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# Emplacing reablement co-creating an outdoor recreation model in the rural Arctic

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#### ABSTRACT

Reablement aims to enable older persons with functional decline to re-engage in meaningful activities. The benefits of engagement in outdoor activities are significant; however, reablement services primarily target function in indoor environments whereas descriptions of outdoor activities are sparse. The aim of this study was to create a model that integrates outdoor recreation into reablement. We therefore elaborated on an experienced based co-design methodology to create a model that integrates outdoor recreation for older persons in reablement in an Arctic, rural context in northern Norway. Stakeholders (N = 35), including reablement participants, participated in workshops, focus groups, and individual interviews. Based on the results, we co-created a person-centred model for outdoor recreation in reablement, including an assessment tool that can guide reablement staff in goal-setting practices. Accordingly, we argue that cherished locations holds significant meaning in the lives of older people and warrant recognition in reablement programmes. There is a need to evaluate the effects and feasibility of the model and the possibility for its implementation in other health care settings.

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Outdoor recreation; activity; nature-based; health care services; emplacement; public health

#### Introduction

Globally, the number of older persons in the population has increased rapidly in recent decades, which has led to an enhanced number of complex and long-term conditions [1]. Health care strategies have moved towards integrated care models [2,3] and healthy ageing initiatives that aim to prevent functional decline and loss of independence, while promoting older persons' participation in daily activities [4]. Reablement is an example of such a strategy, and a Delphi study by Metzelthin et al. [5], p. 713 generated the following definition:

Reablement is a person-centred, holistic approach that aims to enhance an individual's physical and/or other functioning, to increase or maintain their independence in meaningful activities of daily living at their place of residence and to reduce their need for long-term services. Reablement consists of multiple visits and is delivered by a trained and coordinated interdisciplinary team. The approach includes an initial comprehensive assessment followed by regular reassessments and the development of goal-oriented support plans. Reablement supports an individual to achieve their goals, if applicable, through participation in daily activities, home modifications and assistive devices as well as involvement of their social network. Reablement is an inclusive approach irrespective of age, capacity, diagnosis or setting.

Maintaining independence and engaging in meaningful activities is central in reablement and are identified to be important components for older persons to achieve healthy ageing outcomes [6]. The reablement target group is, however, heterogeneous, and what is perceived as meaningful activities for the individual person may vary widely [7,8]. To facilitate a personcentred, goal-oriented approach, the question "what matters to you?" has emerged as a foundation for reablement [9–12]. Although person-centeredness is central, existing knowledge indicates that reablement mainly focus on indoor activities at home [13–15], such as the ability to perform personal activities of daily living (PADL) and mobility [16]. In contrast, needs

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related to social participation, outdoor activities and leisure are in general sparsely described [14,17,18].

Engaging in outdoor environments is perceived to be meaningful for various reasons e.g. some persons want to exercise and improve their health and selfesteem, or experience nature and beautiful landscapes. Others want to escape everyday life and experience peace and tranguillity. Outdoor environments are experienced as an important arena for social interactions with family and friends [19]. The benefits of engagement in outdoor recreation include increased health-related quality of life [20], reduced stress, improved cognitive ability and mental health, and promotion of physical activity and social participation [19,21,22]. Hence, Howell and Peterson [6] state that ageing is a process rooted in a sociocultural context, and Pedersen et al [23] call for an advanced understanding of how cultural and contextual aspects may be utilised to influence older persons health and mobility.

Older persons who were interviewed about their current and past experiences of outdoor recreation, have emphasised the importance of maintaining their level of engagement in terms of daily routine, preserving their identity [21] and culture [24]. In addition to physical, mental, and social health effects, spiritual experiences are framed within the concept of outdoor engagement [25-27]. Traditional activities, such as hunting, hiking, camping, and fishing are often associated with the concept of outdoor recreation. In this study, we apply an expanded perspective that also includes activities such as walking for pleasure and outdoor gardening, in line with the definition of outdoor recreation of Highfill and Franks [28]: "All recreational activities undertaken for pleasure that generally involve some level of intentional physical exertion and occur in nature-based environments outdoors".

The myriad advantages of outdoor recreation align seamlessly with the principles of reablement, based on person-centeredness and meaningful activities as a means to enhance functioning and social participation [18,29]. The reablement literature addresses the need to help people access their local community [29] and the common definition of reablement describes a service that focuses on individuals' independence *"at their place of residence"* [5]. However, few authors have critically discussed the concept of *place of residence. Place* [26,30,31], *place attachment* [31], and *emplacement* [27] have been theorised by scholars to describe the relationship between people and places and comprise an understanding of human-place bonding. In this study, we apply an interpretation of place as something more than merely a physical location but emphasise the emotional, cognitive, social, and practical relationship between people and places. Furthermore, we consider place of residence to include not only the home but also outdoor areas that constitute meaning for a person.

Despite the described benefits of including outdoor activities as part of reablement services, there is still a gap between ambition and practice. Practitioners need a more unified model for conducting services that enables persons to access their local environment. Initiatives need to be adjusted to the individual needs, functional levels, and contextual constraints and possibilities related to the unique places in which a person wishes to engage. This includes re-engaging with their preferred social, leisure, and physical activities [29] in the context of meaningful places [26]. A theoretical framework for the integration of outdoor activities in reablement is lacking. Therefore, in this study, we propose a model for outdoor recreation within reablement. This process is guided by the following research guestion: How can older persons be supported and motivated towards increased outdoor engagement through an outdoor reablement approach?

#### Methods

This study adopts a social constructivist research paradigm and interprets social inquiry as constructed through ongoing social and societal interactions and negotiations [32,33]. We therefore chose a co-creative design [33–36] to guide the process of creating a model for outdoor recreation as part of reablement. Traditionally, service development in the field of health care services has been strongly management driven [35]. As a critique of this top-down management, models that emphasise more user-centred and experiencebased processes in service development have emerged [34-39]. Donetto et al. [34] describe an experiencebased co-design (EBCD) based on participatory design and user experience design to bring about quality improvement in health care organisations through cocreation processes.

In this study, we elaborated on EBCD principles to support the co-creation of a model for outdoor recreation in reablement.

#### Study context

The study was conducted in a municipality with a population of less than 12 000 inhabitants, spread over an area of approximately 400 km<sup>2</sup> in Lofoten, an Arctic area of Norway. Lofoten is a rural island group well known for its unique landscape of dramatic mountains and peaks, open sea and sheltered bays that is exposed to harsh weather for large parts of the year [40]. Traditionally, people living in the Arctic have had a special relationship with the land and the natural environment in which they live [6]. People in Lofoten have been living in close relationship with nature and the seasonal variations, as fishing and harvesting have been important for personal and industrial value creation in the area [41].

