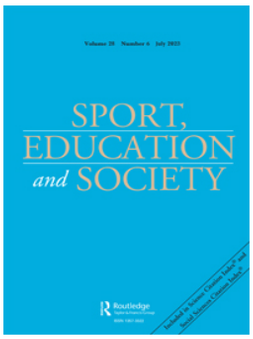

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Whose blue healthy spaces? A scoping study on blue health promotion and recreation, planning and management

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ABSTRACT

This study reviews the research literature on blue health promotion and the value of multiple forms of coastal and marine recreation and activities across societal contexts, with contributions from the Nordic region. It re-emphasizes the need for interrogating whose benefits and interests are promoted and the diversity of physical cultures and activities. The conceptualisation of *salutogenetic* health interventions contextualises the review beyond individualised and medicalised scopes through the research question: *Whether and how does integrated coastal and marine planning and management seek to facilitate and enhance physically active blue health promotion that is also socio-ecologically inclusive?* Following the scoping review framework by Arksey and O'Malley (2005), the study identifies recent research and gaps through an iterative process. It employs transparency on inclusion/exclusion criteria, and in the comparison and discussion concerning methodology and findings. The research techniques included searches across online databases, journals, library resources, and manually scanning reference lists and abstracts. The peer-reviewed works included are $n = 58$ published between 1996 and 2022, with most published between 2015 and 2022. The reviewed literature is grouped analytically into two themes: (1) Blue health promotion, interventions and activities and (2) integrated marine planning, management and policy. Against this background, the article discusses the potential of a complementary research approach combining: (a) the *salutogenetic* orientation, (b) formative interventions and (c) co-creation in blue health promotion practices. Findings suggest a need for greater differentiation concerning a socio-ecological approach to recreational blue health promotion, prioritizing locally tailored and seasonally adapted interventions.

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Blue health promotion interventions; outdoor water sports and physical recreation; socio-ecology; inclusive practice; integrated marine planning and management; Nordic

Introduction

Outdoor sports, nature-based recreation and public health promotion have been widely researched regarding terrestrial spaces (Eigenschenk et al., 2019; Lackey et al., 2021; Li et al., 2022; Triguero-Mas et al., 2015; Van den Bosch & Bird, 2018). However, recreational activities in coastal and marine environments have been underestimated as public health resources (White et al., 2014; 2018; 2020). Increasingly, 'blue health' is becoming an established field of research commonly defined as: 'health-enabling places and spaces where water is at the centre of a range of environments with

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identifiable potential for the promotion of human well-being' (Foley & Kistemann, 2015, p. 157). A multidisciplinary field of research evidence and empirical examples has documented blue health benefits and challenges in relation to safety, drowning prevention, access inequalities, pollution management issues and ecologically unhealthy blue spaces needing attention (Borja et al., 2020; Garrett et al., 2023; Short et al., 2021; WHO, 2021).

As the title of this paper reflects, critical explorations of social inclusivity and politics of place are critical in the emerging field of blue health research (i.e. Juster-horsfield & Bell, 2021; Olive & Wheaton, 2021; Wheaton et al., 2020). This study re-emphasises the importance of the *salutogentic* health promotion orientation (Antonovsky, 1996) foundational for the seminal WHO declaration, and recent agenda on nature, biodiversity and health (WHO, 2021). An approach that prompts different questions, answers and solutions against the growing and complex global health problems than the health/disease dualisms of positivist health sciences. The study advocates, for a socio-ecological approach epitomised in ecological models of health (Sallis et al., 2015, p. 43) ensuring that the environment and policies are considered in developing comprehensive approaches to studying and intervening in health. As well as ensuring socio-ecological health equality in integrated planning and management. To this end, the study addresses the following research question: *Whether and how does integrated coastal and marine planning and management seek to facilitate and enhance physically active blue health promotion that is also socio-ecologically inclusive?*

Sporting activities, organisations and volunteer sectors in the Nordic countries are often requested to shoulder the responsibility to meet government objectives of physical activity participation and health promotion. Increasingly provisions for active outdoor lifestyles are considered in planning and management (Fredman & Margaryan, 2021). However, the ability of sport practices and organizational structures to meet public health needs have been contested (Aggestål & Fahlén, 2015; Pringle, 2001; Gurholt, in review). As well, the call for sustainable transformations requires new research on relations between individuals, 'others' and the environment across the outdoor recreation sectors (Gurholt, 2015, p. 288). Hence, research is needed on policy, practice and organisational structures governing multiple forms of outdoor sports, physical cultures and active outdoor recreation within blue landscapes' for *salutogenetic*, sustainable and inclusive public health promotion.

