiple logistic regression.

Results: Poor occupational posture was associated with body mass index ≥ 25 (OR= 0.99; 95% CI= 0.02 to 1.96; p= 0.044), heavy occupational type (OR= 2.24; 95% CI= 1.34 to 3.14; p<0.001), and history of chronic illness (OR= 0.78; 95% CI= -0.10 to 1.67; p= 0.084).

Conclusion: Poor occupational posture is associated with body mass index ≥ 25 , heavy occupational type, and history of chronic illness.

Keywords: occupational posture, body mass index, occupational type, history of illness

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DOES MATERNAL SCHOOLING AFFECT THE RISK OF CHILD OBESITY? A PATH ANALYSIS EVIDENCE FROM SURAKARTA, CENTRAL JAVA

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ABSTRACT

Background: Earlier life-course studies have shown that childhood obesity increases disease risk in adulthood, including metabolic syndrome, cardiovascular disease, type 2 diabetes and its associated cardiovascular, retinal and renal complications, non-alcoholic fatty liver disease, obstructive sleep apnea, polycystic ovarian syndrome, infertility, asthma, orthopedic complications, psychiatric disease, and increased rates of cancer. This study aimed to examine the risk factors of child overweight or obesity in Surakarta, Central Java, using path analysis.

Subjects and Method: This was a case control study carried out in Surakarta, Central Java, from March to April 2018. A sample of 225 primary school students was selected by simple random sampling. The dependent variable was overweight or obesity. The independent variables were maternal education, family income, physical activity, and maternal body mass index (BMI). The data were collected by questionnaire and analyzed by path analysis.

Results: The risk of child overweight or obesity increased with high family income ($b = 1.51$; 95% CI = 0.80 to 2.22; $p < 0.001$) and maternal BMI ≥ 25 ($b = 1.19$; 95% CI = 0.42 to 1.96; $p = 0.002$). The risk of overweight or obesity reduced with high physical activity ($b = -1.90$; 95% CI = -2.63 to -1.16; $p < 0.001$). Maternal education had indirect association with child overweight or obesity, through maternal BMI and child physical activity.

Conclusion: The risk of child overweight or obesity increases with high family income and maternal BMI ≥ 25 . The risk of overweight or obesity reduces with high physical activity. Maternal education has indirect association with child overweight or obesity, through maternal BMI and child physical activity.

Keywords: overweight, obesity, determinants, children, path analysis

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RISK FACTORS OF TUBERCULOSIS: A NEW PATH ANALYSIS EVIDENCE FROM PONOROGO, EAST JAVA

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ABSTRACT

Background: Tuberculosis remains a major health problem worldwide. In 2016, 6.3 million new cases of TB were reported (up from 6.1 million in 2015), equivalent to 61% of the estimated incidence of 10.4 million. This study aimed to determine risk factors of tuberculosis in Ponorogo, East Java, using a path analysis model.

Subjects and Method: This was a case control study conducted in Ponorogo, East Java, from April to May 2018. A sample of 200 study subjects was selected for this study by fixed disease sampling, consisting of 100 adults with tuberculosis and 100 adults without tuberculosis. The dependent variable was tuberculosis. The independent variables were age, gender, education, nutritional status, dwelling density, smoking, and alcohol drinking. Data on tuberculosis infection status were obtained from the medical record at District Health Office Ponorogo. The data were collected by questionnaire and analyzed by path analysis model on Stata 13.

Results: The risk of tuberculosis increased with BMI ≥ 25 (b= 2.50; 95% CI= 0.51 to 4.50; p= 0.014), smoking (b= 2.42; 95% CI= 0.74 to 4.11; p= 0.005), lack of lighting (b= 3.11; 95% CI= 1.34 to 4.86; p= 0.001), alcohol drinking (b= 2.15; 95% CI= 0.75 to 3.56; p= 0.003), densed dwelling (b= 2.31; 95% CI= 0.69 to 3.92; p= 0.005), and age ≥ 44 years (b= 1.51; 95% CI= -0.01 to 3.02; p= 0.051). The risk of tuberculosis was indirectly affected by education.