In the autumn of 2020, the municipality began implementing reablement as a public service for the older population. The principle of universalism that safeguards equal rights is one of the most central principles of the Norwegian welfare state, whereby public services mainly financed by tax revenues should be offered to all citizens regardless of their financial situation, social status, gender, or age [42]. To fulfil the ideology of reablement, individual goals and participation in meaningful activities are prerequisites for the service. Given that outdoor recreation is specifically important for the population of Lofoten, the lack of a framework for including outdoor recreation in reablement services gave rise to this study.

#### **Recruitment and participants**

To inform the co-creation process with relevant perspectives, it was essential to include diverse stakeholders who could provide a variety of experiences and perspectives. In addition to staff from the local reablement team (project team), we also included personnel from other health care services in the municipality, and political and administrative stakeholders. Reablement staff from two other reablement teams in comparable municipalities ("inspiration teams") with some experience in providing outdoor activities were also invited to participate. Reablement staff included both registered health care professionals, i.e.

 Table 1. Participant information.

occupational therapist (OT), physiotherapist (PT), and registered nurse (RN), as well as non-registered staff, i.e. assistant nurse. An invitation was sent by email to leaders in the respective organisations, including written information about the study and ethical permission, in line with the Helsinki Declaration [43]. In total, 35 stakeholders volunteered to participate. Table 1 provides more detailed information about the study participants.

Table 1 includes members of the research team. According to the co-creating methodology and the constructivist paradigm, researchers cannot be perceived as objective outsiders who merely report on the actions of other participants, as they become part of the co-creation process by virtue of participating in interactions and discussions [44].

#### Co-creation process and data generation

The study was conducted from August 2020 to June 2021. During this period, we arranged several cocreating events based on a modified model of the EBCD cycle by Donetto et al. [34]. Donetto et al. [34] describe a six-stage co-creation model, including narrative-based interviews and "trigger" film of patient narratives. Due to practical considerations of time, resources, and the pandemic situation, we modified the model, adopting a more pragmatic approach with five stages: (1) preparation, (2) recruitment, (3) workshop 1, (4) intermediate follow-up, and (5) workshop 2. The first stage, preparation, corresponds to Donetto et al'.s [34] EBCD model. Typically, the EBCD model involves a second and third stage, (2) gathering staff experiences through observational fieldwork and in-depth interviews, and (3) gathering patient and career experiences through observations and filmed narrative-based interviews. These two stages were omitted in this study, as the pandemic situation restricted us from conducting observations in the

Target group	5 representatives from the local senior council 3 reablement participants*	n=8
Reablement staff in the project team	1 PT	n=3
headiement stair in the project team	1 OT	11=5
	1 RN	
Reablement staff in "inspiration team 1" from a comparable municipality	1 PT	<i>n</i> =2
	1 OT	
Reablement staff in "inspiration team 2" from a comparable municipality	1 PT	<i>n</i> =3
	1 OT	
	1 assistant nurse	
Stakeholders	Administration and policy staff from the municipality	<i>n</i> =16
	Staff from other health care services in the municipality	
Research team	2 PTs	<i>n</i> =3
	1 RN	
*Only participated in individual interviews	Total number of participators	N=35

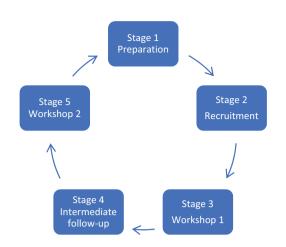


Figure 1. Schematic presentation of the five stages of the cocreation process.

field. Instead, we arranged ad hoc meetings with participants during the recruitment stage (Stage 2) to better understand the field and the context. Figure 1 provides a schematic presentation of the five stages of the co-creation process.

#### Stage 1. Preparation

In this stage, we aimed to create a joint vision for the project, and we established a research team with a common understanding of the goals and strategies and developed a project protocol. This was done across several meetings of the research team. The study was approved in compliance with ethical standards and registered according to municipal privacy regulations (Ref number 3217/13217201).

#### Stage 2. Recruitment

In this stage, we sent invitations to participants and provided them with study information. Additionally, we held ad hoc meetings and informal conversations with several of the participants, to obtain insights from the field. At this time, the reablement service had not started recruiting participants; hence, there were no reablement participants to include during the earliest stages of the project (Stage 1–3). At stage 4 (the intermediate follow-up), the reablement team started providing services and recruited participants to engage in outdoor recreation. At this point, we recruited three reablement participants. To compensate for the lack of reablement participants in the early staged of the study, we recruited five representatives from the local senior council who represented the perspectives of the older population with functional deficits.

#### Stage 3. Workshop 1

We arranged a one-day workshop where participants came together to share experiences and create relevant ideas for the outdoor recreation model. Due to COVID-19 pandemic policy, which at the time restricted intermunicipal travel in Norway, we had to account for both physical and digital participation. Most of the participants were physically present (N =26), however, participants from other municipalities participated digitally, including one researcher and reablement staff from the inspiration teams (N = 6). Audio and video recordings were streamed via Microsoft Teams to those who participated digitally. The workshop was initiated with "trigger presentations" of experiences from a health facility that offers outdoor recreation. Additionally, the researchers presented literature on the possible benefits and effects of outdoor activities. The aim of the trigger presentations was to generate a common understanding of the project and to facilitate new ideas and creative thinking [34]. We divided the participants into three co-creating groups to discuss some central aspects in depth. These groups were strategically composed of diverse stakeholders. Each group was consisted of one or two representatives from the local senior council. Staff members at the reablement teams distributed evenly among the three groups, and the distribution of additional stakeholders was based on professional and organisational background, as we aimed for broad variation among all the groups. The cocreating groups were carried out in meeting rooms with web cameras, microphones, and screens, which enabled those who participated digitally to contribute to the group discussions. A co-mediator ensured that those who participated digitally were also given speaking time.

The researchers created thematic guides, with themes and guiding questions to frame the discussions and ensure that we covered relevant themes, such as "adapting to individuals' needs", "goalsetting", "functional abilities", "adapting to daily practices", and "relevant places". These predefined themes were based on the discussions with stakeholders in the ad hoc meetings in Stage 1. Key components of reablement practices and the question "how can outdoor recreation be part of reablement practice?" were fundamental for the creation of the thematic guides. Additionally, we allowed for spontaneous reflections and ideas during these discussions. The three researchers (ME, BAS, SH) led the respective co-creation groups, and three comediators took notes. At the end of the workshop, we gathered all participants in a plenary discussion where summaries of the group discussions were presented and inputs from the other groups were facilitated.

#### Stage 4. Intermediate follow-up

The fourth stage, intermediate follow-up, corresponds with Donettos et al'.s [34] fifth stage of "sustained codesign work". This intermediate period lasted for six months and included focus groups with the reablement teams (project team and the two inspiration teams) and individual interviews with three reablement participants who had agreed to test outdoor recreation as part of their reablement plan.

