



10th Nordic Health Promotion Research Conference 2023

Sustainability and the impact on health and
well-being: Abstract Book

Halmstad, june 14-16, 2023



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Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Halmstad University hosted the 10th Nordic Health Promotion Research Conference titled "Sustainability and the impact on health and well-being" on June 14–16, 2023.

The 10th Nordic Health Promotion Research Conference focused on the UN 2030 Agenda and the impact on health and well-being in the sustainability goals. The conference emphasised on Goal 3: Good Health and Well-being, but also on how this impacts the other 16 goals. How can the 2030 Agenda be understood from a health promotional perspective, and which efforts must be made to maintain sustainability beyond 2030?

The conference welcomed contributions on a wide array of topics within three subthemes:

- *Social sustainability in relation to equal health and social justice*
- *E-health and the implementation of digital innovations for health promotion*
- *Sustainable health in physical activity and sports*

Halmstad University conference team:

- Head of the organising committee: Eva-Carin Lindgren
- The organisations' committee: Ebba Sundin, Pernilla Ouis, Viktor Gredin, Pernilla Hedström
- Event coordinator: Vivian Violin Lönnesjö
- Communications officers: Jenny Högström och Emma Swahn
- Economy: Eva-Lotta Ekström

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- Halmstad University
- Swedish Research Council for Health, Working Life and Welfare (FORTE)
- Swedish Research Council for Sport Science

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Professor Steffen Torp¹ and MSc. Linn Therese Jacobsen Bergheim²

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Title of the abstract: Psychosocial working environment, work engagement and mental health among occupational therapists in Norway

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: Working environment and health among of occupational therapists have rarely been explored, and when it has, occupational and physical therapists have most often been treated as one occupational group.

Purpose: 1) To compare the psychosocial working environment, work engagement and mental health problems of occupational therapists with those of physical therapists; 2) to compare the same measures among occupational therapists working in the specialist and municipal health-care services, respectively; and 3) to identify job demands and resources that influence the work engagement and mental health problems of occupational therapists.

Methods: This cross-sectional study was performed among 170 occupational therapists and 273 physical therapists in Norway. Data were collected through an anonymous online survey, using a modified version of the instrument Survey for Health Promoting Workplaces. The data were analyzed using t-tests, bivariate correlations, and multiple linear regressions.

Findings: Occupational therapists experienced higher job demands and poorer health than physical therapists. Occupational therapists in the municipal health-care services were slightly more satisfied with their job resources than occupational therapists in the specialist health-care services. Meaningful work and the opportunity to use one's strengths and potential contributed the most to high work engagement. Low work engagement was the most important contributor to poor mental health.

Conclusion: Facilitating a good working environment is important to ensure high-quality occupational therapy and thereby ensure high work engagement and good health for the occupational therapists and for their patients.

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Mrs Anne Seneca Terkelsen¹, Mr Christian Tolstrup Wester², Associate professor Gabriel Gulis², Professor Jørgen Jespersen² and Professor Pernille Tanggaard Andersen²

¹University of Southern Denmark, corresponding author

²University of Southern Denmark, co- author

Title of the abstract: Co-creation and co-production of health promoting activities addressing older people – a scoping review

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: The global population is ageing and promotion of health and well-being in this generation is essential. Co-creative and co-productive practices can be solutions to welfare challenges in local policies.

Purpose of the study: This scoping review aimed to understand the extent and type of evidence in relation to co-creation and co-production of health promoting activities addressing older people aged 60+ years, and, to examine the influence of co-creative and co-productive activities on health and well-being, including influential factors for co-creation and co-production.

Methods: We searched for peer-reviewed and grey literature in 10 scientific and five non-scientific databases. From the 2648 studies retrieved, 18 articles were included in this review. An inductive thematic content analysis was applied for the analysis.

Findings: Three categories related to co-creative and co-productive activities emerged: “Social and physical activities”, “Development of age-friendly environments”, “Discussions of healthy and active ageing”. Facilitating factors for co-creation and co-production were related to the planning and structure of the process, recognition of participants time and resources, while recruitment of participants and time and resources were main barriers.

Conclusion: Future studies should target co-creative and co-productive interventions to concrete areas and specific sub-groups and be aware of factors influencing a co-creative or co-productive relationship with older people.

Keywords: Co-creation co-production, health promotion, older people

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Professor Ruth Kjærsti Raanaas¹ and Mr David Mateus²

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²Norwegian University of Life Sciences, co- author

Title of the abstract: Co-creation of social meeting places in a municipality. The external collaborators' experience

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

In order to prevent loneliness in the population, the development of social meeting places in the local environment is an important area of focus for the municipalities. At the same time the municipalities are encouraged to co-create services with external actors. Aiming to co-create social meeting places together with external actors, a medium sized Norwegian municipality carried out a three-year project hiring a project manager to coordinate.

Purpose of the study

The purpose of the study was to explore how the external actors experienced the cooperation, and their reflections on co-creating with the municipality.

Methods

Qualitative interpretive interviews were conducted with a total of 11 external actors who had been involved in the development of four different meeting places.

Findings

The informants showed a large degree of motivation for the cooperation. Having a project coordinator in the municipality to related to was perceived as important, as well as her local knowledge and characteristics as a driving force. This contributed to; Good communication and clarification of roles, Help with tasks that were difficult for external actors to follow up, and Facilitation of cooperation with other parts of the municipal organization. This in turn contributed to a sense of contributing on own terms and a greater degree of ownership of the projects, which strengthened the motivation for further co-creation.

Conclusion

This study can contribute to more knowledge about community development and how municipalities can make arrangements to strengthen cooperation with external actors.

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Msc Signe Kirsebom¹, Førstelektor Grete Eide Rønningen² and Professor Steffen Torp²

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Title of the abstract: Home-ownership promotes integration and quality of life among refugees in Norway

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: The proportion of immigrants living in poverty in Norway is about three times higher than in the rest of the population. According to the WHO a secure home is one of the four most important pillars of welfare. Homeownership is more common in Norway than in other Nordic countries, but many immigrants have problems with getting a mortgage in a normal bank to buy housing. Therefore, the Norwegian State Housing Bank has, through the «Own First» program, provided immigrant families with mortgages with low requirements for equity.

Purpose of the study: To evaluate refugee families' experiences with buying housing through the «Own First» program, and to investigate whether homeownership contributes to increased quality of life.

Methods: Six refugee families (N=12) were interviewed in-depth, and the qualitative data were thematically analysed.

Findings: The refugees were highly satisfied with getting the opportunity to buy their own home through the “Own First” program. They held that homeownership promoted integration and increased quality of life through increased motivation for work and education, learning about finances and home maintenance, and social support from neighbours. Most importantly, the interviewees held that their children were able to grow up in stable conditions. There is room for improvement when it comes to information, support and mentoring given by the municipality and the Norwegian Labour and Welfare Administration (NAV).

Conclusion: Buying a home seemed to contribute positively to integration and quality of life among refugees. This may prevent poverty and social inequity.

Keywords: Empowerment – living conditions – integration – social inequity – poverty.

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Ph d student Ann Lyrberg¹, PhD Kari Jess² and Professor Ulla Forinder³

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Title of the abstract: The meaning of children's participation in an intervention for families with parental substance abuse

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

Children of parents with substance use problems (SUP) tend to have poorer health and underperform in school, affecting their childhood development and future opportunities. A family intervention for families with parental SUP, provided by Swedish social services outpatient care, Me and My Family, implies cooperation between case managers working with alcohol abuse and child protection. The intervention includes eight weekly sessions, focuses on improving the children's situation, and is an example of preventive work.

Purpose of the study

This study examines children's experiences of a family-oriented intervention. The purpose is to establish whether or not the children consider this intervention valuable and meaningful and, if so, in what ways.

Method

Data consists of 17 qualitative interviews with children, 7 to 19 years old, with a focus on their experiences of the intervention. Thematic analysis was used, and a salutogenic perspective was applied.

Results

The results are presented in three themes: learned to know family members, expressed feelings of relief and helpful incentives. The first two themes resemble processes facilitated by valuable incentives such as open communication, a safe room, case manager support, knowledge, exercises and play.

Conclusions

The results indicate that the intervention has helped the family to break the taboo surrounding parental substance use and enabled the young participants to communicate with their family members differently. It also contributed to stronger bonds between children and their parents and increased children's comprehensibility, manageability and meaningfulness.

Keywords

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Doctoral candidate Emmie Wahlström¹, Associate professor Maria Harder¹, Professor Inger K. Holmström¹, Associate professor Peter Larm² and PhD Marie Golsäter³

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Title of the abstract: Participating in health visits, from the perspective of adolescents with migration experiences

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

For adolescents in Sweden, the most regularly recurrent communication about their health with a health professional occur with a school nurse in health visits. By promoting the adolescents' participation in the health visits, their understanding of health increases and they become actors in creating the encounter together with the health professionals. Yet, for adolescents with migration experiences, their participation in health visits have been sparsely studied and research highlight various challenges that might arise in encounters between these adolescents and health professionals.

The aim was to study experiences of health visits in the school health services, from the perspective of adolescents with migration experiences.

Data was collected using focus groups and semi-structured individual interviews with adolescents aged 13-17 years old, who were born abroad or whose parents were both born abroad, and analyzed using reflexive thematic analysis.

The findings show the adolescents reading the signs in the guided interaction of health visits. The experiences reflected the adolescents' continuous interpretation of the interaction with the school nurse, which guided decisions on how to respond. The interpretations influenced the adolescents' willingness to talk about health, how they adapted to the space of participation provided by the school nurse and their experiences of health visits as focusing on them without being singled out.

Conclusions: The results confirm that interpersonal communication in health visits is important for adolescents' experiences of health visits and show that individual considerations of topics to address is warranted.

Keywords: Adolescents, interaction, migration, school nurse

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You gotta keep on: A grounded theory study of persons living with age-related macular degeneration Jeanette Källstrand¹, You gotta keep on: A grounded theory study of persons living with age-related macular degeneration Eva-Carin Lindgren² and You gotta keep on: A grounded theory study of persons living with age-related macular degeneration Ing-Marie Carlsson²

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Title of the abstract: You gotta keep on: A grounded theory study of persons living with age-related macular degeneration

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: The global goal to promote well-being for all people of all ages is challenging due to an increasingly aging population and, thus, age-related diseases. Age-Related Macular Degeneration (AMD) is the third most common cause of impaired vision worldwide among people 60 years and older.

Purpose of the study: To explore the experience of living with AMD.

Methods: This was an explorative interview study with twelve participants who were ≥ 65 years living in their own homes and diagnosed with dry AMD. The method chosen was the constructivist grounded theory.

Findings: Living with vision loss caused by AMD confronted different problems and challenges. The core category, "Facing the fact," is characterized by the fact that life cannot come to an end just because of AMD, and the main concern that the participants described was that "you gotta keep on." To keep on meant adjusting and adapting to the physical and social environment, accepting the disease's progress and self-acceptance of the new me, and continuing to be independent but with help from others.

Conclusion: The participants in this study wanted to live life as usual but needed to live everyday life more carefully and with help from others due to AMD. Understanding experiences is vital to give voices to whom it concerns to support self-care.

Keywords: age-related macular degeneration, health, everyday living, grounded theory, older people.

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Title of the abstract: A sleep intervention with weighted blankets - promoting sleep and well-being for children with ADHD

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

Sleep is critical to child development and health. Reaching the United Nations Sustainable Development Goal 3 regarding good health and well-being for all ages, sustainable and long-lasting interventions should be a priority for children.

Purpose of the study

The aim was to evaluate the efficacy of weighted blankets on sleep and well-being among children with ADHD and sleeping difficulties.

Methods

A randomised controlled trial (RCT) with a cross-over design included 94 children with ADHD and sleeping difficulties. Children were randomised to start with either a weighted blanket or a lighter control blanket. The children used the blankets during 4+4 weeks. Sleep was evaluated objectively with actigraphy and subjectively with child- and parent-rated questionnaires.

Findings

Weighted blankets had a significant effect on total sleep time (mean diff: 8.05 min, $p < 0.05$), sleep efficiency (mean diff: 0.83%, $p < 0.05$) and parent-rated sleeping difficulties (mean diff: -1.05, $p < 0.05$), but no significant effect on sleep initiation or child-rated insomnia severity or well-being ($p > 0.05$) when evaluating weighted blankets compared to control blankets.

Conclusion

This RCT showed that children with ADHD and sleep problems experienced improved sleep time and parent-rated sleep while using weighted blankets. Thus, weighted blankets are likely effective and an alternative to sleep medication. Good sleep is a significant determinant of health and well-being, especially for children with mental health problems. Consequences on child well-being may be more relevant in a long-term perspective and is yet to be determined.

Keywords: ADHD, Children, RCT, Sleep

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PhD Sofie Lundström¹, PhD Ellinor Tengelin², PhD Hrafnhildur Gunnarsdottir³ and PhD Monica Bertilsson⁴

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Title of the abstract: Young people's experience of promoting aspects for mental well-being

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: Increasing mental health problems among young people are frequently reported. There is also a growing discussion about whether this increase reflects actual mental health problems, or if young people have more limited abilities to deal with normal challenges in life. From a social justice perspective, young people's own thoughts and experiences need to be considered when mental health promotion among young people is addressed.

Purpose: The purpose of this study was to describe young people's experiences of promoting aspects for mental well-being.

Methods: Individual interviews were conducted with 33 youths aged 16 to 25 years. The interviews were based on the mental well-being items used in the national public health survey 'Health at equal terms', annually conducted by The Public Health Agency of Sweden. Qualitative content analysis was used to capture the youth's experiences.

Findings: Preliminary findings describe promoting aspects for mental well-being as; feeling involved in social contexts, having support from loved ones, receiving help from others, feeling significant as a person, being listened to, having an inner strength, feeling that one's life is meaningful, and reasonable expectations from oneself and those around.

Conclusion: Findings show that both internal and external aspects are important for promoting mental well-being among young people. Some aspects are beyond their control, which indicates that society needs to create prerequisites for young people to develop mental well-being.

Keywords: health promotion, mental well-being, social sustainability, young people

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PhD candidate Ragnhild Martinsen Ånestad¹, Postdoctoral Research Fellow Emma Charlott Andersson Nordbø² and Professor Camilla Martha Ihlebæk²

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Title of the abstract: Frameworks and indicators for social sustainability in cities and neighborhoods.

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: It is widely recognized that social aspects must be considered for developing sustainable cities and communities. Nonetheless, there is no universally accepted definition of social sustainability, which is considered a “concept in chaos”. The disparity in suggested definitions, frameworks, and indicators might be an obstacle to addressing social factors and developing our theoretical understanding of the concept. Therefore, providing greater insight into how social sustainability has been conceptualized in different frameworks is important.

Purpose of the study: We aimed to provide an overview of frameworks and indicators proposed for social sustainability.

Methods: A scoping review was conducted in accordance with the JBI methodology. Articles were eligible for inclusion if they presented a framework for social sustainability within cities or neighborhoods. In addition, the articles had to be peer-reviewed and written in English.

Findings: We identified frameworks for social sustainability connected to the built environment, regeneration of urban areas, and to inform policy and planning. Social equity, safety, and social capital/cohesion are commonly included dimensions in the frameworks. The indicators proposed to measure social sustainability differ substantially. They are frequently based on expert knowledge and tend to be context specific.

Conclusion: Social sustainability has been conceptualized in a variety of ways; however, some dimensions are commonly included in different frameworks. Limited agreements were found when comparing indicators applied to measure social sustainability. Theoretical considerations on frameworks and indicators are required to strengthen the knowledge regarding social sustainability.

Keywords: Social sustainability, frameworks, indicators

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Title of the abstract: Workplace Health Promotion initiatives for Italian Healthcare Workers: an Investment for Health.

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

BACKGROUND: Aging workforce has to cope with work-related transformations including new organizational choices (e.g., agile work), psychosocial issues (e.g., COVID-19-related distress), and new technologies. Workers' individual wellbeing indirectly influences the company's economics (e.g., personnel turnover, restrictions on fitness-to-work, occupational injuries and diseases, labor law disputes). Workplace Health Promotion Initiatives (WHPIs) can effectively help facing these challenges in the labor market.

PURPOSE OF THE STUDY: A workplace policy has been introduced in an Italian hospital to optimize professional performance of healthcare workers (HCWs). A multidisciplinary team leads WHPIs related to: “*Disability Management*” (DM) addressing emerging disabilities (e.g., chronic degenerative illnesses), and “*Help Point*” (HP) offering psychological support to overstressed HCWs. We report results related to the economic impact of these two WHPIs.

METHODS: 131 HCWs were enrolled in DM (July 2017-December 2019) and 35 HCWs in HP (September 2016-June 2019). Sickness absence days (SADs) in the 12-month-period before and after WHPIs were registered. SAD reduction accounting for profit, Return on Investment (ROI) was computed as the ratio of net profit and investment cost for the WHPIs' management.

FINDINGS: SADs decreased by 67% and 60% for DM and HP respectively (p value: <.001, <.05) reaching a correspondent ROI of 27.66 and 2.73. Results must be examined with caution, given the small sample sizes.

CONCLUSIONS: WHPIs represent a “win-win” approach for workers, employers, and society, thanks to their educational value. Public Health policies should globally rise awareness about economic advantages of investing on enhancing workers' wellbeing for the overall society towards the global horizon of occupational salutogenesis.

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Master's degree in Health Promotion Mai B. Dehlendorff¹ and Associate professor Susanne Hagen²

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Title of the abstract: Health promotion in municipal co-creation - A qualitative study on citizen participation

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: In the New Public Governance paradigm, citizen participation can be seen as both a requirement and a possibility for the citizens to actively influence the development of public health and well-being. Previous research has revealed difficulties succeeding in not only making citizens heard, but also align the conditions for their opinions being acknowledged, in the pursuit of sustainable and local community health promotion actions.

Purpose: The study aim was to explore how citizen participation, on an organizational level, is experienced in co-creation processes when local-specific services are being established within municipal disease prevention and health promotion.

Method: Data was gathered through four individual interviews of employees and one group interview of citizens, all participating in co-creation processes, within the health department in a Danish municipality. The data was analyzed using thematic analysis.

Findings: Based on the experiences on citizen participation in co-creation, four main themes were identified as remarkable: *the extra dimension, better together than separate, the foundation of healthy collaboration, and organizational matters*. The findings create a picture of municipal co-creation as rewarding, on both personal, organizational, and structural parameters, but also clarifies that this type of collaboration doesn't come without disputed points.

Conclusion: When incorporated in municipal co-creation, active citizen participation can possibly entail co-benefits of disease preventional and health promotional matters in terms of e.g., increased service quality, sustainability, bonding-bridging-linking social capital and social equity.

Keywords: co-creation, citizen participation, municipality, health promotion, social capital

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Master's degree in Health Promotion Solveig Florell¹ and Associate Professor in Health Promotion Susanne Hagen²

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Title of the abstract: Municipal employees' experiences with coordinating intersectoral action for health in Norway

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: To reduce health inequalities, intersectoral action is crucial and can be traced in both Norwegian legislation and governmental documents. Complex patients are often in need of several health services, hence the importance of the intersectoral approach for health equity. The complexity in these cases may challenge the structures within the organizations and the fundamentals of intersectoral action.

Objective: This study aimed to explore how the responsibility of coordinating intersectoral actions is experienced by municipal health workers.

Method: Qualitative data was gathered by in-depth interviews of six employees working at mental health services in four different municipalities in the South-East of Norway. All employees worked with complex patients and had the responsibility of coordinating intersectoral actions. The material was analyzed by using thematic analysis.

Findings: The study revealed that the coordinating responsibility for intersectoral actions entails the experience of being left alone with total responsibility for the patient. This can be explained by the unclear distinction between the coordination responsibility and the caregiving role, as well as unclear role clarification between the sectors, which overwhelms and cause a "fight or flight" response. The insufficient framework within, but also between the sectors, entails an individualized accountability and challenges the employee's professionalism.

Conclusion: A sustainable development concerning intersectoral approach for health equity, requires a sufficient structural framework for coordination at all levels, and a common knowledge highlighting that health is a shared responsibility.

Keywords: intersectoral action for health, municipality, health inequalities

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Dr. Julia S Malmborg¹, Prof. Petra Svedberg², Prof. Jens Nygren², Dr. Katarina Aili² and Dr. Ingrid Larsson²

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²Halmstad University, co- author

Title of the abstract: Parents' health experiences after their child with ADHD and sleep problems underwent a sleep intervention with a weighted blanket

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: Being a parent of a child with attention deficit hyperactivity disorder (ADHD) and sleep problems can be challenging and stressful. Weighted blankets have the potential to improve sleep and health in these children, but less is known about the potential effects the child's use of a weighted blanket may have on parents' health.

Purpose of the study: To explore parents' health experiences after their child with ADHD and sleep problems underwent a sleep intervention with a weighted blanket.

Methods: This study is a part of a randomized, controlled crossover trial with a 16-week sleep intervention with weighted blankets for children with ADHD and sleep problems. A total of 24 parents of children who preferred sleeping with a weighted blanket were interviewed about how the sleep intervention influenced their health. An inductive qualitative content analysis resulted in seven subcategories and two categories.

Findings: Children's sleep with weighted blankets influenced parents experienced health in terms of 1) coping with everyday life, including finding harmony, nurturing family relationships, and maintaining a sustainable structure, and 2) feeling well-being, including being well rested, sustaining energy, reaching calm, and achieving meaningful leisure time.

Conclusion: A sleep intervention with weighted blankets in children with ADHD and sleep problems influenced parents' health positively by improving management of life and well-being. For parents who struggle to meet the everyday challenges of their child's ADHD, this sleep intervention may contribute to a sustainable health.

Keywords: parents' health; children with ADHD; weighted blanket; qualitative method

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Public sector PhD candidate Hilde Hovda Midje¹, PhD, Professor Kjell Ivar Øvergård², Associate professor Vibeke Narverud Nyborg², Associate professor Espen Andreas Brembo², Associate professor Anita Nordsteien² and PhD, Professor Steffen Torp²

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Title of the abstract: Engagement in health and health in engagement

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: In healthcare, strategies for building workforce capacity are of organizational interest due to aging populations, escalating healthcare costs, health workforce shortages, and high turnover rates.

Purpose: Based on the Job Demands-Resources (JD-R) model and in samples of nursing staff in long-term institutional care, this study aimed to systematically review the literature to identify (a) the antecedents (job and personal resources and job demands) and (b) the outcomes of work engagement.

Methods: A systematic review and descriptive and narrative synthesis. The search was carried out in PsycInfo and Medline via Ovid, Academic Search Premier, and CINAHL Complete via EBSCOhost and Scopus. Original empirical quantitative, qualitative, and mixed-method studies were included. The study adhered to the PRISMA 2020 Statement.

Preliminary findings: Fifteen articles were included. 24 different resources were significantly associated with the nursing staff's work engagement. Examples are social support and confidence in my ability. Eight job demands, i.e., work-related family conflicts and work pressure, were identified as important. Person-centered processes and intent to continue working are of the five variables found to be outcomes of engagement.

