

# Evaluating the playground: Focus group interviews with families of disabled children

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## Abstract

As landscape architects deal with the design of environments for children, the inclusion of children with disabilities in their peers should be one of the core goals in designing natural settings. They often times face problems while working in public playgrounds, parks and green landscapes mainly due to lack of adequate provisions to meet their special needs. The purpose of the present study is twofold: to investigate different kinds of problems and specific needs of disabled children in natural settings including parks and playgrounds in Ankara (Turkey), and also to offer solutions for solving these problems. This study that is of case study type consists of parents with disabled children aged between 8 and 12 years old. Parents were investigated and interviewed in the research to obtain their perspectives. The findings revealed that there was a necessary need to improve and construct equipped natural settings specialized for children with disabilities.

## Keywords

Disabled children, Playground environment, Playgrounds, Landscape architecture, Ankara



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## 1. Introduction

A large body of research has demonstrated the importance of interaction with nature for human health and well-being. Aspects of nature such as trees, grass, water, visible sky, rocks, flowers and birds were mentioned as particularly helpful (Olds, 1989, Cooper-Marcus & Barnes 1995, Ulrich, 1999, Kaplan & Kaplan, 1990, Pouya & Demirel, 2015). In a similar vein, Wilson (1984) hypothesized that such responses to natural settings might be of evolutionary significance in that modern humans innately respond to the characteristics of environments favorable to pre-modern humans. Lynch (1977) in an international study of the experience of growing up in cities found that children generally appreciate vegetation. Lynch also reported that such natural settings, which are preferred by children, also have beneficial effects on their well-being. Natural environments represent dynamic and rough playscapes that challenge motor activity in children. The topography, like slopes and rocks, afford natural obstacles that children have to cope with. The vegetation provides shelters and trees for climbing. The meadows are for running and tumbling (Wells & Evans, 2003). Description of physical environment usually focuses almost exclusively on forms (Fjortoft, 2001). All children, including disabled children, have the right to play in green space, to have fun and to take part in recreational activities. This is important as play has a very important role in a child's growth and development. Research indicates that children in natural settings play and learn with more vigor, engagement, imagination, and cooperation compared to those playing on artificial surfaces (Broadhead, 2004; Moore, 1989; Day & Midbjer, 2007). Playing in green space could help develop speech, sensory skills, imagination, independence and social skills. It is crucial that all children, whatever their abilities, be given the opportunity to play and access leisure facilities (Sutton, 2008). Research has found that use of, and access to outdoor spaces can also increase social interaction and that this too can have a positive effect on health and wellbeing.

Being active is a key part of the development of every child (Murphy & Carbone, 2008). Parks and recreation programs support positive youth development, decrease negative behavior and help them to develop into healthy children (Wells & Arthur-Banning, 2008). Spending time outdoors is thought to be related to child development, for example, in relation to motor development – with the types of physical activity associated with outdoor play being beneficial to children's development of strength, balance and coordination (Fjortoft, 2004). It is often the natural elements within outdoor spaces that are conducive to creating these benefits as Fjortoft (2001), for example, demonstrates through the advantages gained from features such as "slopes and rocks", "vegetation" and "trees" in terms of facilitating opportunities for particularly active play. All activities have proven to be beneficial to children with disabilities (Law, King, King, Kertoy, Hurley, Rosenbaum, Young & Hanna, 2006). These activities provide social, emotional and physical benefits (Murphy & Carbone, 2008). Researchers have also shown that people with disabilities who are physically active: "(a) are better adjusted and more satisfied with life, (b) report having fewer days of pain, depression, anxiety, sleeplessness, improved vitality, and (c) substantially increase their life expectancy" (Krause & Kjorsvig, 1992, p. 561). Frost (2006) also links activity within outdoor playgrounds to the development of "strength, flexibility and coordination" due to the types of activities facilitated by play equipment, such as "climbing", "balancing" and "swinging". Such children have been shown to be particularly slow in language development and social skills" (Wolff, 1979). Ample free play opportunities establish children's disposition to take risks and to believe that they are competent, capable learners. Unfortunately, even a cursory examination of current play environments indicates that children with disabilities are often merely occupied in the play environment. In order to provide meaningful play opportunities for all children, especially those with disabilities, it is necessary to understand the

needs of children and the implications of a disability on the child.

