Health Promoting Indicators and Measures in an Educational Context

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Abstract

In line with international trends, the new Norwegian curricula for education have a stronger focus on life mastery, democracy and sustainability compared with previous requirements. Students are to develop competence that promotes health and responsible decision-making. The current study presents a programme implemented in lower secondary school aiming at training social and emotional skills and preparing students to become responsible citizens through engaging their peers in meaningful activities during and after school, as well as coaching younger students. The theoretical framework for the study is Antonovsky's health promotion theory and salutogenic model, stating that for individuals to develop a sense of coherence in life, situations must be comprehensible, manageable, and meaningful. A set of health promoting indicators developed based on research on health promoting measures in kindergartens and schools has served as a framework for the analysis of students' experiences. The indicator set is divided into four main categories: *capacity for action, social and emotional competence, stress management competenc*e and *health promotion competence*. Interviews examining the students' experiences of being engaged in this programme show positive results, mostly related to the indicators defined as *capacity for action*, *social and emotional competence,* and *stress management competence*. The study concludes that the students' experience of facilitating their peers' well-being by engaging them in activities may be related to health promoting factors, and that the set of indicators presented in this study may serve as a useful framework for planning and evaluating health promoting measures.

Keywords: capacity for action, health promotion, salutogenesis, social and emotional competence, stress management competence, youth

In the Norwegian curricula, developing life mastery skills has been introduced as an interdisciplinary topic, as well as democracy and sustainability (The Ministry of Education, 2017). This, in combination with increasing mental health problems among young people in Norway (The Norwegian Institute of Public Health, 2018), has led to discussions on how to promote good mental health in school and change the negative development. Schools play a special role in health promotion according to the Ottawa charter for health promotion (World Health Organization, 1986). Even though reports indicate that public health in Norway is generally good, there is an increasing number of young people that struggle with mental health issues (Bakken, 2018, 2022; Dietrichson, 2018; Reneflot et al., 2018; The Norwegian Institute of Public Health, 2018). Many young people report that they feel depressed, sad or unhappy, and that they feel hopelessness regarding the future. Stress-related symptoms and anxiety are also common, and an increasing number of students dread going to school (Bakken, 2022).

To meet these challenges, national efforts have been made to improve public health in Norway. The programme described in the current study was part of the project Health Promoting Kindergartens and Schools (HBS-Agder) and aimed at preventing mental health problems among students in lower secondary school. It was inspired by a previous programme where students were trained to facilitate for well-being in school by making their peers participate in activities and coaching younger students (Proba Samfunnsanalyse [Proba Society Analysis], 2010). One of the aims of this study is to investigate how students experience engaging in this programme and examine the potential in such an approach for promoting mental health, and developing responsible citizens, in an educational context.

Engaging students in these types of measures can be related to salutogenic theory, describing how a person needs to be engaged in meaningful and manageable activities to develop a sense of coherence (SOC) in life (Antonovsky, 2012). The current study investigates whether making students responsible for engaging their peers in activities during and after school supports health promotion in an educational context. Building on experience and research on how health may be promoted in educational contexts, this study applies a set of health promoting indicators, developed as part of the project HBS-Agder (Helmersen & Stiberg-Jamt, 2019), as a tool to investigate the health promoting potential of the programme. Applying this set of indicators as framework to plan and evaluate measures may be an innovative approach for future health promoting efforts in schools.

The study has a twofold research question: 1) How did the students who participated in organising activities for their peers in and after school experience this programme, and 2) does the health promoting indicator set function as a framework for evaluating health promoting programmes? As the programme in question is based on health promoting theory, the students' experiences are investigated in relation to the indicator set developed in the project HBS-Agder (Helmersen & Stiberg-Jamt, 2019), and to what extent they express health promoting competencies.

In the following, the health promoting indicator set is presented, as well as the theory and research it is based on. Following this, the methodological approach to collecting data from the

implementation of the programme is described, and the findings are presented showing what health promoting indicators dominate in the analysis. In the discussion, the findings are related to Antonovsky's salutogenic theory (Eriksson & Lindström, 2006) and other similar programmes on life mastery in school. Finally, the challenge of evaluating health promotion is adressed, as well as implications for future work with health promotion in an educational context.

