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Implementing health-promoting activities in diverse primary school contexts in the Netherlands: practical lessons learnt

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Abstract

Purpose – To gain insight into factors enhancing or obstructing implementation in various school-settings, which is vital for widespread dissemination and sustainable integration of school-based health-promoting interventions.

Design/methodology/approach – A mixed methods multisite comparative case study to investigate (factors influencing) the implementation of health-promoting activities in twelve Dutch primary schools. Data were collected during three school years (2019–2022) through observations, questionnaires and interviews.

Findings – The project resulted in the implementation of small, incidental activities. Important reasons for the limited implementation were lack of commitment and bottom-up involvement. School directors and teachers were not involved early on in the project, which limited project support and commitment. On school level,

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Ethics approval and consent to participate: This study was conducted according to the guidelines laid down in the Declaration of Helsinki and the need for ethical approval has been waived by the Medical Ethics Committee Zuyderland in Heerlen (METC-Z no. METCZ20190144) due to non-invasive data collection procedures. The study was registered in the ClinicalTrials.gov database on 9 December 2019 (NCT04193410). Written informed consent for study participation and publication of the study's results was obtained from all subjects involved in the study.

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directors largely carried project responsibility themselves, hindering project sustainability and integration. Coronavirus disease 2019 (COVID-19) made that schools had difficulties forming long-term visions and plans. Other observed barriers included limited perceived necessity to change, high workload and high staff turnover. Important facilitators were the presence of a process coordinator and sharing experiences from other schools. **Originality/value** – This research provided valuable insights into (factors influencing) the implementation of health-promoting initiatives in diverse, real-world school contexts. More extensive support is needed to create commitment, bottom-up involvement and a project vision. Furthermore, empowering in-school champions and/or school-wide project groups is desirable to decrease schools' dependence on long-term external support. The findings can be used by various stakeholders throughout development, adoption and implementation and can facilitate widespread dissemination and sustainable integration of school-based health-promoting interventions.

Keywords Implementation, Dissemination, School health promotion, Mixed methods

Paper type Research paper

Background

Schools have been identified as key environments for promoting healthy lifestyle behaviours (WHO, 1997, 2017), and over the years, many school-based health-promoting interventions have been implemented and found to effectively improve health outcomes (e.g. body mass index (BMI) and dietary and physical activity (PA) behaviours) (Khambalia *et al.*, 2012; Peterson and Fox, 2007; Sharma, 2006; Sobol-Goldberg *et al.*, 2013; Zenzen and Kridli, 2009). Despite their effectiveness, long-term implementation and/or wide dissemination of these interventions is often not achieved (Keshavarz *et al.*, 2010). This is partly due to a great diversity in school contexts. When implementing school-based health-promoting interventions, there is no "one size fits all" approach (Darlington *et al.*, 2018; Keshavarz *et al.*, 2010). Schools can be defined as complex systems with a unique context and dynamics influenced by various interacting elements from within and beyond the school-setting (Darlington *et al.*, 2018; Keshavarz *et al.*, 2010; Moore *et al.*, 2015). Health-promoting activities that work in one school might therefore not work in another school. In addition, although there are many studies investigating school-based health-promoting interventions' effects (Van Cauwenberghe *et al.*, 2010; Sharma, 2006; Sobol-Goldberg *et al.*, 2013), less research is available on factors influencing implementation, especially in a real-world setting (de Meij *et al.*, 2013; van Nassau *et al.*, 2016). This research gap contributes to a lack of hands-on, practical advice that can be used by schools and other stakeholders interested in implementing school-based health-promoting activities in their context. Gaining insight into factors enhancing or obstructing implementation can explain why an intervention does or does not work in a specific setting and is therefore vital to sustainably integrate health in more schools.

The "Healthy Primary School of the Future" (HPSF) is a previously implemented and evaluated Dutch primary school-based intervention. In two intervention schools, two changes were initiated: (1) daily provision of a free healthy school lunch and (2) daily structured PA sessions after lunch (Bartelink *et al.*, 2018; Willeboordse *et al.*, 2016). Effect evaluations showed significant positive intervention effects on various health outcomes (e.g. BMI z-score and dietary behaviours) (Bartelink *et al.*, 2019b, c; Willeboordse *et al.*, 2022). Following these positive effects, other Dutch primary schools expressed their interest in implementing HPSF-related activities, which created the opportunity to "scale-up" HPSF. Scale-up is "the process by which health-promoting interventions shown to be efficacious on a small scale and/or under controlled conditions are expanded under real-world conditions into broader policy or practice" (Milat *et al.*, 2015). In HPSF's case, this scaling-up meant working with a significantly lower budget than during the HPSF trial and dealing with various schools with complex and unique contexts (Keshavarz *et al.*, 2010). To evaluate the implementation and effectiveness of the HPSF initiative in a scaled-up, real-world setting, the present research project was initiated. In total 12 Dutch primary schools aiming to sustainably implement HPSF-related activities participated in this project. To reflect the real-world situation, participating schools were mainly responsible for the selection and implementation of

activities in their own context, in contrast to the schools participating in the HPSF trial that were subjected to a pre-defined intervention (Willeboordse *et al.*, 2016). This approach stimulated schools to implement health-promoting activities fitting their context, resulting in the implementation of pragmatic, real-world and school-specific activities.

The present study aimed to generate knowledge and experience on how health-promoting activities are implemented in complex and diverse school-contexts and to identify factors influencing this process. This knowledge can subsequently be used to formulate practical advice for schools and other stakeholders involved in the development and implementation of school-based health-promoting activities. Using a mixed methods approach, the present paper aimed to answer the following research questions:

(1) How and to what degree are activities promoting physical activity (PA) and healthy dietary habits implemented in twelve real-world school settings?

(2) Which factors are of influence on the implementation of activities promoting PA and healthy dietary habits in twelve real-world school settings?

Methods

Study design

This study is part of a research project investigating the scaling-up of the HPSF initiative in various school contexts using a non-randomised, non-controlled, observational study design. The project comprises 12 primary schools that are member of one educational board situated in the southern part of the Netherlands. In the present study, a mixed methods multisite comparative case study design was used to provide insight into project implementation in the various schools and to identify influential factors. Data were collected during three school years (2019–2022).

Setting

The educational board expressed its desire to implement HPSF-related activities in their schools. Their aim was that all schools would eventually implement a daily healthy school lunch and structured PA sessions after lunch, corresponding to the main intervention components allocated during the HPSF trial. However, there were various differences between the setup of the HPSF trial and the present project. In the HPSF trial, schools were subjected to a pre-defined intervention developed by a project team consisting of i.a., researchers, schools and municipalities. Also, prior to the start of the HPSF trial, there was large commitment for HPSF across various stakeholders (e.g. schools, local sports clubs and the Municipal Health Services) and extensive funding was provided by provincial authorities to aid implementation (Willeboordse *et al.*, 2016). Although provincial authorities also provided funding for the present project, this was considerably less than in the HPSF trial and was mainly meant for research purposes and the appointment of a process coordinator. Furthermore, there was less widespread commitment across stakeholders prior to the project's start, and schools were free to decide if, when and to what degree they would implement health-promoting activities instead of having to implement a pre-defined intervention. Activities that schools could implement had to fall in at least one of the following categories, formulated by board members and researchers: (1) healthy and sustainable nutrition, (2) sufficient PA, (3) sufficient rest and relaxation and (4) social involvement. Schools were mainly responsible for their own implementation process, but they were aided by a process coordinator. The process coordinator organised regular meetings with directors, managers, teachers and other stakeholders to support implementation and to provide stakeholders with inspiration for possible activities. Researchers played an observing role to gain insight into these processes in a real-world setting.

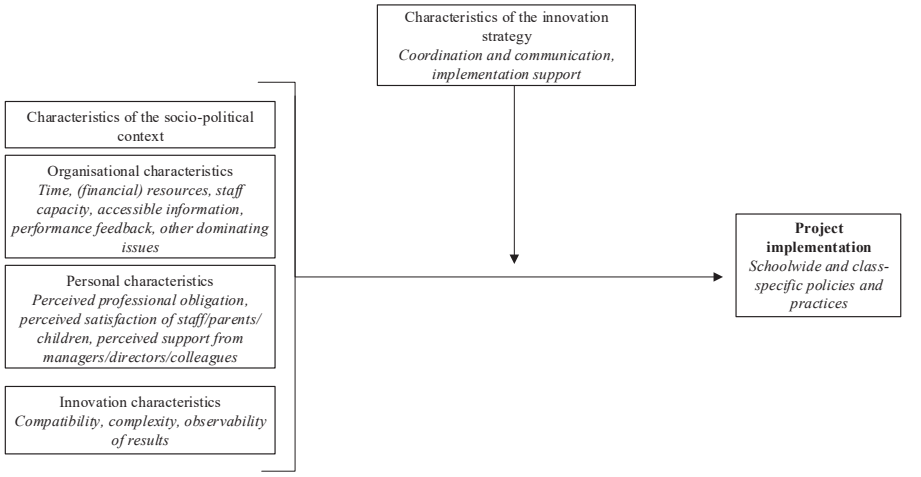
Data collection

Using a mixed methods approach, quantitative and qualitative data were simultaneously collected. To identify factors influencing implementation in the various schools, the framework by Fleuren *et al.* (2004) was used, a framework previously used in dissemination research in the school setting (de Meij *et al.*, 2013; van Nassau *et al.*, 2016). According to the framework, an innovation process is influenced by characteristics of the socio-political context (e.g. existing rules and regulations), the organisation (e.g. staff capacity, available time and resources), the innovation strategy (e.g. coordination and communication), the innovation's user(s) (e.g. beliefs and perceived support) and the innovation itself (e.g. compatibility and complexity) (Fleuren *et al.*, 2004). This framework and the corresponding Measurement Instrument for Determinants of Innovations (MIDI) served as an inspiration during development of the present study's data collection instruments (Fleuren *et al.*, 2004, 2014). Figure 1 provides an overview of the key outcome domains and components addressed in the present study.

Questionnaires. Two questionnaires were administered yearly in 2019–2022: a school scan questionnaire for school directors and a teacher questionnaire.

School scan questionnaire: Directors of the 12 schools annually filled out a digital questionnaire containing several close-ended questions assessing the presence of health-promoting elements within their school. These elements were divided into four themes: routine (e.g. energisers and parental involvement), policy (e.g. rules on snacks, lunch and sugar-sweetened beverages), education (e.g. amount and duration of physical education (PE) lessons, usage of classroom-based health-promoting programmes) and environment (e.g. presence of a school garden). Additionally, one open-ended question was included to identify other dominating organisational issues (e.g. merging of two schools) potentially influencing a school's project focus.

Teacher questionnaire: All teachers of the 12 schools (n = 114 at T0) were annually invited to fill out a digital questionnaire containing several open-ended questions to gain insight in their health-related practices (focussed on nutrition, PA and rest and relaxation). At T1 and T2, fourteen additional statements based on the MIDI were included (Fleuren *et al.*, 2014). Statements assessing organisational characteristics (n = 9) included questions regarding



Source(s): Author's own work adapted from Fleuren *et al.* (2014)

Figure 1.
Key outcome domains and components of the present study

staff capacity, available time, financial and material resources, accessibility of project-related information and the presence of regular feedback moments regarding the project. Two statements assessing innovation characteristics were included to evaluate the project's compatibility with the school context and the observability of effects. Statements concerning personal characteristics (n = 3) assessed perceived professional obligation to work on the project, perceived project satisfaction of parents and children, and perceived support from colleagues and managers to work on the project. Response options for each statement ranged from 1 (totally disagree) to 5 (totally agree).

Interviews. In 2020–2022, semi-structured interviews were conducted by one researcher (MH) with the process coordinator and a purposive sample of staff members from each school until data saturation was achieved. The sample consisted of two childcare managers involved in the project, the directors from all schools and one teacher from each school. These teachers were selected based on recommendations by school directors, as they were aware of the degree of project involvement of specific teachers. Due to COVID-19, all interviews were conducted online. The semi-structured interview guides were based on the MIDI (Fleuren *et al.*, 2014). The interviews were used to get an in-depth insight into the schools' project operationalisation and any factors (related to the socio-political context, organisation, innovation strategy, adopting person(s) and/or innovation) influencing implementation. All interviews were held in Dutch and were audiotaped and transcribed verbatim.

Observations and minutes of meetings. MH observed and took notes during all project meetings with the educational board, school directors, working groups with parents and/or teachers and children's voice groups. These meetings and observations were partly on site and partly online due to COVID-19. The observations' aim was to learn about each school's dynamics and implementation and to see and hear factors influencing these processes. To create an open view, no observational checklist was used.

Analyses

Data from interviews, observations and minutes were coded and analysed deductively by MH using NVivo (version 12.0) (Braun and Clarke, 2006). A second researcher (SJ) independently coded and analysed a sample of 12 interview transcripts. MH and SJ discussed their findings and consensus was easily reached. Coding was guided by the five categories from Fleuren *et al.*'s framework (socio-political context, organisation, innovation strategy, adopting person(s) and innovation) and subcategories were created if necessary (Fleuren *et al.*, 2004). During analysis, categories were reviewed continuously and findings were discussed regularly within the research team. Quantitative questionnaire data were analysed using IBM SPSS Statistics for Windows (International Business Machines Corporation Statistical Package for the Social Sciences, version 25, IBM Corp, Armonk, New York, USA). Baseline descriptives from both questionnaires, combined with data from observations and minutes, were used to describe the schools' pre-existing contexts. T1 and T2 questionnaire data were combined with data from interviews, observations and minutes to describe the schools' implementation processes.