Conclusion: The risk of tuberculosis increases with BMI, smoking, lack of lighting, alcohol drinking, dwelling density, and age ≥ 44 years.

Keywords: tuberculosis, age, dwelling density, smoking, alcohol drinking, education

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TYPE II DIABETES MELLITUS, PHYSICAL ACTIVITY, INJURY, AND THE RISK OF OSTEOARTHRITIS

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ABSTRACT

Background: Osteoarthritis (OA) is a major public health problem. It is a source of pain and functional disability, therefore has a very important social and professional impact. This study aimed to analyze the associations of type 2 diabetes mellitus (DM), physical activity, and history of knee injury, with the risk of OA.

Subjects and Method: A cross-sectional study was conducted at Dr. Moewardi Hospital, Surakarta, Central Java, in June 2018. A sample of 200 patients was selected by fixed disease sampling, comprising 50 patients with knee OA and 150 patients without knee OA. The dependent variable was knee OA. The independent variables were type 2 DM, history of injury, and physical activity. Data on knee OA were obtained from medical record. The other variables were measured by questionnaire. The data were analyzed by a multiple logistic regression.

Results: Knee OA was associated with high physical activity (OR= 2.18; 95% CI= 1.06 to 4.48; p= 0.03), DM (OR= 3.76; 95% CI= 1.83 to 7.74; p<0.001), and history of knee injury (OR= 3.35; 95% CI= 1.63 to 6.90; p=0.001).

Conclusion: Knee OA is associated with high physical activity, DM, and history of knee injury.

Keywords: knee osteoarthritis, physical activity, diabetes mellitus, history of knee injury

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RELIGIOUS BELIEF AND ITS INFLUENCE ON HEALTHY AGEING AMONG THE ELDERLY IN BLORA, CENTRAL JAVA

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ABSTRACT

Background: WHO defines healthy ageing “as the process of developing and maintaining the functional ability that enables wellbeing in older age”. This study aimed to examine religious belief and its influence on healthy ageing among the elderly in Blora, Central Java.

Subject and Method: A cross-sectional study was conducted in Blora, Central Java. A sample of 200 older people was selected for this study by snowball sampling. The dependent variable was healthy ageing. The independent variables were nutrition intake, age, religious (spiritual) belief, education, and income. Data on healthy ageing was collected by WHOQOL-BREF. The other variables were measured by questionnaire. The data were analyzed by a multiple linear regression.

Results: Healthy ageing was positively associated with strong spiritual belief ($b=6.57$; 95% CI= 3.48 to 9.66; $p<0.001$), better education ($b=7.43$; 95% CI= 3.69 to 11.16; $p<0.001$), higher income ($b=6.77$; 95% CI= 3.30 to 10.23; $p<0.001$), good nutritional status ($b=7.00$; 95% CI= 3.89 to 10.11; $p<0.001$), but was negatively associated with age ($b=-3.56$; 95% CI= -6.98 to -0.14; $p=0.041$).

Conclusion: Healthy ageing is positively associated with strong spiritual belief, better education, higher income, good nutritional status, but is negatively associated with age.

Keywords: healthy ageing, religious belief, elderly, ageing

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EFFECT OF CIRCADIAN RHYTHM AND ENVIRONMENT FACTOR ON THE RISK OF BREAST CANCER: A NEW PATH ANALYSIS EVIDENCE

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ABSTRACT

Background: Breast cancer is the most common type of cancer in women. Disruption of the body's circadian rhythm has been linked to increased risk of breast cancer. This study aimed to examine the effects of circadian rhythm and environment factor on the risk of breast cancer, using path analysis model.

Subjects and Method: A case control study was conducted in Kediri, East Java, from April to May 2018. A sample of 200 women was selected by fixed disease sampling. The dependent variable was breast cancer. The independent variables were work schedule, sleep duration, room light, room temperature, chemical exposure, and air pollution. The data were collected by questionnaire and analyzed by path analysis run on Stata 13.

