OUTDOOR ENVIRONMENTS AT CRISIS SHELTERS
User needs and preferences with respect to design and activities

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Abstract
The aim of this study was to identify implications for the design of outdoor environments at crisis shelters for women and children survivors of domestic violence. To address this aim, landscape analyses and interviews with staff were conducted at three Danish cases. The findings are presented in descriptions of the three cases in terms of the number of residents, context, building type and the characteristics of outdoor environments. Furthermore, a thematic content analysis of the interviews resulted in five categories that offer a nuanced insight into how the different types of outdoor environments support crisis shelter functions. The categories are: Protection against perpetrators of violence and helping residents to feel safe; Accessibility in the design, straightforward activities and staff guidance; Being outside and the positive distractions of nature; Space for all; Room to play and relieve children’s feelings. Finally, the findings were summarized to give an overview of implications for design.

Keywords: Children; crisis shelter; design of outdoor environments; domestic violence; women.

INTRODUCTION
Through landscape analyses and interviews this study explores implications for the design of outdoor environments (OEs) at crisis shelters (CSs) for women and children survivors of domestic violence. First, the problem of domestic violence is introduced which is followed by a discussion of the CS setting as a background to the study.

Domestic Violence
Based on the recommendations made by the United Nations (UN) for legislation on violence against women, domestic violence can be defined as any form of physical, sexual, psychological or economic violence involving individuals who are or have been in an intimate relationship, individuals with family relationships to one another; and members of the same household (UN, 2010). In Denmark with its 5.5 million inhabitants, an estimated 28,000 women are exposed to violence by their partner or ex-partner (Helweg-Larsen & Frederiksen, 2007) while 22,000 children grow up in homes with violence (The Body Shop/UNICEF, 2006). Every year, approximately 2,000 women and 2,000 children flee to a CS (Helweg-Larsen & Frederiksen, 2007) which entails stays of 24 hours to over one year (Barlach & Stenager, 2010).
When seeking help at a CS, women and children are in a state of crisis and they can be affected by numerous mental and physical health consequences including depression, post-traumatic stress disorder and chronic pain (Plichta, 2004; Coid et al., 2003; Wolfe, Crooks, Lee, McIntyre-Smith & Jaffe, 2003; Campbell, 2002; Diaz-Olavarrieta, Campbell, Garcia de la Cadena, Paz & Villa, 1999; Fantuzzo & Mohr, 1999; Campbell & Lewandowski, 1997).

Crisis Shelters
CSs in Denmark offer protection from perpetrators of violence and help women and children cope with their crisis, helping them to start a new life without violence.

The women and children live in temporary, unfamiliar housing often in close proximity to strangers. This can make the CS a potentially stressful setting capable of contributing negatively to their state of crisis. The design of the setting should provide an environment that is secure, controllable and predictable with minimal sources of stress (Refuerzo & Verderber, 1989; Verderber, 2001). The OE can be seen as an essential part of the CS. It offers respite from the indoor environment and additional space as well as the benefits of being outside with an opportunity for contact with nature.

Health-Supporting Outdoor Environments
An increasing number of research studies show that contact with nature can support health and improve well being (for a review see Ward Thompson, 2011). Research has addressed the benefits of viewing and being active in nature. It has focused on various groups, settings and health outcomes (e.g. Cooper-Marcus & Barnes, 1999; Grahn, Tenngart Ivarsson, Stigsdotter, & Bengtsson, 2010; Stigsdotter et al., 2011; Ulrich, 1984). A study by Ottosson & Grahn (2008), which focuses on people in crisis, shows that people who are in frequent contact with nature are less affected by their crisis compared to those who have less contact with nature. Some studies on OEs at CSs focus on the activities that are organized for the specific user group and take place in a setting specially designed or chosen for the purpose of the activity (nature-based activities). These studies indicate several health benefits for the women and children in terms of improved self-esteem, mood, stress-coping and social competence (Lee, Kim, & Suh, 2008; Stuart, 2005; Keeley & Leigh, 1999; Pierce & Seals, 2006; Seals & Pierce, 2007).

This research suggests that the OE has the potential to play an important role in supporting the health and well-being of the women and children and to the general success of CS functions. The specific design requirements are, however, less evident. The aim of this study is, thus, to find implications for the design of OEs at CSs that can enhance their use. To address this aim, a two-phased qualitative study of three cases was conducted with the following research questions:

- What is the appearance of OEs at CSs?
- From the staff’s perspective, what are the user needs and preferences with respect to outdoor design and activities?