Results

Participants

In 2020–2022, 24 digital interviews were conducted that lasted between 30 and 60 min (see Supplementary Table S1 for participants' characteristics). The school scan questionnaire was filled out by all directors at T0-T2. The teacher questionnaire was filled out by 84 teachers (response rate (RR) = 73.7%) at T0, 79 teachers (RR = 69.9%) at T1 and 63 teachers (RR = 61.8%) at T2.

Pre-existing context

All participating schools were member of one educational board and were located in a rural municipality in the southern part of the Netherlands. During the project preparation phase, the educational board's director was replaced by a new director, who mainly focussed on other dominating issues, thereby limiting project development. At T0, this director had recently been replaced by another director who was still director at the end of data collection.

The number of students enrolled in the schools at T0 varied from 31–263. At T0, there were seven directors responsible for 12 schools (some directors were responsible for two schools). Two managers were responsible for the various childcare locations within the schools. Two schools were in a merging process at T0, two other schools were planning to move to a different building and a third school was designing a new school building. The T0 school scan questionnaire revealed that all schools had a nutrition policy, although not every school actively managed this policy. Usage of classroom-based health-promoting programmes was limited, and schools using specific programmes mostly worked with nutrition-related programmes. All schools implemented energisers during the day and all classes engaged in at least one PE lesson per week (although these lessons were not always supervised by a qualified PE teacher). All schools had access to a (more or less) active schoolyard, and one school used a school garden during the school day.

In the T0 teacher questionnaire, the majority of teachers reported to already pay attention to nutrition, PA and/or rest and relaxation in class. These efforts were mainly unstructured; most teachers mentioned paying attention to the subject when it naturally came up during the day (e.g. by discussing students' lunches). Teachers who paid no attention to nutrition, PA and/or rest and relaxation mentioned time constraints, other (education-related) priorities and/or no perceived necessity as main reasons for this lack of attention.

Implementation

The educational board's ambition was that all schools would eventually implement a school lunch and structured PA sessions after lunch. However, due to frequent staff turnover in the board, this ambition was not communicated to school directors, managers and teachers. They received general project information right before the project's start instead of being actively involved during project development. In the first meetings with the process coordinator, various stakeholders therefore felt overwhelmed and were hesitant to implement the school lunch and structured PA sessions. With the process coordinator's help, school-specific plans were formed in late 2019. Most schools wanted to integrate small activities (e.g. the provision of a daily fruit and/or vegetable (FV) item), although some schools had more extensive ambitions (e.g. incorporating cooking lessons in their regular curriculum). Project implementation had just started when the COVID-19 pandemic developed in early 2020. Schools had to deal with forced school closures, high absenteeism and various health- and safety measures, making it impossible to implement all aspired plans and activities. Parents and other volunteers were not allowed within schools for the majority of project duration, which made it difficult to involve these stakeholders and to ensure enough capacity to implement the various plans. Several schools decided to postpone working on the project, whilst others continued implementing activities taking into account the various limitations. Towards the project's end, COVID-19's impact decreased and schools had more capacity to work on the project. Several schools started preparing "bigger" plans and activities. Furthermore, the educational board initiated the formation of a "PA team." The ambition was that this team would be responsible for the provision of PE-lessons and for all other health-related activities in the schools, thereby taking over the process coordinator's role after external project funding ceased. Efforts to further shape the PA team's role were still ongoing at the end of data collection. Table 1 describes the implemented activities at the end of data collection (three years after the project's start).

School	Healthy and sustainable nutrition	Sufficient PA	Sufficient rest and relaxation	Social involvement
1	Daily provision of FV item	(Limited) usage of PA floor for toddlers and pre-schoolers	Incidental yoga lessons provided by pedagogical employee	N/a
2	N/a	- Various staff workshops and information evenings for parents related to PA integration in education - Adaptation schoolyard (more active elements)	Provision of weekly yoga lessons in kindergarten	N/a
3	- Daily provision of FV item - Pilot to investigate healthy lunch provision (not integrated yet)	- Various staff workshops related to PA integration in education - Increased amount of education provided outdoors - Adaptation schoolyard (more active elements) - Pilot to investigate structured PA sessions during lunch break time (not integrated yet)	N/a	- Support from volunteers during lunch pilot and FV provision - Support from local companies to provide lunch during pilot
4	Daily provision of FV item	- Integration of additional 20 min of PA every day (using certified method) - Usage of specific game consoles for outside play	N/a	N/a
5	N/a	N/a	N/a	N/a
6	- Daily provision of FV item - Various activities focussed on healthy nutrition (e.g. Family Food Vlogs, classroom-based quiz, Family Food Experience) - Introduction new school-wide dietary policy	- Adaptation schoolyard (more active elements) - Integration of PA in curriculum	N/a	Active role for students' voice group and parents in nutrition-related plans
7	N/a	- Adaptation schoolyard (more active elements) - Staff workshop regarding reflex integration	N/a	N/a
8	Daily provision of FV item	N/a	N/a	N/a

(*continued*)

Table 1.
Activities implemented in the various schools at the end of data collection

School	Healthy and sustainable nutrition	Sufficient PA	Sufficient rest and relaxation	Social involvement
9	- Daily provision of FV item - Daily provision of dairy serving - Expansion of school garden	Integration of additional 20 min of PA every day (using certified method)	Development of relaxation spaces throughout the school	Active role for volunteers in maintaining school garden
10	N/a	N/a	Usage of certified method to improve classroom atmosphere	N/a
11	Daily provision of FV item	Integration of additional 20 min of PA every day (using certified method)	N/a	N/a

Note(s): Due to the merging of two participating schools, eleven schools are included in Table 1 instead of the twelve schools that were originally participating in the project
Abbreviations: PA: physical activity; FV: fruit and vegetable and n/a,:not applicable
Source(s): Authors' own work

Table 1.

Influencing factors

In the remainder of the Results section, the most apparent influential factors across the categories from Fleuren *et al.*'s framework (Fleuren *et al.*, 2014) are specified.

Characteristics of the socio-political context

Within the socio-political context, national COVID-19-related restrictions influenced project implementation. Schools were repeatedly obliged to close and after re-opening had to adhere to strict safety regulations (e.g. social distancing). The quickly changing situation often called for ad-hoc decision making, which made it difficult for schools to develop and adhere to a long-term project plan. Furthermore, schools had to deal with high staff absenteeism and parents and volunteers were not allowed to assist during activities in school, which greatly limited schools' capacity to implement activities. The national focus on minimising educational disadvantages following COVID-19 further complicated this matter.

> Director 2,7: "The closure of schools also had an impact. [. . .] There is a different focus now. You now have to investigate which students have an educational disadvantage, how are the children, how did they pull through?" The focus is very much on that instead of on the project."

Organisational characteristics

An important organisational barrier for project implementation was the educational board's lack of project vision. This made it difficult for schools to know what was expected from them and to start developing project plans. The reason for this lack of vision was twofold. First, the educational board was subjected to regular staff turnover at the project's start. These changes made it difficult to develop a long-term project vision. Furthermore, the board perceived it as very important to place project responsibility and ownership within the schools, ensuring that schools could make decisions fitting their context. Communicating a clear project vision whilst protecting schools' freedom was found to be difficult by the educational board.

A vision was also found to be influential on school level. In schools with a clear health-related vision, stakeholders found it easier to form project plans and motivate other staff members. The presence of a clear vision also made it easier to deal with the rapidly changing situation due to COVID-19, as the overall project objective remained clear and adaptations to the plans could be made relatively fast. If a school used their vision to guide implementation, the project was often not seen as an add-on, but as a part of the other ongoing processes within school, and it was less easily dismissed when the school was faced with other dominating issues. Lack of project vision was sometimes the result of time constraints or other priorities within a school. Multiple schools were dealing with high staff turnover and/or efforts to improve educational quality, which limited their ability to consistently focus on the project.

> Teacher 7: "There is a plan to improve educational results across all schools [of the educational board] because that is necessary. That plan currently has the highest priority within our school and probably also in other schools. [. . .] So that is an important factor taking away time and capacity from this project."

In some schools, other dominating issues did not limit project attention, but created a window of opportunity facilitating implementation. A school designing a new school building had the opportunity to incorporate specific health-related concepts (e.g. a large kitchen and an active play yard) in their new building. Also, moving to a new building created the perception of "starting fresh", which resulted in various stakeholders paying extra attention to the school's overall health-related vision and being more inclined to think about bigger activities.

Personal characteristics

Across school directors, who were responsible for the project in most schools, there were differences in perceived project importance and appreciation. Although all directors acknowledged the project's importance, directors with high internal motivation and perceived necessity for change were more successful in involving other stakeholders and implementing activities than directors who felt less personal connection to the subject. These directors were more likely to focus on implementation barriers (e.g. high workload and other priorities), whilst enthusiastic directors looked for opportunities.

> Process coordinator: "For some directors the project is very close to their heart, they want this very much. For others that is not so much the case, but they see the importance and have accepted that they have to work on it. And some directors have little connection to the subject, which decreases their focus on it."

Almost all teachers underpinned the importance of paying attention to health at school, but the project's additional value within this context was not always clear. Various teachers reported to already incorporate health within the curriculum prior to the project and not seeing any necessity for further improvement.

> Teacher 10: [Researcher]: "So there is not really a theme right now that you can think of as something you would choose to work on within the project?" [Teacher]: "No, it is not that we think, "Oh we should do something regarding health!""

This limited perceived necessity for change impeded implementation of disruptive activities. When school directors and teachers were asked whether they were satisfied with the activities implemented at the project's end or if they would have liked to implement more disruptive changes, the majority reported to be content with what was achieved throughout the project.

Innovation characteristics

Clarity of the project's content, aims and operationalisation was suboptimal for school directors, managers and teachers. The large amount of freedom to implement activities made various stakeholders feel overwhelmed and unsure about what was expected of them. Furthermore, the categories in which implemented activities had to fall were not always clear to stakeholders. Especially the categories "rest and relaxation" and "social involvement" were difficult to grasp. The difficulty with these categories was also visible in the activities implemented in the schools (Table 1), as most implemented activities fell in the categories "healthy and sustainable nutrition" and "sufficient PA."

The most-often mentioned aspects playing a role in stakeholders' choice for a specific activity were its degree of compatibility with the school context and its complexity to work with. Several schools chose to work with a specific programme integrating PA within the curriculum, and when asked for their rationale behind this choice, directors and teachers praised the ease of incorporating the programme within their daily practice.

> Director 11:"This method is just very easy and clear, which means that teachers do not have to spend a lot of time getting acquainted with it."

Other activities, such as the provision of a school lunch, did not get off the ground because stakeholders perceived them as too complex.

> Teacher 3: "Of course we would like to offer a healthy lunch to students, but looking at all the extra work this would bring . . . [. . .] Organisation is a limitation. While I think that all colleagues would like to offer this. But the question is to what extent this would be realistic and feasible."

Characteristics of the innovation strategy

In most schools, project responsibility rested mainly with the school director. Despite efforts of the process coordinator to increase school-wide involvement, directors found it difficult to delegate tasks to their team. They mentioned wanting to "protect" their staff considering the already high work load and limited time.

> Director 3: "I am now responsible for the whole project, although I would like to appoint a coordinator. But right now with all the other tasks, I do not delegate it to my team but carry it myself."

This approach led to a lack of bottom-up involvement, and teachers often mentioned not being aware of project details and/or not feeling ownership for their school's plans. Teachers were often informed about an initiative's implementation rather than being involved during preparation. This made the implementation and especially integration of activities extremely difficult due to limited project involvement and ownership amongst staff.

> Teacher 7:"It was more a management commitment to work on [the project], we [the staff] were not explicitly asked what we thought about it. It was not that we were very enthusiastic about it."

The lack of bottom-up involvement also made the project largely dependent on one person, which limited sustainability. In schools where teachers were more engaged in implementation, there was clear and regular communication within teams (both in general and regarding the project), which motivated and stimulated staff to be involved.

> Teacher 4: "I have to say, the collaboration is great. Everybody is like, "We are going to do this." If we come across a problem, it is discussed, something new is thought of, and we will continue with that."

The process coordinator's presence was vital for project implementation. Whilst schools had to focus on a multitude of subjects (e.g. educational quality, COVID-19 and staff turnover), the

process coordinator had a constant focus on the project and stimulated stakeholders to work on it. Furthermore, she provided schools with inspiration for potential activities.

> Manager 2: "[Process coordinator] makes sure that everybody is up-to-date [. . .] I think that has really been a facilitator, that there is somebody who always has the focus on this despite everything that is happening around us."

Other external project support was also very beneficial, as several schools contacted the Municipal Health Services or other health promotion experts. Furthermore, various interview participants mentioned the positive influence of sharing experiences from other schools working on health promotion.

> Director 8: "The overview which [process coordinator] shared, with all the activities schools are working on, that was very nice. It gives me a lot of energy and makes me think, "Oh I like that as well!""

The experiences from other schools not only served as inspiration, but also provided stakeholders with tips and tricks on how to handle certain situations and even made some stakeholders more willing to work on the project. The positive experiences one school had with a programme integrating PA within the curriculum directly led to two other schools also choosing to implement this programme. Several stakeholders mentioned that they would have liked more knowledge and experience transfer between schools, as they were not aware of all activities implemented within the project. However, this transfer was hindered by COVID-19, which limited the possibility to organise school visits or information meetings.

Table 2 provides an overview of the main facilitators and barriers to the integration of health within the participating schools, as mentioned by school directors, managers and teachers in questionnaires and interviews.

