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RESEARCH ARTICLE

User involvement in the design of outdoor environments to support mental health recovery—From reflection to action

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ABSTRACT

One out of eight people worldwide struggles with mental health illnesses. The treatment is slowly shifting from a biomedical perspective, primarily paying attention to symptom reduction and medicine, towards a more holistic and recovery-oriented perspective. At the same time research shows that the outdoor environment can help relieve pain and stress and improve mental well-being. The study presents a practice-oriented method, inspired by evidence-based design, for developing a master plan for two outdoor gardens at a Mental Health Center in the Capital Region of Denmark. We aimed to provide guidelines for how to set up and perform a flexible design process that combines established knowledge with the needs of the patients and staff. The empirical data were collected through a systematic literature review, semi-structured interviews with patients and staff, workshops and presentations at two different mental health units. The two case studies showed good results in involving patients and staff in the design process and based on the findings of our study involving users. In conclusion, it was apparent that the use of interdisciplinary collaboration informed the design outcome. Based on the two cases, the following advice can be given to the architectural profession: Architects should integrate interdisciplinary knowledge into the design process of outdoor facilities for people with special needs. Interdisciplinary knowledge and user involvement complement each other by adding important site-specific details from the user to the more general design guidelines. This way, the design becomes more nuanced and customized to the users of a specific site. The study showed how architects can import knowledge, skills and values from other disciplines such as environmental psychology to improve the decision-making process of future projects for the benefits of mental patients.

Keywords: recovery; CHIME (Connectedness, Hope, Identity, Meaning, Empowerment); mental health; environmental psychology; evidence-based design; interdisciplinary knowledge

1. Introduction

Worldwide, one out of eight people struggles with mental health illnesses[1], and there is a growing awareness of the need to provide effective and high-quality mental health services to support people in their recovery from mental illnesses. In treatment services, the focus has been shifting from a biomedical perspective,

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primarily paying attention to symptom reduction and medicine, towards a more holistic and recovery-oriented perspective. Treatment is now focusing on well-being and how to empower patients in finding adequate goals and hope for the future and their path to a meaningful and satisfying life[2,3].

Accordingly, research has shown that the environment and level of activity are of great importance for both physical and mental health[4,5]. In particular, the outdoor environment can help relieve pain and stress and improve mental well-being as well as motivation[6–8]. Therefore, improving the quality of the outdoor environment within mental health services has a high potential. Creating comfortable and safe spaces that stimulate well-being and give access to physical activity has a benefit for both mental and physical health[9]. To involve the physical environment in the mental health area, there is a demand to pinpoint specific factors that are important in creating a better outdoor environment. This demand should be fulfilled by looking at established knowledge across mental health research as well as inviting the users, in this case, employees and patients, into the planning process.

Architects can find inspiration in environmental psychology and already established theories such as stress recovery theory (SRT), attention restoration theory[10] or, prospect and refuge theory[11], or more current works such as perception of the environment by Ingold[12]. This work describes a new approach to understanding how people perceive their surroundings inspired by Gibson's affordance theory[13]. A growing number of architects agree that research can improve design, based on positive results in healthcare design[14]. However, the architectural profession is still a practice-oriented field, which focuses on creativity and practice rather than research and theory. The practice-oriented approach limits the interdisciplinary growth of the profession[15] because too little knowledge from other fields is being incorporated. A way to avoid this is by using evidence-based design (EBD).

EBD within architecture is a relatively new field of research that attempts to include functionality and research-based knowledge into aesthetic design[16,17]. EBD can be described as a method, where the design process is based on a conscious balancing of the best available research in the field, design expertise, relevant interdisciplinary knowledge, user needs, and project context. The method has been used particularly in the establishment of hospitals and health centers, where healing architecture is often used as the guiding planning principle[18], but also as a tool for evaluation[19].

The overall objective of this study is to present a practice-oriented method, inspired by EBD[20]. The method should be informed by a triangulation of evidence, user involvement and best practice. In this case we apply the method to two outdoor environments (gardens) at a Mental Health Center in the Capital Region of Denmark. We aim to provide guidelines for how to set up and perform a flexible design process that combines established knowledge with the needs of the patients and staff. The purpose of the user-involvement is to identify staff and patient needs related to garden activities, therapeutic programs, and preferred environmental conditions. This leads to the following research question: How can a systematic use of user involvement and interdisciplinary knowledge secure a design process that meets the design objectives?