Focus groups with reablement teams:

After workshop 1, we conducted focus groups with staff from the two inspiration teams. Due to COVID-19 pandemic restrictions, these goup discussions were conducted digitally on Microsoft Teams. Data from workshop 1 informed the construction of a semistructured guide consisting of open-ended discussion questions, which was developed in line with Polit & Beck [45], who suggest that the key to effective focus groups is preparing a series of questions to guide discussions that move from general to specific issues. By generating data from the focus groups, the researchers were able to obtain viewpoints from several people in a short time and capitalise on how participants reacted to what was said by others.

The purpose of the first focus group was to generate thorough descriptions of experiences with outdoor activities as part of reablement. The researcher facilitated with follow-up questions, in line with methodological recommendations [45]. In the focus group with "inspiration team 1" only two members (a PT and an OT) were able to participate. After the first focus group, the researchers adjusted the focus group guide according to the new information, and we conducted a second focus group with staff from "inspiration team 2". Three team members (a PT, an OT, and an assistant nurse) participated.

After this second focus group, we adjusted the focus group guide again for the third focus group, which was conducted with reablement staff from the "project team" (a PT, an OT, and an RN). The purpose of the third focus group was to generate knowledge about local organisation and practices on this specific team. The semi-structured focus group guides are provided in Appendix 1. One of the authors (BAS) led the group discussions, and another author participated as a co-mediator (ME). The focus groups lasted for approximately 60–70 minutes and were audiotaped, and then transcribed.

Individual interviews with reablement participants:

Based on the preliminary results of workshop 1, the reablement team (project team) initiated a preliminary try-out phase of outdoor recreation with a small selection of reablement participants. We conducted this small-scale try-out phase to gather experiences that could guide the co-creation process further. At this stage, no tools or assessments had been developed; hence, the assessment consisted of an informal conversation between the reablement staff and participants, where the staff asked the participants about preferred outdoor activities and places of relevance. Based on this conversation, the reablement staff and participants agreed on a reablement plan that included outdoor recreational activities for a minimum of 3 interventions per week for 4-6 weeks. Additionally, a standardised assessment tool, the Short Physical Performance Battery (SPPB) [46], was used to assess physical functioning. Activities that were selected were based on the participants preferences and goals, and included i.e. recreational walks, chopping wood, gardening, walking to nearby location such as the grocery store, or to friends or families houses. The inclusion criteria were age 65 years or older and being capable of outdoor activities in any form. We sent out an invitation to the reablement participants. Three participants consented to individual interviews and signed a written consent form. We developed an interview guide based on the tentative analysis of all currently generated data in the project. The interviews were carried out after the reablement participants had engaged in the project for a minimum of three weeks. The guide was designed to allow for elaborations on experiences with outdoor recreation as part of reablement. Each interview lasted approximately 60 minutes. The interviews were audiotaped, and then transcribed.

#### Stage 5. Workshop 2

Six months after the first workshop, we invited the participants to a second one-day workshop. Donetto et al. [34] describe the last stage of the EBCD framework as a *celebration event*. In line with this, we presented the initial results and a preliminary model for outdoor recreation in the reablement service. However, to enable further adaptations and continuous adjustments, we held a plenary discussion to allow further input and more in-depth considerations from all participants. The researchers took notes during the entire workshop, and data provided from this event were used to further adapt the model. Due to pandemic restrictions, the workshop was held digitally. In

summary, the data generated in this project included the following:

- Notes from plenary discussions and co-creation groups in the two workshops;
- Transcriptions of three focus group discussions with reablement staff; and
- Transcriptions of three individual interviews with reablement participants

#### Analysis

The analysis was based on the six-step framework of reflexive thematic analysis, inspired by Braun and Clarke [47], which is a systematic, although fluid, approach to coding and theme development. ME and BS read the entire dataset, including the transcripts and notes from the workshops, multiple times, in line with Braun and Clarke's first step of reflexive thematic analysis [47]. After reading the data, BS carried out an initial inductive process of identifying the meaning units considered relevant for the research question. These meaning units were further subjected to a systematic coding process, where BS and ME jointly collaborated in labelling all the units with an inductive data-based code, in line with the second step of reflexive thematic analysis [47]. During the coding process, we became aware of the multiple factors affecting a person's perception of value and meaningfulness. To address the complexity of individual meaningfulness, a third analysis step involved joint meetings among the author group where we discussed the joint patterns and contradictions among the codes. These discussions led us to the theoretical framework of Kyle and Mowen [31]. Their theory of place describes the relationship between motivation and place attachment, which helped us structure the remaining analysis and frame the results of this study.

This abductive process of moving iteratively back and forth between data and theory aligns with Braun and Clarke's descriptions of a reflexive thematic approach [47]. This theoretical interpretation contributed to the fourth step, where we categorised the codes based on an understanding of the interconnections between a person and places. During the fifth step, we arranged an additional joint meeting within the author group to discuss and refine the themes. At this stage, we tried to operationalise the themes to make them applicable for practice. This process gave rise to an assessment tool that is presented in the Results section and Appendix 2. Finally, we returned to the more theory-driven themes that contribute to the placement of reablement services within the theoretical field of place attachment, which now constitute the results that are presented in the following.

#### Results

Through the thematic analysis, we generated five themes: affective place attachment, cognitive place attachment, conative place attachment, social place attachment, and finally; assessing place attachment.

#### Affective place attachment

Interviews with reablement participants revealed a clear consensus on how the outdoor environment was perceived as valuable. The participants were clear about the significance of being outside, although they found it difficult to define explicit mechanism of the attachment, as they simply concluded that it *felt* good:

"It is fine to do exercises inside but getting outside ... it relates to everything. Both physical and mental. You won't get any better gym than nature itself". (Reablement participant)

This feeling seemed to be related to an emotional motivation for engaging in outdoor places. The stakeholders discussed how it could be difficult for older persons to express a desire for outdoor activities on their own initiative. Therefore, they stated that it was important to get to know a person well and explicitly ask about his or her emotional experiences with outdoor places, which could further be utilised when developing individual goals and plan for interventions. Identifying values and experiences of outdoor activities throughout one's lifespan was claimed to be important for the motivation of re-engagement in outdoor activities. One of the reablement users explained how the reablement staff had applied a "whole person" perspective, and by that identified outdoor activities which implied meaning:

"They [the reablement staff] managed to see the whole person. What the individual goal was in a way. And they were interested. They assessed the situation and tried out different activities. Based on that, they planned for my rehabilitation process. And after a while you can see that it is working. When it works on your body, it also works on your mind. That truly amazed me". (Reablement participant)

Assessing the meaningful places that have affective value for the individual was discussed as a central part of the person-centeredness approach guiding the person in identifying the relevant goals that could motivate the person to engage in outdoor recreation.