Discussion

The present study examined the implementation of health-promoting activities in multiple real-world school contexts and identified various influencing factors. As opposed to the majority of implementation research on health-promoting schools, no pre-defined intervention was provided in the present project. Rather, schools were encouraged to implement activities fitting their context, wishes and needs.

Overall, the original project ambitions were not met and limited implementation was observed. The most important reasons for this were related to *project commitment and bottom-up involvement*, repeatedly identified as key factors in the implementation of school-based health-promoting programmes (Bartelink *et al.*, 2019a; de Meij *et al.*, 2013; van Nassau *et al.*, 2016). Lack of project commitment and bottom-up involvement were observed at different stages and on different levels (project level, educational board level and school level). On project level, there were clear differences between the original HPSF trial and the present project. The original HPSF trial's project team worked extensively on creating *commitment* for and *involvement* in HPSF across school directors, teachers, parents, children and the school environment (Bartelink *et al.*, 2019a, b, c; Willeboordse *et al.*, 2016). These efforts were made to a much lesser extent in the present project. Given the educational board's initial enthusiasm, it was hypothesised that schools would share this enthusiasm and would involve relevant stakeholders. However, in many schools, enthusiasm about the project was less than anticipated and limited time and/or efforts were spent on involving relevant stakeholders. Given the importance of stakeholder involvement for sustainable implementation (Bartelink *et al.*, 2019a, b, c; Deschesnes *et al.*, 2003; Durlak and DuPre, 2008; Pearson *et al.*, 2015), for future projects it is crucial to provide schools with more extensive guidance and support on how to adequately do this (van Dongen *et al.*, 2022). A process coordinator could play a more

Category	Facilitators	Barriers
Socio-political context		COVID-19-related restrictions (e.g. school closure, safety regulations and national focus on limiting educational disadvantages) and the corresponding complexity of the constantly changing situation at school
Organisation *(school)*	- Clear health-related vision within the school - Window of opportunity (e.g. designing a new school building)	- Lack of attention for the project due to other dominating issues (e.g. staff turnover and relocation) - Limited time available for the project due to already full curriculum
Personal *(school directors, managers, teachers)*	- Internal motivation to incorporate health within the school context (e.g. as a result of high perceived importance of the subject) - Availability of a "coordinator" (school director or other staff member) with continuous attention to the project who can stimulate other team members	- High (perceived) workload - No perceived necessity for incorporating health within the school context
Innovation	Compatibility of an activity with the regular curriculum	- Limited clarity of the project as a whole (e.g. its aims and operationalisation) - Complexity of an activity (e.g. time and effort needed to prepare implementation)
Innovation strategy	- Clear and regular communication within teams - Coordination and support from process coordinator who keeps the project alive within the schools - External project support (e.g. from local health promotion experts) - Sharing ideas and experiences across schools	- Top-down decision making, resulting in lack of involvement of various stakeholders

Source(s): Authors' own work

Table 2. Main facilitators and barriers to the integration of health within the participating schools

proactive role in this, e.g. by organising regular meetings to ensure project involvement and commitment of all relevant stakeholders from the beginning.

On educational board level, there was enthusiasm about HPSF and the ambition to implement comparable activities in their schools. However, the decision to participate in the present project was not made in collaboration with school directors and/or teachers. Rather, these stakeholders were merely informed about project participation, indicating a low level of bottom-up involvement at the project's start. Furthermore, the board's project vision and ambitions were not clearly communicated to the schools. As a result of the board's lack of guidance, most school directors felt overwhelmed by the freedom of choice they had when developing school-specific plans, which negatively influenced their project commitment and involvement. *Leadership engagement* (e.g. through setting and communicating clear project boundaries, expectations and goals) has previously been described to facilitate the implementation of various school-based programmes (Bast *et al.*, 2017; Domitrovich *et al.*, 2011; Lane *et al.*, 2022; Wilhelm *et al.*, 2021).

Leadership engagement was not only suboptimal at educational board level, also on school level there was room for improvement. Most school directors carried the project largely by themselves and were hesitant to involve their team as this could further increase their already high workload. This greatly limited bottom-up involvement and project integration within

schools, as other staff members were not aware of the project's details and experienced limited ownership and/or motivation to work on it. In various schools, it was observed that bottom-up involvement in general was limited: school directors took the lead in most decision-making, whilst staff members played a less-proactive role. These dynamics might, therefore, have been part of the schools' general culture. To change this culture, external project support should be more equipped to support and guide schools extensively in stimulating bottom-up project involvement as the present study showed that schools find it difficult to do this on their own.

In most schools, teachers were already satisfied with their students' health status and the amount of attention payed to health before the project. This might have limited their *perceived necessity to change*, which is an important factor in the decision to implement health-promoting activities (Durlak and DuPre, 2008; van Nassau *et al.*, 2016). Focussing on health benefits might therefore not always be the right strategy to create commitment for health integration in schools. It is important to use information fitting a school's specific context and needs when trying to motivate them to work on health promotion. In some schools, this might be information regarding health benefits, but in other schools, this could, e.g. be mentioning the opportunity for a school to distinguish itself from other schools.

COVID-19 and its subsequent restrictions also had a negative influence on project implementation. Approaching the project with a long-term plan was difficult as the situation called for many ad-hoc decisions. This contributed to a lack of project vision, motivation and stakeholder involvement, thereby impeding sustainable implementation of health-promoting activities in schools (Bartelink *et al.*, 2019a, b, c; Cassar *et al.*, 2019; de Meij *et al.*, 2013; van Nassau *et al.*, 2016). Schools that were more successful in dealing with these barriers approached the project with a *clear health-related vision* and had *regular communication* within the team. Through this approach, they perceived the project as an "add-in" rather than an "add-on."

A facilitating factor was the presence of the *process coordinator*, who stimulated stakeholders to work on the project through sharing other schools' experiences and providing information regarding potential activities. However, schools needed extensive guidance for which the process coordinator not always had enough time as she had to guide all participating schools. For widespread dissemination of school-based health-promoting activities, it might, therefore, be better to first focus on schools in which there is already some motivation to work on the subject. The school's drive is an important foundation for successful implementation and focussing attention on fewer schools provides more room to concentrate on creating commitment and bottom-up involvement. The experiences of motivated schools can subsequently be used to stimulate other, less internally motivated schools to work on the subject.

To make widespread and sustainable dissemination feasible, schools should rely less on external project support and feel empowered to work on the subject independently. To achieve this and to facilitate integration within schools, it is important to identify and train in-school champions and/or school-wide project groups. These people should be enthusiastic about the subject and have the skills, power and knowledge to involve and activate other staff members to work on the subject. The importance of identifying and empowering organisation champions to successfully scale up public health interventions has been described previously in other comparable research within and beyond the school-setting (Carson *et al.*, 2014; van Dongen *et al.*, 2022; Lane *et al.*, 2022; van Nassau *et al.*, 2016; Naylor *et al.*, 2015; Simmons and Shiffman, 2007).

Strengths and limitations

The strength of this study was the mixed methods approach, which stimulated data triangulation and complementation (Bartelink *et al.*, 2019a, b, c; Schifferdecker and Reed, 2009). In addition, usage of Fleuren *et al.*'s framework (Fleuren *et al.*, 2014) facilitated comparison with other studies using the same framework (de Meij *et al.*, 2013; van Nassau *et al.*, 2016). Furthermore, following diverse schools in their natural setting allowed for a real-

world insight in project implementation. This provided a valuable addition to the process evaluation of the original HPSF trial (a more controlled situation) that was previously performed (Bartelink *et al.*, 2019a, b, c). It should, however, be noted that all participating schools were member of the same educational board and were located in the same municipality. To further increase the experience base, it would be beneficial to investigate implementation in schools from other educational boards and/or located in different areas.

A limitation of the present study is the fact that only one researcher conducted the interviews. The risk of social desirability was minimised by stressing confidentiality and the fact that participants could not give any wrong answers and by carefully formulating interview questions. To reduce bias related to the subjective interpretation of qualitative data, two researchers coded (part of) the interviews, notes were kept on researchers' objectivity, ambiguities during coding were discussed with colleagues and data interpretation was done in collaboration with two other researchers.

Implications for practice

Figure 2 provides an overview of important activities to be undertaken by various stakeholders throughout development, adoption and implementation of school-based health-promoting projects. All activities are based on important influential factors observed in the

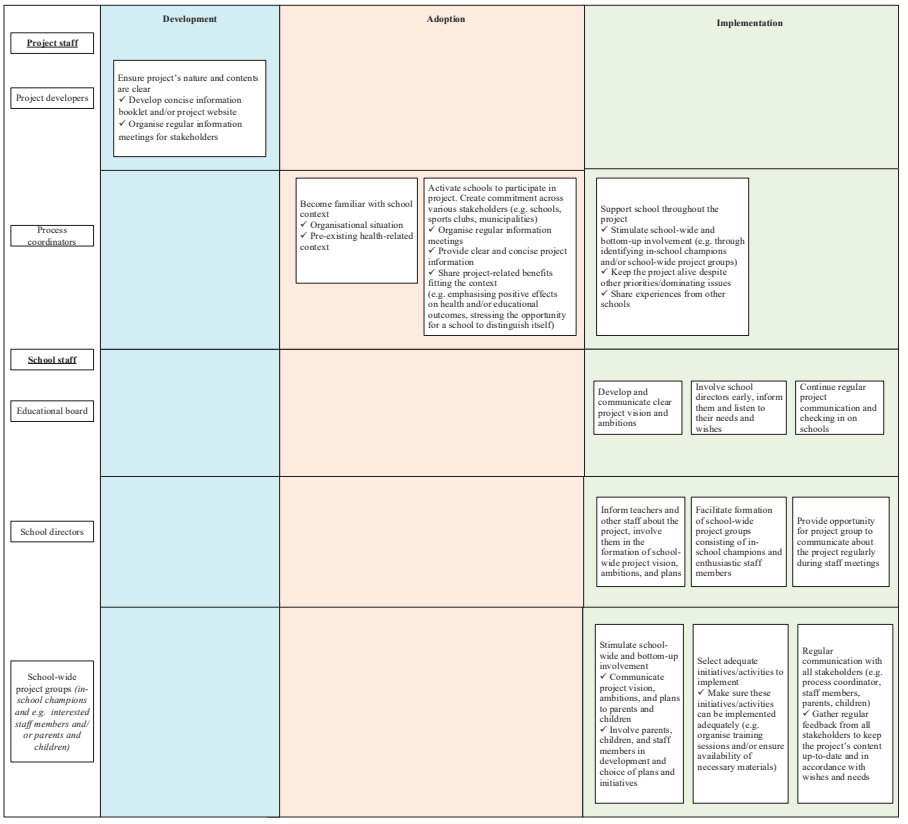


Figure 2.
Overview of activities to be undertaken by various stakeholders throughout project development, adoption and implementation

Source(s): Author's own work

present study and in comparable research (Bartelink *et al.*, 2019a, b, c; Cassar *et al.*, 2019; Domitrovich *et al.*, 2011; Lane *et al.*, 2022; de Meij *et al.*, 2013; van Nassau *et al.*, 2016; Naylor *et al.*, 2015).

Conclusions

The present project's original ambitions were not met. This was due to several reasons, the most important being a lack of commitment creation, bottom-up involvement and project vision on several levels (project level, educational board level and school level). This, together with issues such as high staff turnover, COVID-19 and high workload, resulted in the implementation of small activities with limited focus on long-term integration. For future projects, it would be beneficial to provide more extensive support at the start of the project to create commitment, bottom-up involvement and a project vision. Furthermore, identifying and empowering in-school champions and/or school-wide project groups should be a priority to decrease schools' reliance on extensive long-term external project support and to facilitate project integration and widespread dissemination.

References

Bartelink, N.H.M., Van Assem, P., Jansen, M.W.J., Savelberg, H.H.C.M., Moore, G.F., Hawkins, J. and Kremers, S.P.J. (2019a), "Process evaluation of the healthy primary School of the Future: the key learning points", *BMC Public Health*, Vol. 19 No. 1, pp. 1-15.

Bartelink, N.H.M., van Assema, P., Jansen, M.W.J., Savelberg, H.H.C.M., Willeboordse, M. and Kremers, S.P.J. (2018), "The healthy primary school of the future: a contextual action-oriented research approach", *International Journal of Environmental Research and Public Health*, Vol. 15 No. 10, p. 2243.

Bartelink, N.H.M., van Assema, P., Kremers, S.P.J., Savelberg, H.H.C.M., Oosterhoff, M., Willeboordse, M., van Schayck, C.P., Winkens, B. and Jansen, M.W.J. (2019b), "Can the Healthy Primary School of the Future offer perspective in the on-going obesity epidemic in young children? – a quasi-experimental study", *BMJ Open*, Vol. 9, e030676.

Bartelink, N.H.M., van Assema, P., Kremers, S.P.J., Savelberg, H.H.C.M., Oosterhoff, M., Willeboordse, M., Van Schayck, O.C.P., Winkens, B. and Jansen, M.W.J. (2019c), "One- and two-year effects of the healthy primary school of the future on children's dietary and physical activity behaviours: a quasi-experimental study", *Nutrients*, Vol. 11 No. 3, pp. 1-18.

Bast, L.S., Due, P., Ersbøll, A.K., Damsgaard, M.T. and Andersen, A. (2017), "Association of school Characteristics and Implementation in the X:IT study—a school-randomized smoking prevention program", *Journal of School Health*, Vol. 87 No. 5, pp. 329-337.

Braun, V. and Clarke, V. (2006), "Using thematic analysis in psychology", *Qualitative Research in Psychology*, Vol. 3 No. 2, pp. 77-101.