Before this study a scoping review about the connection between the outdoor environment and recovery of psychiatric patients was identified. A total of 8138 records were screened, 85 studies were included for full-text reading, but only five articles were included in the final analysis. The review generally found that outdoor environments, particularly gardening, contact with nature, and safe environments, can be associated with the well-being of patients in psychiatric units. The review also revealed a lack of research in this area and that the design guidelines were not very specific[21].

To gain more knowledge we looked at already established theories within environmental psychology. The theories proposed different design criteria that can be used as design guidelines in the specific design of the

gardens (see **Table 1**).

Table 1. Established theories.

Theory	Design criteria	Specific design solutions
Stress reduction theory by Ulrich[22]	Social support	Different types of spaces so that patients and staff can meet and interact in different ways. Seating areas that face each other and are designed for multiple people, encouraging social interaction. A kitchen garden where patients and staff can meet.
	Physical activity	Pathway that allows a short walk when out for fresh air.
	The feeling of control and a protected environment	Clear orientation via path, paving and planting towards the more enclosed garden space. Visual and auditory screening with planting and seating where sound levels are lowest.
	Natural distraction	Different opportunities to interact with nature in various ways, e.g., through kitchen gardens: Sitting under a tree and watching the branches move in the wind or observing insect and bird life. Visual and auditory stimulation from natural elements like different scents of nature, etc.
Attention-restoration theory by Kaplan and Kaplan[10]	Being able to withdraw	A place that offers the possibility to get away from the circumstances that cause stress. The place should give the feeling of entering "another world", which can be supported by the design with plants and natural elements.
Prospect-refuge theory by Appleton[11]	Overview, but at the same time shielding from prying eyes	Social spaces that are shielded to varying degrees from the rest of the environment by green, plant-rich boundaries.

2. Methods

When working with EBD, one must first formulate a clear goal. Secondly, search for relevant scientific literature and third, critically evaluate the evidence found and finally, apply the findings to the current problem. The data are collected through triangulation between experts (objective evidence), the architect (subjective evidence), and the users' needs. After commissioning the initial goals can be evaluated. Doing so, it is possible to improve the project if the goals have not been achieved[20]. This article focuses only on the design process and does not address a later evaluation.

An EBD-approach[22] was applied as a case study at a Mental Health Center in the Capital Region of Denmark, where the outdoor areas had been neglected for years. They lacked inviting and accommodating places to sit and possibilities of doing outdoor activities. The overall goal of the design process was to create a place where patients had a space to pause, socialize and be physical active during their stay. The approach focused on involvement of employees and patients in the design process as portrayed below (see **Figure 1**).

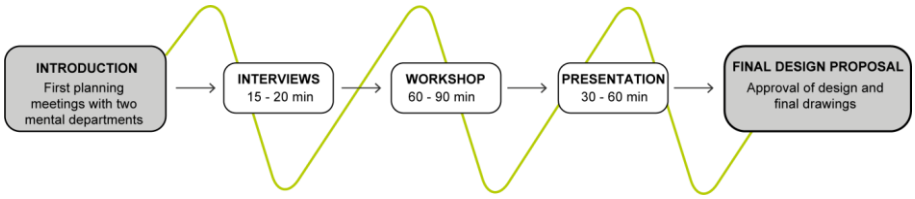

Figure 1. Flow of the design process.

2.1. Study environment

Data in this study were collected through semi-structured interviews[23], workshops and presentations with patients and staff at two different mental health units: an open inpatient rehabilitation treatment facility targeting mainly young people with depression and schizophrenic disorders, as well as a closed inpatient treatment facility targeting patients over 65 years with various psychiatric disorders. The two units were similar in size and number of staff (30 versus 22 staff members) and patients (16 versus 17 number of patient beds).

The two gardens were placed at one out of nine Mental Health Centers in the Capital Region of Denmark, and they were approximately 300 m apart. The managers of the two units agreed to participate in the research project.

2.2. Study design

The study used a mixed methods approach[24], combining semi-structured interviews with the patients and staff at the two units (five patients and one staff member from each unit) with a triangulation of knowledge gained through a scoping review about the importance of outdoor facilities at mental hospitals identified prior to this study[21]. The interviews identified wishes and needs of the patient group, focusing on their experience and personal recovery-process.

Interdisciplinary knowledge and user involvement supplement each other by adding important site-specific details. This way the design process is enhanced since more needs and wishes from the end-users can be incorporated into the design. Thus, a thorough collaboration with the end-users can be ensure a better match between the initial visions and the subsequent use.

An assumption is that development should take place through a transparent design process that enables the collection of valuable data and experience that can also qualify future projects regarding psychiatric patients[25].