Results: The risk of breast cancer increased with irregular work shift (b=1.76; 95% CI= 0.82 to 2.70; p<0.001), sleep duration <5 hours (b= 1.84; 95% CI= 0.95 to 2.73; p<0.001), room light on (b= 1.95; 95% CI= 0.87 to 3.02; p<0.001), warm room temperature (b= 2.60; 95% CI= 1.66 to 3.54; p<0.001), air pollution (b= 2.10; 95% CI= 1.16 to 3.05; p<0.001), and chemical exposure (b= 1.06; 95% CI= 0.20 to 1.92; p= 0.015). The risk of breast cancer was indirectly affected by sleep duration and room light.

Conclusion: The risk of breast cancer increases with irregular work shift, sleep duration <5 hours, room light on, warm room temperature, air pollution, and chemical exposure. The risk of breast cancer is indirectly affected by sleep duration and room light.

Keywords: breast cancer, circadian rhythm, environmental factor

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FACTORS ASSOCIATED WITH DENGUE FEVER PREVENTIVE PRACTICE USING THEORY OF PLANNED BEHAVIOR

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ABSTRACT

Background: Dengue fever, also known as breakbone fever, is a mosquito-borne infection that can lead to a severe flu-like illness. It is caused by four different viruses and spread by *Aedes* mosquitoes. There are currently no vaccines. The best method of prevention is to avoid mosquito bites. Treatment is possible if diagnosis occurs before the patient develops dengue shock syndrome (DSS) or dengue haemorrhagic fever (DHF). This study aimed to investigate factors affecting dengue fever preventive practice using theory of planned behavior, using theory of planned behavior.

Subjects and Method: A cross sectional study was conducted in 8 sub-districts in Sukoharjo, Central Java, from May 7 to July 8, 2018. A sample of 200 study subjects was selected for this study by random sampling. The dependent variable was dengue fever preventive practice. The independent variables were intention, self-efficacy, perceived seriousness, attitude, and education. The data were collected by questionnaire and analyzed by path analysis.

Results: Dengue fever preventive practice was directly and positively affected by intention ($b = 0.62$; 95% CI = 0.45 to 0.79; $p < 0.001$), self-efficacy ($b = 0.13$; 95% CI = 0.01 to 0.25; $p = 0.043$), and perceived seriousness ($b = 0.31$; 95% CI = -0.05 to 0.67; $p = 0.091$). Dengue fever preventive practice was indirectly affected by attitude and education.

Conclusion: Dengue fever preventive practice is directly and positively affected by intention, self-efficacy, and perceived seriousness. It is indirectly affected by attitude and education.

Keywords: dengue fever, preventive practice, Theory of Planned Behavior

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DETERMINANTS OF DELAYED DIAGNOSIS AND MULTI-DRUG RESISTENT TUBERCULOSIS TREATMENT IN SURAKARTA, CENTRAL JAVA

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ABSTRACT

Background: Tuberculosis (TB) is a leading cause of morbidity and mortality worldwide, accounting for about 9.6 million new cases and 1.5 million deaths annually. Multidrug resistant tuberculosis (MDR-TB), defined as resistance to, at least, rifampin and isoniazid (the recommended first-line therapeutic regimen), represents another important threat in the fight against the disease. Approximately 480,000 newly emerging cases of MDR-TB are estimated to occur every year. The spread of MDR-TB mostly derives from mismanagement of TB cases such as the use of inappropriate dosage, inappropriate regimen, limited availability of quality assured pharmaceutical products, and little effort to support patient adherence. This study aimed to examine the determinants of delayed MDR-TB diagnosis and treatment in Surakarta, Central Java.