MATERIALS AND METHODS

Definitions
In this paper, a CS is defined as a place which offers temporary accommodation, care and support to women who have been exposed to domestic violence. The women may be accompanied by children (based on § 109 of the Danish Consolidation Act on Social Services).

The term OE is used to cover the great variety of outdoor settings such as gardens, courtyards and roof gardens. OEs can have different amounts of vegetation and can either be designed or spontaneously developed.
Case Selection
The data were gathered at three Danish CSs. The selection of the three cases was based on a different study covering 31 of Denmark’s 38 CSs (Lygum, Stigsdotter, Konijnendijk, & Højberg, 2012). This study used data from a questionnaire survey, CS homepages and aerial photos to explore the extent, general satisfaction, characteristics and use of the OEs.

Based on the results of this study, the following selection strategy was applied: it was important to get as much and as varied information as possible without compromising the depth of the study. Therefore, an information-oriented selection with a relatively small sample of cases each with their different qualities was chosen. On the basis of expectations about their information content, the study focused on “especially good” cases (Flyvbjerg, 2004, p. 426). A case was evaluated as being especially good if the OE was described as having a rich content and a high number of activities organized by the staff. Indications of extra activities, a high level of satisfaction with the OE and unique aspects of the setting or use were also considered positive. For the cases with the highest scores, the shelter location was taken into consideration with regard to access for the researchers. Based on this process, six cases were chosen and visited. Visits included an unstructured individual interview with a staff member and an overall assessment of the OE to clarify results from the questionnaire survey and obtain further knowledge. The six CSs were reduced to three, which were assessed to be the best in terms of rich and varied information content.

Data Collection and Analysis – Phase 1
Each of the three cases included an unstructured individual interview with the shelter leader to gather further information and to organize the subsequent data collection. Furthermore, several types of landscape analysis were conducted including an analysis of the OEs and their surroundings based on the theory of mental maps by Lynch (1960). The ‘therapeutic garden audit for acute care hospital’ developed by Clare Cooper Marcus and Marni Barnes was also applied (C. Cooper Marcus, personal communication, October 4, 2010). The tool was used as a checklist in combination with findings from prior research on the development of a supportive OE at a Danish CS (Lygum & Stigsdotter, in press). This helped to direct attention to design details in the OEs. Furthermore, an observation of physical traces (Zeisel, 2006) was conducted to obtain information regarding usage. All in all, the landscape analyses resulted in a greater understanding of the CSs as organizations and of the physical environments in which they are placed. This knowledge was used as a basis for carrying out the group interviews described in the following.

Data Collection and Analysis – Phase 2
The last part of the case study consisted of interviews. The seven stages of an interview inquiry by Kvale and Brinkmann (2009) assisted the planning. A semi-structured group interview was conducted with three to four staff members selected by the leaders at each CS. These staff members included night and day porters, childcare workers, a counselor, contact/support persons, a handyman and a leader. The group interviews were recorded and lasted approximately an hour and a half each. Each group was provided with a site illustration of the OE as well as paper and pens to support the discussions. The overall goal of the interviews was to identify the employees’ experience regarding the needs and preferences of the women and children concerning outdoor design and activities as well as the employees’ own needs and preferences. Questions revolved around the use of the OEs, their positive and negative aspects, their significance for the different users, and the participants’ idea of what constitutes the ideal OE.

The recordings from the three group interviews were transcribed and analyzed. The analysis was based on a ‘thematic content analysis’ which is a method adapted from the ‘grounded theory’ approach and from research on content analysis (Burnard, 1991). In the analysis, the themes addressed in the interviews concerning needs and preferences with respect to outdoor design and activities were systematically registered. Moreover, the themes and interviews were linked together according to a category system. The results from the initial phases of the re-
search, such as notes from the individual interviews and the findings from the landscape analyses, supported the overall analysis.

To reinforce the validity of the results, notes were made after each group interview regarding the topics discussed. Furthermore, a preliminary analysis of the transcripts was carried out several weeks before the final and more detailed analysis was completed. The use of NVivo 8 (computer-assisted qualitative data analysis software) ensured that both interview recordings and transcripts were used in combination at all times throughout the analysis and facilitated access to the other types of data collected at the cases. The quotations presented as part of the results were slightly modified to clarify their content and then translated from Danish to English by the authors with the assistance of a native English translator.