Literature Review

This study builds on Antonovsky's (2012) salutogenic model of life mastering while coping with stress and focuses on identifying factors that promote health and life quality in individuals. According to this model, the salutogenic orientation can be described by the following three components: 1) to focus on all people in system (and not only people at risk), 2) to address and promote salutary factors (and not only remove risks), 3) to focus on the whole person (and not only on a specific disease). Furthermore, this theory defines the core notion of the sense of coherence (SOC) by the following three dimensions: individuals need to feel that situations are comprehensible, manageable, and meaningful to develop a sense of coherence, which again leads to the development of resilience (Eriksson & Lindström, 2006). At a given moment, a child will find his life experiences through 1) understanding the situation – What is happening in life? 2) believing that the situation is manageable and within your control – What can be done? and 3) that things in life are interesting, motivating, and a source of satisfaction – Why is this happening? These components and dimensions are united in the concept of generalised resistance resources, which are the resources that help a person, or a collective, to avoid or handle a range of psychosocial stressors (Jensen et al., 2017).

SOC is a central resource for the protection and promotion of health and mainly comprises the individual's mental, social, and spiritual resources for coping with life challenges (Eriksson & Lindström, 2006). A strong SOC is associated with a positive mental health and subjective well-being (Braun-Lewensohn et al. 2016; Moksnes et al., 2014). Studies in adolescent samples have shown positive associations between SOC and perceived positive mental health (Apers et al., 2013; García-Moya et al., 2013; Honkinen et al., 2008). Where adolescents have been examined for "normal" life stressors, such as academic, school, or peer pressure as well as family conflicts, it has been shown that those with stronger SOC report lower stress levels (Nielsen & Hansson, 2007; Ristkari et al., 2008; Simonsson et al., 2008).

The concept of sense of coherence (SOC) is central in the exploration of what coping resources are crucial for the individual's capacity to cope with stressors in daily life and create health (salutogenesis) (Braun-Lewensohn et al., 2016; Eriksson & Lindström, 2006). SOC is described as a personal coping resource and life orientation, which is recognized as the ability to perceive life as comprehensible, manageable, and meaningful, and the perception of having resources needed to cope with normative and non-normative stressors in daily life.

Research on Health-Promotion in School

Health promotion in a school setting is a broad and innovative concept rooted in the Ottawa Charter (World Health Organization, 1986). The principles and action areas in the Ottawa Charter, such as building healthy policy, creating supportive environments, and empowerment of individuals, relate clearly to the salutogenic orientation (Eriksson & Lindstrom, 2006). Health promoting in schools is based on so called Whole School Approaches, where health education and teaching are combined with school policies, the physical and social school environment, and the surrounding community (Jensen et al., 2017). Furthermore, the focus is on promoting health rather than preventing a specific disease. In focusing on health promotion, it is important to consider the educational context as a natural environment in which it is possible to build attitudes toward good mental health. This approach combines a commitment to improving the health and well-being of children and young people and to making schools a better place to learn and work (Jensen et al., 2017). Research has indicated that many young people worldwide are not well informed about mental health (Apers et al., 2013; Paulus & Rowling, 2009; Rose et al., 2007; Sessa, 2005) and there is a clear need to raise awareness, educate, and provide interventions that facilitate the maintenance of mental well-being in young populations. Mental health promotions are potentially central to the solution, and therefore, it is unsurprising that many interventions that take this approach have been developed (O'Reilly et al., 2018). Internationally, this has been implemented through schools adopting social and emotional programs; for example, in the USA, the Collaborative for Academic, Social and Emotional Learning (CASEL, n.d.) and in Australia, KidsMatter (Department of Health, n.d.).