Subjects and Method: This was a cross sectional study conducted at Dr. Moewardi Hospital, Surakarta, Central Java. A total of 73 MDR-TB patients were selected for this study. The dependent variable was delayed MDR-TB diagnosis and treatment. The independent variables were age, gender, distance to health facility, health facility type, suspect criteria of MDR-TB. Data on MDR-TB were taken from medical record. The other data were collected by questionnaire and analyzed by a multiple logistic regression.

Results: Delayed MDR-TB diagnosis was associated with age (OR= 1.02; 95% CI= 0.98 to 1.06; p= 0.330), gender (OR= 0.06; 95% CI= 0.19 to 1.75 p= 0.330), distance to health facility (OR=1.50; 95% CI= 0.53 to 4.19; p= 0.450), health facility type (OR= 0.97; 95% CI= 0.49 to 1.92; p= 0.920), and MDR-TB suspect criteria (OR= 0.91; 95% CI= 0.61 to 1.35; p= 0.620), but none of them was statistically significant. Delayed MDR-TB treatment was associated with age (OR= 0.99; 95% CI= 0.96 to 1.03; p= 0.870), gender (OR= 0.42; 95% CI= 0.15 to 1.22; p= 0.112), distance to health facility (OR= 1.2; 95% CI= 0.44 to 3.30; p= 0.730), health facility type (OR= 1.50; 95% CI= 0.77 to 2.92; p= 0.240), and MDR-TB suspect criteria (OR= 0.90; 95% CI= 0.62 to 1.32; p= 0.600), but none of them was statistically significant.

Conclusion: Age, gender, distance to health facility, health facility type, and MDR-TB suspect criteria, can not be used as reliable predictors of delayed MDR-TB diagnosis and treatment.

Keywords: delayed, diagnosis, treatment, multidrug resistant tuberculosis.

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ASSOCIATION BETWEEN MATERNAL EDUCATION AND KNOWLEDGE OF COMPLEMENTARY FEEDING IN TEGALREJO, YOGYAKARTA

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ABSTRACT

Background: From 6 months of age infants need breast milk and solid foods to promote health, support growth and enhance development. This is called complementary feeding. It ensures that infants receive all the necessary nutrients, including those that are sometimes missing for many infants (iron, zinc and vitamin A). Introducing foods like meat, eggs and liver in the early stages of complementary feeding is recommended, because these foods are good sources of these nutrients. This study aimed to determine association between maternal education and knowledge of complementary feeding.

Subjects and Method: This was a cross-sectional study conducted in Yogyakarta. A sample of 36 lactating mothers was selected for this study. The dependent variable was knowledge of complementary feeding. The independent variable was the maternal education. The data were collected by questionnaire and analyzed by chi square with odd ratio as the measure of association.

Results: Maternal education was positively associated with knowledge of complementary feeding (OR = 3.20; CI 95% = 1.91 to 5.40; p= 0.001).

Conclusion: Higher maternal education is associated with better knowledge of complementary feeding.

Keywords: maternal education, knowledge, complementary feeding

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DESCRIPTION OF SLEEP QUALITY, PHYSICAL ACTIVITY, AND DEHYDRATION STATUS AMONG BATIK WORKERS IN BANTUL, YOGYAKARTA

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ABSTRACT

Background: Previous studies have shown that physical exercise is associated with an improved mood and increased job performance. A lack of sleep is associated with lower satisfaction with life, health, work, and financial well-being. Poor sleepers are significantly less resilient and optimistic and more stressed than good sleepers. This study aimed to describe sleep quality, physical activity, and dehydration status among batik workers in Bantul, Yogyakarta.

Subjects and Method: This was a descriptive cross-sectional study conducted in Bantul, Yogyakarta. A total of 78 batik workers were selected for this study. Variables for this study were sleep quality, physical activity, and dehydration status. Data on hydration status was obtained by urine in the morning. The other data were collected by questionnaire. The data were described in percent.

Results: As many as 43.6% of the batik workers had moderate activity, 79.5% had poor sleep quality, and 47.4% were in mild dehydration. The poor quality of sleep was indicated by sleep duration <5 hours and sleep efficiency <65%.