With relevance to both Nordic and international audiences of researchers and scholars in the field, this scoping study demonstrates why a *salutogenetic* and socio-ecological blue health agenda likely require place-based, collaborative and co-created solutions. Implications for Nordic regions included such as seasonal opportunities, access and ethical challenges for social inclusion through mobilisation of the voluntary outdoor and health care sectors.

Methodology and design

A scoping study approach guides this literature review, enabling a broader search than for systematic reviews. According to the *salutogenetic* orientation of health promotion (Antonovsky, 1996) social and cultural implications of health and community empowerment are critical in solving today's global health issues, yet remain under prioritised (Dean & McQueen, 1996; Eriksson & Lindström, 2010; Kickbusch, 1996; Ottemöller et al., 2021). The scoping study approach was chosen, as it allows diverse research designs and capturing the inherent complexity in health issues and care professions according to the *salutogenetic* orientation. This scoping study followed the five-step framework as developed by Arksey and O'Malley (2005, p. 20): (1) Identifying the research questions; (2) studies; (3) studies selection; (4) charting the analytical information and (5) collating, summarizing, synthesizing and reporting the results. Transparency was pursued in each stage of the research process and in the written article.

Following the Qualitative Reporting Standards (Levitt et al., 2018, p. 29), a detailed representation of the research and analytical process was pursued and disseminated through thematic grouping and a narrative approach. The employed approach identifies deeper meanings of human experiences, actions, and social processes across time, place, culture and contexts. The study had a spatial-geographic focus on coastal and marine settings/seascapes and activities, implications for coastal

planning, management and policy and blue health intervention design. It does not cover the whole spectrum of blue spaces such as inland freshwater such as lakes, rivers and ponds as some blue health studies (i.e. Elliott et al., 2020), due to limitations concerning time and resources of the study.

Through stages, one and two, a broad overview of research questions and studies were gained through an explorative approach. In stage three, identification, screening and the eligibility of studies were undertaken using online journals and libraries, Scopus, PsychInfo, Oria, Web of Science, SageJournal, PubMed, and Google Scholar and by cross-reference reading and bibliographical searches of literature reviews. Backward citation searching of articles was used to identify additional publications. Articles were screened by title and abstract following pre-determined inclusion and exclusion criteria outlined below. The first author did the initial search and screening of the studies according to the agreed aim, research question and keywords. The second and third authors added relevant studies from their fields of knowledge. All three authors validated the final selection of studies and contributed throughout the process to the analysis and writing of the article. Thus, the final text expresses an agreed understanding of all the authors through full-text readings, primary empirical studies, reviews and grey literature such as policy papers and theoretical works. The included studies are published between 1996 and 2022, with most of them published between 2015 and 2022. To this end, the review process from the outset did not intend to place strict limitations on search terms, identification of relevant studies or study selection. Accordingly, the process was not linear but iterative, with necessary steps being repeated. Inclusion and exclusion criteria were defined according to the following search terms and study characteristics:

- Blue health and/or ocean and human health.
- Coastal and marine leisure activities/recreation and/or outdoor water sports, and/or planning and management.
- Health promotion and/or blue space and/or seascapes.
- Sociocultural and *salutogenetic* perspectives related to blue health.
- Qualitative and mixed methodologies (including Public Participation Geographical Information Systems – PPGIS).

Unpublished manuscripts, dissertations or non-peer reviewed journal publications were excluded. Relevant policy papers are discussed but excluded from the counted studies. Following stages four and five (Arksey & O'Malley, 2005, p. 20), a database was created with the eligible results starting with $n = 342$, and throughout the analysis and thematic synthetization of the content (stage 5), the total amount of included works was reduced to $n = 58$. The findings were analytically grouped into two themes: (1) Blue health promotion, interventions, and activities ($n = 43$) and (2) Marine and coastal planning and integrated management ($n = 15$). Only peer-reviewed papers are included in the count. Six policy reports were not included in the counting. Towards the end, a discussion follows which considers further relevant theoretical and grey literature ($n = 17$) concerning formative intervention design, theory, methodological issues and a discussion on socio-ecological Nordic implications. Figure 1 illustrates the overall process through which literature was reviewed.