Conclusion: This review aims to provide evidence for important antecedents and outcomes of work engagement among nursing staff in long-term institutional care. A meta-analysis of the findings was not possible because the number of eligible studies was too sparse and the range of explored antecedents too wide. Future research should include well-known antecedents from the JD-R theory and replicate previous research.

Keywords: work engagement, long-term care, nursing staff, health promotion, systematic review

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Halmstad, June 14–16

Master in Health Promotion Cathrine Jensen¹, Associate professor Susanne Hagen² and Professor Steffen Torp²

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Title of the abstract: Social determinants for health in a rural municipality in Northern Norway

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: Well-being society is a shared responsibility, and strategic public health work requires that municipalities have an overview of the social determinants of health that exist in their local communities. The identification of these determinants is challenging in small municipalities, and roadless and rural communities in Northern Norway are partly unexplored.

Purpose: To investigate social determinants of health in a rural municipality in Northern Norway, and how these determinants can promote health and well-being.

Method: Qualitative data were collected through two focus group interviews (n= 12 citizens) from different communities in a rural municipality in Northern Norway. One of the groups consisted of 6 citizens from different roadless communities, which was only accessible by boat. The data were analyzed thematically.

Findings: Overall, societal structures, reliable relationships, accessible nature and cross-sectoral collaboration were reported as important determinants of health. Regarding collaboration, the citizens emphasized that their knowledge about the local environment, resources and priorities should be acknowledged and utilized.

Conclusions: When municipalities and citizens collaborate based on shared knowledge, common goals and joined resources, it is possible to do more of what creates health. This is crucial in creating a healthy public policy, supportive environments and strengthened community efforts. Thus, co-creation, with a focus on empowerment, equity and meaningful participation, can be a sustainable strategy in rural municipalities with few citizens and a shortage of resources.

Keywords: Co-creation, social determinants of health, rural communities, empowerment, well-being society

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Associate Professor in Health Science Petra Nilsson Lindström¹, Associate Professor in Nursing Lina Behm², Professor Kerstin Nilsson² and PhD and Senior Lecturer in Public Health Åsa Bringsén²

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Title of the abstract: Social sustainability through daily activity: "Grow with horsepower" is person-centered and nature-oriented

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

The health of people with functional variation in Sweden is worse than people without functional variation. A health-promoting resource in adults' lives is meaningful employment, and for people with functional variation it means some form of daily activity. The project "Grow with horsepower" is a person-centered and nature-oriented daily activity for people with function variation, who are far from the labor market. Therefore, the project links to SDG No. 3 and 8.

Purpose of the study is to explore how the person-centered and nature-oriented daily activity is experienced by the participants from a health promotion perspective.

Method is an action-oriented approach and data collection takes place through recurring reflection meetings and focus group interviews. Participants (n=10) aged 18-35 are both men and women. The data is content analyzed.

Findings show that through the person-centered and nature-oriented daily activity, the participants experience: 1) Health development (physical, mental, social); 2) Learning and personal development (metacognition, influence, relationships). These experiences of development connect to social sustainability both individually and through group processes.

Conclusion is that this kind of daily activity contributes to social sustainability by strengthening the participants through increased health, learning and personal development. These strengthening prerequisites create opportunity for participation in working life in the long term. This is significant from a micro perspective for the participant; meso perspective for organizations/authorities; and macro perspective for societal priorities.

Keywords Daily activity; Functional variation; Health Promotion; Person-centredness; Social Sustainability

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Dr. Emma Charlott Nordbø¹, Ms. Helle Frøislie², Dr. Bente Oftedal³ and Dr. Norun Krogh³

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Title of the abstract: The association between socioeconomic status and access to greenspace in the two largest cities in Norway

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: More people live in urban areas, and social inequalities have increased in cities worldwide. Despite the recognized health benefits greenspace, there is limited knowledge on social justice and distribution of neighborhood greenspace in Norway. **Purpose:** We investigated associations between socioeconomic status (SES) and access to greenspace in the two largest Norwegian cities, Oslo and Bergen. Additionally, we examined whether associations varied between the cities and according to different neighborhood scales. **Method:** Registry-data from a Norwegian national cohort (NORCOHORT), which is part of the Europe-wide project ELAPSE, were utilized. The sample comprised of 324080 Norwegian citizens aged ≥ 40 living in Oslo and Bergen in 2011. Data on educational level was combined with data on greenspace measured by the normalized difference vegetation index (NDVI) within 300-m*300-m resolution and 1000-meters buffers. Associations were estimated using linear regression models. **Findings:** Mean NDVI was 0,324 (SD=0,107) within 300-m*300-m resolution and 0,330 (SD=0,085) within the 1000-meters buffer. Access to greenspace was significantly higher among participants with highest SES, both within the nearest neighborhood surroundings ($B=0,016$, CI: 0,015-0,017) and the expanded neighborhood area defined by the 1000-meters buffers ($B=0,009$, CI: 0,008-0,010), compared to those with lowest SES. Access to greenspace varied more with SES in Bergen than in Oslo. Associations between SES and access to greenspace were strongest within the nearest neighbourhood surroundings. **Conclusions:** SES was related to access to greenspace in the two largest cities in Norway, and these results underscore the importance of providing access to greenspace for all.

Keywords: Neighbourhood; Greenspace; Social inequalities.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Associate Professor Leena Eklund Karlsson¹ and Associate Professor Kristine Crondahl²

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²University West, co- author

Title of the abstract: An approach to integrate bottom-up and top-down initiatives for sustainable social inclusion and empowerment

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: Integration of immigrants has been high on the policy agenda for the last 20 years. Many immigrants face specific integration challenges and often continue to experience poorer outcomes than their native-born peers at several levels of life. Integration of immigrants is vital for social cohesion and inclusive growth and for the ability of migrants to become self-reliant, productive citizens. New evidence indicates that the past interventions and policies to facilitate inclusion are not sustainable because they are small-scale, informal, and complementary to the core services and lack systematic efforts to scale up with the formal integration programming. **Purpose:** The aim is to propose a framework for an alternative way to empower socially vulnerable populations to meaningfully participate in their host communities and foster their social capital and -bonding through work-integrated learning (WIL) and Critical Participatory Action Research (C-PAR). **Methods:** Systematic narrative synthesis of existing evidence and best practices. **Findings:** When combined, C-PAR and WIL seem to be effective way to mobilize and empower local community groups. This approach facilitates societal change, capacity building, and co-creation of knowledge needed for self-led integration. The study suggests novel indicators to evaluate the integration process leading to better social inclusion and quality of life. **Conclusion:** For scaling up and long-term sustainability, the approach needs to combine the proven successful local bottom-up initiatives with larger top-down interventions.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Annelie Lindholm¹, PhD Katarina Aili², PhD, MD Håkan Jarbin³, Professor Jens Nygren², Professor Petra Svedberg² and Associate professor Ingrid Larsson²

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Title of the abstract: Sleep, wellbeing and ADHD symptoms in boys and girls with uncomplicated ADHD and sleep problems

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background Attention deficit/Hyperactivity disorder (ADHD) affects approximately 5% of children. More boys than girls are diagnosed, but girls may be underdiagnosed, and more studies on girls are needed. Sleep disturbances are common in children with ADHD. More knowledge regarding sleep problems, health and wellbeing in both genders is needed to promote better sleep and health.

Purpose of the study Describe sleep, wellbeing, and ADHD symptoms in children with uncomplicated ADHD and sleep problems and examine if there are differences between the genders regarding these factors.

Methods A cross-sectional study including baseline data from a randomized, controlled crossover trial with a 16-week sleep intervention with weighted blankets for children with ADHD and sleep problems. The children were 6–15 years old. Differences between boys and girls regarding sleep (objectively measured by ActiGraph, self-reported by ISI and parent-reported by CSHQ; wellbeing, self-reported by CORS and ADHD symptoms, parent-reported by SNAP IV were analysed.

Findings There were no significant differences between boys and girls regarding sleep, wellbeing and ADHD symptoms (Table 1). Both genders had sleep disturbances but values below the cut off-for clinical insomnia. They had mild to moderate ADHD symptoms and rated their wellbeing below the clinical cut-off for children with functional problems.

Conclusion Among girls and boys with ADHD, there were no differences in sleep, wellbeing, or ADHD symptoms. In health promotion work, the focus should be on each individual child's sleep problems, health, and wellbeing, regardless of gender.

Keywords Children, Gender Differences, Sleep, Wellbeing

Table 1 Results from Questionnaires and ActiGraph measurements

Actigraf and questionnaires	Boys (62)	Girls (42)	p
ActiGraph measurements			
Numbers of measured days (mean, sd)	7.02 ± 0.91	7.10 ± 0.85	0.761
Total sleep time (mean, sd)	492.48 ± 55.46	485.38 ± 43.90*	0.491
Sleep onset latency (mean, sd)	37.15 ± 31.25	33.81 ± 21.63	0.940
Sleep efficiency (mean, sd)	86.30 ± 4.97	86.53 ± 4.30^	0.852
Wake after sleep onset (mean, sd)	56.38 ± 106.00	41.43 ± 15.60^	0.799
Missing (n)	(2)		
Child sleep habits questionnaire (CSHQ)			
Total sum of 8 dimensions, (mean, sd)	52.21 ± 7.84	51.21 ± 9.31^	0.420
Insomnia severity index (ISI)			
Total score (mean, sd)	10.00 ± 5.12	10.31 ± 4.57*	0.374
The Swanson Nolan and Pelham Questionnaire (SNAP IV-parent)			
Inattention score (mean, sd)	17.06 ± 4.98	18.38 ± 5.08*	0.097
Hyperactivity/Impulsivity score (mean, sd)	15.29 ± 5.85	14.76 ± 5.90*	0.327
Child outcome rating scale (CORS)			
Total sum (mean sd)	31.08 ± 6.39	30.92 ± 6.41^	0.848
Me (mean, sd)	7.88 ± 2.21	8.20 ± 1.76^	0.716
Family (mean, sd)	8.35 ± 1.94	8.30 ± 2.0^	0.881
School (mean, sd)	6.95 ± 2.55	6.51 ± 2.83^	0.479
Life (mean, sd)	7.90 ± 2.01	7.90 ± 2.50^	0.556

ISI and CORS were self-reported CSHQ, and SNAP IV were reported by the parents. CSHQ range, 0-99 and scores above 41 indicates sleep disturbances. ISI range, 0-28 where values between 15-21 indicate clinical insomnia and between 22-28 indicate severe insomnia. SNAP range, 0-27 where values between 13-17 indicate mild symptoms and 18-22 moderate symptoms. CORS range, 0-10, maximum total score 40 and 32 is a clinical cut-off.

Differences among the genders have been examined with T-tests or Mann-Whitney U tests depending on normality or not. * indicates that Students t-test were used. ^ indicates that Mann-Whitney U test were used. A p-value <0.05 was considered significant.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Student Ulrika Svea Nygren¹

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Title of the abstract: Meeting children's and families' unique needs through team-based visits in Swedish Child Healthcare Service

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

Globally, Child Healthcare Service (CHS) are recommended to be delivered by interprofessional teams within a framework of proportionate universalism. The Swedish CHS-program includes universal and targeted team-based visits (TBVs). Challenges faced by professionals meeting children and families in CHS are important knowledge to create optimal TBVs that meet unique needs of families.

Purpose of the study

This study aimed to explore healthcare professionals' experiences of TBVs in Swedish CHS to gain an understanding of teams' opportunities and difficulties about how to meet children's and families' unique needs.

Methods (and theory)

This study used an explorative qualitative design. Data was obtained through digital focus groups (7) with healthcare professionals (34) within CHS. Data was systematically analyzed as described by Krueger.

Findings

All professional groups perceived great opportunities with TBVs meeting the unique needs of children and families, if enabling prerequisites, processes and structures in the team existed. Well-functioning TBVs were expected to entail accessible and safe family support, early detection of specific needs and initiation of interventions based on children's and families' needs.

Conclusion

Optimal TBVs organized according to the family's needs seems to be an efficient and comprehensive way to meet unique needs of children and their families. For optimal TBVs in CHS, professionals' team competence and organizational structures and support are required. However, without enabling prerequisites, TBVs could have the opposite effect and there is a risk that inequalities in health among children and coverage of CHS will remain.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Ph D Candidate, CRNA Cicilia Nagel¹ and Professor Public Health Epidemiology Kerstin Nilsson²

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Title of the abstract: Nurses' work situation and health before and during the Covid-19 pandemic

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Keywords: Nurses, Health, Work situation, Sustainable workplace

Background

We have a global shortage of nurses and problems retaining experienced nurses. A decent workplace is one of the goals for the UN 2030 Agenda.

Purpose

To understand which factors that affects nurses' work situation and health before and during the Covid-19 pandemic.

Methods

A baseline survey was made in the Swedish region of Skane in 2017 and a follow-up survey was performed in 2020 during the second wave of the Covid-19 pandemic from the same cohort. The data was analyzed with logistic regression analysis. The SwAge model was used as a theoretical model throughout the studies.

Findings

The result showed that lack of joy in the daily work, an increased workload and lack of support from co-workers increased the association to work-related mental-health diagnoses. There was a potential causality between nurses not being able to cope with physical work demands, accumulating work tasks as well as a lack of recuperation between work shifts, and nurses' work-related mental health diagnoses three years later.

Conclusions

Future research regarding the long-term impact from Covid-19 on all areas of nurses' professional and personal lives is needed.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Marie Bjühr¹, Associate Professor Magnus Lindberg², Professor Maria Engström¹, Associate Professor Anna-Karin Welmer³, Associate Professor Britt-Marie Sjölund¹ and PhD student Marie Bjühr⁴

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⁴University of Gävle, corresponding author

Title of the abstract: Sustained health in working life among an aging population and an aging working force

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background. A crucial factor for social sustainability is equal health and social justice. With an aging population and increased expectations on senior workers to prolong their working life, research focusing on sustainable working life in combination with healthy aging is needed.

Purpose. To explore factors related to and experiences of prolonging working life after the expected retirement age of 65 among Swedish people.

Methods. Cross-sectional and longitudinal data were used to assess associations with participation in working life at ages 66 and 72. Additionally, qualitative data, based on 18 individual semi-structured interviews with workers 67–90 years were used to gain an extended understanding of incentives for prolonged working life.

Findings. Male gender and profession were associated with participating in working life at age 72, additionally, fewer diagnosed diseases and a light level of physical activity at work at 66. Senior workers described that working contributed to sustained internal and external resources, added meaningfulness to life and flexible working conditions enabled a satisfying balance between work and leisure. Altogether, these different aspects of working life were interpreted as contributing to increased feelings of vitality, the innermost dimension of health.

Conclusion. Regardless of biological age, being able to remain active in working life can be beneficial to vitality. Actions to provide flexible working conditions, especially for disadvantaged senior workers, may facilitate working life after the expected retirement age with extended equality.

Keywords. extended working life, multidimensional health, older workers.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD in health sciences Maria Warne¹ and Lecturer Åsa Svensson²

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Title of the abstract: Youth Aware of Mental Health– a mental illness prevention program with challenges in the local context

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: The suicide prevention program Youth Aware of Mental Health (YAM) has been developed and used as a universal school mental health program aimed at 14–16-year-olds. The purpose of YAM is to increase adolescents' knowledge about mental health and develop skills to face life's difficulties. The program aims to promote the development of young peoples' problem-solving skills and emotional intelligence.

The purpose of the study was to evaluate a YAM intervention in a municipality in a rural area in the northern Sweden from the school -staffs' and YAM instructors' perspective.

Methods: Interviews were made before and after the intervention with a total of 43 staff from three schools, the student health service, and the municipality. A thematic content analysis was conducted.

Findings: The results show limited changes of using YAM on young peoples' problem-solving skills. The developed themes were related to aspects on the rural context, the society, inability of the pupils to meet demands, school-staff mistrusting mental illness trends, role conflicts and unsecure responsibilities among the school-staff.

Conclusion: For a rural area with small school units, YAM needs to be adapted to the local context and involve the schools to make them stakeholders, not just recipients of a top-down distributed intervention. It is also important to use YAM as part of a whole school approach in the work with school mental health. The work thus becomes more in line with a health-promoting approach.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD, senior lecturer Pelle Pelters¹, PhD, associate professor Krister Hertting², Professor Catrine Kostenius³ and Professor Eva-Carin Lindgren²

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³Luleå University of Technology, co- author

Title of the abstract: Between well-being and ill-being: LGBTQ refugees' understandings of health

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: Social determinants of health are crucial for equal health and social sustainability, providing a challenge for lesbian, gay, bisexual, transgender, queer (LGBTQ) people as refugee subgroup. These refugees are deemed vulnerable to developing health problems due to the double stigma of being a sexual/gender minority and refugee. Hence, they are considered a good case for challenges related to health promotion and equal health.

Purpose: The study aims to explore LGBTQ refugees' understandings of health.

Methods and theory: Eleven participants in the support group “RFSL Newcomers”, provided by Swedish Federation for LGBTQ Rights, were interviewed about experiences during the migration process. Subjective understandings of health were reconstructed using qualitative content analysis. As data did not originally concentrate on exploring understandings of health, health was heuristically conceptualized as wellbeing.

Findings: The narratives revealed three interconnected categories of understanding health in which tensions occur between well-and ill-being: belonging versus alienation, security and safety versus insecurity, and recognition versus denial. The categories contribute to an overarching theme of health as a freedom framed by conditions of society.

Conclusion: For our participants, belonging, recognition, and security/safety are conceptual elements of understanding health, not its social determinants. Participants did neither resort to biomedical understandings of health as crucial aspects of ‘feeling well’. As these understandings emphasize relational and existential meanings of health as relevant for health promotion, adding them to biomedical understandings of health as theoretical foundation for promoting health may enhance interventions.

Keywords: LGBTQ refugees; understandings of health; well-being

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Professor in nursing Henrika Jormfeldt¹, Professor in psychology Andreas Ivarsson² and master student in psychology Helena Cappelen³

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Title of the abstract: The Effects of an Equine-assisted Therapeutic intervention on Well-being in Persons Diagnosed with Schizophrenia. A pilot study.

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: The process of personal recovery among persons diagnosed with schizophrenia may be facilitated through innovative health promotion interventions targeting multidimensional aspects of subjective well-being. Studies on effects of Equine-assisted therapy (EAT) on people diagnosed with schizophrenia are few in comparison to other clinical populations.

Purpose of the study: The current pilot study aims to test the use of self-rated questionnaires as a means of evaluation of the effects of an equine-assisted therapeutic intervention for persons diagnosed with schizophrenia.

Methods: Twenty adults diagnosed with schizophrenia were offered a 12-week EAT intervention performed six times once every 14 days by a licensed mental health nurse. Two validated self-rated questionnaires, HSCL-25 and SHIS were used as outcome measurements at baseline and at post-treatment, additionally the self-rated questionnaire PANAS was completed twice a week starting one week before the 12 week - EAT intervention.

Findings: Only six of the twenty participants managed to complete the validated questionnaires. Despite the low response rate of approximately 30 %, a significant difference was found between pre and post scores for positive affect and well-being. Effect sizes, ranging from small to large for pre-to-post treatment scores indicated less depression and anxiety, more positive affect, less negative affect, and reinforced well-being.

Conclusion: Results suggest that EAT interventions may have beneficial effect on well-being and the process of personal recovery among individuals with schizophrenia.

Keywords: affect, equine-assisted therapeutic intervention, personal recovery, schizophrenia, well-being

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Master student Anette Nøstbakken¹, Co-student Margrethe Bårnes², Professor Kjell Ivar Øvergård², Associate Professor Lars Bauger², Associate Professor Susanne Hagen² and Associate Professor Catherine Anne Nicole Lorentzen²

¹University of South-Eastern Norway, corresponding author

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Title of the abstract: Hardiness and affectivity - a meta-analysis of the relationship with work engagement

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: Work engagement is beneficial at the individual, the organizational and public levels. An extensive understanding of the determinants of work engagement is necessary for succeeding in increasing work engagement among employees. Previous research has found personality traits to contribute to the individual's capability to become engaged at work. Hardiness and affectivity are two personality traits which might have an impact in work engagement.

Aim: The main aim of this study is to summarize the quantitative research on how the two personality traits hardiness and affectivity are related to work engagement.

Method: We performed a meta-analysis from the period 2000-2022. After excluding studies not meeting the inclusion criteria, the number of studies for the examined relationships were: Hardiness - Work engagement, k=4, Positive affect - Work Engagement, k=19, and Negative affect - Work Engagement, k = 21. WebMasem was used to compute meta-analytic correlations and to perform meta-analytic regression analyses.

Findings: We found a positive meta-analytic association between hardiness ($\beta = 0.41$, CI: [.30, .52]) and positive affect ($\beta = 0.47$, CI: [.35, .59]), respectively, and work engagement, and a positive, but small and negligible association between negative affect and work engagement ($\beta = 0.10$, CI: [.01, .19]). The included personality traits explained 54 percent of the variation in work engagement.

Conclusion: This study shows that the personality traits hardiness and positive affectivity also should be taken into account in the understanding and promotion of work engagement.

Keywords: Hardiness, Positive affectivity, Negative affectivity, Work engagement, Meta-analysis

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Phd Candidate Louise Karlsson¹, Senior lecture Marie Lydell² and Professor Lena-Karin Erlandsson²

¹Halmstad University, corresponding author

²Halmstad University, co- author

Title of the abstract: Active Health promotion- What if we should add activities rather than scale them down during stress-related ill-health?

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Stress-related ill-health is one of the fastest-growing causes of sick leave and an extensive societal problem. It affects the individual, the workplace, and society at large. Stress can be experienced in all areas of everyday life, and a common coping strategy is to stop prioritizing oneself. Agenda 2030's third goal aims to promote good health and well-being for all and ensure people's opportunity to contribute to society. However, the focus is often on interventions to rehabilitate people back to work, not to promote their health.

The study aimed to explore what promotes well-being in people with stress-related ill-health from both a work and everyday perspective.

Through mixed methods with, first, a quantitative CRT analysis of 218 participants before entering a work rehabilitation program and, thereafter, a qualitative content analysis of concluding notes of 54 participants after the intervention was applied.

The findings showed a highly relational process, where it is impossible to divide life into private and work life, and presupposes balance in everyday life in multiple dimensions. It also indicates that risk factors are not about gender, age, or education- but complex activity patterns in daily life and a lack of social context.

Conclusion: Work and everyday life are highly intertwined. Perhaps the key to promoting our health and preventing stress-related ill-health is not to scale down on activities but to strive for a more balanced everyday life, prioritizing activities that give us a sense of participation and solidarity.

Keywords: Health promotion, stress-related ill-health, occupational balance, work, social belonging

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Associate professor Lars Bauger¹

¹University of South-Eastern Norway, corresponding author

Title of the abstract: Trajectories of well-being in the transition from working life to retirement in Norway: A growth mixture modelling approach

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

How retirement affects health and well-being has been an important focus for research into the aging process, having the potential to entail major changes to an individual's economic, psychological, and social circumstances. Previous longitudinal research has identified three to four different well-being trajectories in retirement transitions.

Aim

The aim of this study was to, in the Norwegian context, explore variations in well-being and to identify important factors influencing well-being trajectories in retirement.