Conclusion: The majority of the batik workers have moderate activity level, poor quality of sleep, and mild dehydration.

Keywords : sleep quality, physical activity, dehydration, batik worker.

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PREVALENCE AND FACTORS ASSOCIATED WITH METABOLIC SYNDROME AMONG FEMALE BATIK WORKERS

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ABSTRACT

Background: Metabolic syndrome is a cluster of conditions, including (1) increased blood pressure, (2) high blood sugar, (3) excess body fat around the waist, and (4) abnormal cholesterol or triglyceride levels that occur together, increasing the risk of heart disease, stroke and diabetes. Metabolic syndrome is closely linked to overweight or obesity and inactivity such as working as a batik worker. This study aimed to estimate prevalence and to determine factors associated with metabolic syndrome among female batik workers.

Subjects and Method: This was a cross-sectional study conducted in Kampung Batik Giriloyo, Imogiri, Bantul, Yogyakarta. A total of 65 female batik workers were selected for this study. The dependent variable was metabolic syndrome. The independent variables were nutrition intake and nutrition status. Metabolic syndrome was measured by blood pressure, blood sugar, triglyceride, high density lipoprotein (HDL) cholesterol, and waist to hip ratio. To be diagnosed with metabolic syndrome, one would have at least three of these risk factors. Nutrition status was measured by body mass index. The other data were collected by questionnaire. The data were analyzed by chi square test with odds ratio as the measure of association.

Results: The prevalence of metabolic syndrome was 18.5% among female batik workers. The risk of metabolic syndrome increased with high fat intake (OR= 4.75; p= 0.030) and overweight or obesity (OR= 5.23; p= 0.002).

Conclusion: The prevalence of metabolic syndrome is 18.5% among female batik workers. The risk of metabolic syndrome increases with high fat intake and overweight or obesity.

Keywords: metabolic syndrome, prevalence, risk factor, batik worker.

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OCCUPATIONAL HEALTH PROFILES AMONG INFORMAL SECTOR WORKERS IN JEPARA, CENTRAL JAVA

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ABSTRACT

Background: Every industry presents various kinds of safety hazards to its employees. The spectrum of possible occupational safety risks ranges from severe and immediate physical dangers to milder hazards. Occupational accidents directly impact the company's bottom line. An injured employee easily means countless lost man hours and quickly adds up to not only billion rupiahs in company's expenses. This study aimed to describe occupational health profiles among informal sector workers in Jepara, Central Java.

Subjects and Method: This was a cross-sectional study conducted in Plajan village, Jepara, Central Java. A total of 58 informal sector workers were selected for this study. The dependent variable was occupational health. The independent variables were personal protective equipment (PPE), PPE use, occupational disease, work accident, availability of occupational safety and health regulations, smoking prohibition, availability of health workers, availability of the national health insurance (NHI)/BPJS personnel, availability of first aid box, water supply and toilet. The data were collected by questionnaire and described in percent.

Results: Out of 58 informal workers under study, 41 (70.68 %) worked in the wood craft industry. PPE was available in 25 (43.1%) locations. PPE use was 2 (3.4%). Occupational accidents and illness occurred in 52 locations. Occupational illnesses included cough (10.3%), eye irritation (27.2%), and hand irritation (10.3%). Causes of occupational accidents included sharp equipment or machine (89.6%) and fire (3.4%). Occupational health and safety regulation was available at 3 (6.8%) locations. Smoking prohibition, health workers, and the NHI personnel, were absent. First aid boxes were available in 31% locations. Water supply and toilet were available at all locations.

Conclusion: Occupational health and safety remain sub-optimal among informal sector workers, which require close attention from the management.

Keywords: occupational health, safety, accident, informal sector workers.

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DEPRESSION AND ITS CORRELATIONS WITH DAILY LIFE ACTIVITY AND QUALITY OF LIFE AMONG POST HEMORRHAGIC STROKE PATIENTS

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ABSTRACT

Background: Stroke affects brain function and causes personality, mood and emotional changes. There is a strong link between stroke, depression, and anxiety. One in three people experience depression at some point during the five years after their stroke. This study aimed to analyze the correlations of depression with daily life activity and quality of life among post-hemorrhagic stroke patients.