Analysis and synthesized themes

Theme 1: Blue health promotion, interventions and activities

In line with the United Nation's Ocean Decade (2020–2030), a number of European blue health research projects document the strong interrelationships between health and well-being, blue environments and the sustainable transition. Such as the research agendas of the projects: H2020 BlueHealth EU (Grellier et al., 2017); H2020 SOPHIE (Short et al., 2021) and Ocean and Human Health (OHH) (Borja et al., 2020; Fleming et al., 2019; Kellett & Heymans, 2020). Reduced marine environmental qualities, access restrictions, distance and few recreation opportunities appear as critical factors across many European contexts (Elliott et al., 2020). Aesthetically attractive sites,

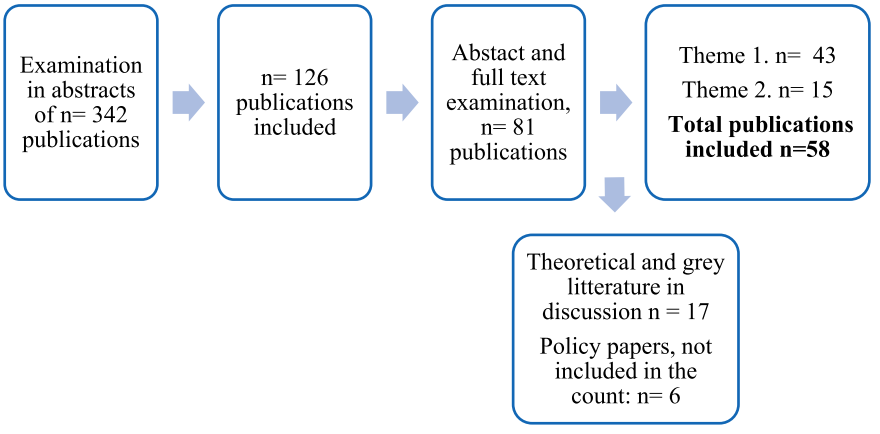

Figure 1. Overview of inclusion and exclusion process and synthetization of themes.

recognized as safe and intrinsically motivating (Tester-Jones et al., 2020), are likely to have more frequent visits and thus more likely to enable health promotion, stress reduction, and physical activity in everyday life (White et al., 2018; 2020; WHO, 2021, p. 24).

The role of health-enabling places, relationships and recreational activities in water-based landscapes is increasingly recognized and conceptualized. Evidence for blue health benefits, effects, and outcomes for mental, physical and social health has been reviewed by Britton et al. (2020, p. 60) and includes an assortment of blue recreational activities such as surfing, sailing, swimming, diving, fishing and sea-kayaking. The included evidence was primarily for the activity of surfing with outcomes for veterans and youth, however, and it did not include studies examining broader physical and recreational cultures or non-sporting activities. For instance, such as using the beach as a setting for families' health promotion (Ashbullby et al., 2013). Findings highlight psychosocial well-being impacts, rather than physical health and suggest that activities in blue spaces play a greater role than particular qualities of the blue spaces themselves. However, other studies emphasise both setting and organised recreational activity as essential for positive health outcomes. For instance, a nature-based health intervention in a wet-land setting using mixed water-based recreational activities in the treatment of individuals diagnosed with stress, anxiety and depression (Maund et al., 2019) suggest findings for improved participants' physical health, reduced social isolation, relaxation and reductions in stress. A range of other studies shows that active engagement in organized water-based sports and recreation enhances women's and young people's life quality and social inclusion (Britton, 2018; Broch, 2021; Brown & Humberstone, 2015; Juster-horsfield & Bell, 2021; Olive & Wheaton, 2021). In studies on outdoor swimming participation, seascapes are often perceived as socially inclusive environments (Gjølme et al., 2020; Moles, 2020), whilst emphasizing that outdoor water competence and drowning prevention are foundational (Stallman, 2017). Other potentially relevant but relatively unconsidered examples in the blue health agenda include consideration for the diverse range of practices across water-oriented outdoor sport, physical cultures and practices (Eigenschenk et al., 2019; Lloret et al., 2021; Smith, 2021), extending to outdoor adventure, experiential education and tourism (Beames et al., 2019; Varley & Semple, 2015) or marine cultural heritage values (Ounanian et al., 2021). These examples indicate a broader range of blue outdoor recreational practices and cultures with potential implications for blue health promotion, and potential for evoking caring environmental ethics and transforming human-seascape relations.