Methods

Using data from the Norwegian life course, ageing and generation study (NorLAG), consisting of three waves in 2002, 2007 and 2017, 567 individuals who had retired between wave one and wave two comprised our sample. Growth mixture modelling techniques was used to explore trajectories of subjective well-being (satisfaction with life, positive- and negative affect)

Findings

Negative affect was the only well-being component that had diverse trajectories in the retirement process. For negative affect, a majority (90 %) had stable low values before and after retirement, while a small proportion (10 %) experienced a considerable decrease in negative affect over the retirement process. Compared to the stable low group, participants with a decreasing negative affect trajectory were more likely to be female and have lower income.

Conclusion

These results contrast with previous research identifying considerable variation in the retirement process when it comes to well-being, and indicate, at least for a Norwegian sample, that retirement affects well-being more uniformly (little change in well-being).

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Dr Niko Männikkö¹

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Title of the abstract: Association of attentional and emotional symptoms of adolescence and adulthood with problematic internet use: a prospective cohort study

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: Over the past two decades, online activities have increased and emerged as an integral part of everyday life among youth. Problematic internet use (PIU) has been considered as an emerging public health concern, and it is related to various online compulsive uses, such as gaming and social networking site use. PIU may be comorbid with other psychopathologies, including attentional and emotional problems; however, the direction of those associations has remained unknown.

The purpose of the present study was to investigate the relationship between general and specific internet behaviors, and their association with attentional and emotional problems.

Methods: Population-based cohort data from the Northern Finland Birth Cohort (NFBC) 1986 was used in the study. The data was collected via a questionnaire from two time points when the participants were aged 15-16 (N = 9215) and 33-35 (N = 8896) years. The questionnaires included variables related to demographics, problematic internet use characteristics, mental and physical health, and emotional and attentional tendencies. Diagnoses of depression, anxiety, and attention-deficit hyperactivity disorder (ADHD) were gathered from Finnish nationwide registers.

Findings: Central findings and results will be presented in the conference.

Conclusion: The present study provides new information about PIU and its association with youth and young adults' attentional and emotional problems. The results will help to identify factors that would be associated with the emergence of PIU and its related disadvantages.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Susanne Hagen¹, MSc Linn Therese Bergheim² and Prof. Steffen Torp²

¹University of South-Eastern Norway, corresponding author

²University of South-Eastern Norway, co- author

Title of the abstract: Health and wellbeing among physiotherapists in Norway: The importance of work environment

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: In general, physiotherapists report a high degree of work-related stress, but also relatively high work engagement and good health. It seems reasonable to expect that the working environment have a major impact on these outcomes, and that both working environment and health outcomes may differ between therapists working in different sectors of health services.

Objectives: In this cross-sectional study we aimed to compare the working environment, work engagement and mental health problems of physiotherapists working in hospitals and in municipal health-care services in Norway. We also wanted to explore the relationships between the therapists' working environment and their work engagement and mental health problems.

Methods: A total of 273 physiotherapists responded to a modified version of the Norwegian Survey for Workplace Health Promotion (SHEFA) measuring mental, social, and organizational characteristics of work, as well as work engagement, sick leave, general health, and mental health problems.

Results: There were no significant differences in working environment, work engagement, and health between physiotherapists working in Norwegian hospitals or in municipal health-care services. High general demands, lack of predictability and low social support were significantly related to mental health problems, whereas meaningful work, the opportunity to use one's potential and high social support were related to being engaged at work.

Conclusion: This study highlights the importance of being aware of poorly designed jobs and the power of usefulness and social support for promoting health and wellbeing at work for this profession.

Keywords: health, work environment, work-engagement, physiotherapists, Norway

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Associate professor Catherine Anne Nicole Lorentzen¹, Associate professor Lars Bauger² and Associate professor Eliva Ambugo²

¹University of South-Eastern Norway, corresponding author

²University of South-Eastern Norway, co- author

Title of the abstract: Associations between general self-efficacy and aspects of mental health among Norwegian adolescents – and the moderating effects of gender and age

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

Research indicates that the mental health of young people in Norway has worsened in recent years. Theory and empirical studies suggest that aspects of mental health may improve with a stronger general self-efficacy. General self-efficacy refers to an overall feeling of optimism about one's abilities to cope with various difficulties and stressful situations one may meet in life. Little research on such associations have been done in the Norwegian context, and there is lack of studies examining potential moderators of such effects.

Aim

The aim of this study was to examine the predictive power of general self-efficacy on depressive symptoms and global satisfaction with life among adolescents in Norway, and whether age and gender moderated such relationships.

Methods

We applied a multi-variate stepwise linear regression analysis, using data on 18 591 students aged 14-19 from the cross-sectional Ungdata survey carried out in a Norwegian county in 2021.

Findings

General self-efficacy significantly and negatively predicted depressive symptoms and positively predicted satisfaction with life ($\beta=-0,306$, $p<0,001$ and $\beta=0,309$, $p<0,001$, respectively). These effects were significantly moderated by gender and age; results showed a stronger predictive power of general self-efficacy on the health outcomes among girls and younger adolescents than among boys and older adolescents.

Conclusion

The findings indicate that general self-efficacy should be regarded as an individual resource which may be relevant to address in health promotion initiatives addressing adolescents. This may particularly apply to girls and the youngest adolescents.

Keywords: General self-efficacy, Mental health, Depression, Satisfaction with life, Moderators

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Dr Marie-Helene Zimmerman Nilsson¹, Dr Marie Lydell² and Dr Linn Håman²

¹University West, corresponding author

²Halmstad University, co- author

Title of the abstract: Health and Well-being Among Immigrated Women in Higher Education: An Integrative Literature Review

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: Society in general and higher education in particular need to find constructive strategies for the partly changed situation that the multicultural society entails. A successful integration promotes health and a new identity in the new society. Immigrant women's experiences show aspects that influence their well-being and inclusion in society. Immigrant women encounter many barriers and are a group at high risk of marginalization in higher education. Hence, increased insight into immigration research is significant for the organization of higher education, especially focusing on women's health and well-being within this area.

Purpose of the study: The purpose is to provide an overview of experienced health and well-being among immigrant women in the context of higher education and the possible facilitators and barriers they encounter.

Methods: This study was designed as an integrative literature review. Databases were searched for international scientific articles. The final material comprised 14 empirical articles published in peer-reviewed journals. Also, a manual search was conducted, involving checking reference lists of the collected articles.

Findings: The findings showed that immigrant women in higher education are perseverant. According to women's experiences, higher education studies challenged traditional gender roles and created tensions. The women described stress and anxiety during their studies.

Conclusion: Several problematic aspects related to health and well-being were evident for immigrant women in higher education, while possible facilitators appeared to be less prominent and need further exploration.

Keywords: *health, higher education, immigration, well-being, women*

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Associate Professor Despoina Andrioti Bygvraa¹, Associate Professor Eva Roth² and Research Associate Signe Dolberg McKinney²

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Title of the abstract: Electronic surveillance in the work: the case of fishermen

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

The project “Camera surveillance of Danish bottom trawl fishery in Kattegat”, covers: 1) The decision process for installation of cameras onboard 83 Danish vessels fishing Norwegian lobsters in Kattegat 2) How the cameras influence the working environment onboard and 3) How trust between fishermen and control authorities are affected. This study explores the fishermen perceptions and presents the working hypothesis that the pathway to healthy fish stocks is not necessarily socially sustainable, even though the aim of the regulation is to reach long-term marine sustainable exploitation.

Methods

The study is expected to finish in March 2023. A mixed method approach is being implemented. (a) the COPSOQ CORE questionnaire was sent out to 83 shipowners/skippers via the Fishermen’s Association (b) Focus group interviews will follow.

Preliminary Findings

All the participants were males and 55% more than 40 years old. 66% were boat owners. There is a camera on board 47% of the respondents while 37% have no camera installed yet. 76% of the respondents think that their work is not recognized and appreciated by the authorities. 90% perceive that there is a lack of trust by the authorities and 88% that monitoring violates privacy.

Conclusions

Fishermen are stressed due to cameras, regulations, quotas and fuel prices. They believe that new regulations should be evidenced based. They are afraid that the authorities aim to close down the trade and fuel social injustice. The findings will help informed prevention policies in fisheries.

Keywords: electronic monitoring, COPSOQ, mistrust, health promotion

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD-student Karolina Larsson¹, Polly Björk-Willén², Katarina Haraldsson³ and Kristina Hansson⁴

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Title of the abstract: Children's use of English in Swedish preschools

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

The fourth goal of Agenda 2030 states that inequalities in education shall be removed - especially emphasizing high-quality education for socio-economically disadvantaged children. Relatedly, the Swedish School Act establishes that education in preschool is to be of equal quality for all children. Preschool is sometimes the main arena where L2 (second language) children are exposed to Swedish. However, some L2 children fail to learn Swedish before school-start due to limited exposure in preschool. Furthermore, in recent years many preschool practitioners have reported that some preschoolers use English as lingua franca instead of Swedish during play.

Aim

The aim of the paper was to study how English is used in everyday conversation in preschool groups with varying proportions of multilingual children, and to explore the meaning-making of children's English language choice.

Method

The study is video-ethnographic, and five preschool units situated in both multilingual low-SES and monolingual high-SES areas participated. The analysis draws on Conversation Analysis.

Findings

All participating children were influenced by English, but to a much greater extent in multilingual areas. English was used in an array of pragmatic purposes, and was a social resource like any language. Children in multilingual areas did not have access to Swedish-speaking peers, and sometimes used English as lingua franca during play.

Conclusion

The reduced time for L2 children to practice Swedish in the multilingual preschools might constitute an obstacle in the process of removing inequalities in preschool education.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Doctoral student, PhD Anna Frisint¹

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Title of the abstract: Perspectives on work - young adults with experience of mental illness give their picture

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

Being a young adult with experience of mental illness may influence opportunities to work. Mental illness is a common cause of exclusion in working life and related to social sustainability and equal health, on both an individual and a societal level. More knowledge and research are requested about how young adults with experience of mental illness pictures work and mental health in relation to work.

Purpose

The purpose of this licentiate project was to analyze how young adults with experience of mental illness view work and mental health in relation to work.

Method

The project was carried out with photovoice as method, including two groups of seven participants, one performed digitally and one on site. Individuals were engaged to photograph their everyday lives and together critically discuss the pictures about work and mental health. Through joint interpretation, participants agreed on themes, subsequently the researcher proceeded the thematic analysis, the groups validated the results and then decided if and how to reach out to a relevant audience.

Preliminary findings

Ongoing analyzes show patterns in how the young adults with experience of mental illness relate to work and perceive the relationship between work and mental health. At the time for the conference, more details will be presented.

Conclusion

Results from this project reveal factors in everyday life that support work, promote mental health and social sustainability, in relation to work among young adults with experience of mental illness.

Keywords

Mental health, photovoice, work, young adults

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Parents education as health promotion, a way to fulfill Social sustainability in relation to equal health and social justice.

Maria Savela¹

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Title of the abstract: Parents education as health promotion, a way to fulfill Social sustainability in relation to equal health and social justice.

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

In Sweden the first strategy for parental support was decided in 2009 and the purpose was that all parents would be offered parental support from pregnancy until the child is 18 years old. Parental support should provide parents with an in-depth knowledge of children's needs and rights, it should open up for new contacts and communities, and parents should feel strengthened in their parental role after participating in parental support. Attending to parent support is voluntary and should adapt parents' needs and wishes. The support can be education and each community can choose which program they want to use.

The purpose of this study was to examine parents' experiences of the program Circle of Security held by social services and Swedish church in a middle-sized town in Sweden.

Nineteen qualitative interviews were held and analyzed by qualitative content analysis. The theory Self-efficacy was used during the analyze process.

The findings showed that parents got right tools from Circle of Security to handle each day as a parent. That made them less stressed out, calmer and felt safer as a parent in the parenting, and it increased their well-being. They felt that they as parent got the power to take control over different situations in everyday life.

Circle of Security is a health promotive parent education program that empower parents in their parenting and increase their well-being.

Keywords: Parents education – Circle of Security – Wellbeing - Empowerment

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD student Josefine Hansson¹, Professor Mikael Nordenmark², Associate Professor Åsa Tjulin², Professor Bodil J. Landstad² and Professor Stig Vinberg²

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Title of the abstract: Socio-Ecological Factors and Well-Being among Self-Employed in Europe during the COVID-19 Pandemic

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: The COVID-19 pandemic has affected many businesses around the world negatively, and the self-employed have been especially vulnerable as they generally have fewer financial and managerial resources compared to large enterprises. The self-employed are at increased risk of negative well-being outcomes when facing adversity such as the COVID-19 pandemic. Studies that examine socio-ecological factors that may protect their well-being are warranted.

Methods: Data were drawn from a cross-sectional survey of European self-employed people (n = 1665). The WHO-5 Well-being Index was used to examine the impact on well-being of factors at four socio-ecological levels. Independent sample t-tests, Pearson correlations and linear regression were applied to analyse differences between groups of self-employed and interactions between variables using SPSS.

Findings: Well-being and the socio-ecological factors of resilience, social support, useful work and finding the rules clear were positively correlated with well-being. For self-employed who reported that it was challenging to run their business during the pandemic, social support and finding rules clear were of significantly greater importance to their well-being.

Conclusions: The findings highlight that the socio-ecological factors of resilience, social support, doing useful work and finding the rules clear affect well-being. The results also indicate that it is vital to consider factors at multiple socio-ecological levels to improve the well-being of the self-employed during adversity.

Keywords: self-employed; socio-ecological model; well-being

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Scientific leader, PhD Katarina Haraldsson¹, Developer with specialization in outdoor education Magnus Göranson² and Professor in Sport Science with focus on health promotion Eva-Carin Lindgren³

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Title of the abstract: Outdoor education promotes pupils' physical activity on equal terms.

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Integrating children's physical activity into everyday environments and education is essential because sedentary behaviour among young people is at a high level. During one academic year, teaching science subjects using outdoor education was conducted in a Swedish school. The study, which had an ethnographic design, was conducted for pupils in 6th grade from three classes (N=71). This presentation focuses on pupils' actions and experiences related to physical activity when taught science subjects using outdoor education. The data collection consisted of observations (N=42) and focus group interviews (N=6). The data was thematically analysed with an abductive approach. Findings showed that all lessons observed had continuous movement activities. These consisted of walking and cycling between different places in the school's immediate area, games, drama, relays, and practical teaching methods. The pupils expressed that they obtained more energy when taught outdoors due to the fresh air and movement which increased their heart rates. This subsequently led to improved mood and alertness and better concentration and composure. To summarise, this compulsory teaching of science subjects using outdoor education has promoted pupils' physical activity on equal terms as it has been a natural part of the teaching. Daily physical activity is essential for both mental and physical health which can promote pupils' well-being and learning conditions. Keywords: equal terms, outdoor education, physical activity, pupils, school

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Associate professor Olin Oldeide¹ and Professor Elisabeth Fosse²

¹University of Bergen, corresponding author

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Title of the abstract: Knowledge-based public health in municipalities

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: The Norwegian Public Health Act requires that public health is anchored across all policy sectors in municipalities' plans and strategies and efforts to improve the population's health and living conditions (1) This requires knowledge-based public health work. The municipalities rely on good, relevant data to get the overview the Public Health Act of Norway requires. A good knowledge system is a prerequisite to describing the public health challenges and planning necessary actions (2).

The purpose of the following study is to explore the types of knowledge and how knowledge is applied when developing local public health policies as explored by local policy makers (politicians and bureaucrats) and in policy documents.

Methods: The study uses documents and personal interviews as data sources to provide an overall overview of what type of knowledge underlies the municipality's organization of public health. The studied municipality is Bergen, the second largest city in Norway. The personal interviews were with policy makers and bureaucrats in all municipal departments.

Findings: Preliminary results indicate that the municipality relies on a substantial knowledge base that informs many of the municipal plans. However, the findings indicate that there are limited organizational structures needed to support cross-sectoral policies.

Conclusion: Although there is a good system for procuring knowledge, it is not used to its full potential due to structural barriers within the municipality.

Keywords: Municipalities, public health, knowledge, policymakers, interviews.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Assistant professor Louise Søgaard Hansen¹ and Associate professor Nicole Thualagant²

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Title of the abstract: Men's handling of everyday life with type 2 diabetes

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: In Denmark, more men than women live with type-2 diabetes and more men are expected to be diagnosed with this chronic illness in the future. A previous study based on a literature review highlights that little is known about how men live with, calibrate differing logics of health or develop tactics of self-care in everyday life with type-2 diabetes. Thus, a health promoting perspective is needed to grasp potential resources for future self-management.

Methods, theory and findings: This paper presents an analysis of qualitative interviews with men categorized as being in vulnerable positions. Embedded in a theoretical understanding of men's health in a gender-relations approach, this study explores how strategies of self-care are invisible to the often-female health professionals in medical encounters. As problematized by other scholars, a prevailing *men's health discourse* emphasizing the health differences with its binary opposite (women), produces a stereotyped approach to men as disadvantaged patients. Our study demonstrates how men manage living with chronic illness and develop strategies of self-care.

Conclusion: These findings illustrate current barriers in the gendered medical encounter and contribute with new insights into self-understandings and social imaginaries concerning illness and health relevant for future health promotion strategies.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Ph.d., Associate professor Lisa Korsbakke Emtækær Hæsum¹, Research assistant Mia Buhl Povlsen², Research manager, Docent Diana Schack Thoft³ and Ph.d Charlotte Brun Thorup³

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Title of the abstract: Skills4HL – what competences health and social care professionals need, to promote and improve health literacy when supporting people with (at risk of) dementia? (an Erasmus+ project)

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

Health literacy (HL) is defined by the World Health Organization as “*the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health*”. Poor HL has numerous negative consequences, ranging from negative health behavior to misuse of health care, conflicting with equal health and social justice.

Dementia is a growing public health problem, and its risk reduction is of high priority to promote better health. Persons at risk of dementia with low HL levels have been reported to have a significantly higher risk of dementia and a faster decline in cognitive function over time.

Purpose

To improve specific knowledge, skills and abilities for professionals in health and social care sectors to identify and promote HL.

Methods

Literature research combined with focus group interviews and individual interviews of experts from social and health care institutions in four Nordic countries. Content analysis was used to reveal themes from the interviews.

Findings

1) the need for HL communications skills among professionals; 2) the need for HL strategies for people at risk of dementia; 3) the need for easy access to information and service 4) the need to empower not only people at risk of dementia but also the informal carer.

Conclusion

The development of Scandinavian-relevant competence profiles targeting the above findings to ensure more sustainable

health and social justice for people at risk of dementia.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Master student Ingrid Kristin Moe¹, Ph.D. Therese Thornton Sjursen², Dentist/ Ph.D. Regina Skavhellen Aarvik³, Professor Torill Helene Tveito⁴ and Dentist/ Ph.D. Maren Lillehaug Agdal⁵

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Title of the abstract: Experience with user involvement among persons with experience of torture, abuse and/or dental phobia. A qualitative study

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: User involvement is increasingly practiced in Norwegian health services, but research on user involvement is sparse in the dental care sector. Persons with experience of torture, abuse and/or dental phobia may need special care during dental examination and treatment. Their opinions and reflections of being involved during dental care should be explored to further develop the dental services.

Purpose of the study: To explore how persons with experience of torture, abuse and/or dental phobia have perceived user involvement in dental care service, and how the dental care services can facilitate user involvement in quality improvement.

Method: We used a qualitative method with nine individual interviews. Thematic text analysis was used to analyze the data.

Findings: The participants had varied understandings of the concept user involvement. They had positive experiences with user involvement at an individual level during facilitated treatment, but their overall experience with user involvement in the dental care service was sparse. They had no experience with user involvement at a system level. They suggested that better information and communication may improve the dental care services. Being seen and listened to, as well as using more time during consultations, were emphasized as important to ensure user involvement in dental care.

Conclusion: The participants thought that increased user involvement in the dental care services may provide patients with positive dental experiences and prevent averseness to dental treatment. Accordingly, more focus on user involvement in dental health care seems necessary.

Keywords: User involvement, dental anxiety,

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Associate professor Hilde Laholt¹, Professor Anne Clancy², Associate professor Hilde Laholt³, Professor Anne Clancy⁴ and Associate professor Kinga Zdunek⁵

¹UiT The Arctic University of Norway, Roundtable organizer

²UiT The Arctic University of Norway, Roundtable contributor

³UiT, corresponding author

⁴UiT The Arctic University of Norway, co- author

⁵University of Lublin, co- author

Title of the abstract: The role of Norwegian public health nurses in promoting inclusive, sustainable health goals in schools

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Authors: Hilde Laholt (first author); Kinga Zdunek (second author); Anne Clancy (third author) .

Background

Norwegian public health nurses are directly involved in health education in schools and are in a unique position to promote health and environmentally sustainable lifestyles. This requires that public health nursing students are adequately trained for their role. There is a paucity of knowledge on how public health nurses are prepared for this task. National educational guidelines for public health nurses are very broad.

Purpose

This research is a part of a bilateral cooperation between Norway and Poland on promoting a green transition. The purpose of this sub-study is to explore how Norwegian public health nurses (PHNs) are prepared to promote health and well-being within a pro-environmental framework.

Methods

A summative content analysis of Norwegian national guidelines for public health nursing education and a discourse analysis of content on social sustainability in relevant curricular documents will be carried out.

Findings

The findings from the content analysis of the national guidelines and discourse analysis of curricular documents will result in attentiveness to PHN's role in promoting pupil's health within a pro-environmental focus.

Conclusions

This research will contribute in a small way towards achieving several sustainable development goals. It will focus on,

quality in education, health and well-being for pupils, reduce inequalities and strengthen the capacity for sustainable health outside the Nordic context.

Key words: well-being; school pupils, sustainability, public health nurses, health education

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Marja Hult¹

¹University of Eastern Finland, corresponding author

Title of the abstract: Towards sustainable and decent work in health and social care

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

Care work is becoming precarious employment (PE), characterized by low wages, poor working conditions and management, heavy workload and a high number of temporary contacts. Decent work is, for the most part, the opposite of PE; therefore, it is essential to recognize the features of PE in care work for future development.

Aims

The aim is to 1) describe changes in PE, psychosocial health and occupational well-being in a three-year follow-up and 2) examine how PE predicts psychosocial health and occupational well-being among care workers.

Methods

The first data was collected in autumn 2020 (T1) (n=7925) through trade unions and a workforce leasing company. In T1, those who volunteered for the follow-up left their e-mail (n=3176). The second follow-up (T2) was in spring 2022 (n=2100), and the third data collection (T3) is ongoing (1045 responses by 12.1.2023). The data will be analyzed with linear mixed-effects models.

Findings

Between T1 and T2, findings showed a decrease in PE and an increase in psychosocial health and occupational well-being, but both decreased for workers with high PE. It is expected that T3 shows similar results, and PE predicts poor psychosocial health and decreased occupational well-being.

Conclusion

PE is a crucial determinant of health and increases inequality among working-aged people. The proliferation of PE in the care sector is worrying and will not improve the industry's attractiveness.