Carson, R.L., Castelli, D.M., Pulling Kuhn, A.C., Moore, J.B., Beets, M.W., Beighle, A., Aija, R., Calvert, H.G. and Glowacki, E.M. (2014), "Impact of trained champions of comprehensive school physical activity programs on school physical activity offerings, youth physical activity and sedentary behaviors", *Preventive Medicine*, Vol. 69 S, pp. S12-S19.

Cassar, S., Salmon, J., Timperio, A., Naylor, P.J., Van Nassau, F., Contardo Ayala, A.M. and Koorts, H. (2019), "Adoption, implementation and sustainability of school-based physical activity and sedentary behaviour interventions in real-world settings: a systematic review", *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 16 No. 1, pp. 1-13.

Darlington, E.J., Violon, N. and Jourdan, D. (2018), "Implementation of health promotion programmes in schools: an approach to understand the influence of contextual factors on the process?", *BMC Public Health*, Vol. 18, p. 163.

de Meij, J.S.B., van der Wal, M.F., van Mechelen, W. and Chinapaw, M.J.M. (2013), "A mixed methods process Evaluation of the Implementation of JUMP-in, a multilevel school-based intervention Aimed at physical activity promotion", *Health Promotion Practice*, Vol. 14 No. 5, pp. 777-790.

Deschesnes, M., Martin, C. and Hill, A.J. (2003), "Comprehensive approaches to school health promotion: how to achieve broader implementation?", *Health Promotion International*, Vol. 18 No. 4, pp. 387-396.

Domitrovich, C.E., Bradshaw, C.P., Poduska, J.M., Hoagwood, K., Buckley, J.A., Olin, S., Romanelli, L.H., Leaf, P.J., Greenberg, M.T. and Ialongo, N.S. (2011), "Maximizing the implementation Quality of evidence-based preventive Interventions in schools: a conceptual framework", *Advances in School Mental Health Promotion*, Vol. 1 No. 3, pp. 6-28.

Durlak, J.A. and DuPre, E.P. (2008), "Implementation matters: a Review of Research on the Influence of Implementation on program Outcomes and the factors affecting implementation", *American Journal of Community Psychology*, Vol. 41 Nos 3-4, pp. 327-350.

Fleuren, M., Wiefferink, K. and Paulussen, T. (2004), "Determinants of innovation within health care organizations: literature review and Delphi study", *International Journal for Quality in Health Care*, Vol. 16 No. 2, pp. 107-123.

Fleuren, M.A.H., Paulussen, T.G.W.M., Dommelen, P. and van Buuren, S. (2014), "Towards a measurement instrument for determinants of innovations", *International Journal for Quality in Health Care*, Vol. 26 No. 5, pp. 501-510.

Keshavarz, N.M., Nutbeam, D., Rowling, L. and Khavarpour, F. (2010), "Schools as social complex adaptive systems: a new way to understand the challenges of introducing the health promoting schools concept", *Social Science and Medicine*, Vol. 70 No. 10, pp. 1467-1474.

Khambalia, A.Z., Dickinson, S., Hardy, L.L., Gill, T. and Baur, L.A. (2012), "A synthesis of existing systematic reviews and meta-analyses of school-based behavioural interventions for controlling and preventing obesity", *Obesity Reviews*, Vol. 13 No. 3, pp. 214-233.

Lane, C., Naylor, P.-J., Shoesmith, A., Wolfenden, L., Hall, A., Sutherland, R. and Nathan, N. (2022), "Identifying essential implementation strategies: a mixed methods process evaluation of a multi-strategy policy implementation intervention for schools", *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 19 No. 1, pp. 1-22.

Milat, A.J., Bauman, A. and Redman, S. (2015), "Narrative review of models and success factors for scaling up public health interventions", *Implementation Science*, Vol. 10 No. 1, p. 113.

Moore, G.F., Audrey, S., Barker, M., Bond, L., Bonell, C., Hardeman, W., Moore, L., O'cathain, A., Tinati, T. and Wight, D.D. (2015), "Process evaluation of complex interventions: medical research council guidance", *BMJ*, Vol. 350 No. h1258.

Naylor, P.J., Nettlefold, L., Race, D., Hoy, C., Ashe, M.C., Wharf Higgins, J. and McKay, H.A. (2015), "Implementation of school based physical activity interventions: a systematic review", *Preventive Medicine*, Vol. 72, pp. 95-115.

Pearson, M., Chilton, R., Wyatt, K., Abraham, C., Ford, T., Woods, H. and Anderson, R. (2015), "Implementing health promotion programmes in schools: a realist systematic review of research and experience in the United Kingdom", *Implementation Science*, Vol. 10 No. 1, p. 149.

Peterson, K.E. and Fox, M.K. (2007), "Addressing the epidemic of childhood obesity through school-based interventions: what has been done and where do we go from here?", *Journal of Law, Medicine and Ethics*, Vol. 35 No. 1, pp. 113-130.

Schifferdecker, K.E. and Reed, V.A. (2009), "Using mixed methods research in medical education: basic guidelines for researchers", *Medical Education*, Vol. 43 No. 7, pp. 637-644.

Sharma, M. (2006), "School-based interventions for childhood and adolescent obesity", *Obesity Reviews*, Vol. 7 No. 3, pp. 261-269.

Simmons, R. and Shiffman, J. (2007), "Scaling up health service innovations: a framework for action", in *Scaling up Health Service Delivery: from Pilot Innovations to Policies and Programmes*, World Health Organisation, Geneva, pp. 1-30.

Sobol-Goldberg, S., Rabinowitz, J. and Gross, R. (2013), "School-based obesity prevention programs: a meta-analysis of randomized controlled trials", *Obesity*, Vol. 21 No. 12, pp. 2422-2428.

Van Cauwenberghe, E., Maes, L., Spittaels, H., van Lenthe, F.J., Brug, J., Oppert, J.-M. and De Bourdeaudhuij, I. (2010), "Effectiveness of school-based interventions in Europe to promote healthy nutrition in children and adolescents: systematic review of published and 'grey' literature", *British Journal of Nutrition*, Vol. 103 No. 06, p. 781.

van Dongen, B.M., de Vries, I.M., Ridder, M.A.M., de Boer, M., Steenhuis, I.H.M. and Renders, C.M. (2022), "Building community capacity to stimulate physical activity and dietary behavior in Dutch secondary schools: evaluation of the FLASH intervention using the REAIM framework", *Frontiers in Public Health*, Vol. 10, p. 2554.

van Nassau, F., Singh, A.S., Broekhuizen, D., van Mechelen, W., Brug, J. and Chinapaw, M.J.M. (2016), "Barriers and facilitators to the nationwide dissemination of the Dutch school-based obesity prevention programme DOiT", *The European Journal of Public Health*, Vol. 26 No. 4, pp. 611-616.

WHO (1997), "Promoting health through schools: report of a WHO expert committee on comprehensive school health education and promotion", Geneva, Switzerland.

WHO (2017), *Report of the Commission on Ending Childhood Obesity. Implementation Plan*, Executive Summary, Geneva.

Wilhelm, A.K., Schwedhelm, M., Bigelow, M., Bates, N., Hang, M., Ortega, L., Pergament, S. and Allen, M.L. (2021), "Evaluation of a school-based participatory intervention to improve school environments using the Consolidated Framework for Implementation Research", *BMC Public Health*, Vol. 21 No. 1, pp. 1-14.

Willeboordse, M., Jansen, M.W., van den Heijkant, S.N., Simons, A., Winkens, B., de Groot, R.H.M., Bartelink, N., Kremers, S.P., van Assema, P., Savelberg, H.H., de Neubourg, E., Borghans, L., Schils, T., Coppens, K.M., Dietvorst, R., ten Hoopen, R., Coomans, F., Klosse, S., Conjaerts, M.H.J., Oosterhoff, M., Joore, M.A., Ferreira, I., Muris, P., Bosma, H., Toppenberg, H.L. and van Schayck, C.P. (2016), "The Healthy Primary School of the Future: study protocol of a quasi-experimental study", *BMC Public Health*, Vol. 16 No. 1, p. 639.

Willeboordse, M., Bartelink, N.H.M., Van Assema, P., Kremers, S.P.J., Savelberg, H.H.C.M., Hahnraths, M.T.H., Vonk, L., Oosterhoff, M., van Schayck, C.P., Winkens, B. and Jansen, M.W.J. (2022), "Battling the obesity epidemic with a school-based intervention: long-term effects of a quasi-experimental study", *PLOS ONE*, Vol. 17 No. 9, p. e0272291.

Zenzen, W. and Kridli, S. (2009), "Integrative Review of school-based childhood obesity prevention programs", *Journal of Pediatric Health Care*, Vol. 23 No. 4, pp. 242-258.

(The Appendix follows overleaf)

Supplementary

	N	%
Stakeholder interviewed	23	
School director	7	29.2
Childcare manager	2	8.0
Teacher	13	54.2
Other[a]	1	8.0
Gender interviewee	23	
Male	8	34.8
Female	15	65.2

Table S1. Characteristics of interview participants

Note(s): [a]Process coordinator (who was interviewed at two different moments to discuss the project's progress)
Source(s): Authors' own work

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Leaving No one Behind - Improving uptake of the Covid 19 vaccination in underserved populations: the critical role of local collaboration and engagement with communities.

Introduction

This paper seeks to examine and share a city-wide approach to improve vaccine uptake in a large metropolitan city in the UK. The paper offers commissioners and practitioners insights into how a gender and culturally sensitive Covid-19 vaccination clinic was set up in a local area that was experiencing lower uptake rates. The paper suggests the importance of local collaboration and engagement with communities and partners; the prominence of a visible and trusted venue in a convenient location; and a nuanced communication plan in increasing vaccine uptake. Albeit requiring further research and validation, this paper suggests some early successes and potentially some transferable learning for wider engagement with public health efforts and reducing vaccine hesitancy.

As noted, the paper focuses on a large UK metropolitan city based in the north of England (referred to now as *'the city'*). The impact of Covid-19 on this population, and other populations globally, does not need to be rehearsed here. Nonetheless, analysis of the response necessary to protect communities from Covid-19 has exposed significant inequalities in a myriad of areas. This includes vaccination uptake where there is emerging evidence that vaccine hesitancy is higher in particular groups due to a range of explicit and tacit assumptions (Abba-Aji et al., 2022) and studies have shown that many ethnic migrant communities experience lower immunisation rates for vaccine preventable diseases generally (Charania et al., 2019). It has been noted that ethnicity, religion, language and upbringing are all factors that facilitate or inhibit vaccination uptake (Forster et al., 2016) and culturally diverse communities and those living in deprived areas may be particularly sensitive to government or state intervention and may have levels of distrust in state action (Marmot et al., 2020).

Due to the scale and severity of the Covid-19 pandemic, tailored approaches were needed to support widespread vaccination uptake. In order to address health inequalities and improve uptake of the Covid-19 vaccine in the city, partners from across the local authority, NHS and the third sector formed a partnership group to identify geographical areas and population groups with low uptake. Through close monitoring of Covid-19 vaccination uptake rates, interrogation of data intelligence and local insight, one ward was identified with significantly lower uptake than the city average. This local area had a number of characteristics which added to the complexity of developing a local response, including being a densely populated setting with the majority of its residents living in the most deprived fifth of the city. The local area was more ethnically diverse as a whole and had a younger population, according to local data sources. The age profile of localities within the city varies considerably with some large, deprived areas having a much younger population thus impacting further on the vaccine uptake rates of communities with similar demographics, as these age groups were called much later in the vaccine programme rollout.

Covid -19 vaccine uptake data from unpublished local data sources for the city indicated that culturally diverse communities were not accessing the vaccine offer as well as other groups. This data indicated that uptake in the culturally diverse communities was 24.1% lower than in the female White population for the Joint Committee for Vaccination and Immunisation (JCVI) priority groups 2-9. Vaccination declines were also 2.2% higher in the female culturally diverse cohort compared to the female White population. Findings also showed that 72.9% of those with English as their main language had been vaccinated compared to 46.0% of those who do not speak English as their main language.

According to data collected by Public Health England, culturally diverse communities were between two and four times more likely to die due to Covid-19 compared with those from a White ethnic background (Public Health England, 2021). These outcomes are independent of age, sex, or

socioeconomic factors. This is compounded by lower Covid-19 vaccine uptake among ethnically diverse groups (Robertson et al, 2021). Routinely collected clinical data in England showed that Black people older than 80 years were only half as likely as White people to have been vaccinated against Covid-19. A UK-wide survey of 12 035 participants investigating attitudes towards Covid-19 vaccination showed that Black and Black British respondents had the highest rate of vaccine hesitancy (71·8%), followed by Pakistani and Bangladeshi respondents (42·3%), compared with White British or Irish respondents (15·2%) who were not likely or very unlikely to take a vaccine (Robertson et al., 2021). This is particularly evident among Black ethnicity groups, in which 1 in 3 report hesitancy in receiving the vaccine (Office for National Statistics, 2021). This data is in line with previous trends in vaccine hesitancy and vaccine uptake more generally in ethnically diverse groups in England (Scientific Advisory Group for Emergencies, 2021).

Kadambari and Vanderslott (2021) identifies a range of similar concerns in culturally diverse communities regarding safety and possible long-term effects on health, in which these groups felt that there was no clear guidance and advice. The speed at which the Covid-19 vaccine was developed and the perceived lack of clinical trials in culturally diverse communities exacerbated existing feelings of vaccine hesitancy. In particular, older people discussed concerns relating to developing a rare blood clot after receiving the Oxford–AstraZeneca vaccine and younger women frequently stated concerns about infertility after receiving a Covid-19 vaccine. Misinformation, through social media channels accessed by culturally diverse communities, have amplified these anxieties and reduced confidence in Covid-19 vaccines. Communication from central government (through television, social media, or written media) to address vaccine safety concerns had not reached various communities in the city. This was due to communication only being delivered in English and by political leaders not being perceived as people that could be related to (Kadambari and Vanderslott, 2021).