Qualities unique to the element of water but not necessarily specific to certain blue landscapes and activites are regognised in various studies, highlighting the gravity-altering and fluid element of water as liberating, enjoyable, playful and providing unique uplifting sensations. Water's ability

to enable bodies of difference to move freely and facilitate respite is found in studies across activities such as outdoor swimming (Britton & Foley, 2021; Foley & Kistemann, 2015), surfing for children with disabilities (Armitano et al., 2015) and sea kayaking for people in recovery from lower spine injuries (Casey et al., 2009; Taylor & McGruder, 1996). Meanwhile, these experiences appear to improve mental and social health and a sense of meaningfulness amongst the participants. A recent sea kayaking study confirms these findings and highlights moreover, the significance of dialectical and vitalizing dynamics at sea, as influential to wellbeing and embodied sensory effects, whilst also invoking fear and physical challenge. The study discusses the implications of experiential learning approach and social support for enabling *salutogenetic* health and Quality of Life (Kronsted Lund et al., 2020).

Critical issues of intervention design, theoretical orientations and methodology in Health Science are increasingly discussed. Western dichotomous conceptions of health disease and disconnection from nature and seascapes are contested (Kronsted Lund et al., 2020; Olive & Wheaton, 2021; Wheaton et al., 2020). Prescription pathways for Blue Care have been considered by Justerhorsfield and Bell (2021, p. 11) and Blue Space Interventions (Britton et al., 2020, p. 51). Quality assurance, resources and standardized training are emphasized before potential interventions can be scaled up. However, the research also stresses that prescription design may need to be designed in collaboration with healthcare practitioners and providers, to counterbalance inequalities in who can define, access and engage with seascapes and ensure interventions are pleasurable, supportive and caring. The researchers are concerned that a prescription design may potentially lessen the playful and informal nature of the activity, and thus, become reduced to forms of consumption and commodification. Similar concerns are raised in a recent study, advocating for a socially inclusive blue public health promotion intervention, to reconnect and reconcile people with blue environments in parallel with improving social welfare (Brückner et al., 2022, p. 10). Additionally, that provisions for leisure and recreation life need to include community building, as commercialized activity and medicalised intervention can have disadvantageous implications for exclusion.

These considerations resonate strongly with the *salutogenetic* orientation of health promotion (Antonovsky, 1996) emphasising an 'upstream' and community-focused intervention of health promotion. Health is seen as a continuum and ongoing process of social-cultural interactions and hence does not take a deterministic orientation that has often characterized westernised medical orientations of disease treatment (Benz et al., 2014; Bunton & Petersen, 1997, p. 94). Rather than focusing solely on pathology, the upstream approach focuses on factors creating health improvements, such as enabling and strengthening factors in life, that create resources, resilience, meaningfulness and a sense of coherence. Despite being recognized as important across many blue health studies (i.e. Brückner et al., 2022; Foley & Kistemann, 2015; Gascon et al., 2017, p. 1207; Kronsted Lund et al., 2020; Völker & Kistemann, 2011), scholars have often omitted its strong societal and cultural implications and focused on individualised benefits. This may be omitting important socio-ecological implications, emphasised by ecological models of health promotion (Sallis et al., 2015, p. 43). Therapeutic discourses for instance, are well represented in the literature, advocating for the role of *hydrophilic* relationships, and personal and innate ties with water environments for health outcomes (Britton & Foley, 2021; Foley et al., 2019; Foley & Kistemann, 2015; White et al., 2020). However, whether or how the objectives and practices of individual therapy correspond to those of the *salutogenetic health* orientation in intervention design has not been widely researched.