The UN Convention on the Right of the Child states that disabled children have the right to be included in their local community and to do the kinds of things that non-disabled children do. They have the right to take part in play and leisure activities, the equal right to access cultural, artistic and leisure opportunities and the right to support to help them to do this (Khalife Soltani et al. 2012). The Disability Convention is an agreement to help make sure that those children and adults with disabilities are treated fairly and can equally participate in all aspects of life. The rights in the Disability Convention are the human rights for all children and adults. The Disability Convention is needed to guarantee that these rights are respected for persons with disabilities (UNICEF, 2007). Social barriers such as fear, embarrassment or discriminatory attitudes also need to be dealt with. An accessible natural setting can be an alternative in which disabled children are able to improve their social skills and feel welcome. Furthermore, a careful attention to landscape design can help to ensure those natural settings are inclusive, comfortable and appealing to disabled children and their families.

## 2. Rationale for the current study

In most parts of the developed world, different assessment tools have been used to describe the developmental achievement among disabled children. However, in Turkey, there has been no study as to needs of proper public park or playground among children with disability. According to the UN statistics (2006), more than 500 million people in the whole world have different disabilities. In 1992, Euro stat showed that 11% of the European population had different disabilities (Anonymous 3, 2003). According to the World Health Organization (WHO), children with disabilities could be defined as any child unable to ensure by himself wholly or partly, the necessities of a normal individual and/or social life, as a result of a deficiency either congenital or not, in his physical or mental capabilities. The WHO also states that 10% of the

population in each country around the world has people with disabilities. It has been estimated that among the 10% of the population with disability, one third are among children less than 15 years old (Khalife Soltani et al. 2012).

It has been reported that 12/29 percent of the population in Turkey has mental or physical disabilities (Uslu 2008) and out of this percentage, 9 million people are at the age of 1-12 who have special needs. According to the Ministry of Education, there are 1 million and 100 thousand disabled children aged between 4 and 18 and among them 45 thousand ones have vision impairment, 130 thousand ones have hearing impairment, 500 thousand of them have mental and emotional disabilities, and 300 thousand of them suffer from physical disabilities. Enrollment rate in Disabled Children School is around 2%. The number of disabled children who benefit from primary education including special education is 28 thousand (Shirin 2002; Şafak & Pouya, 2016). Given the enormous number of children with disabilities in Turkey especially in metropolitan Ankara where landscape designers have recently paid special attention to the disabled children conditions and needs, the main objective of this study was to evaluate the satisfaction of this group of children and also to examine the efficiency of the extant parks for them.

This study, in fact, makes an attempt to determine the satisfaction of parents who have disabled children; demonstrate the lack of provisions specialized to the disabled children in urban spaces such as green places constructed in Ankara city, identify possible reasons caused such situations, and finally, suggest some ways and means for improving the current situation.

## 3. Methods and materials

The current research study used quantitative data to find the values in numerical forms and questionnaires was also used as statistical analysis. The questionnaire was administered to parents of disabled children. The reason of choosing parents for doing the survey was their abilities to write,

read, and understand the issues related to their disabled children. Therefore, parents' help to gather the intended data was essential and it could provide more accurate and reliable answers for the questions. Parents whose children have been studied in Dogan Chalar School (elementary school), the largest and most advanced primary school in Ankara, were the participants of this study. The school consists of three sub-schools (orthopedic impaired school, visually impaired school, and hearing impaired school). In this way, the questionnaires were prepared for parents with children of all kinds of disabilities.

Children at this school usually attend the school with their parents and their parents spend many hours with each other in the yard of school until the end of the courses. Therefore, the break time was the best time for the researcher to gather the data. As it was already stated, a questionnaire form was designed by the researcher for answering the research question. Questionnaire comprised two sections; the first section asked about demographic information of the participants and the second section consisted of a set of questions to examine the parent's satisfaction having disabled children about facilities and provisions existing in parks and playgrounds in Ankara (Figure 1).

The sample of the study was parents with disabled children aged between 8 and 12 years old. Overall, 35 parents of disabled children volunteered to respond to the questions. The data collected from questionnaires was then

analyzed and discussed.

### 3.1. Financial statement of families

Financial status of families affects many activities such as going outside and doing outdoor activities which need considerable payments. In this study, the sets of research questions were used to determine the relationship between family financial status and their ability to visit the park. They were asked to indicate family's monthly income. According to Table 1, the results of these questions showed that 37.14 percent of families had low income and in fact they were poor families who might be deprived of the basic amenities due to financial problems. Hence, financial statement of families could significantly affects the findings of the study (Table 1).