Disaggregating health reporting by gender is not always routinely done or analysed with rigour or intensity to inform policymaking (Nowatzki and Grant, 2011). Like in all developed cities there are always examples to be found of good work being done to proactively support the needs of girls and women. However, there are still many areas of women's lives that are negatively affected by prevailing socio-cultural factors that have limited women in many ways which need to be recognised and acted upon (Allen and Sesti, 2018).

Key consideration and findings

The following sections draws together some of the key approaches to improve and increase uptake in the community.

Importance of local collaboration and engagement

NHS and Local Authorities have been working in partnership with third sector to respond to local challenges posed by Covid-19 on communities. The importance of a return to a semblance of normality and to begin the journey of resetting to a fairer and more equal society, particularly in areas of deprivation, has been paramount in tackling poverty and reducing inequalities.

Experience gained by these local services, of increasing uptake of vaccination in other vaccine programmes, was built upon to develop local approaches in consultation with local communities backed up by national evidence (Bell et al., 2020, Rutten et al., 2021). This included asset-based working – a prominent approach in public health and more traditionally in community development approaches which focuses on strengths and capabilities of communities, rather than issues and deficiencies - with people and communities to ensure that the vaccination programme was targeted, and uptake maximised in areas of deprivation and by groups who are at increased risk of illness and mortality from Covid-19 infection.

Through analysis of local vaccine uptake data, consultation with the local community and feedback from local leaders, the need for a community-based women's only clinic situated in a large densely populated and deprived inner-city area was required. Local consultation highlighted concerns from women in certain parts of the city, that the main vaccine offer lacked an accessible approach due to a number of factors, namely: location (lack of transport being a factor) and cultural sensitivity including a safe and private space to expose skin. In order to progress the development of a locally tailored approach, a partnership group was established to develop and deliver a local convenient vaccine offer to women in a specified geographical area, building the model based on the evidence of best practice to increase uptake of vaccine. Working closely with a women's third sector alliance, who have been identified as a trusted locally based partner who would be crucial in helping inform discussions around how to shape the model. Councillors were invaluable in providing local insight and promoting the clinic offer in local communities through their networks, and via a community radio station as a trusted voice. Local healthcare organisations were also engaged to provide clinical leadership and vaccine supply. The Local Authority Communities Team were able to inform discussions with local insight and through their Community Champions who possess multilingual skills and have an existing reach into the target communities. Operations Leads from the Local Authority were engaged to carry out risk assessments for the venue and organise staff on the day. NHS Communications Team members helped design and disseminate a corporate promotional flyer for the vaccine offer and manage media interest. Local Authority Public Health led the partnership group and enabled partners to work collaboratively and carry through respective actions.

A local, familiar, visible and trusted venue was identified in a convenient location in the heart of the target area, which has a high representation of culturally diverse communities residing in and surrounding the area. The clinic was planned to take place in April 2021, but it was quickly recognised that this could potentially exclude some people due to an overlap with Ramadan and school holidays. This was taken into account and re-scheduled dates were identified for the clinic to the end of May 2021, so they aligned with the dates for the roving bus vaccine offer in the building next door, to enable signposting to both facilities by staff.

Nuanced communication plan

WHO (2021) noted a substantial increase in misinformation during the pandemic and it was recommended that information should be provided in different languages and to be widely promoted through Community Champions. Forging conversations with culturally diverse communities, with non-stigmatising language and focusing on listening to anxieties, would improve vaccine uptake and could also engender trust in governmental institutions. Practical solutions to make vaccination more convenient, including pop-up vaccine clinics in community centres, places of worship, and door-to-door administration, were also recommended to improve uptake. Informed by the evidence and local intelligence the communications plan for the women's only clinic had a two-strand approach. This involved communication materials developed by local NHS partners, including social media graphics, a press release and support for media presence/enquiries, supported by strong third sector involvement who were able to build trusting relationships with communities and disseminate culturally sensitive promotional resources via third sector and primary care colleagues.

A dedicated women's third sector alliance comprising of a number of partners, further adapted and tailored local communication resources in response to local insight, for people who may be less receptive to a corporate message. The flyer contained imagery representing the local community. The flyers were shared widely amongst partners including the third and faith sectors, alongside being delivered in food bank parcels and via volunteers in the local area during the week of the clinic. The community engagement was largely targeted in the local area, but all women in the city were eligible to attend.

The specific measures that were put in place to create a conducive environment were a drop in system; private booths/pods; a children-friendly space; Social Prescribers and Debt Advisors in attendance to help signpost women to other services; a language support machine and Community Champions providing outreach and promotion to local businesses. Elected members were also visible in the community speaking to local residents to promote the offer throughout the week.

The weeklong drop-in vaccine clinic was set up in May 2021 attracting 116 women in total who had not accessed the vaccine through initial invites from the NHS. The demographic data (unpublished NHS data) indicates that the majority of women attended lived locally to the clinic, were from culturally diverse backgrounds, attended for their first vaccine, and were aged between 30-50. Thirty-five percent of the women identified as White British, 14% identified as Pakistani, 12% identified as Bangladeshi, and 9% as African. The remainder of the women were from a range of different ethnic backgrounds which is reflective of the diverse make-up of the area overall. This was a significant step forward as people had been eligible for the vaccine for some time and had not accessed through traditional routes. Amongst the vaccine takers, there was also a 90-year-old woman who presented for a first vaccine. Barriers were overcome around language and the drop-in approach encouraged women to speak with a healthcare professional about their concerns, without necessarily taking up the vaccine.

Learning and local insight from this clinic then informed next steps regarding future women's only offers in the city. Firstly, a second clinic at the same venue was delivered to support people in accessing their second dose in the same, familiar, location as their first, as well as offering first vaccines again for anyone who had not yet come forward. The same communications and engagement approach was utilised and at this clinic, a further 49 vaccinations were given.

Secondly, local women's organisations in the city were contacted to ask if they would be happy to host a vaccine clinic at their premises. There was a positive response from local organisations and following a site visit, a venue was chosen in the city. This venue was well established as a trusted venue in the community having been running since 1985. Some changes were made in the planning of the clinic this time. In response to feedback that people wanted options around which vaccine they can access – a healthcare organisation supported with the clinical elements as they were able to supply and offer two different vaccines. Harnessing the power of community networks, an addition to the communication plan was that the community centre staff contacted their members directly to encourage them to come for their vaccine. Finally, community centre staff supported on the day with the running of the clinic including offering language and translation support. There were 38 women vaccinated at the clinic in one day, and positive feedback was received regarding the local community offer. A second clinic was then arranged at the same venue and a further 18 women were vaccinated.

This settings-based approach, working specifically with third sector women's-only organisations, supported women to access the vaccine who had been previously invited for their vaccine in earlier months but did not attend. It was agreed to continue this setting-based approach: seeking existing community groups, events, and services in the city to offer supportive conversations and vaccinations to local residents. Additional clinics have been delivered in a food bank setting and a mother and baby group setting.

It became evident from the clinics so far that there were certain measures and considerations for the women's only clinics that were transferable to all vaccination clinics – not just women-only clinics. Whilst the focus at present was the Covid-19 vaccination, these same measures and considerations could be applicable to supporting women to access any type of vaccination. To support the sustainability of the approach going forward, a set of 'women friendly principles' were developed. The principles outlined actions in a checklist format encouraging vaccine clinics in any setting to consider what they can do to be more women friendly. The first section of the checklist

focuses on key basic requirements for what clinics can do while the second section highlights additional measures clinics could take. The aim is for these principles to be disseminated with services and organisations in the city that run vaccine clinics (including GPs, pharmacies, and community services). The principles will also be shared with staff as part of their vaccination training.

Concluding remarks

In mitigating inequalities and ensuring underserved populations have access to the Covid-19 vaccine, there is a need to work with communities to develop vaccine clinics that are gender and culturally sensitive and provide a local, convenient and trusted offer that meets the needs of residents. In the case outlined in this paper, a trusted and safe environment alongside a nuanced communication plan was of paramount importance to support women to access the Covid-19 vaccine who had not done so. Lessons learnt from delivering mass Covid-19 vaccination programmes shed light on the complexity of this unprecedented effort and the inequalities that can manifest. This paper also offers valuable insights on how vaccination campaigns need to be adapted to suit local needs, including the impact of providing flexible offers such as walk-in clinics that do not require digital access to book in advance, creating a friendly and accessible environment for women with childcare responsibilities and the opportunity for residents to engage in informal conversations with health care staff and local trusted community members in their own language.

References

Abba-Aji, M., Stuckler, D., Galea, S. and McKee, M. (2022), Ethnic/racial minorities' and migrants' access to COVID-19 vaccines: A systematic review of barriers and facilitators. Journal of Migration and Health, Vol.5, pp. 1-13.

Allen, J. and Sesti, F. (2018) "Health inequalities and women – addressing unmet needs", London, British Medical Association.

Bell, S., Saliba, V., Evans, G., Flanagan, S., Ghebrehewet, S., McAuslane, H., Sibal, B. and Mounier-Jack, S. (2020), "Responding to measles outbreaks in underserved Roma and Romanian populations in England: the critical role of community understanding and engagement", *Epidemiology & Infection,* Vol. 148.

Charania, N.A., Gaze, N., Kung, J.Y. and Brooks, S. (2019), Vaccine-preventable diseases and immunisation coverage among migrants and non-migrants worldwide: A scoping review of published literature, 2006 to 2016, *Vaccine,* Vol. 37 No. 20, pp.2661-2669.

Forster, A.S., Rockliffe, L., Chorley, A.J., Marlow, L.A., Bedford, H., Smith, S.G. and Waller, J. (2017), Ethnicity-specific factors influencing childhood immunisation decisions among Black and Asian Minority Ethnic groups in the UK: a systematic review of qualitative research. *Journal of Epidemiology and Community Health*, Vol 71 No. 6, pp.544-549.

Kadambari, S. and Vanderslott, S. (2021), "Lessons about COVID-19 vaccine hesitancy among minority ethnic people in the UK", *The Lancet Infectious Diseases,* Vol. 21 No. 9, pp. 1204-1206.

Marmot, M., Allen, J., Goldblatt, P., Herd, E. and Morrison, J. (2020), "Build back fairer: the COVID-19 Marmot review. The pandemic, socioeconomic and health inequalities in England", London, UCL.

Nowatski, N. and Grant, K. (2011), Sex is not enough: the need for gender-based analysis in health research, Health Care Women Int, Vol 32 No. 4, pp. 263-77.

Office for National Statistics (2021), "Coronavirus and vaccine hesitancy, Great Britain: 31 March to 25 April 2021".

Public Health England (2021), "Disparities in the risk and outcomes of COVID-19", London, PHE.

Robertson, E., Reeve, K. S., Niedzwiedz, C. L., Moore, J., Blake, M., Green, M., Katikireddi, S. V. and Benzeval, M. J. (2021), "Predictors of COVID-19 vaccine hesitancy in the UK household longitudinal study", *Brain, Behavior, and Immunity,* Vol. 94, pp. 41-50.

Rutten, L. J. F., Zhu, X., Leppin, A. L., Ridgeway, J. L., Swift, M. D., Griffin, J. M., St Sauver, J. L., Virk, A. and Jacobson, R. M. (2021), "Evidence-based strategies for clinical organizations to address COVID-19 vaccine hesitancy", in *Mayo Clinic Proceedings*, Vol. 96, pp. 699-707.

Scientific Advisory Group for Emergencies (2021), "Factors influencing COVID-19 vaccine uptake among minority ethnic groups, 17 December 2020", gov.uk.

WHO (2021), "Call for action: managing the infodemic", Vienna, WHO.

Making sense of health in PE: conceptions of health among Swedish physical education teachers

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Abstract

Purpose – Over the last couple of decades, health has become a central part of the subject content in physical education (PE) curricula in many countries. As a result, issues of health have been foregrounded much more clearly in the teaching of PE. The aim of this study was to explore how Swedish PE teachers make sense of health in relation to their teaching practices. This was done through investigating conceptions and theories about health in the teachers' descriptions of their teaching practices.

Design/methodology/approach – The data analyzed in this paper were collected through focus group and individual interviews with PE teachers in the grades 7–9 within compulsory schools in Sweden. The data were analyzed using thematic analysis.

Findings – Four dominant themes were identified in the data: 1) Health as a healthy attitude, 2) Health as a functional ability, 3) Health as fitness, 4) Health as mental wellbeing. There is a clear impact from healthism and obesity discourses on the teachers' accounts of health, but there is also an impact from holistic views and approaches to health. The authors contend that teachers should be explicit in what they mean by health in relation to what they teach, how they teach and why they teach health in a certain way.

Originality/value – The knowledge produced by this study is crucial since teachers' assumptions regarding health affect the subject content (what), the pedagogies (how), as well as the reasons (why) they teach health and therefore what students learn regarding health.

Keywords Conceptions of health, Physical education, Subject content, Interviews, Thematic analysis

Paper type Research paper

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Introduction

In many countries, schools have an overall goal to protect and support children's and young people's health development (Fitzpatrick and Tinning, 2014). In Sweden, this assignment is summarized by the Swedish National Agency for Education (2019, p. 24) as "stimulating children and young people to develop an understanding of and knowledge about their own health and well-being", and further to "design the activities based on a care for children's and young people's health and well-being". In this overall school assignment, the school subject physical education (PE) plays an important part. Since 1994, health has also been included in the subject's designation (i.e. physical education and health) in Sweden, as it has in, for example, Australia (McCuaig *et al.*, 2013). Over the last couple of decades, health has also become a central part of the subject content in PE curricula in many countries (see, e.g. Lynch and Soukup, 2016; Mong and Standal, 2019). As a consequence, issues of health have since been foregrounded much more clearly in the teaching of PE (Larsson and Redelius, 2008; Schenker, 2018).