Theme 2: Integrated marine planning and management for blue health promotion

A paradigm shift in marine planning and management internationally has led to an increasing focus on integration between the city, people, water environments and public health (Bell et al., 2021; Brückner et al., 2022). Worldwide, numerous seascapes and coastal landscapes and their cities have been polluted and engineered resulting in habitat loss and declining biodiversity and ecological health. In the recent *Baltic and the North Sea Research and Innovation Program* (Koho et al., 2021,

p. 57), integrated policy negotiations and planning for a more sustainable future are requested, including health and wellbeing of coastal communities. Balancing everyday health benefits associated with multiple forms of outdoor recreation with other uses and sectors is becoming critical (Fredman & Margaryan, 2021).

Some research has sought to understand and model the opportunities and obstacles for spatial usage of coastal and marine landscapes in outdoor recreation. For instance, the Blue Health Environmental Assessment Tool (BEAT) (Mishra et al., 2020) which aims to identify the extent to which particular blue spaces provide opportunities for obtaining benefits through exposure to water, which impacts there might be on the environment itself and the potential hazards present for both the environment and people. The BEAT tool is linked to a conceptual model called *The Person-Environment interaction model for Blue Space and health outcomes* (Mishra et al., 2020, p. 49). The conceptual model is based on previous evidence that has been reviewed, and suggests how blue spaces, places and facilities, seascape characteristics and individual experiences (affect, affordances and socio-cultural relationships) influence, what Mishra et al. (2020, p. 49) consider 'blue health determinants'. These determinants are identified as psychological, physical, social and place-attached factors influencing health. The BEAT tool has been tested (Mishra et al., 2021, p. 12) yet methodological limitations concerning qualitative data sampling, diverse geo-political regions, on-site information at macro and micro level and training requires further attention.

According to Brückner et al. (2022, p. 10), regulations regarding public health and commercial interest and homogenous water-front sprawl, must be put in place to avoid transforming blue spaces into 'exclusive edges' as it may endanger social inclusion. To enable socially inclusive and integrated interventions for blue public health promotion, the distinction between two different approaches are recommended: First, *aesthetics and beautification*, in which water is used as an aesthetic object to upgrade the physical environment and provide pleasure in urban settings (e.g. the installation of artificial ponds and fountains). Second, *recreation and leisure* which includes accessible blue public spaces dedicated to water-based sports or multiple recreational activities.

Nordic studies have sought to define, map, and integrate the value of outdoor recreational activities into coastal planning, in response to the first Maritime Spatial Planning (MSP) of the EU Directive 2014 (EU MSP Directive, 2014). In Denmark for instance, a nationwide study has mapped and documented coastal and marine recreation using PPGIS-methodology in combination with a survey (Kaae et al., 2018). Results show that blue recreation is highly diverse and popular since more than three quarters of the population participate. However, coastal and marine recreation remains an underprioritized sector in the Danish MSP (Authority, 2016; Søfartstyrelsen, 2021). Spatial knowledge on marine recreation has to date mostly been applied in regional contexts to assess sector-specific conflicts. Such as marine recreation and water birds (Laursen et al., 2021) and increasing pressures on ecosystem components (Andersen et al., 2020) seen in the Baltic sea region (Hassler et al., 2018; Koho et al., 2021).

A concern is raised, that a dominant discourse of 'enhancing economic growth' underpins the legitimate topics that define the dominant positioning of the sectors mentioned in the EU MSP Directive (Ramírez-Monsalve & van Tatenhove, 2020). Emphasis on energy, transport, fishing, aquaculture, and extraction of raw materials, undermine other sectors such as tourism, recreational activities, and outdoor life. Structural power and dispositional power, referring to the shaping of the power of agents by their organisations' rules and resources remain issues in need of attention.

Studies from Sweden (Skriver Hansen et al., 2021) and Finland (Lankia et al., 2015) based on PPGIS and integrative approaches highlight that ecosystem service valuation concerning everyday health benefits of outdoor recreation is an essential but underprioritized planning category in policy negotiations. This includes health inequalities factors, for example, for people from low-income neighbourhoods or who are subject to other social concerns (Bratman et al., 2019; Brückner et al., 2022, p. 15). In Norway, even though integrated management plans have already been initiated for the Oslofjord where one-third of the Norwegian population lives (Stokke & Haukeland, 2018; NMCE,

2020), research on the benefits and challenges concerning blue health promotion appears to be lacking.