There is relatively little research-based knowledge about how mental health work can be arranged in the best possible health promoting way in schools. So far, research shows that: 1) teaching mental health programmes has a positive short term (especially) effect (Klomsten & Uthus, 2020), 2) the effect tends to decrease and stop when the programmes end (Andersen, 2011; Andersson et al., 2009), and 3) mental health knowledge in school must be maintained through systematic teaching that takes place over time (Klomsten, 2014; O'Reilly et al., 2018). Weist and Murray (2011) argued that health promoting measures or programmes should focus on social and emotional learning, competence for all students, as well as the active involvement of young people, schools, and communities.

There are studies which demonstrate that development of sense of coherence is stronger before the age of 15 than after (Honkinen et al., 2008) and that supportive school environment (classmate and teacher support) is related to students' SOC (Garcia-Moya et al., 2013). School-related stress and sense of coherence also showed a strong correlation, but the direction stayed unclear since the study used self-reported data.

The positive findings, both for population-oriented measures and measures aimed at high-risk groups, apply to areas such as anxiety, depression, suicide, behavioural problems, and bullying (Durlak & DuPre, 2008; Weist & Albus, 2004). They are mainly related to changes in knowledge, attention, attitudes, or stigma, and behaviour (Jané-Llopis, 2005; Pinfold et al.,

2003; Tennant et al., 2007). Nationally in Norway, however, there are few studies of good quality in this area (Andersen, 2011), as most national studies have mainly focused on behavioural problems (Ertesvåg & Vaaland, 2007; Olweus & Limber, 2010; Roland, 2012). The programmes these studies investigate, the Olweus Bullying Prevention Program (Olweus & Limber, 2010), Zero (Ertesvåg & Vaaland, 2007) and Respect (Roland, 2012) do not build on health promotion theory, but rather on theory of bullying and aggression. They emphasize changing individuals through control and use of consequences, rather than facilitating for a health promoting educational environment.

Health Promoting Indicators

To be able to assess how students perceived the programme described above from a health promoting perspective, a set of indicators, which reflect a positive connection between the chosen activity and mental health (Helmersen & Stiberg-Jamt, 2019), was applied. The background for this indicator set was international and national articles and literature reviews on universal promotion interventions in schools for the last 15 years with documented positive effect of preventive interventions in the field of mental health as defined by the WHO (Anthony & McLean, 2015; Butzer et al., 2017; Dix et al., 2012; Fitzpatrick et al., 2013; Hall, 2010; Haraldsson et al., 2008; Hsieh et al., 2005; Kimber et al., 2008; Lendrum et al., 2013; Nielsen et al., 2015; Paulus et al., 2009). Keywords used to describe a desired goal achievement were identified in each study. These were structured into four indicator groups: *capacity for action, social and emotional competence, stress management competence,* and *health promotion competence*. Each indicator consists of explanatory keywords and is shown in table 1.

Table 1

Four Health Promoting Indicators and Explanatory Keywords

Capacity for action	Social and emotional competence	Stress management competence	Health promotion competence
Democracy	Self-consciousness	Confidence	Knowledge of good mental health and well-being
Empowerment	Managing emotions	Mastery/coping	
Self-management	Empathy	Resilience	
Participation	Motivation	Control/autonomy	
	Social activity		
	Respect		
	Relations		
	Tolerance		
	Social support		
	Engagement		
	Attachment to school		

Method

To investigate how students perceived the health promoting programme, interviews were carried out with youth leaders who were engaged in the implementation of the programme. This is a qualitative multiple-case-study (Bryman, 2012), investigating individuals in a real-life context. A summative, traditional content analysis has been carried out on the data (Hsieh & Shannon, 2005), and the keywords in the set of health promoting indicators served as codes in the analysis. Relevant student reflections were coded with the keywords under each health promoting indicator, and the coded excerpts were counted to find out which of the health promoting competences that were prominent in the students' reflections.

Data Collection and Sample

Data were collected in two rounds, in the spring 2019 and 2021. The first year, the students collaborated across grades and students from all grades were invited to a joint social gathering with activities one day after school every week. Due to corona, data was not collected in 2020. In the school year 2020-2021, the programme was organised separately for each grade due to corona restrictions.

The sample consisted of 18 youth leaders from the health promoting programme, and includes eight informants from 10th grade, whereof six are boys and two are girls, four informants from 9th grade, whereof one is a boy and three are girls, and six informants from 8th grade, whereof three are boys and three are girls (Table 2).