### 3.2. Frequency of visits to the natural setting

The participants were also asked about how often they go to parks or playgrounds. The options to answer the question were; More, Once a day, Once a week, Once a month, Never. The analysis of this question showed that the third option (once a week) had received the highest percentage (42.8 %), the fourth option (once a month) had received the second highest percentage. It means 42.8 percent of parents having disabled children go to parks with their children once a week and 28.5 percent of them take their disabled children to parks only once a month. Moreover, about 5 percent of parents had not gone to any the public place, parks or playground with



*Figure 1. Some of the parks photos in the Ankara.*



**Table 1.** Financial status of families with disabled children.

Valid		Frequency	Percent	Valid Percent	Cumulative Percent
	Less than 500 TL	13	37.14	37.14	37.14
	501-750 TL	15	42.8	42.8	79.94
	751 – 1.000 TL	6	17.1	17.1	97.04
	1.001 – 1.500 TL	1	2.8	2.8	100
	1.501 – 2.000 TL	0	0.0	0.0	100
	More than 2.001 TL	0	0.0	0.0	100
	Total	35	100	100	

**Table 2.** Frequency of visits to the natural setting.

Valid		Frequency	Percent	Valid Percent	Cumulative Percent
	More	2	5.71	5.71	5.71
	Once a day	3	8.571	8.571	14.28
	Once a week	15	42.85	42.85	57.13
	Once a month	10	28.5	28.5	85.63
	Never	5	14.28	14.28	100.0
	Total	35	100.0	100.0	

**Table 3.** Time spent in the natural setting.

Valid		Frequency	Percent	Valid Percent	Cumulative Percent
	Half an hour less	3	10.0	10.0	10.0
	30-1 hours	13	43.3	43.3	53.3
	1-2	8	26.6	26.6	79.9
	3-4	3	10.0	10.0	89.9
	Half a day	3	10.0	10.0	100
	Total	30	100	100	

**Table 4.** Ways of access.

Valid		Frequency	Percent	Valid Percent	Cumulative Percent
	By foot	19	63.33	63.33	63.33
	By bus	2	6.66	6.66	70
	By car	9	30	30.0	100
	Total	30	100.0	100.0	

their children. This deprivation and restriction is disappointing in Ankara as a city that has the highest number of parks and playground in the country. According to the results achieved from the first part of questionnaire, 30 families among 65 families never go outside to parks with their disabled children. As with the other questions were related to the parents who had experiences of going to public places with their children, just 35 families could participate in answering the rest of questions and we continue the research with these 35 families to complete the questionnaire in pursuit of the research goal (Table 2).

### 3.3. Time spent in the natural setting

The next question that helped to obtain correct results for this study was

how long they stay with their children in the park or other places. Options included; under half an hour, 30 minutes, 1 hours, 1-2 hours, 3-4 hours, and half a day. The analysis of this question uncovered that most of the participants stayed in park from 30 minutes to 1 hour (43%). Therefore, children are usually taken to parks just once a week or once a month for at most one hour. The point to note, however, is that, all kinds of activities such as sports activities such as walking, playing in playgrounds mostly take time more than one hour especially for children with disabilities who spend more time to have access to their desired locations compared with normal children (Table 3).

### 3.4. How to access public places?

The next question concerned about how families go to the park or other public places. Options included; by walking, by bus, by car. The analysis of this question indicated that the first option (on foot) received the highest percentage (63%). This result proves that these families, for special reasons to be explained below, choose the nearest park to go, even though the selected place has fewer facilities in comparison with the other convenient and well-equipped places (Table 4).

### 3.5. The most distinctive problems of the park

The main purpose of this study was to find different problems that children with disabilities might encounter in the parks and playgrounds of Ankara. Problems usually prevent them from enjoying more and better in the parks and playgrounds. Therefore, questions were asked to detect these problems. The options included principal problems that families often encounter. According to the answers, most of troubles and problems were related to parks. However, the highest percentage is related to question 1. (Paths that were made in the parks or other public places are not fit and suitable for our child). This problem is due to underestimation the crippled or disabled children in draws and designs of architects. The width and length of paths are designed without attention to those children. The ramps of path are not good



**Figure 2.** Paths that were made in the parks or green space are not fit and suitable for disabled children (Pouya, 2016).