Discussion

This review has elaborated on two interrelated areas: (1) blue health promotion, interventions and activities and (2) integrated planning, management, and policy. Against this background, we will discuss the potential of a complementary novel research approach combining; (a) the *salutogenetic* orientation; (b) formative interventions and (c) co-creation in blue health promotion practices.

a. The salutogenetic orientation

Applying the health promotion theory of *salutogenesis* implies a consideration for communities and local settings in producing strong socio-cultural meaningfulness and population health improvements. We propose contingent with other research (i.e. Benz et al., 2014; Eriksson & Lindström, 2010; Ottemöller et al., 2021) that *salutogenesis* in practice necessarily extends beyond individualised and medicalised treatment in health policy concerns, with implications for how outdoor activities and organisations in blue recreational spaces operate, are planned and managed. Standardised interventions conducted elsewhere that are not adapted to contexts, seasonal factors and local community health needs, may waste resources and could affect health negatively (Dean & McQueen, 1996; Ottemöller et al., 2021). Creating a sound knowledge base for action on different practices, coastal communities and geographies with attractive recreational qualities, implications for activities and health promotion, is arguably a pre-requisite for achieving successful *salutogenetic* health promotion policy, practice and interventions. In this matter, discussions are needed on the legitimacy and priority given to different physical cultures, outdoor educational practices, structural and dispositional power in planning and management, to enable an inclusive and sustainable *salutogenetic* blue health promotion agenda.

b. Formative interventions

The need for theoretical and methodological distinctions concerning formative or linear interventions in health promotion settings is not always recognised (Engeström, 2011). Whilst formative intervention design, allows for iterative processes that include participants in co-defining objectives and co-creating processes; linear intervention design intends to enable managers or health professionals to control and predict all aspects of the intervention process. Whilst the latter is often widely adopted in western health care, the approach may not be suitable to create desired community-level health improvements that give agency to participants. For instance, an example from Nordic healthcare systems shows that previous attempts of implementing exercise prescription were largely unsuccessful due to compromising individual agency, intrinsic motivation and related ethical issues concerning personhood (Thing, 2009, p. 286). Health promotion policies aiming to govern social relations and cultural production of self-regulated subjects for 'healthy living' according to a and linear design may resemble the characteristics of a neo-liberal model (Carter, 2015) that may not enable democratic process-making, place-based values or creativity in planning or execution. Formative intervention design, on the other hand, enable collaborative change and outcomes between health professionals and participants or communities, but may not be sustainable due to lacking social, economic, and structural arrangements. Therefore, the social and political dimensions involved in creating lasting change and health interventions across societal structures and agents (Carr & Kemmis, 1986; Mahon et al., 2017) need attention in the future.

Paradoxically, neither health professionals nor civil communities appear to be included in strategy and policymaking for social inclusion and public health promotion through nature-based intervention design and planning for blue space (Brückner et al., 2022, p. 10). Much health promotion

research in blue contexts seem to have over-looked cultural and socio-ecological complexities. Blue recreational activities (i.e. surfing, sailing, swimming/bathing, fishing, sea kayaking and coastal walks) have been identified with a range of benefits, risks, effects and socio-cultural outcomes and obstacles that have been synthesized and modelled as if these are equally accessible for all (i.e. Britton et al., 2020; Mishra et al., 2020; 2021, p. 12; White et al., 2020). This implies that the BEAT tool and other models may need a more careful deliberation in terms of inclusivity, diversity of practices and different social, political, and cultural geographies (Gurholt & Haukeland, 2020; Wheaton et al., 2020). A similar concern may apply for existing international guidelines for outdoor mental health intervention designs (Richards et al., 2020, p. 4), which have not yet been examined within Nordic contexts. A range of Nordic nature-based treatment design and health promotion initiatives calls for further scrutiny (Andkjær et al., 2021; Fernee et al., 2020; Kristjánsdóttir et al., 2020; Salonen et al., 2022). Implications of prescription pathways and methodological design in nature-based health interventions, however, appear in need of further attention.