Connecting meaningful places to goalsetting practices was described as beneficial:

"We need them to set specific everyday goals. They may say that they would like to increase gait function, or they may say that they would like to go outside more. That is fine, but it is too general in a way. We want them to point out more specific goals: "Where do you want to go? To the mailbox? Or is it a specific destination you want to reach?" (PT in inspiration team 1).

Meaningful places were not merely connected to the affective dimension of meaningfulness, as places were also perceived to be highly connected to a cognitive dimension of self-identification, which is covered by the second identified theme in our analysis.

#### **Cognitive place attachment**

Engaging in outdoor environments was perceived to involve the person's (re)conceptualisation of selfidentification. Being able to do things that one had been able to manage independently previously was described as an important motivation for engaging in outdoor environments. As one reablement participant said,

"You will look forward to do things that you enjoy. That is motivating. It is important for me to be independent and to be able to do things that I used to manage by myself". (Reablement participant)

Identifying meaningful activities related to outdoor environments was therefore perceived to be an essential motivation for outdoor engagement. Participants described that people in Lofoten often linked their selfidentification closely to local culture and traditions. The particularity of the Arctic nature in Lofoten was emphasised as a facilitator of positive experiences of outdoor activities:

"In Lofoten, the majority have a garden; most of the people have experiences with being out in nature in one context or another, whether they have harvested from nature or if they just like to take a walk outside. I guess it is of great value for most people here. Positive for some and less positive for others. I guess assessing it [attachment to nature] is as natural as assessing sleeping habits, nutrition status and other important issues in life. Most people are engaged in their local environment. They know the names of every hill and cove that they can view from their window. That can be helpful in the assessment. I mean, that is a good starting point for a conversation [about outdoor activities]". (RN project team) The cultural aspect of engaging with outdoors, seasonal changes, and varying weather was also described as holding meaning for several persons:

"I am surprised of how many who are interested in birds. In addition, they reflect on these [traditional] weather signs. Getting them outside provides an opportunity to talk about lived experiences". (OT inspiration team 1)

The citation above illustrates how the OT had become aware of how valuable it was for many older persons to observe animals in nature. For example, the direction birds flew was perceived to indicate what weather one could expect in the next days. This connection with nature was perceived to be traditionally rooted among many older persons in the Lofoten area and indicated a cultural motivation for being in an outdoor environment. As one reablement participant stated,

"I will never get tired of watching the birds in the springtime. I have always been interested in birds. I also enjoy fishing, and my overall goal is to get outside for berry picking. I think that actually is achievable". (Reablement participant)

#### **Conative place attachment**

The conative dimension of place attachment that was identified in this study was related to the perception of the meaningful leisure activities and practical chores that had been essential activities to uphold the "rhythm" of everyday life.

The assistant nurse from inspiration team 2 presented an experience with an older woman who had been inactive for a while, but eventually became motivated to walk outside to be able to resume her leisure activities:

She basically had become inactive, so we started to do some exercises inside, and then, after a while we suggested going outside. As we started to bring her outside, the motivation developed. In her earlier days, she had run a small shop a short distance from her house. One day she wanted to visit that place. She had all this knitting and these pictures that she had crafted, and she wanted to go outside and visit that place all suddenly, she wanted to go back there, open her shop, and start selling these things. And this woman was over 80! (Assistant nurse inspiration team 2)

There was no clear distinction between leisure activities and practical activities, as for many, leisure activities were closely related to practical everyday life in Lofoten. One of the reablement participants described how his relation to nature had been restricted due to reduced function after a period of disease. His unequivocal appreciation of the reablement team's effort in his re-engagement in nature revealed how practical events, such as maintenance work and fishing for food, were perceived as meaningful, thereby motivating his outdoor engagement:

"Well, I had this boathouse that I had to take care of and keep in good condition. And the boat. I used to fish during the winters. I caught all the fish that I needed for the rest of the year. I have been a fisherman you know. But what do you do when you suddenly have heavy weights hanging around the legs. That was what it felt like. I could not manage anything. And then these three angels appeared [the reablement staff]. Yes, that's what I call them. Because what they have done for me has been amazing". (Reablement participant)

Outdoor areas do not have to involve wildlife nature. They were also described as including nearby local areas, such as the garden, driveway, or even just the outdoors that you could view from your window:

"I don't necessarily talk about a walk in the wild nature, or so. It's about getting out of the house, getting the mail, being able to walk to the store, walking around in the city center or going to the coffee shop". (PT inspiration team 2)

Small activities that were significant for upholding a "normal" everyday life rhythm were perceived to include outdoor environments to a large extent. The quotation below describes an experience with a person who wanted to get outside so that he could chop wood, an activity highly meaningful in terms of practical issues:

"Simply because it is cold outside. He is in need for wood [...] He lives in the countryside and has all the equipment available. He used to do it by himself, independently, but is no longer able to do it anymore. So ... when we asked about what ... what he wanted; he wanted to become stronger, and then we asked '[...] what do you want to use your strength for? Inside? Outside?' Well, he had this wood stack that he could use a little help with ... ". (PT project team)

As these examples show, the stakeholders argued that reablement initiatives should include more than merely exercises. As an OT on inspiration team 1 stated, "We try not to think exclusively on exercises, but rather to see the value in everyday activities". Meaningful activities were described as a primary goal of the outdoor reablement initiatives, as they were also described as facilitating motivation to maintain outdoor engagement over time:

"To actually have a goal will make it easier to maintain [the activity] and maybe see the meaning explicitly [...]. I guess that it is a key point to experience the meaning in the activity. For many persons, it is of great value to be able to get outside, be around people, walk to the store and be able to do all these things by themselves". (PT inspiration team 2)

Socialization with other people was discussed more thoroughly and gave rise to the fourth theme: social place attachment.

#### Social place attachment

The fourth theme comprises the dimension of meaningful places as socially connected, which was perceived as an important motivational factor for engaging in outdoor environments.

Involving relatives was deemed as a potential benefit for the outdoor recreation model, and the reablement staff argued that they tried to encourage relatives to engage in some of the activities. However, barriers to this aspect were also present. Some argued that it was challenging to include relatives who were busy during the daytime and that it was important to be aware of the potential caregiver burden this could imply. Therefore, it was argued that involving relatives should be conducted in a balanced matter, by assessing the potential burden in every individual case.

The possibility of arranging outdoor activities for a group of persons was also discussed as a possible win-win situation due to the benefits of a social component when meeting others, in addition to the economic benefits of approaching several persons simultaneously. Stakeholders on inspiration team 1 described positive experiences in arranging group activities outside. Others, however, argued that this entailed substantial barriers, as it conflicted with the idea of individualisation, and challenged privacy considerations, which could be jurisdictionally problematic. It was also suggested that group activities could require transportation and that appropriate solutions would have to be considered.