2.3. Interviews

Five patients and one staff member from each unit were interviewed. The interviews were conducted in a meeting room or in the garden at the unit. Each individual interview took approximately fifteen to twenty minutes. The twelve interviews were recorded and transcribed for later analysis. The 'seven stages of an interview inquiry' by[23] framed the organization of the interviews. 1) thematizing, 2) designing, 3) interviewing, 4) transcribing, 5) analysing, 6) verifying and 7) reporting. These guidelines defined the topics of the study and the review of the results for validity and generalizability[26].

The interview guide focused on how patients and employees use the current outdoor environment, and which outdoor activities they could imagine in a new optimized setting. The interview guide has been structured around the CHIME framework. CHIME is an acronym, developed from a systematic review by Leamy and colleagues investigating the most important component in the recovery process[27]. The components are: 1) connectedness, 2) hope and optimism, 3) identity, 4) meaning and purpose, and 5) empowerment (in a Danish context see the study of Santini et. al.[28]. CHIME is focusing on how the outdoor environment can support the individual processes of recovery.

2.4. Research ethics

Several considerations in terms of research ethics were made in order to protect the participating subjects. Prior to the start of the study, all participants were informed of the goal of the study and promised full anonymity in the dissemination of research results. The project follows the regulations regarding anonymity and processing of personal information issued by the Danish Data Protection Agency, and the interviews were conducted according to the code of Ethics of the American Anthropological Association. Research ethics were taken into consideration in order to make the participants feel comfortable during interviews and workshops. Participants were informed that they could decline to participate, withdraw their statements, or withdraw consent to participate at any time without any consequences for the course of their treatment. Furthermore, they were informed that their stories and statements would be used exclusively for the stated purpose, and that they could comment anonymously. In addition, the purpose of the research ethics was also to allow participants to express themselves freely and thus provide independent thoughts in relation to the stated goals of the sub-

studies.

Consent was also obtained from the National Committee on Health Research Ethics, which ensured formal ethical approval in connection with data collection in this research project. Based on the information available, the committee decided that the project did not need an approval (20212000-136). Through the university SDU's Research Ethics Committee we also applied for ethical approval, which was approved (REC ID 252).

3. Results

The data combine empirical knowledge from the scoping review[21], research in environmental psychology, and knowledge from the interviews and workshops.

3.1. Interviews with the patients

The knowledge earned from the interviews was processed and divided into different themes to structure and organize the analysis. The themes are not one-to-one with CHIME but attempt to categorize the impact the five concepts have on the relationship between the gardens and patient recovery. The focus in the subsequent analysis of the interviews has been on extracting statements that point to specific attentions that need to be considered in the design of outdoor environment.

3.1.1. Theme: Importance of outdoor environments

In general, getting outside the unit is very important for all patients. However, spending time outdoors does not have quite the same importance for the two patient groups.

The elderly patients enjoy sitting in the garden and appreciate the nature, flowers, sounds, and smells. They all mentioned the importance of nature distraction, which we also identified through the literature review[22]. On the other hand, the younger patients use the outdoor areas to get away from the unit, and use the garden for social support, where different types of spaces can be used to meet and interact in different ways[22]. The outdoor environment is a place for contemplation or conversation. In addition, some of the young patients also mentioned physical activity as an important occupation when being outside. The younger patients are more concerned with finding a specific reason to be outdoors compared to the seniors.

"You have to have a purpose for going out, otherwise it can be difficult to find the energy to do it."

This purpose has to be active, e.g., physical activity or gardening, while the seniors just enjoy being outside.

Overall, patients are satisfied with the existing gardens today, and many of them mention the big trees and all the greenery as something that are important to them.

"We are lucky to have these big trees, if I didn't, I would really feel bad."

3.1.2. Theme: Importance of atmosphere

When asked what kind of nature is important to them, many mentioned the forest as the most calming type of landscape, because of its beauty, but also because it is easy to find peace in a forest. This is supported by the theory, that describe the importance of finding places that offers the possibility to get away from the circumstances that cause stress[10,11]. One senior patient said:

"It is first and foremost the silence, that wonderful silence, and then you can experience the wildlife, birds and insects and just bury yourself in your own thoughts."

One young patient stated:

"Your head goes through sort of a deep cleaning when being in the forest."

Another patient described a deserted place in Sweden as a very special place, because you neither get bothered by car noise nor ugly buildings. In general, aesthetics is also important to the patients. It is nature, but it is important that the gardens are well-kept, or at least that you can see it is maintained. Through the interviews, it came clear that the sensory impressions were very important for the patients, and that the individual senses might be stronger when dealing with mental illness.