c. Co-creation in blue health promotion practices

Co-creation, understood as a participatory methodology, is a means of enabling locally embedded seascape practices, communities, stakeholders and participants to be included in parts of the research process, in policymaking, planning and governance. This implies a formative intervention design. Contingent with the participatory turn in sport, exercise and health research (Pettican et al., 2022), new methods and methodologies that enable co-creation have been requested. Research has discussed (Britton et al., 2020; Juster-horsfield & Bell, 2021; Olive & Wheaton, 2021) options for designing blue space health interventions, including the need for considering diversity and participant perspectives. Linear interventions dominate western health initiatives however, although formative intervention designs have demonstrated benefits in health and educational research (Carr & Kemmis, 1986; Engeström, 2011), and for including socially marginalized groups in health promotion (Leask et al., 2019; Ottemöller et al., 2021).

Recent Norwegian policies have outlined strategic actions which may be relevant for future provisions regarding co-created and integrated planning and management for socially inclusive blue health promotion. For example, the *Action Plan for a clean and environmentally rich Oslo Fjord*, initiated by the Norwegian Ministry of Climate and Environment, emphasises the need to implement 'Measures to promote an active outdoor life' on the fjord and along its coastline (NMCE, 2019, pp. 31–38). As well as Oslo's *Need's Plan for sport and friluftsliv 2021–2031* (City of Oslo, 2020) which aims to support a transformative vision of a societal green shift. With this, updated knowledge on structural socio-economic inequalities and facilitated opportunities for all people, independent of sociodemographic and ethnic backgrounds is requested. This includes considerations for inclusiveness, cultural diversity across urban and rural fjord settings and governance implications for outdoor health promotion (Gurholt, in review). For instance, Nordic welfare agendas, attempting to provide equal access to high-quality educational and health services, as well as to spaces for an active outdoor life, likely require different models and solutions for blue health promotion in the voluntary and public sectors. According to the Nordic Model of Physical Culture (Bergsgaard et al., 2019a; 2019b; Gurholt & Haukeland, 2020), voluntary sports organisations and outdoor-life cultures based on democratic access rights to nature areas, create unique local possibilities but also challenges. Whilst this differ and may be restricted regionally – nonetheless, this is likely to represent a comparative advantage at a pan-Nordic level and internationally. Other conditions such as seasonal variations, weather and climate change influence opportunities for multiple forms of water-based physical activity and outdoor experiences and require locally tailored solutions across the Nordic region – especially during the winter season (Sanderud et al., 2020; Wagner et al., 2019).

Based on this review, we suggest *Salutogenetic* blue health promotion interventions ideally may focus on co-creation with existing and new outdoor recreation comminiteis, social community innovation, collaboration between voluntary, public and private sectors, enabling the requested

sustainable transformations and cultural diversifications in blue physical cultures. However, due to the potential shortcomings of volunteer sport sectors and membership-based organisations to meet public health needs (Aggestål & Fahlén, 2015) collaboration with qualified researchers and outdoor practitioners, health professionals and sectors are likely required. New structural-economic arrangements for *salutogenetic* health improvements and ecological justice for blue space recreation are needed to ensure accessible, enjoyable, safe and healthy seascapes for all.

Conclusion

This scoping study has focused on examining: whether and how integrated coastal and marine planning and management seek to facilitate and enhance physically active blue health promotion that is also socio-ecologically inclusive. In conclusion:

- The promotion of physically active lifestyles and coastal and marine recreation opportunities is considered imperative in planning, management, and policy, yet remain under-prioritised and scarcely conceptualised. Appropriate measures to balance socio-ecological justice are not widely considered.
- *Salutogenetic* blue health promotion intersects with planning and policy facilitation, however community-based interventions are not often realised. Co-created and *salutogenetic* approaches aligning with socio-ecological perspectives needs further elaboration. Particularly, reflecting the call for organised care-oriented interventions tailored for different groups of people, across diverse cultures and settings.
- Formative interventions and may enhance health and social justice in parallel with the integrated planning and management process in seascapes, and democratise the research, practice development and policy-making process. Implications for Nordic regions welfare priorities, volunteer and health sectors, inclusive seascapes community building needs further deliberation.

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