RESULTS

Description of the Three Cases
In Table 1, the three cases are described on a general level by using the findings from the data collection in phase 1 outlined above.

Table 1. Description of the three cases in terms of number of residents, context, building type and characteristics of outdoor environments (Source: Authors).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Case 1</th>
<th>Case 2</th>
<th>Case 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of residents (max. capacity)</td>
<td>10 women and 15 children</td>
<td>16 women and their children</td>
<td>7 women and 12 children</td>
</tr>
<tr>
<td>Context</td>
<td>Suburban area</td>
<td>Urban/Suburban area</td>
<td>Rural area</td>
</tr>
<tr>
<td>Type of building</td>
<td>Two-story institutional building</td>
<td>Three-story institutional building</td>
<td>Two-story building formerly used by a chief forestry supervisor</td>
</tr>
<tr>
<td>Type of outdoor environment</td>
<td>Back garden</td>
<td>Courtyard</td>
<td>Surrounding garden with the characteristics of a park</td>
</tr>
<tr>
<td>Approx. size</td>
<td>1000m²</td>
<td>1,500m²</td>
<td>15,000m²</td>
</tr>
<tr>
<td>Building footprint and outdoor environment</td>
<td><img src="image1.png" alt="Diagram" /></td>
<td><img src="image2.png" alt="Diagram" /></td>
<td><img src="image3.png" alt="Diagram" /></td>
</tr>
<tr>
<td>Short description</td>
<td>The common dining room opens out onto a patio with garden furniture. From here there is a view of most of the garden which includes a lawn, a play area, and a shed. There is a great variety of plants in pots and small beds as well as bushes and trees near the building.</td>
<td>Access is possible through several doors including one from the common dining area, which opens out onto a terrace with tables and chairs. From the terrace a paved path leads to an area which is visually separated from the terrace by the building. This part includes a play area, sets of garden</td>
<td>A series of lawns of varying sizes and openness are separated by the buildings and wooded areas, including a small campfire. There are two main areas. One is connected to an annex and includes garden furniture. The other is connected to the main building. Here the common dining room</td>
</tr>
</tbody>
</table>
boundaries.

Demarcation, level of screening and other security measures

<table>
<thead>
<tr>
<th>Boundaries</th>
<th>Furniture and a greenhouse. There is a variety of plants in pots as well as some bushes and trees</th>
<th>Opens out onto a patio also with garden furniture from where it is possible to overlook a lawn, which has a play area.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enclosed by the building, a locked gate and a 1.90m high wire fence, which is partly covered by vegetation. The door from the building to the garden is locked at night. The garden is visible from its surroundings.</td>
<td>Enclosed by the building and a solid wooden fence approximately 2.5m high with two locked gates that face the neighbors. Residents are advised not to open the doors to the courtyard at night. The courtyard is visible from its surroundings.</td>
<td>Fluid transition to surrounding forest. Doors from the outside to the building are under video surveillance and locked, and residents’ keys are deactivated during the night. The garden is visible from its surroundings.</td>
</tr>
</tbody>
</table>

**Categories Derived from the Group Interviews**

The analysis resulted in five categories consisting of themes concerning needs and preferences with respect to outdoor design and activities. The results are presented in the following with summary descriptions and illustrative quotes.

**1. Protection against perpetrators of violence and helping residents to feel safe:**

Participants from all three cases mentioned that on a few occasions they have encountered men who wanted to contact women and children at the CSs. The men walked around the surroundings, looked through the fences, jumped over a fence into a closed courtyard or entered the building with the help of their children. A participant from Case 3 said that men can travel from one CS to another hoping to find their girlfriend, wife, children or whoever they are looking for. Participants from all three cases also pointed out that there have only been a few incidents of unwelcome men at the CSs in the past few years.

Participants from Case 1 liked the fact that their garden is protected by the CS building and is delimited by familiar neighbors, who can alert the staff if there are suspicious individuals in the area. There is, however, also a public path next to the garden at Case 1, and the participants mentioned an episode where a father stood on the path and saw his children through the wire fence. Therefore, participants from Case 1 said that the screening vegetation by the fence is important at their CS. See photo 1.