Keywords care work, decent work, occupational well-being, precarious employment, psychosocial health

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Prof Anne Clancy¹, PhD Hilde Laholt² and PhD Kinga Zdunek³

¹UiT The Arctic University of Norway, corresponding author

²UiT The Arctic University of Norway, co- author

³Medical University of Lublin, co- author

Title of the abstract: Green transition starts with a green mind-set. Educating school nurses to promote a sustainable society through health education

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

Green transformation is an essential element of creating sustainable “well-being societies” which should be “committed to achieving equitable health now and for future generations without breaching ecological limits” (WHO, Geneva Charter for well-being, 2021). Crucial role is played by public health professionals who are promoting healthy and environmentally sustainable lifestyle. There are discrepancies in the educational approaches at university level between countries and between particular regions within a country.

Purpose

The purpose of the study is to compare Polish and Norwegian school nurses preparedness for practice to engage in creating sustainable well-being societies.

Methods

The analysis of curricular content for a sustainable environmental focus in Poland and Norway will be based on comparison of the higher education curricular documents such as study plans and module descriptors for school nurses in Poland and Norway for evidence of content on green transition.

Findings

Green transition requires appropriate support from the educational system. School nurses are those who are directly involved in public health education in schools at community level. They provide universal services and are in an unique position to promote a green transition.

Conclusions

The responsibility for creating pro-environmental attitudes lies with individuals and governments. Public health professionals play a vital role in promoting a healthy and environmentally sustainable lifestyle. They must be educated for this important role.

Key words: well-being society, sustainability, green transition, public health, health education

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Dr Dip Raj Thapa¹, Prof. Madhusudan Subedi², Professor Anette Ekström-Bergström³, Professor Kristina Areskoug Josefsson³ and Professor Alexandra Krettek⁴

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Title of the abstract: Qualitative evaluation and adaptation of the Sense of Coherence Scale (SOC-13) in Nepali

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

Stronger Sense of Coherence (SOC) associates with better health, quality of life, and coping strategies. We translated and applied the SOC-13 questionnaire for the first time in Nepal. In this process we identified difficulties in response patterns. The findings necessitated further evaluation of the Nepali version of the questionnaire.

Purpose of the study

To qualitatively evaluate the SOC-13 questionnaire in Nepali for cross-cultural adaptation.

Methods and Theory

Nineteen registered nurses from Nepal were asked to respond to the SOC-13 questionnaire in Nepalese, in order to receive their thoughts and understanding of SOC-13, inspired by the “think-aloud” method. Transcribed materials were analyzed using a deductive approach through qualitative content analysis.

Findings

Participants described the questionnaire content as general and non-specific but easy to complete. The overall comprehensiveness and response alternatives were perceived as good, even if there were some items and response alternatives that were difficult to understand according to the nurses. Nurses’ interpretation of the SOC items in the translated version of the SOC-13 questionnaire in Nepali matched the original English version. Items that were experienced as difficult in the Nepali language were modified to increase their comprehensiveness by substituting with easier language.

Conclusion

The current revised version of the SOC-13 questionnaire in Nepali is valid and useful to explore individuals’ overall life orientation and their abilities to deal with and cope with various life events in the Nepalese context.

Keywords

Health resources, qualitative validation, resources, salutogenesis, sense of coherence

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Professor/Dr Michelle Baybutt¹ and Dr Alan Farrier²

¹University of Central Lancashire, corresponding author

²University of Central Lancashire, co- author

Title of the abstract: Tools for growing health in prison settings in England

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: Globally over 11 million people are estimated to be in prison. Prisoners tend to come from marginalised, socially disadvantaged sections of society, exhibiting disproportionately high incidences of poor health linked to social exclusion and multiple complex needs exacerbated by mental illness, substance misuse and histories of abuse. Prisons are complex, challenging environments, overcrowded and (temporarily) home to an ageing population. Prisoners generally return to the community taking with them their health and social care issues.

Purpose: Markedly understudied and under-represented in policy and practice, prison-based gardening can impact positively on poor health. Greener on the Outside for Prisons (GOOP) aims to reduce inequalities by embedding sustainable interventions using gardening and nature-connectedness to improve health and wellbeing outcomes for prisoners utilising a settings approach and embraces the idea of salutogenesis.

Methods: GOOP has combined a mixed-methods evaluation using (qualitative) interviews with staff and prisoners and (quantitative) surveys with prisoners to capture changes in mental wellbeing and nature connectedness with embedding prison-level organisational monitoring and observational activities. **Findings** demonstrate a relative low-cost investment engages prisoners, their families, prison staff and aligned agencies with nature-based solutions that impact positively on mental wellbeing, relationships, prison stability, health literacy and self-worth, confidence and esteem.

This presentation provides a critical discussion of delivering complex systems interventions that utilise a settings approach focused on recognising ‘what creates health’ in austere prison environments and thus providing a positive ripple effect into the wider community.

Keywords Gardening, Prison, Prisoners, Settings Approach, Wellbeing

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Associate Professor Sami Kokko¹ and Professor/Dr Michelle Baybutt²

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Title of the abstract:

Type of presentation: Roundtable

Theme: Social sustainability in relation to equal health and social justice

Submission

The healthy settings approach has been evolving for over thirty years amidst different interpretations and ideological understandings of what the approach is and what it means in practice. The emphasis has tended to focus on traditional institutional settings such as schools, cities and hospitals, with new/contemporary and often non-traditional ones being less recognized. The implementation of the settings-based health promotion has varied significantly (from setting to setting and region to region) with some working with comprehensive and dynamic aims and means, while others have been limited and static—the latter representing more “health promotion *in* settings,” rather than being more comprehensive and holistic settings-based health promotion.

The publication of the Handbook on Settings-Based Health Promotion (2022) built on the previous influential work by Green et al (2000) and sought to provide some clarity on these complex issues. The handbook explores how the settings approach to health promotion strives for change in the structure and ethos of the setting—detailing how changes and developments in people’s health and health behaviour are easier to achieve if health promoters focus on the environments (settings) where people live their lives rather than on the individuals themselves.

This roundtable will explore participants understandings of the settings approach, garner international examples of practice and focus on generating new consensus of contemporary settings-based practice, especially to the Nordic perspective.

These interpretations will be used to develop future symposia and learning events to engage global collaborators with settings-based health promotion.

Keywords Settings; settings approach; ecological health

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Professor/Dr Michelle Baybutt¹ and Dr Neil Wilson²

¹University of Central Lancashire, corresponding author

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Title of the abstract: Dragons in the Hills: Impacts of a community-based citizen science conservation programme in Northern Ireland on health, wellbeing, and nature connectedness

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Empirical research demonstrates that connection to nature contributes to improved health and wellbeing outcomes and pro-environmental and sustainable behaviours. Funded by the National Lottery Heritage Fund, ‘Dragons in the Hills’ is a programme of citizen science education, training and workshop events by The Amphibian and Reptile Groups of the UK (ARG), in partnership with Newry, Mourne and Down District Council and the Herpetological Society of Ireland in communities living in Northern Ireland. The primary aim of the programme is to increase local awareness and understanding of two of Northern Ireland’s native priority amphibian and reptile species – common lizard and smooth newt. The project seeks to encourage diverse local communities to reconnect with their local biodiversity and shared natural heritage, whilst improving the conservation status and ecological resilience of these animals and the landscape they inhabit. The programme is evaluated by the Healthy and Sustainable Settings Unit at the University of Central Lancashire, England.

Online surveys conducted in four schools and qualitative interviews elicited impacts of the programme on health, wellbeing and nature connection with stakeholders: school children, community/ conservation groups, landowners and volunteers.

Survey findings and a thematic analysis of qualitative data are forthcoming.

The presentation discusses the impact of the programme on individual and community health, heritage and local ecology, whilst reflecting on settings-based health promotion for people, place and planet.

Keywords: ecology, community health, citizen science, sustainability

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Dr Michelle Baybutt¹ and Dr Alan Farrier²

¹University of Central Lancashire, co- author

²University of Central Lancashire, corresponding author

Title of the abstract: Therapeutic horticulture in UK Prisons post-pandemic: health and wellbeing implications

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

The COVID-19 pandemic saw restrictions implemented across UK society. This included prisons and impacted on many activities within, including horticulture and gardening. Post-pandemic, prisons are beginning to resume such activities, but during the pandemic there has been a great deal of change.

Purpose

As part of a His Majesties Prisons and Probation-funded evaluation into the Greener on the Outside of Prisons (GOOP) initiative, we examine how prisons are getting 'back to normal' and what horticulture means for the health and wellbeing of prisoners and prison staff post-pandemic.

Method

The main methods used are qualitative: focus groups and interviews with prisoners and key staff in prisons across the UK were recorded. Transcripts were subject to a thematic analysis using a realist evaluation framework, asking the questions “What works, for whom, in what circumstances and why?” (Pawson and Tilley, 1997). Quantitative health and wellbeing monitoring was also gathered.

Findings

The analysis has highlighted that whilst UK prisons are facing challenges post-pandemic, there are many elements of best practice and adaptation of the GOOP programme to the individual circumstances and contexts of individual prisons which have impacted positively on the health and wellbeing of both prisoners and staff.

Conclusion

UK prisons remain under-utilised as sources of health and wellbeing promotion. First-hand accounts from those on the front line of therapeutic horticulture demonstrate the extent of the health and wellbeing benefits of participation in such initiatives.

Keywords: Prisons, health, wellbeing, horticulture, pandemic

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Prof Mark Dooris¹ and Dr Alan Farrier²

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Title of the abstract: Contrasting approaches to nutrition-based learning in women's prisons

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

This presentation reports on an evaluation of an holistic food-based programme titled 'Food Matters Inside & Out' which ran at UK women's prisons HMP Send and HMP Styal from 2021 to 2022. Food Matters is a charity organisation, whose Inside & Out programme was designed to aid informed balanced food choices of offenders serving custodial or community sentences, through multiple means including participatory healthy eating courses, cooking workshops and distance learning. For this study, participants included three contrasting cohorts of women at HMP Send and women at HMP Styal, as well as Food Matters staff and key prisons staff who helped facilitate the programme within the prisons. The main research methods are qualitative: focus groups with prisoners and key staff involved in the project were recorded. Verbatim transcripts were subject to a thematic analysis.

The main issues arising from the study are: the extent to which food can be used as one of a range of tools within a prison setting to foster a rehabilitative culture, which has positive effects on the physical and mental health of participants; how nutrition programmes such as this can aid prisoners to make better food choices within the constrictions of the prison system; how can food programmes in prison better link with the prison system as a whole; how technological developments within prison be used to maximise the impact of food-based programmes and enable them to be manageable and sustainable.

Keywords: Prisons, food, nutrition, health, women.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Senior researcher Katja Ilmarinen¹, Leading expert Anna-Mari Aalto² and Development Director Anu Muuri²

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Title of the abstract: Unmet need in health care and social welfare services in Finland

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

Access to health care and social welfare services is a key element of promoting health and wellbeing. Universal access to services is an important policy goal in Finland as well as in many other European countries. It is related to health equity and is an element of social sustainability.

Purpose of the study and methods

More information is needed on people's experience of receiving services and service barriers. A nationally representative FinSote -survey in 2018 and 2020 was used to find out a) what is the prevalence of unmet need in health care and social welfare services among Finnish population, b) how socio-demographic variables are associated with unmet needs, c) what is the prevalence of service access barriers (difficult opening hours, place of care hard to reach, high user fees) and d) how did Covid-19 affect unmet needs. Data were examined with logistic regression models using SPSS.

Findings and conclusion

A considerable share of Finnish population faces unmet service needs and barriers accessing services. Some groups, especially those worse off, are vulnerable to forgo care in contrast to the principles of universality, health promotion and health equity. Problems related to service accessibility should be solved in the future to achieve principles of universality and social sustainability. We suggest that access to services should be more discussed in the context of social sustainability given its central role in promoting health equity.

Keywords

access to services, equity, health care system, social sustainability, unmet needs

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

T.D Cecilia Melder¹

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Title of the abstract: Who cares! The relevance of an Existential Health perspective for sustainable Health Literacy.

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

Culture and the existential dimension have proven to be important for health conditions and can contribute to efficient health literacy. Along with social health determinants, a person's cultural context and meaning-making system e.g., Religious, Spiritual, Secular or Personal Beliefs [SRPB] are crucial for efficient health promotion. Cultural and existential aspects can facilitate behavioural change, and empowerment opportunities or be barriers to health literacy. This knowledge is important in countries like the Nordic, with increasing individualisation and secularization and multi-cultural and multi-religious contexts.

Purpose of the study

Present a model, to enhance health literacy in various health promotions, that includes existential and cultural aspects, at three crucial stages of a promotion.

Theory and methods

The theoretical framework emerges from 1) Cultural and Existential public health; 2) Literacy and Health promotion, and 3) Education and Human Resource Development (HRD). The model for intervention is based on mixed-method studies. Pilot-tested with questionnaire before-after and interviews in e.g. self-help groups and suicide prevention.

Findings

Systematic inclusion of cultural and existential aspects contributes to efficient health literacy and supports the promotion of both existential health and overall health. This non-confessional promotion can improve literacy in a secular though multi-cultural and multi-religious context.

Conclusion

Systematic inclusion of cultural and existential aspects in health promotion can enhance health literacy and support sustainability, health, and well-being. Further research is needed: to validate this promotion in new and larger settings and to increase the knowledge of existential public health in secular contexts.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Student Rikke Hjort¹

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Title of the abstract: Equality and Equity in Theory and Practice. Combining a Scoping Review with Practitioners' insights into Interventions Promoting Access to Leisure Time Physical Activity for Children and Youth

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: Promoting access to leisure time physical activity (LTPA) opportunities for children and youth is crucial to promote public health. Yet, ensuring sustainable interventions in this field requires theoretically informed approaches to guide processes of development, implementation and evaluation.

Purpose: To examine how the theoretical distinction between equality and equity may shape LTPA interventions and combine such insight with practical experience with promoting LTPA access for children and youth.

Methods: The paper is based in two sources of empirical material. First, a literature review of intervention studies and, second, a series of workshops with project managers in LTPA interventions. For the review a pre-piloted search strategy was used to search three electronic databases for studies of interventions aiming to promote access to LTPA in organized or community sport for children and youth. Following a screening process, 27 publications representing 25 unique interventions were included.

Findings: Through examination of the aim and target group of each intervention, they emerged in distinct categories in accordance with their (implicit) understandings of equality and equity. The review identified facilitating factors to pursue and barriers to bypass for the LTPA programs to become sustainable. Complex partnerships and communication were significant barriers in interventions based in equality. In the workshops with project managers this emerged as a significant barrier across interventions of both equity and equality.

Conclusion: To ensure sustainable interventions, project managers need tools to support communication on differing interests in interventions with complex partnerships.

Keywords: Youth; health; equity; equality; sport

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

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Title of the abstract: School Nurses' Experience of Communicating Growth Data and Weight Development to Parents of Children 8 and 10 Years of Age.

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Introduction: The aim of the study is to describe school nurses' experience of communicating growth data and weight development to parents of school children ages 8 and 10 years.

Method: The design of the study is a descriptive, qualitative design with purposive and snowball sampling. Sixteen interviews with school nurses were conducted and analysed with qualitative content analysis.

Result: The analysis resulted in three main categories including subcategories. In *Challenges in the professional role*, the school nurses expressed a lack of knowledge, skills and tools in communication, described a perception of parental responsibility and stated using several different approaches in communicating growth data and weight development to parents. In *Sustainable communication with parents*, the school nurses described the value of creating a dialogue, a supportive approach to the parents, and the building of a relation between them and the parents as essential. In *Barriers in communicating the child's weight*, the school nurses described the experience of stigma concerning the subject of overweight and obesity, increased concern when they detected underweight as well as an ambivalence towards measuring weight.

Conclusion: The study highlights an educational challenge concerning the need for training, skills, and strategies for communication with parents. A variety of ways in school nurses' communication with parents were identified in the present study and this shows an inconsistency in how School health services was offered and a need for the development of evidence-based procedures for communicating growth data and weight development to parents.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Ms. Julia Kontak¹, Ms. Caitlyn Macrae², Dr. Camille Hancock Friesen³ and Dr. Sara Kirk⁴

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Title of the abstract: The process of student engagement in school health promotion: A scoping review

Type of presentation: Oral

Theme: Social sustainability in relation to equal health and social justice

Submission

Introduction: Schools are an essential setting to influence the health and well-being of students. Health Promoting Schools (HPS) is a whole-school approach that strengthens and builds a safe and healthy school environment for students to learn and develop. Supporting the UN Convention on the Rights of the Child, a core component of HPS is meaningful student engagement. Despite promising outcomes from student participation in HPS, there is less known on the process. This scoping review mapped the components of the student engagement process within school health promotion.

Methods: We followed guidelines employed by the Joanna Briggs Institute and Arksey and O'Malley's framework. The Participant, Concept and Context (PCC) mnemonic was used to develop eligibility criteria. Databases searched included: CINAHL, ERIC, MEDLINE, Scopus, ProQuest Dissertations & Theses Global databases, and Google Scholar. Websites and sources identified by experts were also reviewed. Two reviewers screened the title, abstract and full text of the sourced articles.

Findings: We included 46 primary sources that described the process of youth engagement in school health promotion. Most sources were primary studies ($n = 32$) with qualitative methods applied ($n = 26$), and the majority being from European countries ($n = 25$). We are in the process of charting and conducting qualitative analysis to understand different forms of activities youth are involved in, as well as the initiators and barriers for engagement.

Conclusions: This synthesis will help to further understand what strategies, and form of participation are used to engage students in school health promotion.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Anna Nivestam¹, PhD Nina Simonsen², RN, MA, MPH Johanne Lind³, PhD student Anne Seneca Terkelsen⁴ and Professor Anne Clancy⁵

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Title of the abstract: Health promotion in ageing research in a Nordic context - A scoping review of doctoral theses

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background: This scoping review is conducted by the ‘healthy ageing’ research group which is part of the Nordic Health Promotion Research Network.

Aim: The overall aim is to explore how ageing research under the label ‘health promotion’ is undertaken in a Nordic context.

Method: A scoping review method is used where different data bases in Denmark, Finland, Norway, and Sweden were searched for theses published between the years 2011 and 2021.

Findings: The preliminary results show that both qualitative and quantitative methods were used. Data was collected mainly from healthy older-home dwelling persons. Theoretical perspectives varied and were sometimes absent. This also applied to definitions of health promotion. The number of theses published differed between the Nordic countries.

Conclusion: To conclude, doctoral theses within the field of healthy ageing research must be more specific about the meaning and use of the concept of Health Promotion. The use of a health promotive theoretical perspectives could help develop a solid theoretical foundation that could guide healthy ageing research.

Keywords: Doctoral thesis, Health promotion, Healthy ageing, Older people

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Professor Camilla Ihlebæk¹, Emma C. A. Nordbø² and Ragnhild Ånestad³

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³Norwegian University of Life Sciences

Title of the abstract:

Type of presentation: Roundtable

Theme: Social sustainability in relation to equal health and social justice

Submission

Socially sustainable places is described as places where people want to live and work, now and in the future. However, most research literature on social sustainability is conducted within the fields of planning, urban form, architecture etc. with limited knowledge on human needs, health, and quality of life. To understand and create socially sustainable places, both physical and social factors of a community need to be considered. Physical factors encompass place-related factors such as infrastructure, the built environment, and green space, whereas social capital and equity are examples of social factors. Still, the interplay between the physical and social environment to promote socially sustainable places is less established and understood within the social sustainability research literature. In this session, current research from the Nordic context on social sustainability covering both physical and social factors and their role for health and well-being will be discussed. Ongoing Nordic collaborative research performing place-based analyses of Norwegian inhabitants' use of the neighborhood spatial context for social purposes will be presented. Also, a large Norwegian population study investigating how physical and social factors are associated with social sustainability will be presented. The participants will be invited to discuss how to integrate knowledge about physical place and social dimensions in research and practice to create socially sustainable places, and how spatial planning can contribute to promote social interactions and social capital across socioeconomic groups. Furthermore, the participants will be invited to discuss how knowledge from the field of health promotion could enhance our understanding of social sustainability.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Forinder U, Fosse E, Haglund B, Johannessen A, Kokko S, Lindgren E-C, Liveng A, Ringsberg KC, Tillgren P, Thualagant N, and Torp S.¹

¹Forum for Nordic Health Promotion Research Network www.nhprn.com

Title of the abstract: The Nordic Health Promotion Research Network (NHPRN) - developing theory and research from a Nordic perspective

Type of presentation: Poster

Theme: Social sustainability in relation to equal health and social justice

Submission

Background

Since the Ottawa Charter (1986), the Nordic countries have been in the forefront in developing health promotion (HP) theory, research, policy and practice. In 2007, the NHPRN was established in cooperation with the Nordic School of Public Health. It is a network working with research on HP from a Nordic perspective. Since 1996, ten Nordic HP research conferences have been arranged, of which the five most recent by NHPRN.

Aims

The aims of the NHPRN are to develop the theoretical understanding of HP, to promote Nordic research collaboration, and to organize the Nordic Health Promotion Research Conferences.

Organization

It is an interdisciplinary network with junior and senior researchers from the Nordic countries who meet biannually at WHO's premises in Copenhagen. The network is organized in working groups engaged in topics central for HP research and practice: Children and young people in HP settings; Covid-19 from a HP perspective; Empowerment; Equity in health; Healthy ageing; Health literacy; Review of Nordic PhD theses.

In the meetings, lectures on state-of-the art issues are given by leading researchers and policy makers. Participants engage in theoretical discussions in plenum and working groups. Collaboration finds also place at the meetings in Copenhagen, through e-mail correspondence, and online meetings.

Outcomes of the network

The network has contributed to the scientific discussion by publishing journal supplements from the latest Nordic HP conferences, scientific and debate articles, and a book.

Welcome to join the network

The network is open for HP researchers and PhD students working with HP or doing HP research in the Nordic countries. The NHPRN is a working network, and it is expected that participants take part in the work and the meetings. For more information see the website www.nhprn.com.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Associate Professor Grete Eide Rønningen¹

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Title of the abstract: Health Promoting Synchronous Online Classrooms (HPSOC).

Type of presentation: Poster

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: In the wake of the pandemic, teachers and students at universities were abruptly relegated to synchronous online classrooms. It is relevant to Health Promotion to explore how such classrooms may become healthy and supportive learning environments.

Purpose: To explore master's degree students in health promotion's descriptions of HPSOC, and their input on how this may be facilitated.

Methods: A total of 28 students from two different student groups participated by choice in this qualitative study. All of them had been participants in synchronous online ZOOM courses last year. The data was collected during two online lessons and with an alternation between individual, group, and plenary reflections. The data was analyzed according to principles of content analysis.

Findings: The students described HPSOC as predictable, democratic and supportive learning environment, with clear frameworks and expectations, where the educator is distinct and facilitates active participating and learning. This is exemplified by sufficient technological skills, clear rules for the use of cameras and microphones, short sessions, dialogue and group reflections. HPSOC was also described as a supportive culture for collaboration and learning. Particular emphasis was placed on HPSOC as a contribution to universal facilitation, lifelong learning and to promote social equality by enabling more people to attend higher education.