Despite the barriers that were elaborated, there was a clear consensus on including a social aspect as a dimension of the outdoor recreation model. Assessments of social networks, including relatives and important others (e.g. friends, neighbours), and possibilities for including others was therefore emphasised as central to assess in each individual case.

#### Assessing place attachment

Based on the previously described themes, the fifth and final theme relates to how the varied dimensions of place attachment could be assessed as a foundation for outdoor initiatives in reablement. Based on joint discussions among the stakeholders and interviews with reablement participants, we created the Place Attachment Assessment Tool (PAAT) (Appendix 2) including the different facets of place attachment that guide a goalsetting process which include outdoor activities as part of person-centred reablement initiatives. The PAAT was created as a conversation guide that assesses a person's personal experiences with and preferences for outdoor recreation. The assessment establishes a basis for the goal-setting practices that involve outdoor recreation in reablement. Utilising local maps (Google Maps or similar applications) was suggested as the foundation for the conversation, allowing the reablement participant to provide a narrative of meaningful places. Figure 2 illustrates the assessment tool, and a manual for the conduct of the assessment is provided in Appendix 2. The four abovementioned themes of affectional attachment, cognitive attachment, conative attachment, and social attachment encompass different dimensions that was emphasised as essential for a startup conversation to assess how place attachment can generate motivation in each individual case. These dimensions comprise the vertical rows of the assessment tool. Concerning lifespan changes in the interpretation of meaningful places, the assessment was designed to categorise meaningful places in terms of a time span, assessing whether places are perceived as meaningful in the past (before), in the present (now), or in the future; this comprises the horizontal dimension of the assessment tool (Figure 2). Furthermore, the identified meaningful places should be interpreted in the context of additional assessments that inform traditional reablement

practices, such as general goal setting or assessment of physical function. The assessment tool also includes that the participant prioritise the significance of places. This may guide the overall goal-setting practice by suggesting what places that are perceived to be of most importance for the person to re-engage in. Lastly, the assessment tool involves a conversation about possible constrains to account for. Barriers on both an individual and environmental level should be accounted for before initiating outdoor activities.

Although it was emphasised that one should aim to motivate a person to engage in outdoor activities, it was also discussed that since engagement in outdoor activities varies between people, and thus, engagement should reflect the unique person's goals and preferences. Outdoor recreation needs to be an optional offering for those it offers meaning to. As a PT stated,

"You won't be able to engage everyone [in outdoor activities]. I believe that this is how it should be. We are all unique, and we have to respect that". (PT in inspiration team 2)

This statement confirms person-centeredness as a fundamental principle in integration of outdoor recreation within reablement.

# Discussion

In this study, we aimed to co-create a model that integrates outdoor recreation in reablement. Based on a multistakeholder perspective, we developed a model that accounts for the multiple dimensions of meaning

Place attachment	Before	Now	In the future
Emotional attachment			
Cognitive attachment			
Conative attachment			
Social attachment			
Priori	tized places	Challenges or ob	stacles to account for
1. 2. 3. 4.			

Figure 2. The place attachment assessment tool (PAAT): identifying meaningful places as a fundament for goal-setting practices in reablement.

making and place attachment. Through this work, we have identified a need to theorise place as a central concept in reablement. We elaborate on this in the following paragraphs.

#### Theorizing emplacement in reablement

Since the meaning of outdoor places and activities may vary for different individuals, outdoor recreation in reablement needs to be based on a person-centred approach. The rationale for assessing meaningful places, activities, and networks is in line with the perspective of place attachment of Kyle et al. [31], who suggest that individuals' preferences for outdoor environments are socioculturally attached. Based on the five theory driven themes in our results, we developed an assessment tool (the PAAT) to identify meaningful places that can generate motivation for outdoor recreation (Figure 2). The PAAT was designed to map out for whom it is applicable to engage in outdoor recreation, and to assess a person's personal experiences with, and preferences for outdoor recreation, including future perspectives. The assessment forms a basis for goal-setting practices that involves outdoor recreation in reablement. Personal goal-setting is a central characteristic for reablement practices [5,48] and is associated with an increased level of physical activity among older persons [49].

This study adds to the knowledge provided by Barron et al. [27], developing the concept of emplace*ment* as a framework to enhance the understanding of how places are fundamentally physical, social, and cultural and thereby integrates human beings and the environment into one arena of common engagement. The person-centred approach to meaningfulness is crucial for implementing outdoor recreation. While a quiet walk in natural surroundings may be meaningful for one individual, it may appear to be a waste of time for others who value outdoor activities for their practical benefits, such as harvesting, wood chopping, or gardening. In accordance with Kyle et al. [31], the sense of meaning can be interpreted through four dimensions: 1) the emotional dimension, 2) the cognitive dimension, 3) the social dimension, and 4) the practical dimension, which guided the development of a meaningful outdoor recreation model in this study.

This study adds to the field of reablement, by providing knowledge about the importance of a person's emotional connection with places and activities concerning sensory impressions in nature, such as a bird song during spring, colourful leaves in the autumn, or the feeling of stormy winds on one's face during winter. This aspect supports a meaning-making process (built on place attachment and experiences of seasonal variation) between reablement staff and older persons, in line with the emotional attachment described by Kyle et al. [31].

Conversations about previous experiences with the outdoor environment were also emphasised. This is in line with the cognitive dimension of place meaning, including how places define a person's sense of selfidentity [26,31]. Kaltenborn et al. [41] studied the wellbeing of the citizens of Lofoten and found that outdoor activities such as harvesting and engaging in one's local environment are strongly linked to the maintenance of identity and guality of life. Other studies have illustrated that value ascription develops during early childhood [50,51] and that outdoor recreation can have symbolic value for persons who have engaged in outdoor activities since childhood [52]. Reconnecting with memories from earlier outdoor experiences should therefore be emphasised to facilitate the motivation for re-engagement in outdoor places and activities.

Assessing meaningful places also includes assessing the social dimension of place attachment including how social relationships can tie individuals to places [26,31]. Hartig et al. [53] reported that social contact is a key element in engaging older persons in outdoor activities, and Currie et al. [54] found that a lack of social relations is a barrier to outdoor recreation. Involving social networks, such as adult children, spouses, and others, is emphasised in the reablement literature [55,56]. However, this study is the first, to our knowledge, to include an assessment of social networks in reablement. Additionally, participants discussed that including relatives could impose increased care burden, which also Jakobsen and Vik discussed in their research [55]. Therefore, there is a need for further exploration of how the social network can be involved in outdoor recreation in reablement to prevent an, inappropriate caregiver burden.