Participants from Case 2 and 3 both discussed the security measures at their CSs and how far one should go in protecting residents. Participants from Case 2 were aware that it is possible to kick in their wooden fence or to climb over it with a ladder, if someone really wants to get in to their courtyard. On the other hand, the participants thought that the inclusion of security measures such as barbed wire on the fence or video surveillance would be going too far, and they were concerned that this would change the residents’ experience of the courtyard in a negative way. One participant from Case 2 said the following about their fence: “A fence as large as ours has a certain symbolic value...it simply says ‘keep out’ - there isn’t more to this fence, and if someone really wants to break in, it’s possible”. See photo 2. At Case 3 there is no fence around the garden and the transition to the surrounding forest is fluid. Staff and residents enjoy the large amount of space and the experience of nature. However, the lack of demarcation and overview can create anxiety among residents, which a participant expressed in the following way: “That's the downside of it. They [the residents] can feel that they are being secretly watched. And if there is a strange noise, they wonder if it is the deer. Those who have lived there for some time learn to tell the different types of sounds apart. Then, when it suddenly sounds different – well, is there then someone out there? That's a negative aspect of not having an enclosing fence – it makes them feel unsafe”. Participants from Case 3 said that the employees encourage residents to stay close to the door of the main building when they are in the garden. They do this to keep children...
away from the traffic on the private road which leads to and from the CS, but also to make sure that they can quickly gather the residents inside the building if something suspicious occurs. The employees have also got personal attack alarms, which they can take with them when they are outside with the residents, or which a woman can carry with her if she feels unsafe.

The use of different types of lighting directed out into the garden was also discussed, and a participant from Case 3 mentioned that it would be good to have spotlights, which could be turned on during the night if something suspicious occurs.

The possibility for visual contact between mother and child in the OE was pointed out as being important. A participant from Case 1 explained it as follows: “It is this issue that they often have when they [the mothers and their children] come here – their attachment to one another isn’t pure or clear – there are difficulties and it is very important for the children that they can see their mothers and that the mothers can keep an eye on their children”. A participant from Case 2 said that it is not possible to overlook their courtyard from a single point, which is an issue when there is only one member of staff to look after the children outside. On the other hand, the participant also argued that the shape of the courtyard, being split up into two parts that are not visually connected makes it more interesting and also provides the opportunity for different kinds of activities.

2. Accessibility in the design, straightforward activities and staff guidance: Residents may be prevented from using the OEs for different reasons. This category is about initiatives taken by the staff to get residents to go outside and the design aspects which make it easier for residents to use the OEs.

Residents feel unsafe not only because of fear of what they have fled from, but also because of the process of moving into a new temporary home and their uncertain future. Partici-
pants from Cases 1 and 3 mentioned that women can feel so unsafe that they prefer to stay indoors. Moreover, women might not have the energy to go out especially during wintertime when it is cold. The fact that some women do not go out may also be because of their cultural background or because they are not used to having the possibility of making use of an OE. Such obstructions to women’s use of the OEs may also have an influence on the children’s use because there must always be an adult present when children play in the OEs at all three cases.

At both Case 1 and 3, the main door to the garden opens out onto a patio. Participants argued that a patio is an advantage for residents, because it feels like a safe area to be outside at the beginning of their stay. A participant from Case 1 said that it also makes it possible to overlook the garden that may ease access to the rest of it. See photo 3.

To enhance accessibility participants from Case 2 recommended the inclusion of play facilities, which the children are familiar with from kindergarten or after-school activities. One participant said the following: “Sometimes there are groups that are good at having barbecues together – after trying it out and becoming familiar with it - it is very enjoyable for them”. Furthermore, a participant from Case 2 mentioned that social interaction between residents often takes place in the courtyard. Participants from Case 3 said that residents really appreciate social activities and each other's company during certain periods, which a participant explained in the following way: “They feel extremely lonely or have been very isolated – that is why it is an important part of the support we give”.

Participants from all three cases mentioned examples of how different elements in their OEs are used as a starting point for activities with residents, e.g. the collection of fruits, berries and herbs which are then used in the preparation of common meals. Participants from Case 2 described how a group of women during the summertime were given the opportunity to buy plants for pots and the greenhouse and to take care of them. A participant from Case 2 pointed out that activities in the courtyard can be used as a means to unwind and relax: “Many of them [the women] have this itch in their fingers if they have had to leave their house and garden. They miss the mental benefits of being in their garden and tending their flowers…I think it is mental hygiene that works. There is a specific group of women that I think of – for them it was great that they had the possibility to be outside and sweep or go into the greenhouse and trim or plant and so on – it was quite simply therapy for some of them”.