Conclusion: HPSOC is described as a predictable, democratic and supportive learning environment, and may also allow for universal solutions and lifelong learning. Students, educators and the organization have a shared responsibility to create HPSOC.

Keywords Online classrooms, Healthy learning environment

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

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Title of the abstract: Developers' beliefs and values – a discursive analysis of e-health technology in home healthcare

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background

The implementation of e-health is transforming healthcare. The acknowledged benefits of digitalization are quality improvement, patient empowerment, and increased efficiency. The mobility of e-health makes it especially suitable for home healthcare. eMar is a common e-health technology used in Swedish home healthcare. Decisions about technology design are governed by developers' perceptions of intended users. These perceptions can be identified in the description and promotion of a specific product.

Purpose

The purpose of the presentation is to contribute to increased knowledge about the values entailed in a specific eMar used in Swedish home healthcare, and furthermore to discuss how these values conform with existing national missions such as people-centered care.

Method

Information consisting of sales materials about a specific eMar used in several Swedish municipalities has been analyzed through critical discourse analysis to visualize values embedded in the eMar.

Findings

Preliminary results show that the provider of the specific eMar describes care in terms borrowed from the industrial sector, such as shift changes and production of care. Good and safe care is defined as the right person receiving the right medicine at the right time. Furthermore, the app is advertised as a tool for monitoring assuming that the performance of tasks can be influenced through the remote control of the employee. The eMar is described as representing new and modern technologies that are expected to raise the status of healthcare professions and facilitate the recruitment of employees.

Keywords: e-health, eMar, values, discourse

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Ms Dayana Shakya¹, Ms Karin Flodin², Dr Dip Raj Thapa², Mr Victor Bankler², Ms Hua Bai², Mr Ulf Wilhelmsson², Professor Madhusudan Subedi³, Professor Nawi Ng⁴, Dr Natalia Oli⁵, Professor Abhinav Vaidya⁵, Professor Per Backlund² and Professor Alexandra Krettek²

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Title of the abstract: Digital games for sustainable cardiovascular health promotion: a way forward in Nepalese adolescents

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: Digital interventions are promising tools to reach adolescents for cardiovascular health promotion.

Purpose: We assessed adolescents' knowledge, attitude and practice (KAP) regarding cardiovascular disease (CVD), explored opportunities for a digital intervention, and developed a serious game prototype.

Methods: In total, 649 adolescents grades 8-10 were surveyed in a semi-urban community of Nepal regarding KAP of CVD and digital pre-requisites. Eight focus group discussions (FGDs) separately among boys and girls (n=76) provided deeper understanding of CVD perceptions.

Findings: Median (IQR) percent scores for KAP were 70.6 (10.59), 78.5 (8.46) and 69.5 (11.59), respectively. Good KAP (median percent scores >75%) was found in 27.7%, 69% and 27.8% adolescents, respectively. Knowledge ($p<0.001$), attitude ($p=0.025$) and practice ($p<0.001$) was higher among adolescents in private than government schools. Girls had better attitude than boys (<0.001). Furthermore, 98% adolescents had smartphone access and 91.6% had internet access.

In preliminary FGD analyses adolescents mentioned physical, nutritional, mental, environmental and hereditary causes for CVD. Financial and work-related burdens, plus psychological and family-related issues were perceived to influence CVD severity. Junk food and physical inactivity were health barriers. Adolescents perceived serious games as beneficial and easy to use. Challenging game and attractive visuals were thought to stimulate game use.

Conclusion: With good attitude and excellent digital prerequisites, we conclude that serious games can help fill the existing gaps in knowledge and practice in Nepal. A prototype of "Happy Heart" is being pilot-tested among adolescents as a promising way for digital cardiovascular health promotion.

Keywords: Cardiovascular health, cardiovascular health literacy, adolescents, lifestyle, gaming

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Student Britta Teleman¹

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Title of the abstract: Norm-transformation of Child Participation in Health and Welfare Services through a Digital Communication Support Tool

Type of presentation: Poster

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background

There is a gap between ambitions regarding child participation in care contexts and actual practices, partly due to a lack of supportive tools. Children's influence is determined by structures, technology, and norms within these socio-technical settings but there is a knowledge gap on how novel digital tools might counteract excluding norms and empower children to make their voices heard.

Purpose of the Study

Based on interviews with professionals this study aims to understand how digital communication support tools influence norm-transformation related to child participation in care contexts.

Methods

The study had an explorative design with a Constructivist Grounded Theory methodology.

Professionals (n=11) in healthcare and social services (7 professions represented) that had tested a digital communication support tool with children in their practice were interviewed about child participation and their experiences of introducing the support tool.

Findings

Data patterns indicate that when the tool was added into the context, dynamics changed. The professionals experienced that the tool both had an influence on the participation of the child and changed their own perspectives on participation and their own role in relation to child participation. The perceived gains for children from using the tool were related to access and autonomy.

Conclusion

The study adds knowledge on how digital communication support tools may influence child participation norms and professional's perspectives on participation in care contexts.

Keywords

Participation, Children, Care, Norm critique, ANT

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

phd-student Lisa Hultman¹, Phd Caroline Eklund², Professor Anne Söderlund², Professor Maria Lindén², Phd, associated professor in psychology Magnus Elfström² and Professor Petra von Heideken Wågert²

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Title of the abstract: GAUdiS- Reduced sedentary time through joyful activities – Development of a digital program to reduce sedentary time.

Type of presentation: Poster

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: Sedentary time increases with age and can lead to decreased health. The time for retirement can be beneficial for health promotion interventions to reduce sedentary time. Such intervention could preferably be delivered as e-health.

Purpose of the study: To explore preferred and required features for a digital program to reduce sedentary time in people in the transition from working life to retirement and to explore agreement with established behaviour change techniques (BCTs).

Methods: Participatory Design (PD) was used as a methodological approach to include the end users. Nine participants, including six people in transition from working life to retirement, a web-developer, and two researchers, participated in three workshops. Thematic analysis was used to analyse workshop data.

Tentative findings: Participants wanted a basic, easy to use program, which could be individualized according to interest and joys and accessed from both computers and portable devices. The most important features to reduce sedentary time were features to find joyful activities, for goal setting and for providing information regarding sedentary time in general. A digital prototype of a program to reduce sedentary time was developed during the workshops. The digital prototype included sixteen different established BCTs.

Tentative conclusion: The Integrated behaviour change model can be used as a model for how the digital prototype could reduce sedentary time.

Keywords: sedentary time, transition to retirement, joy, affect, participatory design

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Dr Ebba Sundin¹ and Dr Malin Hallén²

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Title of the abstract: The representation of COVID-19 App Trackers in Nordic news media

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: Since the COVID-19 pandemic became a reality in mid-March 2020, intensive work was carried out to develop smartphone applications to reduce the risk of spreading the disease. Scientific discoveries, with political debate and media representations, were continuously and in real-time shaping public perceptions of digital contact tracing apps (Matt, 2021). **The purpose** was to study four Nordic countries' ambitions and use of digital apps for tracking COVID-19, and what themes connected to digital health services were visible in the media context. We were particularly interested in the issues related to digital health structures, ethics, privacy, and integrity and how they were addressed in the media coverage in the Nordic region. **Methods:** A qualitative text analysis was carried out for the media content in this study. The data included four Nordic countries: Sweden, Norway, Denmark, and Finland. The sample included the earliest article dated April 8, 2020 to August 4, 2021. In total, 320 items from newspapers, TV, radio, and web were collected. **Findings:** The results show a variety of themes highlighted in the news about the different apps used in the Nordic countries. There are both similarities and differences, some themes are shared such as concerns raised about personal integrity and privacy when collecting and sharing data in the apps. **The conclusion** is that the role of the media is central in critically reviewing and articulating the challenges associated with digital tracking apps that authorities need to address in order to build social trust.

Keywords: COVID-19, apps, Nordic, media analysis, integrity

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Assistant professor Julie Dalgaard Guldager¹, Ph.d. student Robert Hrynyschyn², M. Sc. Public Health Satayesh Lavasani Kjær³, Engagement Director Timo Dietrich⁴, Associate professor Gunver Majgaard³ and Associate professor Christiane Stock⁵

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Title of the abstract: How do Danish adolescents respond to a virtual reality simulation for alcohol prevention?

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: *VR FestLab* is a virtual reality application developed for Danish adolescents to increase their competences to resist social pressures to drink alcohol. The simulation game features a party setting where adolescents can "steer" their own party experience and can make decisions when offered alcohol.

Purpose of the study: Due to the novelty of the approach, many aspects of virtual simulations for alcohol prevention are still unexplored, such as the user satisfaction and engagement. Therefore, we studied the user experience, game satisfaction, and engagement of adolescent users of *VR FestLab*.

Methods: This cross-sectional study involved 181 students (aged 15-18 years) in seven schools in Denmark who responded to the short user experience questionnaire and a game satisfaction and engagement questionnaire after having explored *VR FestLab* for 15 min.

Findings: Two thirds of the adolescents liked the VR experience and all user experience factors were rated positively or neutral. We found no association of the user experience score nor a score for game satisfaction and engagement with sex, age, perceived family affluence, school performance, alcohol consumption and attitudes or mental health.

Conclusion: Overall, positive user experiences and game satisfaction of *VR FestLab* were observed without link to student characteristics. Virtual simulations offer new ways for developing drinking refusal skills that are attractive and acceptable for adolescent users.

Keywords: Virtual reality, simulation game, alcohol prevention, adolescents

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Associate professor Anne Liveng¹

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Title of the abstract: When do health care apps potentially lead to empowerment? The centrality of eHealth literacy in the meeting between patient and digital technology.

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background

eHealth is considered a solution to healthcare challenges. The EU Interreg project NorDigHealth tested health technologies in clinical and qualitative studies.

Purpose of the study

The purpose of the analysis was to explore conditions for patient empowerment using apps in health care settings.

Methods and theory

The eHealth literacy framework was applied on qualitative data from the testing of two apps. One for measurement of progression in age-related macular degeneration (AMD) in older patients and one for instructing pregnant women at risk for preeclampsia. The material consisted of 18 interviews with and observations of AMD-patients and 13 interviews with pregnant women. The concepts of eHealth literacy and empowerment was used.

Findings

Significant differences in eHealth literacy existed. Older patients had challenges in using the apps, partly due to low eHealth literacy, partly due to multimorbidity. They needed intensive instructions from the health professional at the clinic. Pregnant women used the app immediately and independently at home after instruction at the clinic. They had high eHealth literacy and found that the app gave a sense of control over their health.

Conclusion

eHealth literacy is crucial in implementation of apps. The e-health literacy framework provided an analytical tool for gaining insight into challenges and advantages for specific groups of patients when using apps. Health technologies in the form of apps hold potentials in relation to some groups of patients, while they for others lead to disempowerment.

Keywords

eHealth, patients, empowerment

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

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Title of the abstract: IDEAHL - Best practices for Digital Health Literacy interventions, a review study. (The "IDEAHL" project has received funding from Horizon Europe Framework Program under GA 101057477)

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background. Improving Digital Empowerment for Active Healthy Living (IDEAHL) is a HorizonEurope project focusing on developing and testing digital health literacy (dHL) interventions, through the co-creation of a comprehensive EU dHL Strategy. The strategy aims to empower EU citizens in using digital tools to improve health and well-being. The initial phase comprised a literature review of health literacy (HL) and dHL interventions in EU and beyond.

Purpose. Reviewing key factors, drivers, barriers, and best practice in HL and dHL interventions at policy-organizational- group- and individual level.

Method. Ten electronic databases became the base for a literature search supplemented with grey literature in a participatory scoping review process among IDEAHL's 14 partners (10 EU Member States). Covidence was used for managing references based on inclusion criteria that embrace key factors, (drivers, barriers, effectiveness, and best practice at different levels) on HL and dHL interventions.

Findings. The review revealed that there were 5 intervention studies at political level, 21 at organizational level, 15 at group level and 31 at the individual level. Key factors in the identified interventions were training of healthcare professionals, patients, caregivers, or others in addition to tailored communicative initiatives. Among interventions targeting adolescents, the dominant outcome was mental HL, and only few interventions addressed dHL.

Conclusion. Among interventions targeting HL and dHL great diversity were found, still this review provides an overview of core tendencies. More research is needed to determine best practices of improving dHL.

Key Words: Digital Health Literacy, HorizonEurope, Scoping review

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Phd Emilie Steerling¹, Postdoctoral position Elin Siira², Professor Per Nilsen³, Professor Petra Svedberg² and Professor Jens Nygren²

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Title of the abstract: Implementing AI in healthcare - the relevance of trust: A scoping review.

Type of presentation: Poster

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background

AI systems have the potential to transform health care and solve many of its current challenges, e.g., by reducing costs, improving efficiency and quality. Despite the potential benefits, the translation into healthcare is often slow and challenging. Trust is a key concept in health care and recognized as important for an innovation's uptake. There is a general lack of empirical studies in AI implementation in health care, and trust is an important aspect of such implementation processes that needs to be investigated in relation to AI implementation to be able to develop effective strategies.

Purpose of the study

The aim was to explore the scientific literature with regard to how trust in AI implementation in health care is conceptualized and what influences trust in AI implementation in health care.

Methods

A scoping review was conducted based on a thematic analysis with an inductive approach.

Findings

Eight studies were included, and the inductive coding yielded three themes, *individual characteristics*, *AI characteristics*, and *contextual characteristics*, which were related to trust. Most empirical studies were cross-sectional, and few studies had a qualitative approach.

Conclusion

Further empirical research on trust in AI implementation in health care is needed that have a holistic view on trust and that look beyond individual characteristics and AI characteristics to be able to develop effective strategies to guide the implementation of AI into health care.

Keywords

trust, artificial intelligence, implementation, health care, scoping review

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Lena Petersson¹, Professor Petra Svedberg², Professor Jens Nygren² and PhD Ingrid Larsson²

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Title of the abstract: Developing an ethical model for guidance the implementation of AI in healthcare

Type of presentation: Poster

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: Artificial intelligence (AI) is predicted to improve healthcare, increase efficiency, save time and resources. However, research shows an urgent need to develop guidance to ensure that the use of AI in healthcare is ethically acceptable.

Purpose: To develop an ethical model to support AI implementation in practice.

Methods: The study used an explorative and empirically driven qualitative design. Individual interviews were conducted with 18 healthcare professionals from two emergency departments in Sweden where the county council has developed an AI application to predict the risk for unexpected mortality within 30 days after visiting an emergency department. A deductive analysis based on ethical theory i.e virtue, deontology and consequentialism, was used.

Findings: The developed model shows how the healthcare professionals use ethical reasoning in relation to the implementation of AI. In relation to virtue ethics, moral considerations in relation to the use of AI were mentioned. In relation to deontology, considerations were mentioned on actions performed based on information acquired from the technology and adherence to specific duties, roles and responsibilities. In relation to consequentialism, considerations about how to provide better resources more rapidly in an equal way and how the technology can be adjusted to each patients' individual needs and preferences in order to support decisions, self-determination, and actions that are in the patients best interest.

Conclusions: Our findings provide an ethical model demonstrating the relevance of virtue, deontology and consequentialism when AI are to be implemented in practice.

Keywords: Artificial intelligence, ethic, healthcare professionals, implementation, qualitative method.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Lena Petersson¹, Professor Petra Svedberg², Professor Jens Nygren² and PhD Ingrid Larsson²

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Title of the abstract: Expected values of implementing AI in healthcare – A Qualitative study

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: Artificial intelligence (AI) is often presented as a technology that will change healthcare and be useful in clinical work in disease prediction, diagnosis, and precision health. More knowledge is needed regarding the value of AI applications based on the perspectives of healthcare leaders to understand their roles as gatekeepers and facilitators for successful implementation.

The purpose of the study: To explore healthcare leaders' perceptions of the value of AI applications in clinical work.

Methods: The study had an explorative qualitative approach. Individual interviews were conducted from October 2020 to May 2021 with 26 healthcare leaders with different experiences in implementing AI in clinical practice in a county council in Sweden. Inductive qualitative content analysis was used, and eight sub-categories and three categories emerged.

Findings: The value of AI applications in clinical care was described in terms of expected benefits for patients as tools supporting person-centered information and individualized self-management. The expected benefits for healthcare professionals included decision-support in diagnostics, risk assessments, and treatment recommendations but also providing warning systems and second opinions in clinical work. On an organizational level, the benefits comprised patient safety and decision-support in prioritizing healthcare resources in and across healthcare organizations.

Conclusions: The healthcare leaders perceived that AI applications would provide value on different levels in healthcare for patients, healthcare professionals, and organizations. Across these levels, the implementation of AI can support person-centeredness, patient self-management, quality of care, patient safety, and resource optimization.

Keywords: AI applications, healthcare leaders, qualitative study, value

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

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Title of the abstract: Implementing a digital Healthy Setting approach: Interim results of a developmental evaluation of a digital health promotion platform

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

E-health structures and practices are widely integrated into society and people's everyday life, also in health promotion. Participation and user-centricity are recommended to ensure sustainable, successful solutions and improvement, value, and empowerment of users. This is associated with opportunities and challenges to be considered during development.

We present interim results of a developmental evaluation of the creation and implementation of a digital platform for online health promotion and preventive services (*DIFA*, funded by PKV Verband e.V.), enabling a digital Healthy Setting approach.

After an analysis of project documents and interviews with representatives of the strategic level (funding body), operational level (project management, platform development) and target group (pilot partners from different settings), we conducted a SWOT analysis for sustainable strategy building.

The main strength is the participatory, user-centred development of *DIFA*, involving pilot partners from different settings. A weakness is the high complexity of the project, which challenges new partners, e.g. in understanding the concept of *DIFA* and in resource planning and onboarding. An opportunity is the general shift in consumer behaviour towards sustainable digital solutions, also in healthcare. Nevertheless, possible threats include a lack of digital skills and acceptance of the target group.

The participatory approach in development integrates different stakeholder perspectives. However, high project complexity demands strategies for communication and collaboration among stakeholders and new partners. Consequently, respective strategies were formulated and implemented in the project's risk management system.

Keywords: Healthy Setting approach - digital platform – evaluation – implementation – SWOT analysis

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

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Title of the abstract: The use of artificial intelligence in mental health to support decision making – A scoping review

Type of presentation: Poster

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background

Artificial intelligence (AI) has been used to support decision making in mental health in healthcare systems and self-care services for various applications including predictions, diagnostics, treatment plans, and workflows. However, it is not clear how these tools are utilized for decision support and whether it includes patients in the process of decision making.

Objectives

This study aims to explore the use of AI based decision support systems in mental health, in relation to how it has been researched, implemented, and used to support decision making.

Methods

The study follows a scoping review approach. Five databases were used for the search strategy. After removal of duplicates, 1217 articles were screened based on the inclusion and exclusion criteria and 31 remained eligible for full text screening.

Results

The identified articles illustrate the domains and decisions the implemented AI systems engage with in mental health. Based on the preliminary findings, AI support systems were used for speech recognition in psychotherapy, supporting prediction of mental conditions, and conversational agents for supporting self-help seeking.

Discussion

Studying implemented AI decision support systems can benefit in shaping person-centered care approaches in mental health, and guiding the inclusivity of patients in the development of future AI processes and tools.

Conclusion

Understanding the implemented AI systems and how they were utilized in supporting decision making could contribute

to further improvement in the design and implementation of these systems in mental health.

Keywords

Mental health, Artificial intelligence, Support decision-making, Implementation

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

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Title of the abstract: Developing an impact model for a digital health promotion and prevention platform

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: The German Association of Private Health Insurers (PKV Verband) is developing a digital platform (DIFA) to ensure that health-promoting and preventive services can be offered and implemented completely online according the Healthy Setting approach. According to the Standards of Evidence for Efficacy, Effectiveness and Scale-up Research in Prevention Science, a clear theory of causal mechanisms should be established (Gottfredson, 2015).

Purpose of the study is to develop an impact model that describes how the planned activities can achieve the intended results. Central to this is the identification and description of core components that are indispensable for positive outcomes and should therefore be given special attention to during implementation (Blase & Fixsen, 2013).

Methods: Document analysis of 20 key programme documents, 4 qualitative group interviews with representatives of key stakeholders, development of an a priori model, discussion and finalisation of the model in two workshops with representatives of key stakeholders.

Findings: A graphical representation of the project showing the main intervention components of the programme structure and their key relationships to each other and to the outcome structure, as well as to key external influencing factors. The general core activities identified were the acquisition of pilot partners, their participatory involvement in the development of the platform and their support in the digitisation of services.

Conclusions: The development of the impact model creates a common language and terminology and thus supported the successful development and implementation of DIFA

Keywords: program theory, core components, digital health promotion

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Associate Professor Grete Eide Rønningen¹

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Title of the abstract: Health Promoting Synchronous Online Classrooms (HPSOC).

Type of presentation: Poster

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: In the wake of the pandemic, teachers and students at universities were abruptly relegated to synchronous online classrooms. It is relevant to Health Promotion to explore how such classrooms may become healthy and supportive learning environments.

Purpose: To explore master's degree students in health promotion's descriptions of HPSOC, and their input on how this may be facilitated.

Methods: A total of 28 students from two different student groups participated by choice in this qualitative study. All of them had been participants in synchronous online ZOOM courses last year. The data was collected during two online lessons and with an alternation between individual, group, and plenary reflections. The data was analyzed according to principles of content analysis.

Findings: The students described HPSOC as predictable, democratic and supportive learning environment, with clear frameworks and expectations, where the educator is distinct and facilitates active participating and learning. This is exemplified by sufficient technological skills, clear rules for the use of cameras and microphones, short sessions, dialogue and group reflections. HPSOC was also described as a supportive culture for collaboration and learning. Particular emphasis was placed on HPSOC as a contribution to universal facilitation, lifelong learning and to promote social equality by enabling more people to attend higher education.

Conclusion: HPSOC is described as a predictable, democratic and supportive learning environment, and may also allow for universal solutions and lifelong learning. Students, educators and the organization have a shared responsibility to create HPSOC.

Keywords Online classrooms, Healthy learning environment

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

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Title of the abstract: Developers' beliefs and values – a discursive analysis of e-health technology in home healthcare

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background

The implementation of e-health is transforming healthcare. The acknowledged benefits of digitalization are quality improvement, patient empowerment, and increased efficiency. The mobility of e-health makes it especially suitable for home healthcare. eMar is a common e-health technology used in Swedish home healthcare. Decisions about technology design are governed by developers' perceptions of intended users. These perceptions can be identified in the description and promotion of a specific product.

Purpose

The purpose of the presentation is to contribute to increased knowledge about the values entailed in a specific eMar used in Swedish home healthcare, and furthermore to discuss how these values conform with existing national missions such as people-centered care.

Method

Information consisting of sales materials about a specific eMar used in several Swedish municipalities has been analyzed through critical discourse analysis to visualize values embedded in the eMar.

Findings

Preliminary results show that the provider of the specific eMar describes care in terms borrowed from the industrial sector, such as shift changes and production of care. Good and safe care is defined as the right person receiving the right medicine at the right time. Furthermore, the app is advertised as a tool for monitoring assuming that the performance of tasks can be influenced through the remote control of the employee. The eMar is described as representing new and modern technologies that are expected to raise the status of healthcare professions and facilitate the recruitment of employees.