Subjects and Methods: This was a cross sectional study conducted at Sultan Agung Hospital. A sample of 33 post-hemorrhagic stroke patients was selected for this study. The dependent variable was activity of daily living (ADL) and quality of life. The independent variable was depression. Depression was measured by Beck Depression Inventory (BDI). Quality of life was measured by SSQol. Activity of daily living was measured by Barthel Index. The data were analyzed by Pearson correlation.

Results: Of 33 post-hemorrhagic stroke patients, 19 (57.6%) patients were 45 to 54 years of age. As many as 2 (6.1%) patients had depression, either mild or severe. The Beck Depression Inventory (BDI) score was mean= 24.4 and SD= 9.8. Stroke Specific Quality of Life Scale (SS-QOL) score was mean= 14.0 and SD 15.3. Depression was correlated with ADL ($r = -0.86$; $p < 0.001$) and quality of life ($r = -0.75$; $p < 0.001$).

Conclusion: Depression is correlated with activity of daily living and quality of life among post-hemorrhagic stroke patients.

Keywords: depression, activity of daily living, quality of life, post-hemorrhagic stroke

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ASSOCIATION BETWEEN ENVIRONMENTAL SANITATION AND INCIDENCE OF DENGUE HEMORRHAGIC FEVER IN AN ENDEMIC AREA

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ABSTRACT

Background: Dengue Hemorrhagic Fever (DHF) continues to be a major public health problem in Indonesia. Rowosari sub-district is an endemic area in Semarang, Central Java, with a cumulative incidence of 3.42 new cases per 10.000. This study aimed to determine the association between environmental sanitation and incidence of DHF in a DHF endemic area.

Subjects and Methods: A case control study was conducted in a DHF endemic area, Puskesmas Rowosari, Semarang, Central Java. A sample of 50 study subjects was selected for this study, consisting of 25 DHF cases and 25 controls. The dependent variable was the incidence of DHF. The independent variable was environmental sanitation. DHF data were taken from medical record. Environmental sanitation data were collected by checklist and field observation. The data were analyzed by a logistic regression.

Results: The risk of DHF increased with poor environmental sanitation (OR=2.56; p=0.002).

Conclusion: The risk of dengue hemorrhagic fever increases with poor environmental sanitation.

Keywords: dengue hemorrhagic fever, environmental sanitation

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DETERMINANTS OF LATENT TUBERCULOSIS IN BANDUNG, WEST JAVA

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ABSTRACT

Background: TB remains a leading cause of morbidity and mortality in developing countries, including Indonesia. About 7% of all deaths in developing countries are attributed to TB. Latent tuberculosis infection (LTBI) is a state of persistent immune response to stimulation by Mycobacterium tuberculosis antigens without evidence of clinically manifested active TB. This study aimed to examine the determinants of latent tuberculosis in Bandung, West Java.

Subjects dan Method: This was a cross-sectional study conducted in Bandung, West Java. A total of 252 peoples were selected for this study, consisting of latent tuberculosis cases and controls. The dependent variable was latent tuberculosis. The independent variables were age, nutrition status, BCG scar, and smoking. The data were collected by laboratory test and questionnaire. The data was analyzed by a multiple logistic regression.

Results: The risk of latent tuberculosis increased with occasional smoking (OR= 9.34; 95% CI= 4.23 to 20.67), frequent smoking (OR= 12.99; 95% CI= 2.49 to 67.94), poor nutrition status (OR= 2.64; 95% CI= 0.49 to 14.31), but decreased with BCG scar (OR= 0.45; 95% CI= 0.21 to 0.95).

Conclusion: The risk of latent tuberculosis increases with occasional smoking, frequent smoking, poor nutrition status, but decreases with BCG scar.