In relation to this, participants from Case 3 discussed whether horticultural activities with residents would be a good idea in their OE. A participant pointed out that it might be an issue that residents only stay at the CS for a limited and varying amount of time. She also mentioned that staff would have to develop a good way of working with the residents in order for them to get something out of the activities. In relation to this, a participant from Case 1 stressed that it is important that the garden be easy to maintain, and that the activities in it be kept simple.
3. Being outside and the positive distractions of nature: This category is about the experiences that the OEs can provide and how they benefit staff, women and children. At all three cases, participants described how the OEs can offer opportunities for positive distractions for residents.

A participant from Case 2 expressed the positive aspects of just being outside in the following way: “It is spacious, the sounds are different – there are a lot of things about just being outside – especially for the women who have their children with them – then it is very different to be outside on a summer evening than to stay inside and stare at the wall”. A participant at Case 3 mentioned that both women and children have a different energy when they have been outside and that the family dynamics are also positively affected.

Participants from all three cases recommended that an OE at a CS should offer many different sensory experiences such as colors and scents. Participants from Case 3 said that the staff enjoys the nature around their CS, and one of them mentioned that in her experience the women often also learn to appreciate nature after living for some time at the CS. She described it in the following way: “In the summertime there are bats and it is really fascinating for the women – many of them are town-dwellers. They sit out there and then ‘oh my god, there is a bat!’ – And then there is a little squirrel in the big tree and the deer. In the night, owls hoot and that’s scary. It gives them experiences that they have not been close to before and they realize - well, this is also what life is”. A participant from Case 1 said that children discover ants, woodlice and squirrels and that the fauna in general contributes to making their garden interesting and inviting. See photo 5.

A participant from Case 3 argued that by going outside, residents have the opportunity of distancing themselves from the crisis they are in. At Case 3, the staff are aware of the importance of sharing their nature experiences with the residents, as supported by the following statement...
from one of the participants: “When the snow lay really heavily on the fir trees and we [the child-
care workers and the children] were out on a walk, we imagined that in a moment she would
come – the ice queen – and I told some great tales about her. Or the special light in the autumn
that is reflected in the warm colors of the leaves - we share it with the women”. See photo 6.

Figure 5: At Case 1, the staff and the children feed the
birds almost every day (Source: Authors).

Figure 6: The big old trees at Case 3 are fascinating for
both residents and staff (Source: Authors).

4. Space for all: This category is about the differences in users’ needs and preferences. Partici-
pants from all three cases described the different functions of the OE for both staff and residents.
Participants from Cases 1 and 2, where the OEs are relatively small compared to the one at Case
3, pointed out that it is important that the OE is a place for activities for adults as well as a play
area that offers challenges for children of different ages. Furthermore, as a participant from Case
1 pointed out, there should also be places where the children can retreat once in a while.

An aspect of potential conflict is the varying need for order and tidiness. A participant from
Case 1 explained it in the following way: “Some women are used to orderliness and others are
used to a little more ‘laissez-faire’ – more chaotic conditions. When they are in crisis these char-
acteristics are magnified – those who are used to orderliness want more order and those who are
used to more chaotic conditions become even more disordered. It is often here that conflicts are
provoked… some women want everything in place which is also what the staff prefer, while oth-
ers just forget about tidying up – they are so filled up with everything else”. The same participant
said that the responsibility for tidying up is delegated and that sometimes, with the mothers’ ac-
ceptance, she gathers the children to tidy everything up together. The participant also recom-
mended the inclusion of a shed in the garden for storage. See photo 7.

Participants from all three Cases said that the OEs have been used for meetings and
counseling. A participant from Case 3 mentioned that she has held several meetings about the
planning of common meals with women outside while their children were playing nearby. A partic-
ipant from Case 2 said that she has had counseling sessions in the courtyard, and she expressed the advantages in the following way: “When we have counseling with the mothers it can sometimes be hard to find someone to look after their children in the meantime. But if it is possible to create a space where you can be alone with the mother, and her children can play nearby then one can manage to talk a little with her”. See photo 8. On the other hand, another participant from Case 2 pointed out that using the garden for counseling can also be problematic: “If I’m in the middle of a deep conversation with a woman and she is maybe getting affected by the things we are talking about and we are outside – and maybe the woman starts to cry – then other people walking around next to us are always a disturbance”. As a solution to this, the participant suggested the inclusion of a glass pavilion where it would be possible to ensure the necessary privacy needed in a counseling session.