However, not all persons apply the emotional, cognitive, or social dimension of meaningfulness with regards to outdoor activities. The results of this study show that some persons have a more practical and rational attitude towards the meaning of outdoor activities. For example, one of the participants argued that he needed to be able to chop wood to be prepared for the long, cold winter a head. Others emphasised activities such as gardening or berry picking. Engaging in the outdoor environment based on the values of hard work can be seen as part of the culture in Lofoten [41], in line with the conative dimension of place attachment, which concerns how places facilitate practical activities involved in maintaining the "rhythm" of everyday life, as well as leisure activities [31]. This knowledge supports the

results described by Baron et al. [52], who found that engaging in land-based activities, such as hunting, fishing or picking berries, is important for Inuits living in Arctic, rural areas in Canada. This is comparable to results on meaningful activities among older persons in rural areas in Northern Norway [57].

Mapping out meaningful activities is closely related to goal identification, which is central in reablement [5]. Ageism is an evident phenomenon that may restrict both professionals and older persons in terms of how the latter actively engage in various activities [58]. We identified indications of ageism in this study as well. For example, the assistant nurse in inspiration team 2 was surprised by an older woman who wanted to open her shop and sell handcrafted things; as she stated, "[...] and this woman was over 80!". An explicit assessment of meaningful activities in connection to outdoor recreation may prevent a prejudiced assumption about older persons as being too inactive for, not capable of, or interested in outdoor activities.

In our model, place mapping is an essential part of the assessment. Place mapping methodologies have been used by others to enhance the understanding of the associations between place and health [49] and to explore people's re-engagement in places after injury [26]. We argue that our findings also apply to place mapping methodologies, a central aspect of goal-setting practice in reablement.

The integration of outdoor recreation in reablement should consider the wide perception of meaningful places and the characteristics of such places. Mapping out appropriate areas of wild nature as well as constructed urban green spaces can be essential to acknowledge what is meaningful for the unique person. However, our results support existing knowledge [49,59] when it shows that nearby places may be even more appropriate as valued outdoor places for some older persons. Nearby places are the areas where older persons tend to carry out physical activity most frequently [60,61]. Research has shown that the type and range of areas a person inhabits to; a person's life-space mobility [62] is associated with physical abilities, nursing home admission, mortality [63], guality of life, engagement in social activities [64], and cognitive abilities [63,65]. Including outdoor recreation as part of reablement services may support older persons in maintaining or even increasing their life-space mobility, thereby possibly enhancing the long-term health outcomes. Whereas such an assumption is supported by theory and previous empirical findings, the effects of outdoor recreation in a reablement context require further exploration.

This wide perspective on meaningful places contains an understanding of place as more than a geographic area. Therefore, it should be recognised as social, historical, political, and cultural, in line with Barron et al'.s [27] conceptualisation of emplacement. Adapting outdoor recreation in accordance with the person's perception of meaningfulness is in line with the core principles of person-centeredness and meaningfulness in reablement [5,29]. Therefore, we emphasise strategies that optimise meaningfulness by assessing meaningful places and activities, in addition to social networks that can support and enhance outdoor activities. This comprehensive individual assessment of meaningfulness is supported by theoretical aspects of emplacement [27] and place attachment [31].

#### Strengths and limitations

This study describes a co-creation methodology whereby researchers collaborate closely with stakeholders to generate a co-created model that is useful for practice. Our main impression is that the participants were generally positive towards including outdoor recreation as part of reablement. Agreement on the main aim is a prerequisite when planning changed practices; however, this study may have omitted the innovation potential of diverse opinions. Nevertheless, we were genuinely interested in the multi-actor perspectives of a wide range of stakeholders, which provided multiple perspectives in the discussions that were conducted. Issues such as goal-setting practices and the inclusion of social networks were debated, and diverse opinions had to be negotiated. Multiple perspectives and voices strengthened the democratic validity [66,67] and ensured that this research is of direct practical relevance [35,44].

We were unfortunately only able to recruit three reablement participants. Due to the patient-centred cocreation design, this must be considered a limitation of the study. However, to compensate for this, we included five representatives from the local senior council to represent the desires and needs of the older population. An additional limitation was that relatives or important others were not included among the stakeholders. The fact that we included stakeholders from both the project community and other municipalities and communities nevertheless enabled a broad contextual interpretation. However, effectiveness and feasibility were not evaluated, which calls for a further examination of the model. The PAAT was a result of the co-creation process, and the benefit of this bottom-up approach was a ready-to-use assessment tool that reablement staff in an Arctic rural setting considered feasible to use. However, since psychometric properties have not been evaluated, validity and reliability of PAAT remains to be explored.

Whereas already established instruments for place attachment exist [68,69], further development in this area needs to consider whether such instruments could be culturally relevant and valid given the context under study. Furthermore, other established instruments could be considered due to their emphasis on outdoor activities [70], also used in an Arctic context [71] or the life space assessment [72].

This project was conducted between November 2020 and May 2021, which enabled the reablement team to try out outdoor activities during the winter and spring seasons. This generated rich contextual data for the model. However, to broaden the perspective on integrating outdoor recreation in reablement during summer and fall as well as studies in other geographical contexts could provide valuable input to validate or further develop the model. Further investigations on these contextual features, facilitators and barriers should be conducted in future studies of outdoor recreation initiatives.

Several aspects of the project are worthy of rigorous discussion. The workshops were conducted during the COVID-19 pandemic, and the restrictions on social interactions resulted in hybrid conduct. Most of the stakeholders were physically present during the workshops. However, the stakeholders on the inspiration teams and one researcher were located in different municipalities and engaged in the workshops digitally. This may have limited the creative and democratic dialogue. However, service delivery was never affected by the pandemic restrictions and was carried out as usual during the project period.

This project was conducted with a reablement team consisting of only three team members. This was also the case for the inspiration teams. The number of participants in the focus groups was therefore small. This may have influenced the group discussions and prevented thorough reflections. Only three of the reablement participants who tested the outdoor activities were interviewed. Based on this small number of participants, we cannot analyse the effect of the model. The data must be seen as a contribution to the co-creation of a model, rather than an evaluation of the model. Further evaluations and outcome measures are needed.

While this study was conducted in an Arctic rural context, the model was specifically designed with consideration for the unique context. Other contextual circumstances must be considered if the model is to be implemented within for example urban areas.

#### Conclusion

In this study, we created an outdoor recreation model that corresponds to the concept of reablement and the ideology of person-centeredness based on meaningfulness of valued activities, places and social contexts. Based on a co-creation methodology with varied stakeholders, including reablement participants, we demonstrated that the four dimensions of emotional attachment, cognitive attachment, conative attachment, and social attachment are essential in identifying meaningful places that can facilitate outdoor engagement for older persons in reablement. These dimensions contribute to the operationalisation of a personcentred approach and establish a foundation for goalsetting practice in the outdoor recreation model.