Table 2
Sample

Grade	Boys	Girls
8th	3	3
9th	1	3
10th	6	2

The interviews with the youth leaders of the programme were carried out in groups of two, and the data was collected according to ethical guidelines. All the data collected in the interviews were anonymous, and there was no audio-recording. As no personal, or identifiable, data was collected, the study was not reported to the Norwegian Agency for Shared Services in Education and Research. Information about the health promotion project and the research study was distributed to parents via the school's learning platform. Information was given that it was voluntary to participate. The content of the interviews was not particularly sensitive. The interview guide included among others the following questions: Why did you join this programme? What education or training did you receive? What do you think works well or does not work? How does it affect you? What could have been done differently and better? Additional questions were added during the interview to make the students elaborate on their answers.

Analysis

The informants' reflections have been analysed by using the set of health promotion indicators and keywords outlined above (Table 1) as a tool for analysis. The four main categories in this framework are: *capacity for action, social and emotional competence, stress management competence,* and *health promotion competence*. Not all keywords under each category were used in the analysis as not all were relevant in relation to the reflections. The keywords under *capacity for action* applied as codes were self-management, participation, and empowerment. The keywords applied as codes for social and emotional competence were motivation, engagement, empathy, social support, self-consciousness, social activity, relations, respect, and attachment to school. For the third indicator, stress management competence, the keywords applied as codes were confidence, mastery/coping, resilience and control, or autonomy.

The number of occurrences of the individual keywords under each indicator have been summed up to indicate what type of competencies are revealed in the informants' reflections. Even though there are more keywords under some indicators, this is evened out as there may be more than one occurrence of a keyword in the analysis of the data material from each informant. The results from the analysis of data from 2019 and 2021 showed quite similar patterns, and therefore the results are collapsed in the presentation of findings.

Validity and Reliability

As the sample of this study is limited to one school, the validity of the study can be questioned, whether findings can be trusted and generalised (Bryman, 2012). This means that the experiences that are reported from this set of students may not be generalizable across contexts. The conclusions are also based on self-reported data, and these are not reliable measures, hence, the reliability of the findings may also be questioned. To ensure as reliable reporting from the students as possible, a qualitative approach with semi-structured interviews was chosen (Kvale & Brinkman, 2015), with the purpose of getting the students to describe their experiences from their point of view.

In qualitative research, it is common to talk about transferability (Lincoln & Guba, 1985), meaning that the findings have validity beyond the sample and context of the study as the meaning is recognizable across contexts, and may yield significant insights for contexts beyond the sample of the study. The researcher's competence and skills are crucial for the data that is created, including how the interview is carried out, notes taken during the interview, and how the analysis is carried out. The researcher's scientific point of view, values and view on knowledge influence the data created. Credibility is related to an open attitude, preciseness, reflexivity, and the ability to meet dynamic challenges in the interview situation. In the interviews in this study, this was strived for through asking open questions and using follow-up questions based on the students' responses. The analysis is a result of subjective interpretation, and some of the indicators in the analysis tool overlap to a certain degree, so perhaps another analysis would be possible. To achieve as reliable results as possible, the meaning of the indicators in the analysis tool have been discussed and clarified.

Findings

The results (Table 3) show what type of health promoting indicators are revealed by the students involved in implementing the health promoting programme. *Social and emotional competence* (176) dominates in the material. In addition, the informants revealed *capacity for action* (31) and *stress management competence* (31).