One participant from Case 3 said that staff often uses the garden by themselves. However they keep to a certain area not used by residents to ensure that the residents have their own area but also because staff need a place to have their lunch or to talk as co-workers. A participant from Case 1, where there is no specific staff area, mentioned that the problem with having staff meetings outside is that they are not private and they are therefore unable to have confidential conversations. Participants from Cases 1 and 2 also said that it can be difficult to take a break in the OEs, because they still have to be contactable if one of the residents needs them. At both cases, participants expressed the need for a specific staff area, which a participant from Case 2 put in the following way: “We are just asking for a little corner where it is possible to go outside to get some air after a tough conversation with a resident”. The participant recommended a screened area in which staff can keep to themselves.

![Figure 7: The shed at Case 1 (Source: Authors).](image1)

![Figure 8: The seating areas at Case 3 make outdoor meetings possible while allowing the adults to keep an eye on the children playing nearby (Source: Authors).](image2)

5. Room to play and relieve children’s feelings: This category concerns the potential of the OEs to allow children to express themselves in different ways than when they are indoors. The
category also concerns how conflicts can occur between children, and examples are given as to how this is handled by the staff and considered in the design.

A participant from Case 1 mentioned that some children spend a lot of their time indoors. Another participant from Case 2 said that for security reasons, certain children are not allowed to leave the CS at the beginning of their stay. She pointed out that if these children didn’t have the possibility of going out into the courtyard, they could easily spend days on end indoors. A participant from Case 1 also pointed out that children find each other and connect in the garden by playing together, thereby establishing relationships, which they can continue indoors.

Another participant argued that it just would not work if the staff did not have the possibility of letting the children out every once in a while, which she explained in the following way: “Many of them feel restless or total despair – passivity. They are affected by the crisis their mothers are in which can be reflected in shouting, being noisy, rushing around and bicycling extremely fast – there is something that needs to come out of their system”. In relation to looking after the children, a participant from Case 2 also stated: “It goes much more smoothly when we are outside”. See photo 9.

The OE gives the children the opportunity to make noise and move around to a higher degree than when they are inside. It is a place for the children to relieve their feelings if they need it. Participants from all three cases mentioned how conflicts occur between children and how their aggression can sometimes be directed towards each other or elements in the OE. A participant from Case 2 described it in the following way: “Children who move into a CS have often been exposed to many different things. Maybe they have been used to a lot of arguments between the adults and maybe physical violence. They have a different set of limits – many of them are without limits. Often they do not have an awareness of others than themselves and it can be difficult to show empathy for others and to wait one’s turn and things like that. The children can have a really hard time and therefore many of them need a lot of guidance and can benefit from having an adult close by”. Besides the possibility for good contact between children and adults in the OE, child safety is also an aspect which is in focus at all three cases. In relation to this, a participant from Case 1 recommended the following: “One should in any case choose play equipment which isn’t too dangerous. Nowadays you can find all sorts of exciting play equipment at nature playgrounds – also thing that are a little dangerous. When I think of the children here at the CS some of them do not have those limits – they throw themselves out into anything and adults need to be around. This isn’t always the case here – there is less surveillance because mothers do not always have the energy it requires”. A participant from Case 2 also recommended that the play elements and toys be robust and added the following: “Sometimes we go outside and everything is messed up”. Participants from Case 1 have had bad experiences with objects which can be used as weapons such as plastic swords, and they recommended avoiding such objects. See photo 10.

Participants from both Cases 1 and 2 discussed whether it would be responsible to keep domestic animals in the gardens due to the potential for creating conflicts but also because of concerns over the animal’s well-being. At Case 1, the participants agreed that keeping animals would need a staff member with an interest to take responsibility. At Case 2, the participants argued that having domestic animals visit the CS once in a while would be a manageable solution for the staff. At both cases, the participants felt that children would benefit from the contact with domestic animals and that they would be able to learn something from this experience.
DISCUSSION

Discussion of Results
The aim of this study was to find implications for the design of OEs at CSs for women and children survivors of domestic violence. Table 2 lists the implications for OE design derived from the five categories.

Table 2. Implications for design (Source: Authors).