Reablement has been criticised for the lack of explicit theoretical assumptions guiding such interventions [7]. Thuesen et al. [73] discussed how different theoretical perspectives on successful ageing could inform reablement. While their reasoning on theoretical perspectives is highly individualised, including a person-centred perspective, external perspectives, such as outdoor activities or places are not discussed. Based on our findings, we state that places and local circumstances are central features in many people's lives and therefore must be acknowledged in reablement. Thus, we suggest that theories on place and place attachment need to be elaborated further in relation to reablement theories.

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# Appendix 1. Focus group guides

## Focus group 1: Inspiration team 1

Themes	Guiding questions	Follow-up questions
Introduction and	Introducing the project, project aim and setting	
creating confidence	Can you tell about yourself; professional and educational background, experiences with reablement services and outdoor recreation?	
	What connection do you personally have to outdoor recreation?	
Organizational settings	How does a workday normally look like?	
in the reablement services	How do outdoor activities fit with the organisational settings of your additional reablement offerings?	
Experiences with outdoor activities in reablement settings	For how long have your reablement team been providing outdoor activities as part of the service? Can you tell about how it started?	
	What was the initial rationale behind implementing outdoor activities?	
	Can you provide us with some positive experiences or cases of particular interest?	Follow up to get thorough descriptions about cases: Who were the user, goals, motivation, places of relevance, social network of relevance?
	Can you provide us with some less positive experiences that you have had?	Follow up to assess possible challenges: Physical, motivational, social, cultural or environmental challenges?
Recriutment and goalsetting	What kind of people would you say fit for outdoor recreation offerings in reablement?	
	What assessment guides the goalsetting practice? Outdoor activities	
	Explain what activities that you have experiences with doing. Why are these activities chosen? Why are these activities conducted? What preparations are needed?	

Focus group 2: Inspiration team 2	Focus	group	2:	Inspiration	team 2	
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Themes	Guiding questions	Follow-up questions
Introduction and creating confidence	Introducing the project, project aim and setting	
	Can you tell about yourself; professional and educational background, experiences with reablement services and outdoor recreation?	
	What connection do you personally have to outdoor recreation?	Do you have a local background from the area? Experiences with outdoor activities in the arctic context?
Organizational settings in the reablement services	How does a workday normally look like?	
		can you tell more about the rationale behind choosing the assessment tools you use? Challenges and benefits with using them?
	How do outdoor activities fit with the organisational settings of your additional reablement offerings?	
Experiences with outdoor activities in reablement settings	For how long have your reablement team been providing outdoor activities as part of the service? Can you tell about how it started?	
	What was the initial rationale behind implementing outdoor activities?	
	Can you provide us with some positive experiences or cases of particular interest?	Follow up to get thorough descriptions about cases: Who were the user, goals, motivation, places of relevance, social network of relevance?
	Can you provide us with some less positive experiences that you have had?	Follow up to assess possible challenges: Physical, motivational, social, cultural or environmental challenges?
Recriutment and goalsetting	What kind of people would you say fit for outdoor recreation offerings in reablement?	

## (Continued).

Themes	Guiding questions	Follow-up questions
	What assessment guides the goalsetting practice?	
Arctic cultural factors	Why do you think this population finds outdoor recreation to be of significance?	
	Can you try to describe any cases that you have experiences that reveal a cultural connection between people and the nature in which they live in?	
Arctic environmental factors	Have you experienced any challenges concerning weather, climate, or other possible issues?	Experiences with aids or technical advice, clothing, etc.?

# Focus group 3: Project team

Themes	Guiding questions	Follow-up questions
Introduction and creating confidence	Introducing the project, project aim and setting	
	Can you tell about yourself; professional and educational background, experiences with reablement services and outdoor recreation?	
	What connection do you personally have to outdoor recreation?	
Organizational settings in the reablement services	How does a workday normally look like?	
	Your team started practicing reablement services for only a short while ago. How do you experience the start up?	How did you share tasks and responsibility? What kind of assessment tools are used in your reablement practice? Who is the typical reablement participant?
Experiences with outdoor activities in reablement settings	What was the initial rationale behind implementing outdoor activities?	Why did you consent to participate in this project?
	What was your experiences of the workshop and what processes was generated within the reablement team after participating in the workshop?	What formal and non-formal procedures and practices were generated? How were tasks and responsibility shared and distributed?
	How did you recruit participants, and how did they respond to the service offer?	How did you introduce outdoor activities to them? Did they have to be motivated to go outside? Can you elaborate on challenges if you experience any?
	Can you provide us with some positive experiences or cases of particular interest?	Follow up to get thorough descriptions about cases: Who were the user, goals, motivation, places of relevance, social network of relevance?
	Can you provide us with some less positive experiences that you have had?	Follow up to assess possible challenges: Physical, motivational, social, cultural or environmental challenges?
Recruitment and goalsetting	What kind of people would you say fit for outdoor recreation offerings in reablement?	
	What assessment guides the goalsetting practice?	What is important to assess? How can you contribute to motivate participants?
	What do the participants perceive as motivating factors for engaging in outdoor recreation?	
Arctic cultural factors	Why do you think this population finds outdoor recreation to be of significance?	
	Can you try to describe any cases that you have experiences that reveal a cultural connection between people and the nature in which they live in?	
Arctic environmental factors	Have you experienced any challenges concerning weather, climate, or other possible issues?	
	How do you plan for challenges in the outdoor climate during seasonal changes?	Equipment, tools, clothing, aids?

# **Individual interviews**

Introduction and creating confidence	Can you tell about how you got in contact with the reablement team in the first place?	Story behind engagement in the reablement service? Had you heard about the service? What were your expectation, goals, concerns, etc.?
Outdoor activities as part of reablement services	How did you experience being introduced to outdoor activities by the reablement team?	
	Can you tell about the details of the outdoor interventions?	What was done? By whom? Where did you go? Was the place and activities familiar to you?
	How did you and the reablement staff talk about goals and preferences?	Were there used any standardised tools? Free conversation? Leading questions or suggested activities by the team?
	Can you tell about the outdoor activities that you perceive as of highest significance for you?	Why do you think these activities are important for you
Experiences with outdoor activities	What activities do you normally do outside?	
	What places are of importance to you?	
	What motivates you to be outside in nature (or other outdoor areas)?	
	Can you tell about your connection with being outdoor in nature?	Can you tell about earlier outdoor experiences of relevance from childhood up to this current data?
	Have you had any connection with outdoor activities based on your work or leisure activities?	
Arctic environmental factors	Are there any seasons that you are more outside than others? How do seasonal changes affect your engagement with outdoor activities?	

# Appendix 2 Place Attachment Assessment Tool (PAAT): Manual

The PAAT was developed to support a patient-centred approach to outdoor recreation in reablement practice. The assessment tool provides a framework for identifying the individual's attachment to outdoor places. By building on and facilitating personal motivation for outdoor recreation, the assessment tool forms a basis for goal-setting practice, which involves outdoor recreation as part of reablement.