Table 3
Health Promoting Indicators Revealed in Interviews

Health promoting indicator	Keywords/code	Number of occurrences	Total number
Capacity for action	Self-management	11	31
	Participation	17	
	Empowerment	3	
Social and emotional competence	Motivation	38	176
	Engagement	10	
	Empathy	45	
	Social support	21	
	Self-consciousness	28	
	Social activity	10	
	Relations	11	
	Respect	11	
	Attachment to school	2	
Stress management competence	Confidence	9	31
	Mastery/coping	7	
	Resilience	5	
	Control/autonomy	10	

Capacity for Action

The students revealed *capacity for action* (31), and one of the keywords prominent here is ability for self-management (11). They explained how they had become able to lead, be a role model and come up with games. One student reported that he now dared to do what he wanted, others that they were more responsible and more active physically. One of the students said: “Our parents have noticed that we have become more responsible”. The other element of *capacity for action* revealed in the data is participation (17), which is understood as actively taking part in something, or contributing. The students reported that they had been able to contribute to organising, making decisions, arranging activities, and taking responsibility for including others and making sure nobody was left outside. One of them mentioned that they were concerned with “stopping bullying and including everyone”. Empowerment is a third element that occurs in the data (3), how the students empowered others to dare to be themselves and say no to negative influence. When asked about what they had learnt that was important,

and that they would remember in future life, one of the students answered: “To be positive, to make others feel well, not to push others down, but to help them rise”. These results show that the students revealed *capacity for action* to self-manage and to participate in, or contribute to, their surroundings.

Social and Emotional Competence

The dominating health promoting indicator is *social and emotional competence* (176). Many students emphasised motivation, meaning that they enjoyed taking responsibility and participating in activities (38), and that they found it interesting and engaging (10). One of the students said: “It is fun when they come and say that they enjoy themselves”. Many students also reported empathy for their peers (45), recognising that not everyone felt safe. One student said: “Those who have nothing to do after school, they usually are also insecure in general”. It is also recognised that some students need extra attention: “We have seen that some students always stay close to a teacher, this means that they need some extra attention”. There are also examples of social support (21), that they made other students feel safe about transferring from 7th to 8th grade, that they included others and facilitated activity for them. The students also reported self-consciousness (28) concerning what they had learnt by being a youth leader, for example new games and how to help others. It is also expressed that the programme provides a social activity (10), and that everyone can participate. One student said: “The boys who did not like to be social have become social”. Another point emphasised by some of the students is how the activity facilitated for building relations and sharing of responsibility (11). When asked about what works particularly well, one of the students answered: “Food and being together, we sit with friends, eat good food, do something extra, talk with others, then it is even better, being together is perhaps the most important”. The students also expressed respect (11) for each other’s competences. Finally, two students revealed an attachment to school. These are all various elements of *social and emotional competence*.

Stress Management Competence

The students also expressed *stress management competence* (31). They expressed confidence (9) by reporting that they were proud of having the role as youth leader and felt confident that others were comfortable talking with them. One of the students said: “I have become better at talking to people I do not know well”. More of the students reported that they had become better at coping (7), for example that they were less afraid of giving presentations and leading conversations, and less nervous about job interviews. One of them said: “It is fun to be able to talk without being nervous”. Some of the students expressed having developed resilience (5), for example that the transference from primary school felt safer, a sign of them having the ability to cope with stress. The students reported: “I was nervous about being in lower secondary school for quite some time, the programme helped me feeling safe” and “the idea of moving on to secondary school was scary. It helped being an activity leader”. In addition, the students described feeling in control (10) of the knowledge needed to organise activities and how to create good systems. All these examples show *stress management competence.*

Discussion

This study investigates the experiences of students who participated in organising activities for their peers as part of a health promoting programme. The health promoting indicator set, as presented here, provided a framework for analysing the students' experiences. The study also demonstrates how the health promoting indicator set may function as a sensible framework for evaluating health promoting measures. The main findings of this study show that students who were engaged in the programme developed mainly *social and emotional competence*, but also *capacity for action* and *stress management competence.* This also supports student agency, meaning that students participate in activities and influence their surroundings, which is emphasised as important in future education, both internationally (OECD, 2018) and in Norwegian curricula (The Ministry of Education, 2017), to develop responsible citizens in a rapidly changing society. Other studies from a Norwegian context reporting on health promoting initiatives with focus on *social and emotional competence* have shown similar results (Horverak, 2024; Horverak & Helmersen, 2023; Horverak & Jenssen, 2020) and illustrate how students can collaborate to work with finding solutions to challenges in the learning environment through discussions. Studies from an Australian context also show good results of measures focused on students working together, supporting each other to solve problems (Morcom, 2022), and prevention of bullying through programmes on emotional intelligence and resilience training (Bunnet, 2021). This contrasts other anti-bullying programmes as the Olweus anti-bullying programme (Olweus & Limber, 2010), Zero (Ertesvåg & Vaaland, 2007) and Respect (Roland, 2012). A Swedish study also shows that social and emotional training has a positive effect on self-image, well-being and the hindering of negative behaviour, such as bullying (Kimber et al., 2008). Another study from an Irish context concluded that a health and personal development programme showed improvement concerning emotional and behavioural difficulties (Fitzpatrick et al., 2013). Internationally, there have been several programmes focusing specifically on *social and emotional competence*, among others on SEL – social and emotional learning, and reviews of these programmes have shown that they generally have positive results with improvement in SEL and reduced risk of behavioural problems (Goldberg et al., 2019; Stefan et al., 2022).