<table>
<thead>
<tr>
<th>Number and title of category</th>
<th>Implications for design</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Protection against perpetrators of violence and helping residents to feel safe</td>
<td>Safe demarcation&lt;br&gt;Screening off from surroundings&lt;br&gt;Surveillance lighting&lt;br&gt;Good visual contact between adults and children</td>
</tr>
<tr>
<td>2: Accessibility in the design, straightforward activities and staff guidance</td>
<td>Safe transition area from the inside to the outside&lt;br&gt;Locations which provide an overview of the area&lt;br&gt;Familiar facilities&lt;br&gt;Opportunities for social activities&lt;br&gt;Starting points for straightforward activities</td>
</tr>
<tr>
<td>3: Being outside and the positive distractions of nature</td>
<td>Many opportunities to experience nature</td>
</tr>
<tr>
<td>4: Space for all</td>
<td>Activities for adults as well as children of different ages&lt;br&gt;Elements and layout which facilitate tidiness&lt;br&gt;Posibility for gatherings with children playing nearby&lt;br&gt;A secluded area for confidential conversations&lt;br&gt;A secluded staff area</td>
</tr>
</tbody>
</table>
5: Room to play and relieve children’s feelings

- Play facilities with possibilities for physical activity
- Child safety including robust facilities that do not provoke dangerous behavior
- Controlled contact with domestic animals

The existing studies on nature-based activities at OEs at CSs point to a few results concerning design including safety (safely enclosed space, visual contact with children, safe facilities) and accessibility (for children and wheelchair users) (Lee et al., 2008; Stuart, 2005; Keelley & Leigh, 1999; Pierce & Seals, 2006; Seals & Pierce, 2007). These results also emerged in this study. When concentrating on design, a three year long study of women’s CSs with an architectural perspective generated several guidelines specifically for the OE (Verderber, 2001; Refuerzo & Verderber, 1993, 1990, 1989, 1988). Many of the results are similar to the design implications in this study and concern aspects relating to secure enclosure, screening, surveillance, indoor/outdoor connections, nature qualities, facilities for the different user groups including play areas and the need for a controllable OE with opportunities for both social and private use. The similarity in results between the existing studies and this study strengthens the design implications in question.

Since this study explored the staff’s view on user needs and preferences with respect to outdoor design and activities, the design implications differ from existing results insofar as there is much more focus on how OEs should be designed in order for staff to use the OEs actively in their work, combining a focus on design and nature-based activities. Examples of this include starting points for straightforward activities, many opportunities for experiencing nature, elements and layout facilitating tidiness, possibilities for gatherings with children playing nearby, secluded areas for confidential conversations, secluded staff areas, opportunities for physical activity (as a means to control the children’s energy levels) and controlled contact with domestic animals.

Discussion of Methodology
The repetitive interplay between the collection and analysis of data, which is a common approach in qualitative research, was to some degree limited in this study. This was due to the special characteristics of the CSs, which are closed settings, and the staff’s workdays which are busy and unpredictable. Furthermore, the residents are in crisis and may be vulnerable to situations that can make them feel unsafe. These characteristics were taken into consideration when planning the data collection. The implications for the CSs were clearly communicated to the CS leaders and the data collection involved a certain number of fixed appointments. By conducting group interviews with staff members, it was possible to obtain information based on long-term experience with a great variety of user needs and preferences concerning the OEs. On average, the participants had worked at the CS for a period of six and a half years – with employments ranging from six months to sixteen years. Furthermore, the staff had the opportunity to explain and clarify the complex situation that the women and children find themselves in and were able to relate this to the CS functions from a professional perspective.

Implications for Practice and Future Research
This study can be seen as a contribution to the qualification and development of guidelines for the design of OEs at CSs with the perspective that they have the potential to strengthen CS functions by supporting the health and well-being of their users. The study provides insight into the complexity of the topic and shows the importance of the context in that each case is unique with its own setting and practice. The results and the summarized implications for design should be seen in direct relation to the context of the three cases. The findings can be applied to other contexts to the extent that the descriptions of the cases are taken into consideration with a reasoned judgment about transferability (Guba & Lincoln, 1982).

Research in this area is at an early stage and further qualitative and quantitative studies are needed. Firstly, there is a need to further investigate outdoor design and activities to accom-
modate users’ needs and preferences. Subsequently, the effects of specially designed OEs with nature-based activities to support health and well-being and thereby CS functions could be explored.

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