Keywords: e-health, eMar, values, discourse

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Halmstad, June 14–16

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Title of the abstract: Digital games for sustainable cardiovascular health promotion: a way forward in Nepalese adolescents

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: Digital interventions are promising tools to reach adolescents for cardiovascular health promotion.

Purpose: We assessed adolescents' knowledge, attitude and practice (KAP) regarding cardiovascular disease (CVD), explored opportunities for a digital intervention, and developed a serious game prototype.

Methods: In total, 649 adolescents grades 8-10 were surveyed in a semi-urban community of Nepal regarding KAP of CVD and digital pre-requisites. Eight focus group discussions (FGDs) separately among boys and girls (n=76) provided deeper understanding of CVD perceptions.

Findings: Median (IQR) percent scores for KAP were 70.6 (10.59), 78.5 (8.46) and 69.5 (11.59), respectively. Good KAP (median percent scores >75%) was found in 27.7%, 69% and 27.8% adolescents, respectively. Knowledge ($p<0.001$), attitude ($p=0.025$) and practice ($p<0.001$) was higher among adolescents in private than government schools. Girls had better attitude than boys (<0.001). Furthermore, 98% adolescents had smartphone access and 91.6% had internet access.

In preliminary FGD analyses adolescents mentioned physical, nutritional, mental, environmental and hereditary causes for CVD. Financial and work-related burdens, plus psychological and family-related issues were perceived to influence CVD severity. Junk food and physical inactivity were health barriers. Adolescents perceived serious games as beneficial and easy to use. Challenging game and attractive visuals were thought to stimulate game use.

Conclusion: With good attitude and excellent digital prerequisites, we conclude that serious games can help fill the existing gaps in knowledge and practice in Nepal. A prototype of "Happy Heart" is being pilot-tested among adolescents as a promising way for digital cardiovascular health promotion.

Keywords: Cardiovascular health, cardiovascular health literacy, adolescents, lifestyle, gaming

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Student Britta Teleman¹

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Title of the abstract: Norm-transformation of Child Participation in Health and Welfare Services through a Digital Communication Support Tool

Type of presentation: Poster

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background

There is a gap between ambitions regarding child participation in care contexts and actual practices, partly due to a lack of supportive tools. Children's influence is determined by structures, technology, and norms within these socio-technical settings but there is a knowledge gap on how novel digital tools might counteract excluding norms and empower children to make their voices heard.

Purpose of the Study

Based on interviews with professionals this study aims to understand how digital communication support tools influence norm-transformation related to child participation in care contexts.

Methods

The study had an explorative design with a Constructivist Grounded Theory methodology.

Professionals (n=11) in healthcare and social services (7 professions represented) that had tested a digital communication support tool with children in their practice were interviewed about child participation and their experiences of introducing the support tool.

Findings

Data patterns indicate that when the tool was added into the context, dynamics changed. The professionals experienced that the tool both had an influence on the participation of the child and changed their own perspectives on participation and their own role in relation to child participation. The perceived gains for children from using the tool were related to access and autonomy.

Conclusion

The study adds knowledge on how digital communication support tools may influence child participation norms and professional's perspectives on participation in care contexts.

Keywords

Participation, Children, Care, Norm critique, ANT

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Title of the abstract: GAUdiS- Reduced sedentary time through joyful activities – Development of a digital program to reduce sedentary time.

Type of presentation: Poster

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: Sedentary time increases with age and can lead to decreased health. The time for retirement can be beneficial for health promotion interventions to reduce sedentary time. Such intervention could preferably be delivered as e-health.

Purpose of the study: To explore preferred and required features for a digital program to reduce sedentary time in people in the transition from working life to retirement and to explore agreement with established behaviour change techniques (BCTs).

Methods: Participatory Design (PD) was used as a methodological approach to include the end users. Nine participants, including six people in transition from working life to retirement, a web-developer, and two researchers, participated in three workshops. Thematic analysis was used to analyse workshop data.

Tentative findings: Participants wanted a basic, easy to use program, which could be individualized according to interest and joys and accessed from both computers and portable devices. The most important features to reduce sedentary time were features to find joyful activities, for goal setting and for providing information regarding sedentary time in general. A digital prototype of a program to reduce sedentary time was developed during the workshops. The digital prototype included sixteen different established BCTs.

Tentative conclusion: The Integrated behaviour change model can be used as a model for how the digital prototype could reduce sedentary time.

Keywords: sedentary time, transition to retirement, joy, affect, participatory design

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Dr Ebba Sundin¹ and Dr Malin Hallén²

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Title of the abstract: The representation of COVID-19 App Trackers in Nordic news media

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: Since the COVID-19 pandemic became a reality in mid-March 2020, intensive work was carried out to develop smartphone applications to reduce the risk of spreading the disease. Scientific discoveries, with political debate and media representations, were continuously and in real-time shaping public perceptions of digital contact tracing apps (Matt, 2021). **The purpose** was to study four Nordic countries' ambitions and use of digital apps for tracking COVID-19, and what themes connected to digital health services were visible in the media context. We were particularly interested in the issues related to digital health structures, ethics, privacy, and integrity and how they were addressed in the media coverage in the Nordic region. **Methods:** A qualitative text analysis was carried out for the media content in this study. The data included four Nordic countries: Sweden, Norway, Denmark, and Finland. The sample included the earliest article dated April 8, 2020 to August 4, 2021. In total, 320 items from newspapers, TV, radio, and web were collected. **Findings:** The results show a variety of themes highlighted in the news about the different apps used in the Nordic countries. There are both similarities and differences, some themes are shared such as concerns raised about personal integrity and privacy when collecting and sharing data in the apps. **The conclusion** is that the role of the media is central in critically reviewing and articulating the challenges associated with digital tracking apps that authorities need to address in order to build social trust.

Keywords: COVID-19, apps, Nordic, media analysis, integrity

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Title of the abstract: How do Danish adolescents respond to a virtual reality simulation for alcohol prevention?

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: *VR FestLab* is a virtual reality application developed for Danish adolescents to increase their competences to resist social pressures to drink alcohol. The simulation game features a party setting where adolescents can "steer" their own party experience and can make decisions when offered alcohol.

Purpose of the study: Due to the novelty of the approach, many aspects of virtual simulations for alcohol prevention are still unexplored, such as the user satisfaction and engagement. Therefore, we studied the user experience, game satisfaction, and engagement of adolescent users of *VR FestLab*.

Methods: This cross-sectional study involved 181 students (aged 15-18 years) in seven schools in Denmark who responded to the short user experience questionnaire and a game satisfaction and engagement questionnaire after having explored *VR FestLab* for 15 min.

Findings: Two thirds of the adolescents liked the VR experience and all user experience factors were rated positively or neutral. We found no association of the user experience score nor a score for game satisfaction and engagement with sex, age, perceived family affluence, school performance, alcohol consumption and attitudes or mental health.

Conclusion: Overall, positive user experiences and game satisfaction of *VR FestLab* were observed without link to student characteristics. Virtual simulations offer new ways for developing drinking refusal skills that are attractive and acceptable for adolescent users.

Keywords: Virtual reality, simulation game, alcohol prevention, adolescents

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Associate professor Anne Liveng¹

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Title of the abstract: When do health care apps potentially lead to empowerment? The centrality of eHealth literacy in the meeting between patient and digital technology.

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background

eHealth is considered a solution to healthcare challenges. The EU Interreg project NorDigHealth tested health technologies in clinical and qualitative studies.

Purpose of the study

The purpose of the analysis was to explore conditions for patient empowerment using apps in health care settings.

Methods and theory

The eHealth literacy framework was applied on qualitative data from the testing of two apps. One for measurement of progression in age-related macular degeneration (AMD) in older patients and one for instructing pregnant women at risk for preeclampsia. The material consisted of 18 interviews with and observations of AMD-patients and 13 interviews with pregnant women. The concepts of eHealth literacy and empowerment was used.

Findings

Significant differences in eHealth literacy existed. Older patients had challenges in using the apps, partly due to low eHealth literacy, partly due to multimorbidity. They needed intensive instructions from the health professional at the clinic. Pregnant women used the app immediately and independently at home after instruction at the clinic. They had high eHealth literacy and found that the app gave a sense of control over their health.

Conclusion

eHealth literacy is crucial in implementation of apps. The e-health literacy framework provided an analytical tool for gaining insight into challenges and advantages for specific groups of patients when using apps. Health technologies in the form of apps hold potentials in relation to some groups of patients, while they for others lead to disempowerment.

Keywords

eHealth, patients, empowerment

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Research Consultant Charlotte Brun Thorup¹, Research Assistant Mia Buhl Povlsen², Research Manager Diana Schack Toft², Research Lecturer Lisa Korsbakke Emtækær Hæsum² and HorizonEurope On behalf of the IDEAHL consortium³

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Title of the abstract: IDEAHL - Best practices for Digital Health Literacy interventions, a review study. (The "IDEAHL" project has received funding from Horizon Europe Framework Program under GA 101057477)

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background. Improving Digital Empowerment for Active Healthy Living (IDEAHL) is a HorizonEurope project focusing on developing and testing digital health literacy (dHL) interventions, through the co-creation of a comprehensive EU dHL Strategy. The strategy aims to empower EU citizens in using digital tools to improve health and well-being. The initial phase comprised a literature review of health literacy (HL) and dHL interventions in EU and beyond.

Purpose. Reviewing key factors, drivers, barriers, and best practice in HL and dHL interventions at policy-organizational- group- and individual level.

Method. Ten electronic databases became the base for a literature search supplemented with grey literature in a participatory scoping review process among IDEAHL's 14 partners (10 EU Member States). Covidence was used for managing references based on inclusion criteria that embrace key factors, (drivers, barriers, effectiveness, and best practice at different levels) on HL and dHL interventions.

Findings. The review revealed that there were 5 intervention studies at political level, 21 at organizational level, 15 at group level and 31 at the individual level. Key factors in the identified interventions were training of healthcare professionals, patients, caregivers, or others in addition to tailored communicative initiatives. Among interventions targeting adolescents, the dominant outcome was mental HL, and only few interventions addressed dHL.

Conclusion. Among interventions targeting HL and dHL great diversity were found, still this review provides an overview of core tendencies. More research is needed to determine best practices of improving dHL.

Key Words: Digital Health Literacy, HorizonEurope, Scoping review

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Phd Emilie Steerling¹, Postdoctoral position Elin Siira², Professor Per Nilsen³, Professor Petra Svedberg² and Professor Jens Nygren²

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Title of the abstract: Implementing AI in healthcare - the relevance of trust: A scoping review.

Type of presentation: Poster

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background

AI systems have the potential to transform health care and solve many of its current challenges, e.g., by reducing costs, improving efficiency and quality. Despite the potential benefits, the translation into healthcare is often slow and challenging. Trust is a key concept in health care and recognized as important for an innovation's uptake. There is a general lack of empirical studies in AI implementation in health care, and trust is an important aspect of such implementation processes that needs to be investigated in relation to AI implementation to be able to develop effective strategies.

Purpose of the study

The aim was to explore the scientific literature with regard to how trust in AI implementation in health care is conceptualized and what influences trust in AI implementation in health care.

Methods

A scoping review was conducted based on a thematic analysis with an inductive approach.

Findings

Eight studies were included, and the inductive coding yielded three themes, *individual characteristics*, *AI characteristics*, and *contextual characteristics*, which were related to trust. Most empirical studies were cross-sectional, and few studies had a qualitative approach.

Conclusion

Further empirical research on trust in AI implementation in health care is needed that have a holistic view on trust and that look beyond individual characteristics and AI characteristics to be able to develop effective strategies to guide the implementation of AI into health care.

Keywords

trust, artificial intelligence, implementation, health care, scoping review

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Lena Petersson¹, Professor Petra Svedberg², Professor Jens Nygren² and PhD Ingrid Larsson²

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Title of the abstract: Developing an ethical model for guidance the implementation of AI in healthcare

Type of presentation: Poster

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: Artificial intelligence (AI) is predicted to improve healthcare, increase efficiency, save time and resources. However, research shows an urgent need to develop guidance to ensure that the use of AI in healthcare is ethically acceptable.

Purpose: To develop an ethical model to support AI implementation in practice.

Methods: The study used an explorative and empirically driven qualitative design. Individual interviews were conducted with 18 healthcare professionals from two emergency departments in Sweden where the county council has developed an AI application to predict the risk for unexpected mortality within 30 days after visiting an emergency department. A deductive analysis based on ethical theory i.e virtue, deontology and consequentialism, was used.

Findings: The developed model shows how the healthcare professionals use ethical reasoning in relation to the implementation of AI. In relation to virtue ethics, moral considerations in relation to the use of AI were mentioned. In relation to deontology, considerations were mentioned on actions performed based on information acquired from the technology and adherence to specific duties, roles and responsibilities. In relation to consequentialism, considerations about how to provide better resources more rapidly in an equal way and how the technology can be adjusted to each patients' individual needs and preferences in order to support decisions, self-determination, and actions that are in the patients best interest.

Conclusions: Our findings provide an ethical model demonstrating the relevance of virtue, deontology and consequentialism when AI are to be implemented in practice.

Keywords: Artificial intelligence, ethic, healthcare professionals, implementation, qualitative method.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Lena Petersson¹, Professor Petra Svedberg², Professor Jens Nygren² and PhD Ingrid Larsson²

¹Halmstad University, corresponding author

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Title of the abstract: Expected values of implementing AI in healthcare – A Qualitative study

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: Artificial intelligence (AI) is often presented as a technology that will change healthcare and be useful in clinical work in disease prediction, diagnosis, and precision health. More knowledge is needed regarding the value of AI applications based on the perspectives of healthcare leaders to understand their roles as gatekeepers and facilitators for successful implementation.

The purpose of the study: To explore healthcare leaders' perceptions of the value of AI applications in clinical work.

Methods: The study had an explorative qualitative approach. Individual interviews were conducted from October 2020 to May 2021 with 26 healthcare leaders with different experiences in implementing AI in clinical practice in a county council in Sweden. Inductive qualitative content analysis was used, and eight sub-categories and three categories emerged.

Findings: The value of AI applications in clinical care was described in terms of expected benefits for patients as tools supporting person-centered information and individualized self-management. The expected benefits for healthcare professionals included decision-support in diagnostics, risk assessments, and treatment recommendations but also providing warning systems and second opinions in clinical work. On an organizational level, the benefits comprised patient safety and decision-support in prioritizing healthcare resources in and across healthcare organizations.

Conclusions: The healthcare leaders perceived that AI applications would provide value on different levels in healthcare for patients, healthcare professionals, and organizations. Across these levels, the implementation of AI can support person-centeredness, patient self-management, quality of care, patient safety, and resource optimization.

Keywords: AI applications, healthcare leaders, qualitative study, value

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

BA MSc Mariella Seel¹, Mag. Ludwig Grillich² and Dr. Elitsa Uzunova³

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Title of the abstract: Implementing a digital Healthy Setting approach: Interim results of a developmental evaluation of a digital health promotion platform

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

E-health structures and practices are widely integrated into society and people's everyday life, also in health promotion. Participation and user-centricity are recommended to ensure sustainable, successful solutions and improvement, value, and empowerment of users. This is associated with opportunities and challenges to be considered during development.

We present interim results of a developmental evaluation of the creation and implementation of a digital platform for online health promotion and preventive services (*DIFA*, funded by PKV Verband e.V.), enabling a digital Healthy Setting approach.

After an analysis of project documents and interviews with representatives of the strategic level (funding body), operational level (project management, platform development) and target group (pilot partners from different settings), we conducted a SWOT analysis for sustainable strategy building.

The main strength is the participatory, user-centred development of *DIFA*, involving pilot partners from different settings. A weakness is the high complexity of the project, which challenges new partners, e.g. in understanding the concept of *DIFA* and in resource planning and onboarding. An opportunity is the general shift in consumer behaviour towards sustainable digital solutions, also in healthcare. Nevertheless, possible threats include a lack of digital skills and acceptance of the target group.

The participatory approach in development integrates different stakeholder perspectives. However, high project complexity demands strategies for communication and collaboration among stakeholders and new partners. Consequently, respective strategies were formulated and implemented in the project's risk management system.

Keywords: Healthy Setting approach - digital platform – evaluation – implementation – SWOT analysis

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

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Title of the abstract: The use of artificial intelligence in mental health to support decision making – A scoping review

Type of presentation: Poster

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background

Artificial intelligence (AI) has been used to support decision making in mental health in healthcare systems and self-care services for various applications including predictions, diagnostics, treatment plans, and workflows. However, it is not clear how these tools are utilized for decision support and whether it includes patients in the process of decision making.

Objectives

This study aims to explore the use of AI based decision support systems in mental health, in relation to how it has been researched, implemented, and used to support decision making.

Methods

The study follows a scoping review approach. Five databases were used for the search strategy. After removal of duplicates, 1217 articles were screened based on the inclusion and exclusion criteria and 31 remained eligible for full text screening.

Results

The identified articles illustrate the domains and decisions the implemented AI systems engage with in mental health. Based on the preliminary findings, AI support systems were used for speech recognition in psychotherapy, supporting prediction of mental conditions, and conversational agents for supporting self-help seeking.

Discussion

Studying implemented AI decision support systems can benefit in shaping person-centered care approaches in mental health, and guiding the inclusivity of patients in the development of future AI processes and tools.

Conclusion

Understanding the implemented AI systems and how they were utilized in supporting decision making could contribute

to further improvement in the design and implementation of these systems in mental health.

Keywords

Mental health, Artificial intelligence, Support decision-making, Implementation

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

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Title of the abstract: Developing an impact model for a digital health promotion and prevention platform

Type of presentation: Oral

Theme: E-health and implementation of digital innovations for health promotion

Submission

Background: The German Association of Private Health Insurers (PKV Verband) is developing a digital platform (DIFA) to ensure that health-promoting and preventive services can be offered and implemented completely online according the Healthy Setting approach. According to the Standards of Evidence for Efficacy, Effectiveness and Scale-up Research in Prevention Science, a clear theory of causal mechanisms should be established (Gottfredson, 2015).

Purpose of the study is to develop an impact model that describes how the planned activities can achieve the intended results. Central to this is the identification and description of core components that are indispensable for positive outcomes and should therefore be given special attention to during implementation (Blase & Fixsen, 2013).

Methods: Document analysis of 20 key programme documents, 4 qualitative group interviews with representatives of key stakeholders, development of an a priori model, discussion and finalisation of the model in two workshops with representatives of key stakeholders.

Findings: A graphical representation of the project showing the main intervention components of the programme structure and their key relationships to each other and to the outcome structure, as well as to key external influencing factors. The general core activities identified were the acquisition of pilot partners, their participatory involvement in the development of the platform and their support in the digitisation of services.

Conclusions: The development of the impact model creates a common language and terminology and thus supported the successful development and implementation of DIFA

Keywords: program theory, core components, digital health promotion

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Dr. Aurélie Van Hoyer¹, Dr. Benny Cullen², Dr. Aoife Lane³, Mr. Kevin Volf⁴, Dr. Liam Kelly⁴, Dr. Enrique Bengoechea², Prof. Anne Vuillemin⁵ and Prof. Catherine Woods⁴

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Title of the abstract: Health promotion policies, perceptions, activities and needs of Irish sports clubs

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport a) Main focus on sport

Submission

Background

Sports clubs potential for health promotion (HP) has been underexploited. Previous studies have shown the biggest gap is situated among HP policy development.

Purpose of the study

The present cross-sectional study investigates how Irish sports clubs develop HP, especially in regard to policies and future needs.

Method

Two hundred thirty-nine sports clubs completed a survey measuring priorities for ten health topics (physical activity, healthy eating...) and daily activities, mention of HP in different policy documents, perceptions of HP and future needs. Quantitative data were analysed using multivariate statistics, whereas the policy cycle was used for a deductive analysis of sports clubs' needs.

Findings

Results showed a high score (>70%) was given to the 10 health topics, suggesting that sports clubs consider HP as an important part of their remit. Sports clubs greatest investment was on physical activity promotion and lowest investment is prevention of substance consumption (tobacco, performance enhancing drugs). Nevertheless, up to a third of sports clubs had no HP policy. Irish sports clubs showed similar patterns to sports clubs in other countries in terms of HP perceptions, showing that both the organizational and economic determinants of health need to be addressed in the future. The policy cycle has helped to identify key tools to be created based on sports clubs HP policy development.

Conclusions

Practical implications include fostering HP in sports clubs' development plan, by establishing templates and getting

support from sports federations.

Kyewords: sport, health promotion, policy

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Dr Linus Jonsson¹, PhD student Jenny Back², Professor Urban Johnson², Professor Petra Svedberg² and Professor Andreas Ivarsson²

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Title of the abstract: Changes in amotivation, external regulation, and intrinsic regulation predicted dropout from youth soccer during the COVID-19 pandemic

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport a) Main focus on sport

Submission

Background: Regular sport participation is essential for youths physical, mental, and social health. Research shows, however, that sports participation peaks at around 10-14 years of age before declining through adolescence. Soccer, which is the most popular youth sport in Sweden, is no exception to dropout problems during adolescence.

Purpose of the study: The purpose was to examine longitudinal changes in youth soccer players motivational regulations during the first year of the Covid-19 pandemic in Sweden, and how longitudinal changes in motivational regulations predicts dropout from youth soccer.

Methods: Self-reported data was collected from 325 youth soccer players between 11 and 17 years of age ($M = 13.08$) at the beginning of the season in 2019 (T1) and 2020 (T2) and dropout data was reported by the coaches at the end of the season in 2021 (T3). Latent change score analyses, using Bayesian estimator, was used to examine change in the players motivational regulations.

Findings: There was a credible increase in amotivation ($\beta = 0.14$) and a credible decrease in identified regulation ($\beta = -0.41$) between T1 and T2. Changes in amotivation ($\beta = 0.16$), external regulation ($\beta = 0.14$), and intrinsic regulation ($\beta = -0.15$) between T1 and T2 were credible predictors of dropout from soccer at T3.

Conclusion: To reduce the risk of dropout from youth soccer, during an ongoing pandemic, it is important to mitigate increases in amotivation and external regulation and to facilitate intrinsic motivation.

Keywords: Adolescent, Motivation, Self-determination theory, Sustainable sport participation, Youth sports

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Dr. Aurelie Van Hoyer¹, Dr Aurélie Van Hoyer², Dr. Susanna Geidne³, Mrs Lina Raudasojä⁴ and Dr. Sami Kokko⁴

¹University of Limerick, Roundtable organizer

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Title of the abstract:

Type of presentation: Roundtable

Theme: Sustainable health in physical activity and sport a) Main focus on sport

Submission

Background

Developing health promotion (HP) in sports organisation remains a challenge due to their voluntary nature and limited resources, restricting the exploitation of an enormous potential for the millions of youth and adults practicing in organised sport. Previous studies have shown a poor application of the settings-based approach among sports clubs, as well as lack of rigorous evaluation methods.