The increased focus on health has often resulted from a perceived threat of an obesity epidemic, as well as a general shift towards a "holistic" discourse in PE during the 1980s and 1990s (Lynch and Soukup, 2016; Quennerstedt *et al.*, 2010). The discourse advocates a broader, more holistic health concept, and PE is constituted as a potential critical and constructive tool for reflecting on and learning from experiences of different physical activities (e.g. Quennerstedt, 2019). In Sweden, this discourse is, according to a review by the National Agency for Education (2019), reflected in policies and documents that govern the school's various strategies for promoting students' health, including PE. References to "the expanded health concept, wellbeing, salutogenic approach and sense of coherence" are plentiful in these documents (National Agency for Education, 2019, p. 12). Despite this push for a more holistic view of health in educational policy, and the strong emphasis that has been placed on health as a concept, little is known about how PE teachers make sense of health in relation to their teaching practices. This knowledge is crucial since teachers' assumptions regarding health affect the subject content (*what*), the pedagogies (*how*), as well as the reasons (*why*) they teach health and as a consequence what students learn regarding health (Quennerstedt, 2019).

In a recent systematic review of literature, Mong and Standal (2019) investigate how health is taught in PE and find that teachers using different health perspectives also emphasize different ways of teaching health in PE. Their analysis distinguishes "alternative perspectives" of health, including both critical and so-called salutogenic perspectives, from a "biomedical perspective". While the latter emphasizes the importance of diet and physical activity for health, critical and salutogenic perspectives share a critical view of a biomedical understanding of health in PE based on a healthism ideology and reducing health to a matter of promoting physical activity and preventing obesity (Mong and Standal, 2019).

Similar to Mong and Standal (2019), in a study exploring how PE teachers use discursive resources related to body weight and obesity to create professional identities, Barker *et al.* (2021a) found different perspectives of health and on PE. While the participating teachers' identities contained elements that were fundamentally unsympathetic to overweight individuals, they were also more inclusive, sensitive and critical with regard to questions of body size, weight and health than current PE literature on obesity has suggested (Barker *et al.*, 2021a). These findings are surprising considering that PE has been presented as an important cure for the "obesity epidemic" (e.g. Davidson, 2007; Bennet and Burns, 2020). The teachers consequently presented not only pathogenic obesity discourses but also sensitive and caring ones. This finding sparked our interest for investigating more closely how PE teachers make sense of health. There are important insights for PE teaching and PE teacher education to be gained from examining how the concept of health is interpreted and understood within the discipline. We also contend that PE teachers need a (more) systematic and analytical understanding of how health can be theorized in different ways, not least to be

able to relate more critically to different discourses about body, weight and health in order to teach health in more holistic and non-reductionist ways. This is especially important since research highlights the complex and multidimensional character of the concept of health and also its moral and ideological qualities (e.g. Williams, 2003, p. 46). Any notion of health or notions of a "healthy lifestyle" involves value judgements and is fundamentally ideological as it refers to a specific notion of what it means to be healthy (Korp, 2008, p. 25). We believe this will have crucial consequences for *what* teachers teach and *how* or *why* a certain content or activity is chosen with regards to health.

The aim of this article is thus to explore how Swedish PE teachers make sense of health in relation to their teaching practices. This is done through investigating conceptions and theories about health in the teachers' descriptions of their teaching practices. The research questions guiding the investigation are as follows: 1) what concepts and theories of health are expressed in PE teachers' accounts of health? and 2) what values and norms regarding health are implicit in PE teachers' accounts of health?

Exploring PE teachers' beliefs, representations and ambivalence regarding health

There has over the years been several studies exploring how people in general understand and conceptualize health in everyday life (e.g. Herzlich, 1973; Blaxter, 1990; Flick *et al.*, 2002; Aim *et al.*, 2020). This research is based on an effort to explore what illness and health means to people and what social significance health has in their personal or professional lives. Perhaps the most influential work in this area is Claudine Hezlich's study from 1973 (Herzlich, 1973), which has inspired several subsequent studies (e.g. Jovchelovitch and Gervais, 1999; Downey and Chang, 2013; Aim *et al.*, 2020). This strand of research has demonstrated how people's conceptions of health are complex. For example, people at times understand health as absence of disease, as a resource, as an equilibrium, or as an inner balance (Ohlin Lauritzen, 1997, p. 437). Thus, health is not just a matter of the body and physical health, but also of mental experiences and states. People also understand health as part of social life. According to Blaxter (1990), an important aspect of health is being able to fulfil social roles and duties. Studies have also shown that people's beliefs, or social representations of health vary with social position (e.g. d'Houtaud and Field, 1984), ethnicity (Jovchelovitch and Gervais, 1999), age (Williams, 1990), gender (Aim *et al.*, 2020), sexuality (Adams *et. al.*, 2013), and profession (Flick *et al.*, 2002). In their review of research on people's everyday understandings of health, Flick *et al.* (2002, p. 585) found four recurring categories: 1) being free of problems and complaints; 2) functionality; 3) a condition for flexibility and adaptation; 4) well-being and (mental) balance. According to these findings people's everyday understanding of health is often holistic and more than just a matter the absence of disease.

Another, more recent strand of research in this area in education is focused on how prevalent discourses of body weight and health affect people's conceptions of health (e.g. Powell, 2016; Wright *et. al.*, 2006; Wright *et. al.*, 2018; Vander Schee, 2009). Drawing on poststructural theories, a number of studies examine how such discourses affect PE teachers' and pre-service PE teachers' professional as well as personal understanding of health (e.g. Burrows and McCormack, 2012; Garrett and Wrench, 2012; Varea and Underwood, 2016; Welch and Wright, 2011; Gray *et al.*, 2018). Garrett and Wrench (2012), for example, found that pre-service teachers used both healthism and biomedical discourses when describing being healthy as a matter of taking personal responsibility for eating the "right" food and participating in the "right" amount of exercise, thus focussing on physical aspects of health over social, emotional and cognitive aspects. In Varea and Underwood's (2016) investigation, pre-service PE teachers expressed anti-fat bias by considering fatness as an indicator of health through BMI, body size and weight. Other studies claim that PE teachers become

crusaders against fatness within these discourses (Pringle and Pringle, 2012), and that teachers try to fulfil these expectations of being healthy role models by being fit and slim (González-Calvo *et al.*, 2019; Webb and Quennerstedt, 2010).

However, there are also clear signs of ambivalence in how healthism and obesity discourses are met in PE. Welch and Wright (2011) found that pre-service PE teachers took different positions in relation to dominant discourses that reduce health to a matter of body size and weight. On the one hand the pre-service teachers in this study agreed with discourse that "associates good health with diligent dietary and exercise practices; and sees a healthy weight or 'fit' appearance as within an individual's reach" (Welch and Wright, 2011, p. 208). On the other hand, they presented a counter-discourse in which they dismissed and challenged the connection between body size or shape with health, spoke about health as other than physical, and emphasized the problematic nature of health being indicated by appearance (Welch and Wright, 2011, p. 204). The teachers also vacillated to an extent, challenging the concept of health as solely a matter of body size, shape and weight, but also emphasizing the importance of the physical body for health.

This ambivalence is also visible in a study of preservice teachers by Gray *et. al.* (2018). They found that the students deconstructed dominant healthism and obesity discourses, but did not necessarily articulate critical practice as a result. Instead, they constructed counter discourses in which health was defined holistically, for example in terms of aspects of mental wellbeing such as "being happy" and "having a good mindset", but also as having a functional body and positive social relations (Gray *et al.*, 2018, p. 30). When talking about ideal bodies, the students maintained that bodies can be any shape and size, but still referred to size and weight when defining the ideal body (Gray *et. al.*, 2018, p. 32). In a similar way Burrows and McCormack (2012) claim that the teachers in their study both related to obesity health discourses, and at the same time described their diverse role as physical educators, which included caring. Burrows and McCormack (2012, p. 729) proposed that teachers' views of teaching PE are "intimately linked to their lived histories of 'health', their understandings of their own and others' bodies and their personal convictions about what constitutes a 'good' and/or 'healthy' life".

Ambivalent and contradictory positions in relation to discourses of health and obesity are also reflected by the PE teachers in our previous work (Barker *et al.*, 2021a, b). Our research suggests that PE teachers tend to see health as involving mainly physical properties. Body size and weight are thus often regarded as indicators of health. As a consequence, to be healthy is to be slim and fit, while being unhealthy is clearly associated with fatness understood within a biomedical understanding of health. Teachers also commonly regard health as a matter of individual responsibility, i.e. to have the character or will power to do the "right" thing and make "healthy" choices. Teachers also express holistic perspectives of health, but tend to subject these perspectives to a pathogenetic notion of health.

Theoretical and methodological considerations

Theoretically, there are differences in how people's conceptions of health have been researched. Studies of people's everyday experiences of health and illness commonly rely on the concept of "lay beliefs" (or "theories") about health (e.g. Herzlich, 1973; Blaxter, 1984; Cornwell, 1984; Williams, 1990), but there are also studies using social representation theory (e.g. Flick *et al.*, 2002; Aim *et al.*, 2020). For the purpose of this study, we will work with social representation theory described by Flick (1998) and Flick *et al.* (2002), which emphasizes that human representations of health are socially shared. However, we are also sensitive to the criticism of social representation theory regarding how social representations are produced (e.g. McKinlay and Potter, 1987; Potter and Edwards, 1999). Therefore, we will also use insights from Billig (1993) and Radley and Billig (1996) on the argumentative and discursive aspects of how conceptions of health are produced.

Social representations are defined by Flick (1998, p. 641) as "how a social group (or system, society or culture) conceptualizes a material or symbolic object - the socially shared core of this conceptualization". According to Flick *et al.* (2002, p. 583), people hold everyday ideas of what health is, how to deal with it, and what it depends on. These ideas are constructed and transformed in everyday interactions, being influenced by concepts of health found in research, everyday knowledge, media and public discourse. Professional groups, sharing educational background and professional socialization, further tend to produce common social representations that have implications for how they understand and deal with different problems within their professional lives (Flick *et al.*, 2002, p. 583).

Billig (1993) however, claims that social representations need to be understood as a matter of people's participation in "the thinking society". He argues for extending social representation theory to deal with "the essentially argumentative aspects of thinking". Based on Wetherell and Potter's (1988, pp. 168–169) argument that discourse is a social practice, Radley and Billig (1996) claim that the representations people make of health must be seen as accounts produced in specific situations. This means that people's accounts derive their meaning from the rhetorical situation in which they are produced. Investigating perceptions of health thus means examining an activity of "accounting" in terms of giving explanations and justifications for specific thoughts or actions, and thus, articulating a position within a wider social discourse (Radley and Billig, 1996, p. 228).

In line with Flick (1998) and Billig (1993), we consider the different conceptions and theories about health in teachers' descriptions as constructed. These constructions occur in an interview situation and in relation to available health discourses, but also as representations of philosophies and theories that the teachers through their teacher education and professional socialization have learnt to act upon in their everyday teaching. This entails that, unlike most research on people's everyday perceptions of health we do not explore personal experiences of illness or health, but the professional "everyday theories" that teachers use to meet the curricular requirements for teaching PE *and health*.

Methods

The interview material used as data in this paper were generated within a larger project exploring discourses of body, health and weight among PE teachers (see Barker *et al.*, 2021a, b; Quennerstedt *et al.*, 2021). Data were produced in Sweden in fall, 2018 and spring, 2019.

Participants

The study involved PE teachers of grades 7–9 within compulsory schools in Sweden. To be included in the study, teachers needed to have a teacher's degree in PE and professional experience as a PE teacher of at least one year. In total, there were 24 participants (11 women and 13 men), aged 27 to 61, with professional experience as a PE teacher of between one and 30 years. Most participants (20) had more than three years of experience as PE teachers. All except one worked in an urban or suburban school.

The data

In total we conducted 12 interviews, which were held at either the participants' schools or at the university coordinating the project. Two focus group interviews with five participants, four focus group interviews with two participants, and six individual interviews were conducted. Interview format was determined by practical factors—focus groups were the researchers' preferred format but finding times that suited multiple participants was not always possible.

The interviews lasted on average 65 min and the focus group interviews were slightly longer. Health was one of several areas covered. The main foci of the interviews related to what it means to be a good student in PE, if there is a normal body in PE, if there is a healthy body in PE, and meanings of health. We also asked about how the teachers work with overweight students in PE lessons and if they had focused on bodies as a subject area in their teaching. Follow up questions allowed for elaborations on specific topics. Sometimes these elaborations were initiated by the teachers, sometimes by the interviewer.

Because of the different interview methods, the data we have collected are different in character. In the focus groups, group interactions took place that highlighted the participants' ways of thinking, as well as different group norms and cultural values. In the individual interviews, participants reflected on the questions we had alone. Still, it is our impression that the individual interviews were perceived as safe and comfortable by the participants and that they developed into relatively open discussions that produced a data comparable to that generated by the focus group interviews.