Keywords : latent tuberculosis, smoking, nutrition status, BCG scar.

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THE EFFECTS OF NUTRITION INTAKE AND PEER ROLE ON OVERWEIGHT AMONG ADOLESCENTS: A PATH ANALYSIS FROM KARANGANYAR, CENTRAL JAVA

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ABSTRACT

Background: The adolescent period is associated with changes in eating and activity behaviors. Peer experiences have been theoretically and empirically related to the “Big Two” contributors to the obesity epidemic, unhealthy eating and physical inactivity among adolescents. This study aimed to examine the effects of nutrition intake and peer role on overweight among adolescents.

Subjects and Method: A cross-sectional study was carried out in 25 junior high schools in Karanganyar, Central Java, in December 2017. A sample of 200 students was selected for this study by fixed disease sampling. The dependent variable was overweight. The independent variables were nutrition intake, snacking habit, physical activity, maternal education, family income, and peer role. Data on body weight were measured by weight scale. Data on height were measured by microtoise. The other variables were measured by questionnaire. The data were analyzed by path analysis.

Results: The risk of overweight in adolescents was directly and positively affected by high nutrition intake ($b= 2.04$; 95% CI= 1.21 to 2.87; $p<0.001$), high snacking habit ($b= 1.28$; 95% CI= 0.43 to 2.14; $p= 0.003$), and strong peer role ($b= 1.98$; 95% CI= 1.16 to 2.81; $p<0.001$), but negatively affected by high physical activity ($b= -2.11$; 95% CI= -2.95 to -1.26; $p<0.001$). The risk of overweight in adolescents was indirectly affected by maternal education and family income.

Conclusion: The risk of overweight in adolescents is directly and positively affected by high nutrition intake, high snacking habit, and strong peer role, but negatively affected by high physical activity. The risk of overweight in adolescents is indirectly affected by maternal education and family income.

Keywords: overweight, nutrition intake, snacking habit, physical activity, maternal education, family income, peer role

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EPIDEMIOLOGY AND MICROORGANISM PROFILE OF PYONEPHROSIS

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ABSTRACT

Background: *Pyonephrosis* is an infection of the kidneys' collecting system. Pus collects in the renal pelvis and causes distension of the kidney. It can cause kidney failure. This study aimed to describe the epidemiology and microorganism profile of *pyonephrosis*.

Subjects and Method: This was a cross sectional study carried out at Sultan Agung Islamic Teaching Hospital, Semarang, Central Java. A sample of 42 in-patients with *pyonephrosis* was selected for this study. The dependent variable was microorganism profile. The independent variables were age and gender. Epidemiological data were taken from the medical record. Microorganism profile and sensitivity were analyzed from pus collected from surgery. Culture was performed using Blood Agar Plate and Mac Conkey technique. Sensitivity to antibiotic was tested by CLSI diffusion method. Microorganism profile was described in percent.

Results: Of all 42 patients with *pyonephrosis*, 38 (90.5%) patients aged 26 to 64 years and 23 (54.76%) patients were male. Of all types of gram-negative microorganism, 12 (28.57%) were *Escherichia coli*, 5 (11.90%) *Klebsiella pneumoniae*, 3 (7.1%) *Pseudomonas aeruginosa*, and 1 (2.3%) *non typhoidal Salmonella*. Of all types of gram-positive microorganism, 2 (4.7%) were *Staphylococcus aureus* and 1 (2.3%) *Streptococcus viridans*. Only 2 (4.7%) were anaerobic bacteria. Some samples were sterile. As many as 2 (16%) were *Escherichia coli* that produces extended spectrum beta lactamase (ESBL), which is an isolate resistant to the third generation Cephalosporin. All (100%) *Staphylococcus aureus* were methicillin sensitive.

Conclusion: Most patients with *pyonephrosis* were adults. Percents of male and female patients were comparable. Gram-negative microorganisms outweigh gram-positive microorganism.

Keywords: *pyonephrosis*, epidemiology, microorganism profile.

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