Methods

The roundtable will include four presentations liaising different parts of intervention implementation: a Finnish presentation on intervention co-creation, a Swedish example of sports club's intervention implementation, a Finnish example of coaches' intervention implementation and a French intervention process and effectiveness evaluation.

Findings

The first presentation will be dedicated to the co-creation process of an intervention to enhance active commuting among a junior hockey club in Finland, describing the methods, stakes and challenges of using such approach. The second presentation will describe the characteristics of organised sport and physical activity initiatives for older adults in Sweden, giving insights how salutogenesis and settings-based approach are applied. The third presentation will give insights on how Finnish coaches Physical Education activities do have an effect on sports participants physical activity level. The last presentation will describe a mixed method hybrid type 3 design to evaluate the health promoting sports clubs in France.

Conclusions

This roundtable will offer the opportunity to the audience to reflect on settings-based intervention implementation, with example from the sport setting, as well as examples of methods to develop them.

Keywords: intervention, settings-based, sport

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD student Jenny Back¹, Professor Urban Johnson², Professor Andreas Ivarsson² and Professor Petra Svedberg²

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²Halmstad University, co- author

Title of the abstract: Psychosocial risk factors for dropout from adolescents' soccer

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport a) Main focus on sport

Submission

Background: The number of adolescents that drop out of soccer has increased the last decades. As soccer participation may represent a substantial part of adolescents' physical activity, efforts to reduce drop-out are important. To develop effective prevention programs, knowledge about why adolescents drop out is needed.

Purpose of the study: Using a prospective design, over three consecutive seasons, we investigate differences in motivation and coach autonomy support between adolescents that stay in soccer and adolescents that drop out.

Methods: Participants were 738 adolescents (462 males and 275 females), 11-17 years old ($M = 13.72$, $SD = 1.77$) from soccer clubs in Sweden. Data about demographics, motivational regulations and coach autonomy support was collected in 2019, drop-out data at the end of seasons in 2019-2021. We used Mann-Whitney u-test to analyse potential differences between the two groups. A p-value $<.05$ was considered a statistically significant result. Cohen's d effect size was calculated for each comparison.

Findings: Of the participants, 256 (34,7%) dropped out until the end of the 2021 season. Dropouts experienced lower intrinsic motivation ($U=55263$, $N1=479$, $N2=253$, $p=.006$, $d=0,15$), more amotivation ($U=66358$, $N1=482$, $N2=256$, $p=.042$, $d=0,13$) and less coach autonomy support ($U=49566$, $N1=479$, $N2=253$, $p=<.001$, $d=0,30$). Regarding identified motivation ($U=57329$, $N1=482$, $N2=255$, $p=.13$, $d=0,11$) and introjected motivation ($U=64628$, $N1=482$, $N2=256$, $p=.25$, $d=0,08$) no statistically significant differences were found.

Conclusion: To facilitate motivation and continued soccer participation we propose theoretically informed education programs to help coaches adopt autonomy-supportive coaching strategies.

Keywords: Adolescent, Drop-out, Soccer, Sport Participation

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Student Johanna Bergman¹, Principal Anders Jonasson² and PhD and Senior Lecturer in Public Health Åsa Bringsén³

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Title of the abstract: Health promotion supporting a sport education in an upper secondary school in southern Sweden

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport a) Main focus on sport

Submission

Background: Previous research show that the health of pupils in sport education at upper secondary schools decreases. Contributing factors are competitiveness and professionalism in sport, and a health perspective is often neglected, hence the culture of sports often governs the organization. Approaches to sport education in schools with a focus on health promotion (HP) is necessary. Thus, the aim is to conceptualize a sport education with a health promotion perspective for upper secondary school level.

Method: The development process for the conceptualization was action oriented and lasted for two years with I) initial planning II) pilot-testing and adjustment III) implementation. The planning was supported by interdisciplinarity including an educational, a sport coaching, a strength and conditioning as well as a health promotion perspective supported by science and professional experience.

Findings: The HP sport education started in 2018 and employs approximately 60 pupils in football, ice-hockey and swimming. The aim is to support pupils' development of autonomy, empowerment, life-long learning, and health. The core is process-oriented sport-teaching and injury prevention supported by pupils' influence, active participation and decision making, as well as reflection, learning and personal development. The curriculum-based assessment relates to personal development. Admission is non-selective regarding sport and choice of school program. Collegial communication and reflection support the staff in their everyday practice.

Conclusions: HP in sport education is an innovative, promising but complex strategy and further research is needed. A four-year research project is thereby planned for and initiated.

Keywords: Sport education, health promotion, upper secondary school

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Professor Torill Bogsnes Larsen¹, Msc Martin Kahrs Lie², Associated Professor Ellen Merete Haug³ and Professor Ingrid Holsen³

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Title of the abstract: Is participation in organized sports associated with the five C's in Positive Youth Development in Norwegian upper secondary students?"

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport a) Main focus on sport

Submission

Background: Organized sports represents an important arena for health promotion. Knowledge regarding the conditions which promote mastery, connection, participation, and experience of meaning is of political interest. Research indicates that participation in sports is of importance in youth development. Simultaneously, aspects regarding positive youth development through sports are to a little extent studied in the Norwegian context.

Objective: Examine associations between participation in organized sports and characteristics that can facilitate positive youth development (competence, confidence, character, connection, caring).

Method: This study has applied data from the 2017/18 «*Health Behaviour in School- aged Children. A WHO-study across countries*» study, which is a nationwide survey conducted by the HEMIL-center at UiB. The sample examined in the present study consisted of 2204 students in 1st grade in upper secondary schools in Norway. Regression analyses were performed to examine the associations.

Results: There was a significant positive association between sports participation and competence, confidence, connection and character. The association was strongest for competence. Controlling for gender and socio-economic status had little impact on the associations. Gender did not moderate the associations.

Conclusion: Sports participation in Norway is positively associated with characteristics connected to positive youth development. The findings contribute to increased knowledge regarding organized sports and characteristics regarding youth development. Increased focus on youth development in sports and efforts to include more children and young people in organized sports can contribute to favorable health-promoting effects.

Keywords: Organized sports, sports participation, positive youth development, the five c's, HBSC

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD student Dennis Bengtsson¹, Docent Andreas Stenling², Professor Jens Nygren³ and Professor Andreas Ivarsson³

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Title of the abstract: A formal leadership development program for Swedish youth ice hockey coaches to improve interpersonal needs supportive behaviors

Type of presentation: Poster

Theme: Sustainable health in physical activity and sport a) Main focus on sport

Submission

Keywords: Sport, Coach, Education, Self-determination theory

Introduction

The self-determination theory (SDT) emphasizes three basic needs (autonomy, competence, relatedness) which can be supported through coach interpersonal behaviors and, in turn, benefit youth athlete's intrinsic motivation and sustained sport participation. These behaviors can be enhanced through an SDT-based coach education. Nevertheless, such intervention-based research is scarce, inquiring further efforts to investigate its potential in enhancing coaches' interpersonal needs supportive behaviors. Hence, the study aims to investigate whether youth sport coaches' self-reported interpersonal needs supportive behaviors differ before and three weeks after participation in a leadership development program.

Methods

44 youth ice hockey coaches with a mean age of 36,2 (SD = 9,4) participated in the study. The coaches underwent a 2-day formal education encompassing three modules (leadership, ice-hockey practice, physical training and nutrition), delivered by researchers and trained coach educators from the Swedish Hockey Association. The SDT-based leadership module comprised of lectures, group discussions and online-handouts.

Findings and Conclusion

The results from a repeated measures ANVOA showed a statistically significant difference in interpersonal needs supportive behaviors between the two time points ($F(1, 35) = 6.608, p = .015, \eta_p^2 = .159$). In conclusion, the youth ice hockey coaches perceived a positive change in interpersonal supportive behaviors compared to before their participation in the leadership development program. This highlights potential benefits of research informed theory-based efforts through formal and institutionalized pathways.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Dr N. Viktor Gredin¹, Ms Jenny Back², Professor Urban Johnson², Professor Petra Svedberg², Dr Andreas Stenling³, Dr Bård E. Solstad⁴ and Professor Andreas Ivarsson²

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⁴University of Agder, co- author

Title of the abstract: Exploring psychosocial risk factors for dropout in adolescent female soccer

Type of presentation: Poster

Theme: Sustainable health in physical activity and sport a) Main focus on sport

Submission

Background

Research on why young females choose to continue or discontinue (i.e., drop out) in organised soccer is critical for the development of sporting excellence, wellbeing, and healthy lifestyles in the population.

Purpose

We examined how age, participation in other sports, socioeconomic status, perceived sport competence, achievement goal orientations, and perceived motivational climate may interact to predict the risk of dropout among adolescent female soccer players.

Methods

Self-reported data from 519 female soccer players between 10 and 19 years of age ($M = 13.41$, $SD = 1.77$) were analysed using a person-centred approach to uncover the interactions among risk factors and their relative predictability of dropout.

Results

Perceived motivational climate was identified as the main predictor, where lower levels of mastery climate were associated with a higher dropout tendency (absolute risk reduction [ARR] = 12.2% \pm 6.1% [95% CL]). If combined with lower levels of mastery climate, lower levels of perceived sport competence were related to higher dropout risks (ARR = 16.5% \pm 9.5%). If combined with higher levels of mastery climate, lower levels of ego-orientated achievement goals were associated with higher dropout rates (ARR = 10.8% \pm 12.6%).

Conclusions

Our findings afford novel insights into the interactions between, and the relative importance of, various risk factors for dropout in adolescent female soccer. This knowledge may be useful for soccer associations, clubs, and coaches when developing guidelines and strategies that aim to foster young females' sustained participation in organised soccer.

Keywords: Achievement Goal Theory, participation, youth sport, withdrawal, sustainability

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD fellow Signe Engdal¹ and Associate professor Laila Ottesen²

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Title of the abstract: The health promoting role of sports instructors in sport-health partnerships

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport a) Main focus on sport

Submission

Background

Sport-health partnerships between municipal health centres and voluntary sports associations (VSAs) are implemented to support adults' adherence to physical activity routines in everyday life after municipal training programmes. Instructors from VSAs join health- and illness related programmes to ensure their competences working with new target groups.

Purpose

This multiple case study of five sport-health partnerships examines instructors practice and how their teaching enables and/or constrains the inclusion and adherence of new target groups.

Methods and theory

Besides document analysis of educational programmes, the study is based on participant observations of sports activities [N=50] and on semi-structured interviews with instructors, board chairmen and project leaders [N=25]. Online focus group interviews with instructors and project leaders [N=20] were conducted to discuss findings from observations and interviews by use of Norbert Elias' figurational theory.

Results

Instructors adapt sports activities to include new target groups as proposed by educational programmes. This results in a new norm of applying sport for health, where instructors balance between incorporating very structured health-enhancing activities and still enable a socially inclusive environment by using game-like sport activities.

Conclusion

Educational programmes can be fruitful to support instructors in establishing sports activities for adults from health centres. For sport activities to become a routinized part of people's everyday life and still avoid a healthisation of pastimes, there's a need for education to focus on fostering social relationships rather than only specific illness-related knowledge.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Ms. Katja Rinta-Antila¹, Mr Pasi Koski², Ms Tuula Aira³, Mr Olli J Heinonen², Ms Raija Korpelainen⁴, Mr Jari Parkkari⁵, Mr Kai Savonen⁶, Ms Kerttu Toivo⁷, Ms Arja Uusitalo⁸, Ms Maarit Valtonen⁹, Mr Tommi Vasankari¹⁰, Mr Jari Villberg³ and Mr Sami Kokko³

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Title of the abstract: The association of coaches' health promotion activity with adolescents' sustainable sports club participation over time from adolescence to emerging adulthood

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport a) Main focus on sport

Submission

Background Sports club participation is significant in the Nordic countries and in physical activity promotion. However, many quit club sports by emerging adulthood. The association of coaches' health promotion activity (HPA) with maintained participation is less studied, especially with longitudinal data. HPA could aid in maintaining adolescents' participation, physically active lifestyle, and health.

Purpose of the study This study examines the association of coaches' HPA with maintained sports participation from adolescence to emerging adulthood.

Methods 15-year-olds sports participants (n=323) were followed up to age 19 (149 maintainers/174 dropouts). At age 15, participants were asked if coaches discussed *sleep&rest/injury prevention/training ill/physically active lifestyle/nutrition/hygiene/substance use/violence in sport/sexual issues* very often/often/rarely/never. Sum variable split in high/medium/low HPA was used in chi-square tests and in binary logistic regression analysis to examine the association of coaches' HPA with maintained sports participation.

Findings The majority of participants reported coaches discussing sleep/rest, injury prevention, or training ill very often/often (55–65%), and other topics rarely/never (53–97%). More typically male maintainers (49%) compared to male dropouts (20%) had experienced coaches' high HPA ($p=.002$). Among females, there was no difference (32%, 28% respectively/ $p=.829$). Male gender ($OR=1.62/95\% CI=1.03–2.54/p=.037$) and coach's high HPA ($OR=1.78/95\% CI=1.03–3.07/p=.038$) increased the odds of being a maintainer rather than a dropout.

Conclusion Overall, there is a need to invest in coaches' HPA. Currently, coaches' high HPA may support maintained sports participation among males. Research is needed on coaches' HPA that supports participation among females.

Key words adolescents, sports club, coach, health promotion

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Samuele Tonello¹

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Title of the abstract: Expanding IceHearts: Improving mental health and well-being for disadvantaged youth through a pan-European initiative based on the IceHearts Finnish model.

Type of presentation: Poster

Theme: Sustainable health in physical activity and sport a) Main focus on sport

Submission

Purpose of the Study: The main goal of IceHearts Europe, a three-year project funded by the EU4Health programme, based on the Finnish IceHearts model, is to demonstrate that consciously integrating mental health into sport programmes highly benefits vulnerable children's well-being. IceHearts Europe is doing this by scaling up at European level the IceHearts model, which uses team sports as a tool for engaging children with social work. The model provides consistent long-term support for vulnerable children by offering a mentor who helps selected children participate in team activities and supports them at school, after school and at home for 12 years.

Methods: The scale up at European level is achieved by bringing together a group of five grassroots sport partners from five pilot implementation countries (early adopters) and a group of expertise and associate partners (next adopters). Methodologies implemented include a situation analysis and needs assessment in each pilot country, the development of a final national implementation plan, the training of IceHearts Mentors, sport activities and social and school assistance.

Findings: IceHearts model has proven to have a positive impact on participants' physical activity, child-adult relationships, peer relations, social skills, self-esteem, mental health. Results of the original Finnish model are already available, thanks to cost-benefit analysis and to longitudinal studies with mentors, school personnel, parents and children themselves. These positive results will be presented, along the first learnings from the first six months (January-June 2023) of the scale-up in other European countries.

Keywords: Mental Health, Physical Activity, Youth, Mentoring, Europe.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

prof. Natalia Stambulova¹ and prof. Andreas Ivarsson²

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Title of the abstract: Promoting Mental Health of Student-Athletes: European and Scandinavian Perspectives

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport a) Main focus on sport

Submission

Background. In this presentation we provide an overview of the ERASMUS+ Project (2021-22) “Dual Career for Mental Health” (DC4MH) with six European countries involved (Belgium, Denmark, Italy, Slovenia, Spain, and Sweden) and Halmstad University as one of the partners. **Purpose.** The Project was aimed at optimizing mental health (MH) services within European dual career (DC) ‘elite sports and education’ organizations with four major parts: MH monitoring, MH structures, MH literacy, and resilience building. **Method.** Across the parts of the Project mixed-methods methodology was used. **Findings.** The survey-based MH monitoring of European students-athletes in comparison to students non-athletes led to the following conclusions: (a) among total sample (N=1798) significantly higher positive MH revealed in student-athletes (vs. student-non-athletes), males (vs. females), and Scandinavians (vs. non-Scandinavians); (b) among only student-athletes (N=1146) significant predictors of higher MH were: DC experiences, being a part of Scandinavian DC system(s), and having income from sport; (c) the strongest (positive) predictors for MH were DC competencies and benefits, life satisfaction, and MH literacy. Existing MH structures in various types of DC development environments in Europe were explored through seven case studies and following cross-case analysis led to developing MH literacy quiz, a set of exercises helping student-athletes to improve DC competencies and build resilience, and the MH promotion framework for DC environments. The framework was structured as having organizational foundations and three pillars – MH monitoring, MH literacy, and well-being interventions – all serving to ensure safe and healthy DC climate. **Conclusion.** Twelve recommendations on how to use the MH promotion framework and other findings of the Project were validated by Swedish DC support providers (N=25) leading to discussion on usefulness of the Project for Scandinavian DC systems. **Keywords:** dual career in sport and education, mental health monitoring, mental health literacy, mental health promotion framework, Scandinavian dual career system

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Associate professor Lena Nordgren¹, Professor Petra Heideken Wågert², Professor Anne Söderlund³ and Associate professor Maria Elvén³

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Title of the abstract: Can healthy lifestyle behaviours reduce the impact of perceived stress on self-rated health in people with non-communicable diseases?

Type of presentation: Poster

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Background: It is well-known that perceived stress affect people's health and health behaviours. The complex and interrelated nature between stress, health, and health behaviours raises questions about whether people with non-communicable diseases have the same needs regarding support for a change in health behaviour as people without non-communicable diseases, or whether the needs differ.

Aim: This study examined whether lifestyle behaviours, i.e., daily physical activity, physical exercise, sedentary behaviour, and dietary habits, can mediate the impact of perceived stress on self-rated health in people with or without one or more self-reported diseases: myocardial infarction, stroke, hypertension and/or diabetes.

Methods: A cross-sectional research design was used. Responses from 10,583 individuals were collected by a self-report questionnaire. Mediator analyses were conducted.

Findings: For people with none of the requested diagnoses, daily physical activity, physical exercise, and healthy dietary habits reduced the impact of perceived stress on self-rated health. For people with one of diagnosis, daily physical activity and physical exercise, as well as less sedentary behaviour decreased the effects of perceived stress on self-rated health. For participants with two diagnoses the relationship between perceived stress and self-rated health was mediated in a positive direction by physical exercise only.

Conclusions: The investigated healthy lifestyle behaviours partly mediated the association between perceived stress and self-rated health. Within the frame of health dialogues, healthy lifestyle behaviours could possibly be targeted in relation to the number of diseases that the individuals have.

Keywords: exercise; health behaviour; mediation analysis; noncommunicable diseases; stress

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Registered nurse, MSc, PhD student Annika Imhagen¹, Health economist, Associate professor Lars Hagberg², Psychologist, Associate professor Jan Karlsson³, Registered nurse, PhD, Associate professor Emma Ohlsson-Nevo⁴, MD, PhD Stefan Jansson⁵ and MD, Consultant surgeon, PhD, Associate professor Erik Stenberg⁶

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Title of the abstract: Physical activity before and after bariatric surgery

Type of presentation: Poster

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Background

Physical activity (PA) after bariatric surgery (BS) is of importance for weight loss, health status and quality of life. Essential mediators to participate in PA are enjoyment, self-efficacy and social support. PA behavior in BS individuals is unclear and more studies are needed.

Purpose

The aim was to investigate change in accelerometer measured and self-reported PA 12 months after BS, and to study changes in PA mediators.

Methods

Adults scheduled to undergo BS were recruited from a Swedish university hospital. Accelerometer-measured and self-reported PA, weight and PA mediators were collected at baseline and 12 months post-surgery.

Findings

Among 90 individuals included, 50 participants completed the 12-month follow-up assessment and had valid

accelerometer data. Time spent in light PA and total PA increased significantly from 259 to 289 minutes/day ($p=0.02$) and from 270.5 to 303.5 minutes/day ($p=0.001$) respectively. Step counts increased significantly from 6013 to 7460 steps/day ($p=0.001$). There was a significant increase in self-reported PA, enjoyment, self-efficacy for exercise and positive social support from family. The increase in mediators for PA did not lead to a significant change (+3.7 minutes/day, $p=0.06$) of time spent in moderate to vigorous physical activity (MVPA).

Conclusion

Individuals after BS are probably in need of a customized intervention to increase their MVPA. However, the increase in total PA and steps/day is likely to have a positive effect on their health in the long term.

Keywords

Bariatric surgery, physical activity, mediators, accelerometer

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Senior lecturer Thomas Ljung¹ and Senior lecturer Robert Larsson²

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Title of the abstract: FALK, a method to increase physical activity in school.

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Background: Physical activity (PA) promotes health in adults as well as children. A large proportion of schoolchildren don't meet the recommendations for PA. Few scientific studies have investigated both effectiveness and feasibility regarding school-based efforts to increase PA. We have evaluated a method we call Physical Activity and Lesson in Combination (In Swedish: Fysisk Aktivitet och Lektion i Kombination, FALK).

Purpose: To investigate the effectiveness and feasibility of FALK.

Methods: Two schools participated, one constituted control group (C), the other intervention group (I). In addition to the same PA as C-group, the I-group had three FALK sessions of 30 minutes each week.

We used pedometers to assess changes in physical activity and interviews to evaluate feasibility.

A total of 164 pupils aged 7-9 wore pedometers for a whole week on four occasions over two semesters. The number of steps per day (SPD) and the proportion of pupils with <10,000 SPDs were compared.

Interviews were carried out with students, parents, and educators (n = 35) and were analyzed by qualitative content analysis.

Findings: Pedometer data shows that students who perform FALK sessions are more physically active, and the proportion of students with insufficient PA is smaller, compared to students who don't have FALK.

The interviews show both enabling factors and barriers, but overall FALK is experienced as positive, clear, and flexible.

Conclusions: FALK increases PA and is assessed as a useful and feasible practice to integrate PA into theoretical teaching.

Keywords:

Effectiveness, Feasibility, School based intervention physical activity, Health promotion, School children

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD and Senior lecturer in public health Åsa Bringsén¹, Associate Professor in Health Science Petra Nilsson Lindström² and PhD and Senior lecturer in public health Marie Nilsson²

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Title of the abstract: Success factors for a physical literacy initiative in a Swedish upper secondary school for pupils with disabilities

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Background

Adolescents with disabilities are less physical active and have poorer health compared to others. Health Promotion (HP) including physical literacy was therefore implemented in a Swedish special upper secondary school. Implementing physical activity initiatives outside physical education is challenging, and little is known about school staffs' experiences of HP with pupils with disabilities. The purpose of the study was consequently to explore the school staffs experience of the HP initiatives success factors.

Methods

Five two-hour collegial reflection seminars were used for data-collection. 27 school staff (teachers and personal assistants) with varying age and gender participated. Seminars had preset questions related to the aim of the HP initiative and the explorative study. The group reflections were digitally recorded, transcribed, and analyzed through thematic analysis. The study was done in accordance with the Swedish Law of Research Ethics, SFS 2003:460.

Findings

An experience and reflection-based learning strategy, including individual adaptation, participation and influence functioned as prerequisites for the pupils' development of physical literacy. Staffs' participation in activities and collaboration was also related to success, together with continuous documentation, analysis, and reflection.

Conclusion

Participation and reflection are thereby considered the core of a successful HP initiative for physical literacy development of pupils with disabilities in a special upper secondary school. More research is however needed for further exploration of the complexity characterizing school HP in this type of setting.