The findings from this study show that *health promotion competence*, meaning knowledge of good mental health and well-being, is not obtained through the described programme, which was not the purpose of it either. The purpose of the programme was to improve the social climate in school and get more students to participate in social gatherings after school. That *social and emotional competence* dominates in the findings may be related to the fact that the purpose of the programme is to create social activities. Other measures developed and implemented in several schools in Norway, such as VIP (Guidance in mental health) and UPS (Education in mental health), focus mostly on giving students *health promotion competence*, more specifically - knowledge of what good mental health is and different symptoms of poor mental health, and where they can go to receive help for potential problems (Andersen, 2011; Klomsten & Uthus, 2020). In addition, VIP includes peer partnership, meaning that student pairs collaborate and take some responsibility for each other (Andersen, 2011) and UPS focuses on teaching students how to develop strategies for handling stress (Klomsten & Uthus, 2020).

Results from UPS show that the students gained more insight as they reported an increased understanding of themselves and others. The results of VIP showed that the students gained increased knowledge of mental health, and where to seek for help when needed (Andersen, 2011). Another similar programme for Norwegian upper secondary school, from another region, called "What is it with Monica" (Andersson et al., 2009), also showed increased knowledge of mental health and where to seek help. The health promoting programme investigated in the current study does not focus on teaching about mental health to youths, but rather focuses on engaging students in creating positive activities for their peers and giving guidance to younger students. It is therefore not surprising that the programme did not lead to increased *health promotion competence*, but to *social and emotional competence*, as well as *capacity for action* and *stress management competence*, which are all central aspects of health promotion.

Salutogenesis and Universal Health Promoting Measures

The transition of youth occupies a place of special interest in research on the relationship between SOC and health – individual's capacity to cope with stressors in daily life and create health (salutogenesis) (Braun-Lewensohn et al., 2016; Eriksson & Lindström, 2006). Obtained *social and emotional competence* among students leads, in special, to process conditions of a more or less strong SOC to cope with life stressors, which conditions the adoption of certain health behaviours that will have repercussions on future health and wellbeing. These findings are in line with Weist and Murray (2011), who argued that health promoting measures or programmes should focus on social and emotional learning, competence for all students, as well as the active involvement of young people, schools, and communities. *Stress management competence* and coping ability, which youth in this program express that they gained, hopefully will lead to a perception of having resources needed to cope with stressors in daily life.

Previous research has shown that effects tend to decrease and stop when programmes end (Andersen, 2011; Andersson et al., 2009). If there is continuity in the programme described here, and it is implemented in a systematic way, health promoting knowledge may hopefully be developed and maintained over time. In this way, awareness of health promotion is raised, and education to improve mental well-being among the young population is ensured. This is in accordance with recommendations from earlier research (Klomsten, 2014; Rose et al., 2007; Sessa, 2005).

This study, like other studies (Jensen et al., 2017), assumes that a positive way of phrasing health is a precondition for reaching another key principle in a health promoting school approach: students' active participation and involvement which creates ownership and therefore also the potentials for sustainable healthy change. The principle of participation is therefore also consistent with salutogenesis' underlining of participation in socially valued decision-making as a prerequisite for developing a strong sense of coherence (Antonovsky, 1996). In the future of learning, facilitating participation and a strong sense of coherence may be one approach of preparing students to become responsible citizens that will be able to understand and deal with rapid changes in society.