"It's a mixture of a sensitivity and an aesthetic sense, but it turns into something pathological, so it's... it's very painful and I'm not able to walk down the street without everything cutting into me. Sounds and smells are the same way. So, it's hard."

3.1.3. Theme: Illness and environment

Senses are stimulated in different ways, and there is a big difference between what is good and what is bad. A young patient says:

> *"It's also part of my symptoms that I almost couldn't distinguish myself from the surroundings, so when I see a building, I feel it so much that it could be … that I feel myself cut across where the building meets the sky, that the lines are cutting inside me, so it's like that. Just goes straight in, meaning that my sensory filter is totally open, so everything with the senses just goes straight in, whether it's sounds or visuals or smells."*

Some patients mentioned that sounds of raindrops can be very soothing, while traffic noise is very stressful or even painful. The same goes for planting, with some patients preferring a very structured garden, while others prefer wild nature. It is therefore difficult to create general guidelines that suit all patients at the same time.

3.1.4. Theme: Future wishes

As for actual wishes for the future, patients at both units named a number of specific needs for their new garden facilities. Among the seniors, it was important to have comfortable places where they could sit sheltered from the wind and be protected. I addition, the seniors also wanted places to retreat. A senior patient said:

"Perhaps some places you could be a little withdrawn from others if someone wished to withdraw from being with a lot of people."

The younger patients want both secluded places and places that invite socializing. At the same time, the young patients also asked for some activities related to the gardens, such as gardening or physical activities. There are also small design challenges that must be considered when it comes to selecting materials. E.g., one senior said:

"I like roses a lot. Unfortunately, there are thorns on it. And they sting terribly, and when you get blood thinning medicine, the blood runs down the arms, doesn't it."

In general, the patients wanted diverse outdoor areas with small niches and higher comfort, nice greenery, kitchen garden and training facilities. In addition, the architect should avoid materials, which can harm or be used for self-harm. For example, plants with thorns or a garden pool. Therefore, the reflecting pool in the garden was only two centimeters deep to avoid tragic drowning incidences.

3.2. Interviews with the staff

Interviews were also conducted with members of the staff from the two units. One employee from each unit. The two selected staff members take care of the patients during the daily routine and perform various activities with them.

The staff interviews took a different approach, asking more directly about the patients' daily lives and possible future initiatives in the garden. Questions were asked about activities that could help improve patients' daily lives in terms of physical activity, social gathering places, and spaces for contemplation.

Both staff members agreed that it is important for the patients to be able to spend time in the garden. Here, patients could find their own corner where they could either sit alone or have a private conversation. At the same time, it was important for the staff to keep track of the patients, so they needed to have a good overview of the garden.

They also agreed that it is important for patients to be able to do something practical, like pulling weeds or watering the plants. This would give a homely feeling, so the unit doesn't feel like a hospital all the time. This is especially important for patients over 65 with various psychiatric disorders since they stay in a closed unit. This supports the theory by Roger Ulrich, describing nature distraction, where different opportunities to interact with nature in various ways, e.g., through kitchen gardens are import[22].

"Some patients feel locked up, so you might feel less locked up if you can get out in the garden, even though the garden is fenced."

Some patients are difficult to motivate to leave the building, preferring to stay in their rooms. The garden could give them the opportunity to go for a short walk. This way, they would get different impressions and get some fresh air. The garden is also used for physical activity, where specific training is done by a physiotherapist. This includes various coordination and balance exercises or for the younger patients, different games with and without a ball.

"I work a lot with sensory profiles and how we perceive and process stimuli, so I really care about the fact that there are some opportunities to sense and feel, smell, see and hear different stimuli…"

The importance of the garden for social events was also mentioned in the interviews. The gardens are often used for afternoon coffee breaks, social gatherings, and listening to music.

"These are older people, and I believe that you only get well if you have good days and if you have positive experiences. And caring people to be with, good relationships. If you feel that you might be able to go to gymnastics while you are here, then you might also be able to do it when you are back in your own municipality again…"

Likewise, the gardens are also important when relatives come to visit, since many relatives prefer to sit outdoors. This way, they can escape the atmosphere at the unit. Especially the younger relatives find it exceptionally difficult to sit in the ward.

In addition, the garden was also important for the units' smokers. But this could be a challenge as not everyone smokes. It would be useful if the areas could be separated so that people can sit without being exposed to smoke.