**Aim**: The aim of the PAAT is to assess a person's unique experiences with and preferences for outdoor recreation. **Target group**: This tool is primarily designed for reablement participants.

**Assessing personnel**: The tool is designed to be used by reablement staff in collaboration with reablement participants.

**Psychometric evaluation**: No psychometric evaluation has been conducted, and the results must be interpreted in accordance with this knowledge.

**Short description of the instrument**: The tool involves three steps; (1) a conversation between the reablement participant and the reablement staff to identify places of significance for the participant; (2) the participant is asked to prioritise places of significance, and (3) the participant and reablement staff discuss and assess the accessibility of the prioritised places to identify possible challenges and solutions to enhance the accessibility of prioritised places.

#### Step 1 Place attachment mapping:

The first step involves a semistructured conversation between the reablement staff and the reablement participant. This step could be supported by using a map (digital or printed version) that visualizes relevant places in the nearby surroundings. An example of an open source that may be used is Google Maps (https://www.google.com/maps). This is not mandatory but could be used as a supplement to the conversation. The four guiding questions below for a basic structure for the conversation.



#### 1. Who?

By asking who the person is, one should strive for descriptions of how the individuals identify themselves through values, goals, and experiences of outdoor activities throughout the lifespan. Do they possess or have they possessed any specific roles, such as spouse, parent, grandparent, employee, neighbour, farmer, fisherman, volunteer, etc., which connects them to any significant places? By exploring these roles and senses of identity, one should be sensitive to and follow-up with questions regarding places that have been, are, or will be relevant in connection to *who* the personasking where themselves to be.

#### 2. Where?

Second, by asking *where* the person has any perception of attachment to, significant places may be identified. Thus, *where* could refer to any outside environment, e.g. garden, neighbourhood, local community, third home, sea, mountains, etc.

#### 3. What?

Third, the assessing personnel should ask what activities are important for the person. Follow-up questions regarding places where these activities possible can be conducted will connect important activities to places of significance. Identifying meaningful activities may facilitate motivation for re-engagement in physical activity, social and societal participation, and connectedness.

#### With whom?

Last, by asking *with whom*, the person's social network can be mapped out, which can give an indication of social connections that can foster support for increased outdoor engagement. Actors that maybe relevant to assess are relatives, friends, group-activity peers, organisations, neighbours, etc.

Places that appear to be of significance are identified throughout the conversation and documented in the scheme below. Based on the narratives that emerge in the conversation, places are categorised within the four categories of emotional attachment, cognitive attachment, conative attachment, or social attachment. Additionally, places are categorised in accordance with the time span, which indicates whether the person evaluates the place to be of significance now, before or in the future. Identified places can be placed in more than one field in the scheme.

#### Step 2 Goal-setting

After identifying places of significance, the reablement participant should be encouraged to construct a prioritisation of significant places that they want to engage with in the future. This prioritisation list provides a basis for the goal-setting procedure, as the prioritised places should be included in the participants' overarching goals for the reablement process.

#### **Step 3 Intervention**

The third step in this assessment conversation is to discuss possible challenges or obstacles that one should account for. Challenges on both an individual and environmental level should be discussed, and the guiding questions below may support the conversation:

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- (1) How do you see yourself in that place? Are there any physical or cognitive functional issues that may hinder engagement in that place?
- (2) Are there any environmental obstacles or distractions that may hinder you from engaging in that place?
- (3) How do you see yourself getting there? Are there any physical or cognitive functional issues that may hinder you getting there?
- (4) Are there any environmental obstacles or distractions that may hinder you from getting to that place?

Place attachment	Before	Now	In the future
Emotional attachment			
Cognitive attachment			
Conative attachment			
Social attachment			
Prioritized places		Challenges or obstacles to ac	count for
1.			
2.			
3.			
1.			

The PAAT was developed within a rural Arctic context where environmental factors such as seasonal variations, harsh weather and inaccessible landscapes were discussed as possible constraints. A general environmental assessment should guide contextspecific practices. The figure below exemplifies how a general environmental map was conducted in the context of a rural Arctic municipality in Northern Norway.

Winter: Usually more in-house activity. Duration varies from year to year. Various light phenomena (dusk, northern lights, polar night). Christmas and Easter	<b>Spring</b> : Major changes in the landscape; snow melting, buds springing out, grass growing, and the scents and sounds of nature. Lambing and the chirping of birds. Easter and nationalday (May 17 <sup>th</sup> )
<b>Opportunities</b> : Some vehicles are becoming more usable; skis, kicks, toboggans	<b>Opportunities</b> : Long, bright days inspires to more outdoor activities; rake, sow plants, clean outdoors, washing windows. The temperature rises and less clothes are required.
<b>Challenges</b> : Cold, dark, slippery, wet. More need for adapted activity inside to maintain function	<b>Challenges</b> : Large variations in terms of temperature, wind and precipitation.
Seasonal	variation
Autumn: Colorful season with clear cold air, shorter days and darkness in the evening; time to bring out reflex. Harvest from nature; berries, mushrooms and other crops. Thanksgiving.	Summer: Temperature rises. Light all day due to midnight sun. More people to meet outside. Nature is blooming Opportunities: Trails and natural areas are drying
<b>Opportunities</b> : Good opportunities to go hiking, for many in combination with picking e.g., berries and study the play of colors in nature	up, accessibility improves. Less clothes are required. Many plants can be studied, picked and eaten. Possible to swim or wade outside

The identified challenges and obstacles should serve as a basis for choosing interventions on both an individual and environmental levelthat facilitate outdoor engagement. Note: As this conversational assessment is based on subjective self-reporting, it should be supplementary to functional assessments that are conducted in reablement practices.

Examples of functional assessment tools that are being used in reablement services:

- Barthel ADL Index, Mahoney, F.I. and D.W. Barthel, Functional evaluation: the Barthel Index: a simple index of independence useful in scoring improvement in the rehabilitation of the chronically ill. Maryland state medical journal, 1965.
- Timed Up and Go (TUG), Podsiadlo, D. and S. Richardson, The timed "Up & Go": a test of basic functional mobility for frail elderly persons. Journal of the American geriatrics Society, 1991. 39(2): p. 142-148.
- Canadian Occupational Performance Measure (COPM), Law, M.C., et al., Canadian occupational performance measure: COPM. 1998: CAOT Publ. ACE.
- Nottingham Extended Activities of Daily Living (NEADL), Nouri, F. and N. Lincoln, An extended activities of daily living scale for stroke patients. Clinical rehabilitation, 1987. 1(4): p. 301-305.
- Short Physical Performance Battery (SPPB), Guralnik, J.M., et al., A short physical performance battery assessing lower extremity function: association with self-reported disability and prediction of mortality and nursing home admission. Journal of gerontology, 1994. 49(2): p. M85-M94.