Whether universal measures focused on students developing coping strategies is health promoting for students have been questioned, as it is an underlying notion here that it is the students that must change, when in fact the problems perhaps lie in societal structures (Madsen, 2020). Still, even though society and educational structures change, individuals need to develop competence to cope in life and to participate in social settings. Health promoting measures in school may facilitate for developing this type of competence.

Salutogenesis and Measurement in an Educational Context

Lindström and Eriksson (2010) define salutogenesis as an "umbrella concept", underneath which concepts and theories gather that contribute to our understanding of how health is maintained, strengthened, or set at risk. Salutogenesis, therefore, does not only relate to the explicit measurement and the application of sense of coherence, but is a much broader framework, touching on concepts like "empowerment", "self-efficacy", "quality of life", "resilience", "well-being", "action competence" and several other concepts. While it is universally agreed that all those constructs relate to salutogenic dimensions and make valuable contributions in describing, explaining, analysing, and promoting health, some researchers also claim that Antonovsky's salutogenic theory is still the best explored and with the broadest evidence base (Jensen et al., 2017). The indicator set applied in the analysis of the current study combines some of the constructs within the broader framework of salutogenesis and may provide a tool for planning and evaluation measures in school to strengthen life mastery skills such as *social and emotional competence* and responsible decision-making, central elements in the Norwegian curricula (The Ministry of Education, 2017).

When diagnosing in clinical work, clear criteria are used in defining mental health problems, and programmes aimed at teaching students about mental health issues are based on this knowledge. However, there is no similar set of assessment criteria that could "diagnose" what health promotion is in for example a school context. One of the main challenges with health promoting measures is to evaluate whether they have potential to promote good mental health. The crucial question is therefore, when applying various measures – *is mental health promoted or not?* School, as a health promoting arena, contributes to the additional challenge – the population is young and self-reported data can be a challenge to analyse. Antonovsky developed and validated a questionnaire for examining a person's sense of coherence, or an individual's mental health condition in relation to stress and coping (Eriksson & Lindström, 2006). However, this is developed for an adult population, and there is no appropriate similar instrument for young people. Furthermore, this instrument does not answer the question whether measures are in fact health promoting. Perhaps the indicators described in this study, developed based on research in the past, may provide an alternative framework for this purpose for the future, and for developing measures in kindergartens and schools that are health promoting. This is because this project is dealing with the whole child instead of only addressing disease and risk dimensions—the focus is on a salutogenetic (not a pathogenetic) approach.

Implications

Developing life mastery skills has been introduced in the educational curricula in Norway (The Ministry of Education, 2017). This is in line with international trends focusing on the importance of agency (OECD, 2018), which means participating in and influencing own lives for example through self-management as setting goals and planning actions. Using a health promoting approach as described in this study, could be one way of working with life mastery, or supporting agency, in an educational context. In this programme, students contribute to creating a good school climate for each other, meaning that they take responsibility not only for themselves, but also for their peers. Applying the health promoting indicator set (Helmersen & Stiberg-Jamt, 2019) may provide 1) a quick testing and understanding of whether different approaches applied in school are health promoting, and thereby promote life mastery skills, as is required in the renewed curricula in Norway, 2) a tool for evaluating whether activities in school are health promoting in general, and if so, in which sense and 3) a guide to strengthen the action orientation and intervention dimension of the salutogenic theory. Ideally, activities in school should complement each other and include all four dimensions of the health promoting indicator set; *capacity for action, social and emotional competence, stress management competence* and *health promotion competence*. Furthermore, this may lead to a supportive educational climate, which will motivate children and young people to be effective learners and responsible peers, and at the same time, lead to better health and well-being. As this study is quite limited, more extensive, and longitudinal research is needed to investigate the health promoting potential of the programme explored here, as well as the potential of using the health promotion indicator set as a framework for evaluating measures in educational contexts.

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