Following the interviews, the wishes and needs of patients and staff were collected and evaluated. The interviews revealed a need for three types of spaces, which should be incorporated into the final design: 1) private spaces for private contemplation, 2) social gathering spots, and 3) spaces for various activities such as gardening or physical exercise. The interviews overall supported the theory identified through the literature review, but the patient's comments were more site specific, because they knew the gardens.

3.3. Workshops

The interviews, together with the literature reviewed and the theoretical findings, formed the basis for the subsequent design process, in which different ideas and wishes were translated into a concrete design. The first

author of this article, a trained landscape architect was responsible for the design of the two gardens. To involve the units in the design process, workshops were organized in which patients and staff could participate. The one-and-a-half hour workshops were held on the ward, and all patients and staff were invited to attend. Two workshops were scheduled so that everyone had the opportunity to participate. During the workshops, a preliminary proposal for the future design was presented to the patients to encourage them to think about the design solutions.

In advance, we had prepared materials such as floor plans, reference photos, paper, and various colored pencils for the patients to work on the design themselves, but patients were a little hesitant to actively participate in the design process.

Instead, the workshops ended up being more a presentation followed by a discussion. After an initial presentation the patients contributed to the discussion and gave us important feedback on the design. Small adjustments were made, and new objects were added. Especially in the seating areas where patients wanted more seclusion around the furniture. For example, more greenery was added to provide protection and privacy. In addition, the armrests were removed from the chairs in the young patients' ward, as some of them are overweight and may have problems fitting into a normal chair.

In summary, the workshops not only provided important ideas, but also gave patients a sense of ownership and influence over the design of their future gardens.

3.4. Presentation of the two final gardens

The design of the two gardens and the illustrations were created by the first author of the article. The design proposal was both presented at the workshops in a PowerPoint presentation, but also handed out as a small booklet. (See **Figures 2** and **3**).

Figure 2. Final design of unit for young patients with depression and schizophrenic disorders (illustration: first author).

Figure 3. Final design of unit for patients over 65 with various psychiatric disorders (illustration: first author).

The variation in age groups and gender was diverse for the two units. Group 1 (age: 18–30, mix of males and females) and group 2 (age: above 65, majority of females), but the two groups of patients had common desires for the design of the gardens. Both groups of patients wanted places to be alone or in smaller groups, places for reflection or intimate conversations, as well as larger areas for social events.

As for physical activity, only the garden for patients over 65 has a special exercise facility—a wooden staircase that can be used for daily physical training. In the garden for young patients with depression and schizophrenia, the lawn has been kept free for ball games and other activities.

4. Discussion

This paper aims to show how a systematic use of user participation and interdisciplinary knowledge can influence a design process. Through a structured design process a triangulation of user needs and interdisciplinary knowledge were included in the design proposal.

The needs of the users supported the theories of Ulrich et al.[22], Kaplan and Kaplan[10], Appleton[11], where the theories call for different types of spaces that provides 1) an opportunity to remove oneself from the circumstances, 2) places where patients and staff can meet and interact with each other in different ways and 3) different opportunities to interact with nature in different ways, e.g., through kitchen gardens or other activities.

Each space has several characteristics and design solutions that were identified through triangulation of scientific literature, semi-structured interviews, design team experiences, such as material and plant knowledge and overall aesthetics, and existing conditions on the site.

4.1. Private contemplation spaces

Gardens for mental health use must contain places that are as far as possible shielded from windows and other interfaces where the experience of glances like visual exposure is significant[22]. Private contemplation spaces allow patients and staff to withdraw from the hospital facilities where treatment takes place. As far as possible, the private contemplation spaces should be in places where sound level are low. Where this is not possible, greenery and shelter should be added. The experience of entering a private contemplation space to separate the environment from the treatment environment can be supported by planting, space-creating, characteristic, and screening greenery from surrounding hospital facilities[10,11].

This corresponds to the wishes of the patients, however, the patients had different ideas about the planting and its appearance. Either very structured or wild nature. Therefore, a compromise was found in the design: The plant beds in the center of the garden are more structured, while the planting at the edge is wilder.

4.2. Social meeting spots

The spaces should be sheltered from the surroundings but leave space for social meetings either by planting or roofed by existing shelter or a parasol[17]. The purpose is to support the feeling of connectedness, which as described in CHIME is an important element in the recovery process[27].

Small café tables and chairs were set up along a wooden fence so patients could sit and overlook the surrounding area.