Key words

Physical literacy, Adolescents, Disabilities, School health promotion

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Lars Kristén¹, PhD Maria Nyholm² and PhD Marie Lydell²

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Title of the abstract: Parent's view about their child with ADHD and ASD participating in an intervention to increase physical activity.

Type of presentation: Poster

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Background: Changing the physical environment might be a way to promote physical activity and improve social inclusion among children with ADS and ADHD, however, different intervention is needed for new evidence. This study used the theoretical framework of environmental relative model, that is the interaction of the child with ASD and ADHD and the environment.

Purpose of the study: The aim of the study was to describe parents' view about their child (10-15 years) with ADHD and ADS participating in a Physical activity on prescription (PAP)-intervention to increase physical activity.

Methods: The PAP- intervention involved a Child and Adolescent Psychiatry outpatient clinic, the Sports Federation, and local sports clubs in a region in southwestern Sweden. A sample of 13 parents participated in this semi-structures interview-study.

Findings: The parents considered that the child's participating in the PAP intervention was a way to gain permission to participate and to fit into a physical activity environment. The parents describe that the structure of the intervention created a safe space and made it possible for the child to feel proud and capable.

Conclusion: This study adds up to the limited knowledge of promoting physical activity with an intervention for children with ADS ad ADHD. The intervention showed the importance of conditions and environment to participate in physical activity, this is also important for policymakers when trying to fulfil WHO-recommendation for all.

Keywords: Children with ADS and ADHD, partnership, PAP-intervention, parent's view, physical activity.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Dr. Emma Charlott Nordbø¹ and Ms. Vilde Juul²

¹Norwegian University of Life Sciences, corresponding author

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Title of the abstract: Activity-friendly neighborhoods: built environment characteristics in relation to physical activity and the moderating role of perceived safety

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Background: Despite the well-known health benefits of regular physical activity (PA), inactivity remains a major public health concern. Understanding how the built environment can encourage physical activity is important to inform current policy strategies for creating activity-friendly neighborhoods. Yet, limited knowledge from the Nordic context exists on this matter.

Purpose: We examined whether neighborhood walkability and greenness were associated with physical activity, and if perceived safety moderated any such relations, among adult citizens in Norway.

Methods: This cross-sectional study included 5670 adults aged ≥ 18 years living in urban areas of Stavanger. Information on physical activity levels, perceived neighborhood safety, and socio-demography were obtained from questionnaire data collected in the Norwegian county public health survey of Rogaland. Geographic information systems were utilized to compute walkability and vegetation scores within postcode areas, which subsequently were linked to the survey data. Hierarchical linear regression models were fitted to examine associations between walkability, greenness, safety and weekly minutes of PA. Interaction effects of perceived safety were estimated by adding interactions terms.

Findings: The adults were on average physically active 148.3 minutes/week. Neighborhood greenness was positively related to physical activity when adjusting for potential confounders. No such relation was observed for walkability. Perceived safety was significantly related to increased levels of physical activity, but no moderation was observed.

Conclusion: The results point towards the importance of policymakers, planners, and public health professionals to advocate for the provision of green spaces and safe environments for physical activity in the neighborhood.

Keywords: Physical activity; built environment; safety.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

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Title of the abstract: : Cost-effectiveness of physical activity interventions for elderly with vision-related disease

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Background Physical activity is believed to slow the progression of dry age-related macula degeneration (AMD), a hereditary eye disease that affects the central vision.

Purpose of the study To compare costs and health effects of two physical activity programs for elderly with AMD; one empowerment-based implemented in Sweden and one more traditional program in Denmark.

Methods Self-reported survey data and objectively measured physical functional tests were collected at baseline, 4 months, 6 months, and end of program. The incremental cost-effectiveness ratio (ICER) reports differences in societal perspective intervention costs between the programs (implemented for 6 months in Sweden and 12 months in Denmark) divided by the differences in mean changes in quality-adjusted life-years (QALYs) between baseline and follow-up. Intervention costs, reported in year 2022 SEK, were collected via project personnel interviews. QALYs are estimated for 6 and 12 months, respectively, via the instrument EQ-5D-5L.

Findings Preliminary 4-month findings indicate higher societal intervention costs for the traditional program, of 3,450 SEK per patient. The mean change in QALYs was 0.0013 for the empowerment-based program but a negative -0.0003 for the traditional. The traditional program is thus not cost-effective in comparison with the empowerment-based program. Physical tests show a statistically significant positive change in strength but not in balance (only Swedish 6-month data).

Conclusions The more costly traditional physical activity program did not result in more health effects than the empowerment-based program after 4 months, but these short-term findings might change in the full follow-up of programs.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Maria Nyholm¹, PhD Marie Lydell² and PhD Lars Kristén²

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Title of the abstract: Health promotion partnership to promote physical activity in Swedish children with ADHD and ASD. Did the partnership functioning?

Type of presentation: Poster

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Background: Children with ASD or ADHD have a higher risk of inactivity, efforts to promote physical activity targeting these children are few. Promoting physical activity in partnership with partners from different sectors in the society might create robust results.

Purpose of the study was to examine the partnership in an intervention for physical activity, partnership between Child and Adolescence Psychiatry (CAP), the Sports Federation, and local sports clubs and address the question: Did the partnership functioning?

Methods: Data were obtained through interviews with professionals at CAP (n=11), three focus-group interviews with sport coaches and interviews with parents (n=13). We used Bergen Model of Collaborative functioning to analyse the findings: input (resources, mission, financial resources) collaboration (leadership, communication, roles, structure) and output (synergy, additive- and antagonistic results).

Findings: A balanced input in the partnership was that the partners shared the mission, there was unbalance input in personnel resources and funding. The Sports federation helped with the roles and structures in the intervention, which helped the collaboration, whereas doubts and uncertainties about the sustainability interacted negative. The output showed a synergy in the product of the partnership, parent described their children participating in physical activity, an antagonistic output was that there was a lack of trust between partners.

Conclusion: The process of the partnership did not function smoothly, however the product of the partnership did, i.e children with ADHD and ADS became physical active. Partnership in real-world, raises complex questions for research.

Key words: children, evaluating, health promotion partnership, interviews, physical activity

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Linn Håman¹, PhD Lars Kristén², Associate Professor Åsa Alftberg³, PhD Jeanette Källstrand², Associate Professor Ing-Marie Carlsson² and Professor Eva-Carin Lindgren²

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Title of the abstract: Empowering older people with age-related macular degeneration: An Empowerment-Based Physical Activity Intervention

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Empowering older people with age-related macular degeneration: An Empowerment-Based Physical Activity Intervention

Background: Age-related macular degeneration (AMD) is the most common cause of incurable visual impairment. These impacts include loss of social activities, decreased functional independence, and reduced physical activity.

The purpose of the study was to explore the participants' experiences and meanings expressed by people with AMD participating in an empowerment-based intervention.

Methods: The study has an explorative design based on ethnographic observations and informal interviews during the Empowerment-Based Physical Activity Intervention (EPI). The intervention embraced empowerment as a process and adopted the reflective equilibrium community empowerment approach. The EPI was carried out over six months and comprised adapted physical activity and social activities twice a week—furthermore, individual health coaching on three occasions.

Nine women and two men aged 70-87 years old with AMD in Sweden participated in EPI. Field notes of the observations were analysed using a thematic method with an abductive approach.

Findings: The analysis resulted in five themes: a) Feeling seen and included, b) Having a sense of security, c) Developing physical skills, d) Feeling meaningful and social connectedness, and e) Feeling increased motivation.

Conclusion: Based on the findings, EPI has been a resource for the participants' well-being and development. The findings also filled a gap in the research literature and may provide insights into the potential of creative supervised, adapted physical activity in groups, health coaching, and socialising.

Keywords: Adapted physical activity, age-related macular degeneration, empowerment, intervention, well-being

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Miss Charlotte Sylwander¹, Prof. Astrid Klopstad Wahl², Dr. Maria Andersson³, Dr. Emma Haglund⁴ and Dr. Ingrid Larsson⁴

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Title of the abstract: Health literacy in individuals with knee pain – a cross-sectional study

Type of presentation: Poster

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Background: Health literacy (HL) is the ability to access, understand, appraise, and apply health information. A low level of HL is associated with poorer health and less adherence to treatment in chronic conditions, such as physical activity. HL is thus essential in health-promotive work for chronic pain and osteoarthritis.

Aim: To investigate the level of HL and its associations with health status, lifestyle factors, chronic pain, and knee osteoarthritis in individuals with knee pain.

Method: A cross-sectional design including 222 individuals with knee pain (67% women, mean age 56±8 years). General HL was assessed using HLS-EU-Q16 and electronic HL by eHEALS. Independent variables were SF-36, lifestyle factors, pain distribution, and knee osteoarthritis. Differences were analysed with the Chi² test and Mann-Whitney U-test and associations with logistic regressions.

Results: In total, 29% had a limited level of general and/or electronic HL. Individuals with sufficient HL reported higher general health (figure 1), higher education, and more had a healthy diet (table 1). No differences were found regarding physical activity. Higher education (secondary school: OR 3.79; CI 1.59-9.04; university: OR 4.07; CI 1.68-9.88), healthy diet (OR 2.66; CI 1.15-6.12), and <1 unit of alcohol/week (OR 2.44; CI 1.02-5.84) were associated with sufficient HL.

Conclusion: Almost 30% reported limited HL among individuals with knee pain and few differences were found between the groups with limited and sufficient HL. Future research should further study the role of HL regarding physical activity and other health-promotive activities.

Key words: health literacy, health promotion, lifestyle, knee pain

Table 1 Descriptive statistics for the whole sample and the groups of a limited and sufficient health literacy (HL) level.

	All n = 222	Limited HL n = 65	Sufficient HL n = 157	p-value
Age, mean years (sd)	56 (8)	57 (8)	55 (8)	0.224
Gender, n (%)				
Women / Men	148 (67) / 74 (33)	41 (63) / 24 (37)	107 (68) / 50 (32)	0.282
Education, n (%)				<0.001
Compulsory school	34 (15.5)	19 (29)	15 (10)	
Secondary	87 (39.5)	24 (37)	63 (40)	
University	100 (45)	22 (34)	78 (50)	
Usability of internet use, n (%)				
Not useful / Useful	52 (24) / 168 (77)	32 (50) / 32 (50)	20 (13) / 136 (87)	<0.001
Importance of the internet, n (%)				
Not important / Important	47 (21) / 173 (79)	24 (37.5) / 40 (62.5)	23 (15) / 133 (85)	<0.001
General HL, n (%)				
Limited level / Sufficient level	46 (21) / 176 (79)			
Electronic HL, n (%)				
Limited level / Sufficient level	41 (19) / 175 (81)			
Pain group, n (%)				0.166
NCP	41 (19)	13 (2)	28 (18)	
CRP	146 (66)	35 (58.5)	68.8 (70)	
CWP	33 (15)	14 (21.5)	19 (12)	
Knee osteoarthritis ^a , n (%)	75 (35)	28 (44)	47 (31)	0.085
Meets recommendations for physical activity ^b , n (%)	126 (57)	39 (60)	87 (56)	0.655
Healthy diet ^c , n (%)	54 (24)	9 (14)	45 (29)	0.013
Smoker, n (%)	16 (7)	5 (8)	11 (7)	0.526
Snus user, n (%)	10 (4.5)	2 (3)	8 (5)	0.403
Alcohol intake, n (%)				0.105
< 1 unit/week	83 (38)	20 (31)	63 (41)	
1-4 units/week	99 (45)	29 (44.5)	70 (45.5)	
≥ 5 units/week	37 (17)	16 (24.5)	21 (13.5)	

Limited HL was defined as reporting a limited level of general HL and/or electronic HL

^a Having a score ≥1 on the Ahlbäck scale for knee osteoarthritis

^b WHO recommendations: 150-300 minutes of moderate intensity and/or 75-150 minutes of vigorous intensity

^c Vegetables and fruit every day, fish 2/week, breakfast most days, pastries a few times/week

NCP, no chronic pain; CRP, chronic regional pain; CWP, chronic widespread pain

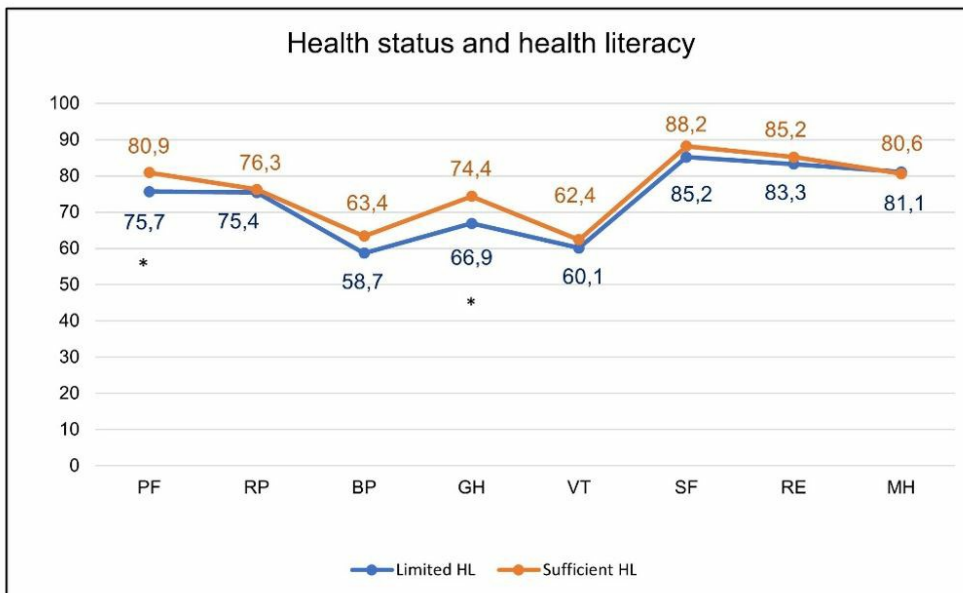


Figure 1 Results from the SF-36 subscales in the groups with limited and sufficient health literacy. The sub-scales are physical function (PF); role function – physical aspect (RP); bodily pain (BP); general health (GH); vitality (VT); social functioning (SF); role function – emotional aspect (RE), and mental health (MH). * p < 0.05

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Linn Håman¹, PhD Katarina Haraldsson² and Professor Eva-Carin Lindgren³

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Title of the abstract: Research circle in a health promotion intervention: developing physical education teacher's child-centred coaching approach

Type of presentation: Poster

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Research circle in a health promotion intervention: developing physical education teacher's child-centred coaching approach

Background: Research has shown that professional development positively influences teachers' capacity to reflect on new knowledge and practice. One way of working with collegial learning in schools is through so-called research circles, in which teachers and researchers collaborate on specific content.

Purpose: This presentation aims to illuminate how a research circle can develop and deepen physical education teachers' (PE) critical reflection on a child-centred coaching approach.

Methods: The research circle was conducted within the health promotion intervention. The intervention focused on moderate-to-vigorous physical activity (MVPA), incorporating a child-centred coaching approach. The research circle consisted of three full days during a school year with PE teachers (N=22, approximately 18 per meeting) from eight primary and middle schools (from grades 4 to 9) in eight municipalities in Sweden, and three researchers. The data consist of group discussions audio-recorded and transcribed verbatim in the research circle meetings.

Findings: During a thematic analysis, three themes were identified: Creating an inclusive environment, Challenges to motivate all pupils, and Adapting MVPA activities.

Conclusion: The research circle contributed to critical reflections that improved actions in the intervention and everyday practice, as the teachers learned from each other and the researchers when critically reflecting on a child-centred perspective on practice.

Keywords: Coaching, health promotion, inclusion, intervention, physical activity, pupils, research circle

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

Consultant, PhD Camilla Ida Ravnbøl¹ and Consultant Ditte Luise Hartvig²

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Title of the abstract: "We're all in the same boat" Health benefits of group training among older adults with degenerative eye disease

Type of presentation: Poster

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Close to 20% of citizens in Scandinavia over the age of 60 are affected by the eye disease called age-related macular degeneration (AMD), which is the leading cause of blindness among older adults.

This paper presents results from an interdisciplinary study conducted at the Zealand University Hospital in Denmark. Here, older adults with AMD participated in a 52-week training programme, to test whether traditional strength training in groups twice a week could halt the progress of their vision loss. Qualitative research with 26 participants was carried out prior to or after training (interviews and focus groups) along with observations during training sessions. This research has given insight into the participants' experiences of living with visual loss including how it affects their physical health and mental wellbeing. Themes that emerged through the qualitative data included feelings of sorrow upon diagnosis, social isolation from family and friends, and feelings of shame due to loss of normality.

The qualitative study found the participants to have considerable benefits from the training interventions. Group training improved their physical health and mobility and strengthened feelings of empowerment and community belonging, because they established social relationships with other AMD patients. On this basis, the results show how physical group activity strengthens physical and mental wellbeing among older adults with degenerative eye disease.

Keywords: visual loss, older adults, group training, qualitative research, physical and mental health

Submitted for sub-theme: Sustainable health in physical activity and sport

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

PhD Pelle Pelters¹ and PhD, senior lecturer Petra Roll Bennet²

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Title of the abstract: Desirable Pain – reaching one's full potential through body modification and body building

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Background: To be healthy and reach one's full potential, practices such as exercise or cosmetic surgery can be applied. Whereas exercise primarily targets physical health, cosmetic surgery aims to achieve correspondence between inner and outer self-image, thereby supporting mental health. Both practices, however, appear to require a passage through pain, represented by the exercise slogan 'no pain, no gain' and the cosmetic surgery mantra 'beauty knows no pain'. Hence, pain potentially possesses positive qualities, regardless of the pain avoidance paradigm of biomedicine. However, the meaning and health promotion significance of this 'desirable' pain is under-investigated.

Purpose: The presentation aims to explore potentially desirable, self-induced pain to achieve longed-for body change and pain's significance for health promotion.

Methods: We draw on two ongoing studies. The first investigates the role of pain in narratives on cosmetic surgery, derived from an online forum for women planning to undergo breast-augmentation. In the second study, gym users are interviewed about their experiences and attitudes regarding positive pain and pain-related expectations in the gym.

Findings: Tentative results show a tendency to identify with social norms emphasizing the willingness to push through pain to realize one's full potential as one's 'best self'.

Conclusion: Pain appears to represent a hidden yet inevitable agenda for proofing oneself worthy. Utilizing this motivational capacity and impeding its devaluating potential for those not passing the pain proof is another task to add to the health promotion curriculum.

Keywords: pain, physical exercise, cosmetic surgery, health promotion, self-realization

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

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Title of the abstract: Adapted physical activity - Collaboration and innovation for increased participation and accessibility in the subject of Physical Education.

Type of presentation: Oral

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Background

Research shows that children with disabilities have worse health conditions than children without disabilities in Sweden. The school subject physical education (PE) has potential to promote all student's well-being and healthy lifestyles, regardless of disabilities. The idea is equal access to education, which includes the school system, the pedagogical practice and the well-being of students.

Purpose of the study

The purpose of the study was to develop, test and evaluate the educational model Peer Guiding that enables inclusive teaching in physical education in school.

Methods

The study was conducted as a Research Circle with teachers during 2021, followed by an intervention at 2 schools during 2022. A shorter training about inclusion was carried out with the students, who then had to practice this during the lessons in PE. The intervention contained participant observation combined with qualitative interviews on students n=70 (grade 4 and 6) with and without disabilities, PE teachers n=3 and principals n=2.

Findings

The conditions for inclusive teaching in physical education improved according to teachers and students. The results showed three themes that students and teachers considered as important for inclusive education: Joyful lessons in physical education, individual adaptations and equalize normative differences.

Conclusions

The results indicate that the Peer Guiding model contribute to students with and without disabilities at school becoming more active and improving their health from a holistic perspective.

Keywords: Adapted Physical Activity, Inclusion, Physical Education, Students with disabilities.

Nordic Health Promotion Research Conference 2023

Halmstad, June 14–16

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Title of the abstract: Concurrent validation of questions about physical activity and sedentary time in targeted health dialogues in Sweden

Type of presentation: Poster

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Title: Concurrent validation of questions about physical activity and sedentary time in targeted health dialogues in Sweden

Background: The goals of targeted health dialogues (THD) conducted in primary health care are to reach an equal and sustainable health in the population. THD discover resources to support the participant to improve their lifestyle habits preventing ill health.

Purpose of the study: To validate self-reported physical activity (PA) and sedentary time measured in Swedish THD.

Method and theory: Evaluating agreement between PA measured by an interview form and PA objectively measured by accelerometry and comparison of a question on sedentary time with measurement by inclinometer. Statistical analyses included Bland-Altman plots and correlation coefficients.

Findings: Preliminary results indicates higher absolute variation in the difference between self-reported and objectively measured PA for very high PA, both for energy expenditure and amount of time spent in moderate and vigorous physical activity (MVPA). The correlation between self-reported and objectively measured PA was modest. Sedentary time was underestimated of the participants. The correlation between the single item question and objectively measured sedentary time was moderate.

Conclusion: Preliminary results showed an acceptable agreement between self-reported PA and PA objectively measured by accelerometry. The question about sedentary time tended to underestimate sedentary time compared to objective measures. The interview form of PA and the question about sedentary time seems acceptable for use in connection with Swedish targeted health dialogues.

Keywords: targeted health dialogue, accelerometry, Bland-Altman plot, health promotion, validity

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Title of the abstract: Physiological effects and compliance of a self-managed high-intensity interval training program in individuals with rheumatic back disease

Type of presentation: Poster

Theme: Sustainable health in physical activity and sport b) Main focus on exercise and physical activity

Submission

Background: Exercise is an important treatment and health promotion tool for individuals with the rheumatic disease axial spondyloarthritis (axSpA). High intensity interval training (HIIT) has positively affected symptoms and risk-factors without exacerbating disease activity. However, compliance tends to decrease over time, and long-term supervised training is costly. Thus, the purpose was to study if 12 weeks of self-managed HIIT with digital support in individuals with axSpA improved fitness, body mass, disease activity, and health status differently compared to moderate intensity training in an axSpA control group (CTL).

Methods: Individuals with stable axSpA were randomized to a HIIT intervention group (HIG; n=12) or CTL (n=12). HIG trained 12 weeks three times/wk, in self-selected activities guided by a fitness watch. CTL exercised as usual (fulfilled physical activity recommendations). Baseline and follow-up assessments included Åstrand VO₂max, grip strength, body mass, self-reported health status (EQ5D), and disease activity (BASDAI). Statistics included 2x2 ANOVA (p<0.05).

Findings: Compliance was 21/24 (87%). At follow-up, HIG lost ~1kg in body mass and CTL gained ~1kg (p<0.05). Both groups increased their absolute VO₂max (p<0.05), but only HIG increased relative VO₂max (p<0.001). Only HIG improved in health status (p<0.001). No change (p>0.05) existed in grip strength or disease activity.

Conclusion: After 12 weeks of a year-long RCT, compliance was high, HIG lost some body mass, whereas CTL gained some. Both groups increased in absolute VO₂max, but HIG increased more. Self-reported health status was higher in HIG but unchanged in CTL. Disease activity did not differ between groups.