Data analysis

We conducted a thematic analysis following the six phases described by Braun and Clarke (2006). The interviews were recorded and transcribed verbatim. Led by the first author, the analysis started with iterative readings of the transcripts. In this stage initial ideas were noted. We then coded theoretically relevant aspects of the data across the whole data set focussing both on concepts and arguments explicitly reflecting socially shared representations of health, as for example references to the WHO definition of health, and concepts and arguments reflecting personal or less conventional ideas. When initial codes were generated, we reiteratively organized the data into meaningful themes. When constructing the themes we looked for representations of health that articulated a professional understanding based in education and experience (Flick *et al.*, 2002). We also looked for explanations for different approaches to health and justifications for different ways of approaching health in the teaching practice (Radley and Billig, 1996). The themes reflected both explicit and implicit aspects of the teacher's accounts of health. This produced a mapping of the data in unrefined codes and themes. The themes were then tested against coded extracts and the data set as a whole and checked for patterns, variability and consistency. In the final stage, compelling extracts were chosen to illustrate the themes and the overall analysis. The writing of the results concluded the analysis.

Results

Four dominant themes of how the teachers make sense of health in relation to their teaching practices were identified: 1) *health as a healthy attitude*; 2) *health as fitness*; 3) *health as functional ability*; and 4) *health as wellbeing*. The themes are distinct conceptualizations of health, but at the same time are also closely related in different ways to their teaching practice. Different aspects of the themes were often articulated in the same interview and often also by the same teacher.

Health as a healthy attitude

The theme health as a healthy attitude entails a recurring assumption that health is a matter of how each person individually approaches health. This is often with regard to how students relate to PE, but also to health in general. Within the theme, health becomes an unattainable goal to strive for where improvement can be achieved through a positive approach, a willingness to take on challenges, and individual "grit", particularly in relation to physical activity and PE.

One teacher maintained that a healthy attitude is self-reinforcing and thus creates health, stating that; "A healthy body, it is a product of a healthy attitude" (Interview 3). Another teacher further developed how attitude creates a healthy body.

> Yes, a healthy body is probably one that, if we talk from a student perspective, it is probably one that manages to come here, has a reasonably lively and happy mood as I said before. [they] have slept well, have eaten, are also perhaps properly dressed for sports and have the right clothing and do not come in jeans perhaps. And also, at the same time [a healthy student] shows interest that "I don't know this, but I want to learn". (Interview 7)

However, the healthy attitude was seldom described so explicitly. More often, it was expressed as an underlying condition in the many occasions when health was articulated as something you need to strive for that requires a will to develop and get better. This includes being active, taking on challenges and constantly trying to improve.

> First of all, you have to think about whether you can ever achieve health. I would claim that you cannot. I would claim that health is something you strive for, but you never achieve. And then it will be a little easier, I think. And if you have a body that strives for health, it is a body that is sometimes active, that gets enough sleep, that does not expose itself to too many diseases and toxins and things like that. [. . .] A healthy body [. . .] is a body that is trying to improve. (Interview 6)

Rather than an end, or a means for other ends, health, within the theme, is unattainable. The logic in this argument is that a healthy attitude (a will to improve) produces an active body that produces health in terms of constant improvements. Since improvement is always possible, one can never reach a permanent or final state of health. Health consequently both consists of, and is created by, activity and effort.

Health as a healthy attitude also entails a positive and embracing approach to life in general, which by having a healthy attitude means being positive, committed and willing. There are a number of normative conceptualizations of the healthy attitude in teachers' statements in terms of being; reasonable, positive, engaged, committed, willing, and responsible. A willingness to engage and take on challenges are also important aspects of a healthy attitude. Closely related is the use of the concept "grit", which signals a tougher attitude towards these challenges in the sense of having strong will and perseverance.

Health as fitness

Health as fitness is a dominant theme in all interviews. Within the theme there are clear connections to body weight and form, and performance on fitness tests is constituted as an indicator of good or poor health. Fitness becomes fitting into physical ability norms, and not being fit equals not being healthy. References to physical capacities and skills as indicators of health are plentiful, and being fit is an attribute that most of the teachers consider important in PE. Fitness is also high on the teachers' lists of health determinants.

There are several examples of teachers expressing frustration over the decreasing levels of fitness and increasing levels of overweight among their students and concern about the effects this will have.

> Teacher 1: But I also think that if you are overweight, you could say it's okay. You're strong. You're in good condition. But it depends on how being overweight affects health. If there are diseases because you are overweight, it's definitely not good. And we have to say that it's unacceptable. There'll be diabetes and other heart problems.
>
> Teacher 2: And cardiovascular disease, yeah.
>
> Teacher 1: And that's a lot. So, it's not good. If we think about health, about health . . . it is not . . . if you are overweight . . . if obesity affects health, it is absolutely not good, I think. (Interview 9)

Teacher 1 in this excerpt is a bit frustrated about his colleagues. In this focus group there was an engaged discussion about whether a clearly overweight body (described by one of the teachers) could be healthy. By elaborating a physical ability argument, the group seemed to come to the conclusion that an overweight body can be healthy, or at least that it doesn't have

to be unhealthy. The teacher in the excerpt thought they moved too far in this direction and wanted to assert the importance of fitness as a health indicator. The importance of fitness was also evident in the recurring emphasis on various fitness tests and how poor results in these tests indicated poor health.

> So, I think it's problematic when you do not manage a Harvard step test of 30 cm. Then it can feel that . . . Then I am a little worried about the student's health and also . . . Then it'll be difficult to . . . Then I need to check complex mobility first 10 minutes of the lessons because he will not last through the whole lesson because the student does not have the physical capacity. (Interview 5)

Although most of the teachers presented complex and multifaceted accounts of health, fitness was a decisive demarcation of health or not health for many of them. A person cannot, according to many of the teachers, be healthy if they're not fit. Often this assumption is implicit in formulations which, by attempting to reduce its significance, confirm it; "You do not have to be *completely* fit" (Interview 3), health is "not *just* a matter of what the scale says" (Interview 4), and "your health is not *completely* dependent on the body you have" (Interview 6).

Health as functional ability

This theme is about health as being able to do things and to have an everyday functional ability. Here, health is relational in the sense that the functional abilities are related to personal needs and desires. These needs can be social or psychological, connected to family or friends, or how the abilities enable people to do the things they want to do in life. It is a holistic concept of health in relation to PE. The theme can be illustrated in this excerpt where the participants in the focus group discuss what it is to be healthy.

> P2: But if you isolate the body, can you see if there is a healthy body, or less healthy? Is it about coping with a certain load?
>
> P1: Yeah, you mean if you just look at the body or if you see how it moves?
>
> P2: Yeah, if you see how it moves, yeah. There is health somewhere, in mobility. Don't you think? A healthy body can move . . .
>
> [. . .]
>
> P1: Take on the challenges you face in everyday life. That you have the energy for it. That you have the ability to participate. That is, you are not limited by what you want to do. (Interview 9)

This discussion ends in agreement that health is about having a body that gives you the energy to take on challenges in life and enables you to do things you want to do in life. Health is thus understood as something relational, a matter of how bodily abilities relate to needs. However there are also examples of articulations of a wider understanding of functional abilities.

> And then I spontaneously think that a healthy body is a body that has enough resources to cope with all the demands of everyday life . . . And also has the strength and energy to concentrate on lessons . . . I think here too, we talk about health as something social, these social capacities also have to be able to function in different contexts, to be able to handle such situations . . .
>
> (Interview 4)

This extract illustrates a more holistic view of health that many teachers expressed. There are also articulations of determinants of wider functional ability. Apart from fitness related examples, there are also examples of determinants involving fundamental psychological and social needs such as the need to; feel healthy, feel good physically and mentally, have a family and someone who listens to you, have friends, and live a life that you enjoy. These are accounts that were based in teachers' experiences of meeting students who do not have such needs fulfilled.

Health as wellbeing

While attitude, functionality and fitness dominated the teachers' accounts of health, there were also recurring references to psychosocial and mental aspects of health and wellbeing. The theme health as wellbeing involves a holistic notion of health embracing physical, mental as well as psycho-social aspects of wellbeing. The focus in the theme is on mental wellbeing, but with a close connection between mental and physical health. Reflecting the well-known definition of the WHO, several teachers proposed a more holistic health as three dimensional including physical, psychological and social aspects of wellbeing.

> That you have balance in life and in yourself. That you get to know yourself. That you know what health is. Social health, mental health, physical health. And social health, it can be having friends and moving, yes, between them. Not just maybe having a friend, but several. Family. Mental health, having mental well-being, being able to relax. Stress management. (Interview 11)

Notions of "balance in life" and "knowing yourself" in the quote above illustrates the way mental wellbeing is constituted within the theme. Often referred to as "the inside", mental aspects of health were also described as a state of being comfortable and satisfied with oneself, but also in terms of feeling safe and not being afraid. These kinds of discussions were often directly related to the experience of seeing many students who are uncomfortable with, and sometimes worried about, PE. Fear, stress and mental barriers are examples of challenges to the students' mental wellbeing. Several teachers also talked about the interconnection between mental and physical health in terms of wellbeing.

> You should feel well. Be happy with yourself. Eat, yes. But you should enjoy yourself. If you have any problems, ask the teachers for help. Don't diet as a teenager. Because I have also come across that, already. I haven't worked for many years at all, but have already come across 13-year-olds who are dieting. They diet on powder. Because they have somehow been told by someone else that "You are fat. You need to lose weight". (Interview 3)

Bodily dissatisfaction and anxiety as threats to wellbeing was also an aspect of the theme. This was frequently in relation to bodily issues in general, but more so with regard to thinness and anorectic tendencies among students than fitness and obesity.

Discussion

Our study of how Swedish PE teachers make sense of health in relation to their teaching practices have revealed four distinct but interrelated themes: 1) health as a healthy attitude; 2) health as fitness; 3); health as functional ability; and 4) health as wellbeing. The themes represent different conceptions and theories about health in the teachers' descriptions of their teaching practices with important consequences for *what* teachers teach, and *how* or *why* a certain content or activity is chosen with regards to health.

The themes identified in the study reveal an understanding of health that largely replicates aspects that have been found in previous research. Two of the four general "lay" definitions found by Flick *et al.* (2002) some twenty years ago are represented in our data ("functionality" and "well-being and mental balance"), and health as fitness is well represented in a number of studies of how PE teachers view health (e.g. Welch and Wright, 2011; Gray *et al.*, 2018). However, the theme health as a healthy attitude is not as common in the literature as a specific aspect of health in studies of everyday understandings of health.

In terms of theories, the teachers present different systems of thought about what health is and how it is determined. The idea of *health as a healthy attitude* is an example of such a system that defines health as a primarily mental phenomenon. A critical question for this "theory" is how the healthy attitude itself is produced, whether it is an inner motivational factor determined by behavioural beliefs and perceived norms as described in social

psychological models of health behaviour change (e.g. Montano and Kasprzyk, 2008), or if a healthy attitude is to be understood as a matter of access to "health relevant cultural capital" emphasizing structural conditions for health (Abel, 2006, p. 67). In our study it sometimes appeared as if a healthy attitude is something that students choose to have, and sometimes as determined independent of the students' willpower.

The use of "grit" further suggests an understanding of the healthy attitude as determined by the individuals' perseverance and an expectation that one's efforts will pay off (Morton and Paul, 2019). The "theorizing" expressed in this theme also includes the idea that overweight and obese students can reshape their bodies and overcome health problems through a healthy attitude which, just as in the studies by Welch and Wright (2011) and Garrett and Wrench (2012), signals a strong impact of healthism and obesity discourses, where individual responsibility is at the forefront.

The theme *health as fitness* relates to a biomedical concept and theory of health by which health ultimately is an absence of disease (Quennerstedt, 2019). According to this approach strategies to improve health should aim at producing risk-reducing "healthy" lifestyles (Bandeira *et. al.*, 2022). This is a pathogenic approach that focuses on physical activity and fitness as a means of preventing disease and illness. This approach also connects to discourses about healthism as it focuses on whether or not the individual has a healthy lifestyle that generates acceptable fitness and strength (Gray *et al.*, 2018). However, there are examples where fitness is also related to functionality in a wider sense, and to arguments based in more salutogenic orientations (McCuaig *et al.*, 2013; Mittelmark and Bauer, 2016), thus defining fitness as a resource for health. At the same time, the theme as such is based on accounts that problematize lack of fitness as a threat to students' physical health status. It is in this context that overweight and obesity are most clearly expressed as health problems and obesity discourses come to the surface. There are aspects within the theme that can be interpreted as stigmatizing for overweight and/or non athletic students, similar to the anti-fat bias among health and PE teachers found by Varea and Underwood (2016).

A more complex system of thought regarding health is, however, found within the theme *health as a functional ability*. In this case health is determined by the interplay of individual desires and needs and the resources available to satisfy these needs. Although the socio-culturally determined nature of individual wishes and needs were seldom discussed, this kind of theorizing opens up for more holistic views of health, relating to well established theories of health (e.g. Antonovsky, 1987; Nordenfeldt, 2007), that could be productive for PE teaching.

The theme *health as wellbeing* captures a wide range of accounts that relate to the general idea of wellbeing as a matter of balance between physical, mental and social aspects in life (Hagget, 2016). The way wellbeing is articulated also reflects ideas from positive psychology (Lomas, 2016). The theme presents an understanding of health as subjective and holistic and includes social relations and feelings of belonging and self-esteem. This theme also includes accounts that link physical and mental aspects of health and, like the pre-service teachers in the study by Gray *et. al.* (2018), involves a critique against the dominant focus on physical health that exists in our society. The core ideas of wellbeing are however, not elaborated upon within the theme and the holistic reasoning by the teachers stops at references to the WHO's definition of health from 1946 as a matter of physical, mental and social aspects of wellbeing (WHO, 2020).