The gardens are also important when relatives come to visit. In discussion with the patients and staff members, it became clear that many patients prefer to sit in the garden with their relatives. This way, they can escape the hospital-like atmosphere on the ward and forget for a while that they are in the hospital. This is especially important in the senior care unit, as many of the younger relatives find it particularly difficult to sit inside the unit. That's why we focused on creating smaller niches where two or three people can sit together and have a private conversation.

4.3. Spaces for activities

Based on R. Ulrich's Stress reduction theory the gardens offered spaces that can enhance physical activities[17]. These may be kitchen gardens that offer gardening work, such as removing weeds and watering the plants. Work tasks that are particularly requested by the elderly patients, and being assigned specific tasks in the garden as well as having the opportunity to do physical work can add to the important feeling of purpose in the recovery process[27].

To this end, the garden provides space for gardening in raised planting beds. The raised beds are intended to provide access to the soil for seniors who have difficulty bending over. At the same time, the raised beds also provide a small, confined area. This is important, because several patients indicated that while they would like to participate in gardening, they also pointed out that they have a limited amount of energy. The younger patients requested more space for physical activities such as exercise and play. According to the staff, it was also important to leave space for these activities. Therefore, we did not touch the existing lawn areas where the staff offers various games and exercises. In the garden for young patients with depression and schizophrenic disorders, we put up a flagpole so that patients can raise the Danish flag to celebrate their birthday. This is part of the recovery process of giving meaning and purpose to everyday life, as described in the CHIME-framework[27].

4.4. Methodical reflections

It could be a limitation that we are not able to determine the specific therapeutic effect of the outdoor environment in relation to the specific patient. However, this has not been the focus of interest since we are concerned with patient's process of personal recovery, not symptom reduction or diagnostics. Demonstrating a causal relationship between a systematic user involvement and interdisciplinary knowledge and outcome is challenging, because the relationship is complex. Simplistic interventions may therefore ignore underlying health determinants that cannot be addresses through landscape design. Nevertheless, the project has shown that there is a strong correlation between applied theory and user desires. The interviews overall supported the theory. However, user desires were far more detailed than what was described in the theory. Thus, theory cannot stand alone, and patients must be included to portray the different perspectives. In an ideal world, user involvement does not end after the design process. On the contrary, there should be the possibility to test and change specific design solutions with patients and staff, once the project has been implemented, and as patient groups change.

5. Conclusion and implication for future research

The purpose of this study was to present a practice-based, EBD-inspired method for developing a master plan for two outdoor spaces (gardens) at a mental health center in the Capital Region of Denmark. The study is an example of developing a new design approach by incorporating interdisciplinary research and user involvement in the design process. An important approach to make further progress in this research area. Based on the findings of our study involving users, we can conclude that outdoor environments have potential to promote and support recovery. Findings supported by a comprehensive review[29].

The two case studies showed good results in involving patients and staff in the design process. Based on the two cases, the following advice can be given to the architectural profession: Architects should integrate interdisciplinary knowledge into the design process of outdoor facilities for people with special needs.

Interdisciplinary knowledge and user involvement complement each other by adding important site-specific details from the user to the more general design guidelines. This way, the design becomes more nuanced and customized to the users of the two units.

Architects should make the design process transparent so that everyone can see what decisions were made during the design process. Overall, the two gardens were developed in cooperation with their users. After the construction of the two gardens presented in this study, it is highly relevant to collect data to examine the ongoing use of the gardens. Future evaluation may reveal whether user involvement and interdisciplinary knowledge in the design process are making a difference and improving the quality of the garden. This could be done through systematic observations, surveys and interviews, leading to the identification of user groups and on-site behavior patterns. In this way, the proposed design strategy can be validated, and it can be determined how the suggested approach can assist architects to fulfill the intended visions and attract the intended user groups[30].

Author contributions

Conceptualization, MH (Mikkel Hjort) and KKR; methodology, MH (Mikkel Hjort) and KKR; software, MH (Mikkel Hjort); validation, KKR, SW and MH (Michaela Høj); formal analysis, MH (Mikkel Hjort); investigation, MH (Mikkel Hjort); resources, MH (Mikkel Hjort); data curation, MH (Mikkel Hjort); writing—original draft preparation, MH (Mikkel Hjort); writing—review and editing, KKR, SW and MH (Michaela Høj).; visualization, MH (Mikkel Hjort); supervision, KKR; project administration, KKR; funding acquisition, KKR. All authors have read and agreed to the published version of the manuscript.

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Conflict of interest

The authors declare no conflict of interest.

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