Concluding remarks – teaching health in physical education

In this article, we have explored how Swedish PE teachers make sense of health in relation to their teaching practices focussing on the conceptions and theories about health. We identified four distinct themes that capture fundamental aspects of how the teachers in different ways theorize health within their profession as teachers. The themes relate to prevailing discourses in society as well as to specific discourses within PE. There is a clear impact from healthism

and obesity discourses on the teachers' accounts, but interestingly there is also a clear impact from holistic views and approaches to health.

While interviews does not provide the full story about how the teachers actually teach, research suggests that the way PE teachers theorize health have significant consequences for *what* they teach, as well as *how* and *why* a certain content or activity is chosen with regards to health (Quennerstedt, 2019). In our study, we can see that the conceptualization of health as a healthy attitude and as fitness dominates when the teachers talk about and give examples of how they teach. At the same time, holistic conceptualizations of health as well-being and as functional ability occurred clearly during the interviews. However, in contrast to the theories of health as a healthy attitude and as fitness, the holistic theories were not as evident in the teacher's stories and examples of how they teach. These theories of health, even if they clearly align with the Swedish national curriculum, seemed more "theoretical" to the teachers and came up rather as a result of them trying to define health than from illustrations they provided of their teaching practices. Hence, we believe that it would be desirable that PE teachers develop a deeper understanding of how health can be understood and theorized in a consistent and analytical way, as well as the consequences of different theories for teaching methods.

Theories and practice of health as functional ability as well as health as well-being carry a potential for PE as a subject to move beyond health as being fit and having the right attitude. We see them as a road to a possible embracement of more holistic approaches and a reframing of what PE is and could be. This implies a better understanding of the practical consequences of different theories of health. Thus, our contention is that one key would be for the PE teacher education to address the practical consequences of these theories for PE teaching in terms of *what* to teach, *how* to teach and *why* to teach health more holistically.

References

Abel, T. (2006), "Cultural capital in health promotion", in McQueen, D., KickbuschPotvin, I.L., Pelikan, J.M., Balbo, L. and Abel, T. (Eds), *Health and Modernity: the Role of Theory in Health Promotion*, Springer, New York, NY, pp. 43-73.

Adams, J., McCreanor, T. and Braun, V. (2013), "Gay men's explanations of health and how to improve it", *Qualitative Health Research*, Vol. 23 No. 7, pp. 887-899.

Aim, M.-A., Lelaurain, S., Khatmi, N., Fonte, D., Bovina, I. and Dany, L. (2020), "'Similar but different': social representations of health according to gender for French youth", *Journal of Health Psychology*, Vol. 25 No. 12, pp. 1905-1916.

Antonovsky, A. (1987), *Unraveling the Mystery of Health: How People Manage Stress and Stay Well*, Jossey-Bass, San Fransisco, CA.

Bandeira, A.d.S., Ravagnani, F.C.d.P., Barbosa Filho, V.C., de Oliveira, V.J.M., de Camargo, E.M., Tenório, M.C.M., Sandreschi, P.F., Dos Santos, P.C., Ramires, V.V., Hallal, P.C. and Silva, K.S. (2022), "Mapping recommended strategies to promote active and healthy lifestyles through physical education classes: a scoping review", *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 19 No. 1, p. 36.

Barker, D., Quennerstedt, M., Johansson, A. and Korp, P. (2021a), "Physical education teachers and competing obesity discourses: an Examination of emerging professional identities", *Journal of Teaching in Physical Education*, Vol. 40 No. 4, pp. 642-651.

Barker, D., Quennerstedt, M., Johansson, A. and Korp, P. (2021b), "Fit for the job? How corporeal expectations shape physical education teachers' understandings of content, pedagogy, and the purposes of physical education", *Physical Education and Sport Pedagogy*, Vol. 28 No. 1, pp. 29-42, doi: 10.1080/17408989.2021.1934664.

Bennet, L. and Burns, S. (2020), "Implementing health promotion schools to prevent obesity", *Health Education*, Vol. 120 No. 2, pp. 197-216.

Billig, M. (1993), "Studying the thinking society: social representations, rhetoric and attitudes", in Breakwell, G. and Canter, D. (Eds), *Empirical Approaches to Social Representations*, Oxford University Press, Oxford, pp. 39-62.

Blaxter, M. (1984), "The causes of disease: women talking", *Social Science and Medicine*, Vol. 17 No. 2, pp. 59-69.

Blaxter, M. (1990), *Health and Lifestyles*, Routledge, London.

Braun, V. and Clarke, V. (2006), "Using thematic analysis in psychology", *Qualitative Research in Psychology*, Vol. 3 No. 2, pp. 77-101.

Burrows, L. and McCormack, J. (2012), "Teachers' talk about health, self and the student 'body'", *Discourse: Studies in the Cultural Politics of Education*, Vol. 33 No. 5, pp. 729-744.

Cornwell, J. (1984), *Hard Earned Lives: Accounts of Health and Illness from East London*, Tavistock, London.

Davidson, F. (2007), "Childhood obesity prevention and physical activity in schools", *Health Education*, Vol. 107 No. 4, pp. 377-395.

Downey, C.A. and Chang, C. (2013), "Assessment of everyday beliefs about health: the Lay Concepts of Health Inventory, college student version", *Psychology and Health*, Vol. 28 No. 7, pp. 818-832.

d'Houtaud, A. and Field, M.G. (1984), "The image of health: variations in perception by social class in a French population", *Sociology of Health and Illness*, Vol. 6 No. 1, pp. 30-60.

Fitzpatrick, K. and Tinning, R. (2014), "Considering the politics and practice of health education", in Fitzpatrick, K. and Tinning, K. (Eds), *Health Education: Critical Perspectives*, Taylor and Francis Group, Oxon, pp. 1-14.

Flick (1998), "The social construction of individual and public health: contributions of social representations theory to a social science of health", *Social Science Information*, Vol. 37 No. 4, pp. 639-662.

Flick, U., Fischer, C., Schwartz, F.W. and Walter, U. (2002), "Social representations of health held by health professionals: the case of general practitioners and home-care nurses", *Social Science Information*, Vol. 41 No. 4, pp. 581-602.

Garrett, R. and Wrench, A. (2012), "'Society has taught us to judge': Cultures of the body in teacher education", *Asia-Pacific Journal of Teacher Education*, Vol. 40 No. 2, pp. 111-126.

González-Calvo, G., Varea, V. and Martínez-Álvarez, L. (2019), "Health and body tensions and expectations for pre-service physical education teachers in Spain", *Sport, Education and Society*, Vol. 24 No. 2, pp. 158-167.

Gray, S., MacIsaac, S. and Harvey, W.J. (2018), "A comparative study of Canadian and Scottish students' perspectives on health, the body and the physical education curriculum: the challenge of 'doing' critical", *Curriculum Studies in Health and Physical Education*, Vol. 9 No. 1, pp. 22-42.

Hagget, A. (2016), "On balance: lifestyle, mental health and wellbeing", *Palgrave Communications*, Vol. 2 No. 1, p. 16075.

Herzlich, C. (1973), *Health and Illness: A Social Psychological Study*, Academic Press, London.

Jovchelovitch, S. and Gervais, M.-C. (1999), "Social representations of health and illness: the case of the Chinese Community in England", *Journal of Community and Applied Social Psychology*, Vol. 9 No. 4, pp. 247-260.

Korp, P. (2008), "The symbolic power of healthy lifestyles", *Health Sociology Review*, Vol. 17 No. 1, pp. 18-26.

Larsson, H. and Redelius, K. (2008), "Swedish physical education research questioned—current situation and future directions", *Physical Education and Sport Pedagogy*, Vol. 13 No. 4, pp. 381-398.

Lomas, T. (2016), "Flourishing as a dialectical balance: emerging insights from second-wave positive psychology", *Palgrave Communications*, Vol. 2 No. 1, p. 16018.

Lynch, T. and Soukup, G.J. (2016), "'Physical education', "health and physical education", "physical literacy" and "health literacy": global nomenclature confusion", *Cogent Education*, Vol. 3 No. 1, 1217820.

McCuaig, L., Quennerstedt, M. and Macdonald, D. (2013), "A salutogenic, strengths-based approach as a theory to guide HPE curriculum change", *Asia-Pacific Journal of Health, Sport and Physical Education*, Vol. 4 No. 2, pp. 109-125.

McKinlay, A. and Potter, J. (1987), "Social representations: a conceptual critique", *Journal for the Theory of Social Behaviour*, Vol. 17, pp. 471-487.

Mittelmark, M.B. and Bauer, G.F. (2016), "Salutogenesis as a theory, as an orientation and as the sense of coherence", in Mittelmark, M., Bauer, G.F., Vaandrager, L., Pelikan, J.M., Sagy, S., Eriksson, M., Lindström, B. and Meier Magistretti, C. (Eds), *The Handbook of Salutogenesis*, Springer Open, Cham, pp. 11-18.

Mong, H.H. and Standal, Ø.F. (2019), "Didactics of health in physical education – a review of literature", *Physical Education and Sport Pedagogy*, Vol. 24 No. 5, pp. 506-518.

Montano, D.E. and Kasprzyk, D. (2008), "Theory of reasoned action, theory of planned behavior, and the integrated behavioral model", in Glanz, K., Rimer, B.K. and Viswanath, K. (Eds), *Health Behavior and Health Education: Theory, Research and Practice*, John Wiley and Sons, Hoboken, NJ, pp. 67-96.

Morton, J.M. and Paul, S.K. (2019), "Grit", *Ethics*, Vol. 129 No. 2, pp. 175-203.

National Agency for Education (2019), *Hälsa För Lärande – Lärande För Hälsa (Health for Learning – Learning for Health)*, National Agency for Education, Sweden.

Nordenfeldt, L. (2007), "The concepts of health and illness revisited", *Medicine, Health Care and Philosophy*, Vol. 10 No. 5, pp. 5-10.

Ohlin Lauritzen, S. (1997), "Notions of child health: mothers' accounts of health in their young babies", *Sociology of Health and Illness*, Vol. 19 No. 4, pp. 436-456.

Potter, J. and Edwards, D. (1999), "Social representations and discursive psychology: from cognition to action", *Culture and Psychology*, Vol. 5 No. 4, pp. 447-458.

Powell, D. (2016), "Schools and the 'war against obesity'", *New Zealand Physical Educator*, Vol. 49 No. 3, pp. 4-5.

Pringle, R. and Pringle, D. (2012), "Competing obesity discourses and critical challenges for health and physical educators", *Sport, Education and Society*, Vol. 17 No. 2, pp. 143-161.

Quennerstedt, M. (2019), "Healthying physical education-on the possibility of learning health", *Physical Education and Sport Pedagogy*, Vol. 24 No. 1, pp. 1-15.

Quennerstedt, M., Barker, D., Johansson, A. and Korp, P. (2021), "The relation between teaching physical education and discourses on body weight – an integrative review of research", *Curriculum Studies in Health and Physical Education*, Vol. 12 No. 3, pp. 287-305, doi: 10.1080/25742981.2021.1894407.

Quennerstedt, M., Burrows, L. and Maivorsdotter, N. (2010), "From teaching young people to be healthy to learning health", *Utbildning and Demokrati – Tidskrift För Didaktik Och Utbildningspolitik*, Vol. 19 No. 2, pp. 97-112.

Radley, A. and Billig, M. (1996), "Accounts of health and illness: dilemmas and representations", *Sociology of Health and Illness*, Vol. 18 No. 2, pp. 220-240.

Schenker, K. (2018), "Health (y) education in health and physical education", *Sport, Education and Society*, Vol. 23 No. 3, pp. 229-243.

Vander Schee, C. (2009), "Confessions of the 'unhealthy' – eating Chocolate in the Halls and smoking behind the bus garage: teachers as health missionaries", *British Journal of Sociology of Education*, Vol. 30 No. 4, pp. 407-419.

Varea, V. and Underwood, M. (2016), "'You are just an idiot for not doing any physical activity right now': pre-service health and physical education teachers' constructions of fatness", *European Physical Education Review*, Vol. 22 No. 4, pp. 465-478.

Webb, L. and Quennerstedt, M. (2010), "Risky bodies: health surveillance and teachers' embodiment of health", *International Journal of Qualitative Studies in Education*, Vol. 23 No. 7, pp. 785-802.

Welch, R. and Wright, J. (2011), "Tracing discourses of health and the body: exploring pre-service primary teachers' constructions of 'healthy' bodies", *Asia-Pacific Journal of Teacher Education*, Vol. 39 No. 3, pp. 199-210.

Wetherell, M. and Potter, J. (1988), "Discourse analysis and the and the identification of interpretative repetoires", in Antaki, C. (Ed.), *Analysing Everyday ExplanationA A Casebook of Methods*, Sage, London.

WHO (2020), *Basic Documents: Forty*, 9th ed., World Health Organization, Geneva.

Williams, R. (1990), *A Protestant Legacy: Attitudes to Death and Illness Among Older Aberdonians*, Clarendon Press, Oxford.

Williams, S. (2003), "Beyond meaning, discourse and the empirical world: critical realist reflections on health", *Social Theory and Health*, Vol. 1 No. 1, pp. 42-71.

Wright, J., O'Flynn, G. and Macdonald, D. (2006), "Being fit and looking healthy: young women's and men's constructions of health and fitness", *Sex Roles*, Vol. 54 Nos 9-10, pp. 707-716.

Wright, J., O'Flynn, G. and Welch, R. (2018), "In search of the socially critical in health education: exploring the views of health and physical education preservice teachers in Australia", *Health Education*, Vol. 118 No. 2, pp. 117-130.

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