**Table 5.** The most distinctive problems of the park.

Question	Strongly Disagree		Disagree		Disagree Neither		Agree Nor Disagree		Agree Strongly Agree		Total frequency	Total Percent
1.Paths that were made in the parks or green space are fit and suitable for our child.	13	43.33 %	10	33.33 %	7	23.33 %	0	0.0 %	0	0.0 %	30	100%
2.Play equipment in the parks or playground are suitable for use	12	40 %	10	33.33 %	6	20 %	2	6.66 %	0	0.0 %	30	100%
3.People look and behavior of them in the around are not annoying	12	40 %	9	30 %	6	20 %	3	10 %	0	0.0 %	30	100%
4.Planting trees, flowers and species of them are not annoying	5	16.66 %	5	16.66 %	7	23.33 %	7	23.33 %	6	20 %	30	100%
5.Places of shade and sitting places design suitable	4	13.33 %	5	16.66 %	6	20 %	7	23.33 %	8	26.66 %	30	100%
6.Because of the distance within places access to the desired location in the park is not difficult	2	6.66 %	3	10 %	5	16.66 %	10	33.33 %	10	43.33 %	30	100%
7. Places of parks and paly grounds are busy and crowded that dose allowed us to using	11	36.66 %	9	30 %	5	16.66 %	4	13.33 %	1	3.33 %	30	100%
8. Field of sports and sports equipment are suitable for using	11	36.66 %	8	26.66 %	4	13.33 %	5	16.66 %	2	6.66 %	30	100%
9. There is not enough security and going to them are not dangerous.	10	33.33 %	7	23.33 %	4	13.33 %	6	20 %	3	10 %	30	100%
10.Services such as WC, parking, restaurant are appropriate.	10	33.33 %	7	23.33 %	6	20 %	5	16.66 %	2	6.66 %	30	100%
11.Materials used in sports equipment, sitting palce and.. are safe and appropriate.	10	33.33 %	7	23.33 %	5	16.66 %	5	16.66 %	3	10 %	30	100%
12. Access to the water places and contact with water is possible	9	30 %	7	23.33 %	5	16.66 %	6	20 %	4	13.33 %	30	100%
13. The possibility of playing with other children, and making better social relationships is very good	6	20 %	6	20 %	7	23.33 %	7	23.33 %	4	13.33 %	30	100%
14. The diversity and the beauty of the park is very high	2	6.66 %	3	10 %	6	20 %	9	30 %	10	33.33 %	30	100%
15. Information and readability is well	3	10 %	4	13.33 %	7	23.33 %	7	23.33 %	9	30 %	30	100%
16.Noise in the parks are not annoying	2	6.66 %	2	6.66 %	5	16.66 %	10	33.33 %	11	36.66 %	30	100%
17. There is possibility of contact with animals	9	30 %	7	23.33 %	6	20 %	5	16.66 %	3	10 %	30	100%

for crossing by wheelchairs which is an obstacle to prevent families from going to the parks (Figure 2).

The play equipment and facilities

in parks or playgrounds are often designed for normal children and no deserved attention is paid to the needs and conditions of disabled children

**Table 6.** Preferences for activities in the natural setting.

	Activities	Interested		Not Interested		Total frequency	Total Percent
Valid	Playing with the ball	25	83.33%	5	16.66%	30	100%
	Cycling	3	10%	27	90%	30	100%
	Horse Riding	1	3.33%	29	96.66%	30	100%
	Playing with water	20	66.66%	10	33.33%	30	100%
	Swimming	24	80%	6	20%	30	100%
	Playing in the playground	24	80%	6	20%	30	100%
	Paintings on the wall	20	66.66%	10	33.33%	30	100%
	Playing with sand or soil	21	70%	5	30%	30	100%
	Pogo stick	2	6.66%	28	93.33%	30	100%
	Speaking with another children in the place	5	16.66%	25	83.33%	30	100%
	Skating	5	16.66%	25	83.33%	30	100%
	Doing exercise with Sportive device	10	33.33%	20	66.66%	30	100%
	Playing with their toy	15	50%	15	50%	30	100%

which makes it hard for them use and play with them (question 2). Moreover, people consider and treat them in offensive and sometimes pejorative ways that is annoying for them and cause them to feel more separated from the society and as a result, they might become more reserved (question 3). This problem stems from the culture and lack of the public's awareness about the issue of disorder and disabilities. Ankara is an over-crowded and bustling city in Turkey where designers have recently built numerous parks and play grounds (question 7). Accordingly, nowadays Ankara is famous for its parks. People come from other cities to its central parks and accordingly the parks are often crowded and populated. The general problems are summed in the table below (Table 5).

### 3.6. Preferences for activities

Children, both normal and disabled ones, at special age groups like to do certain activities at parks or play grounds. Current conditions, however, do not let the disabled children do their interesting activities. To understand their favorite activities, questions focused on which activities or playing attract your disabled children's attention and which play they can do? Even though the requirements and interests of disabled children don't differ from the normal children's ones, because of some physical disorders, their needs might be changed slightly. thus, taking into consideration these children's interests might help designers to devote specific places for disabled children in their plans so that their satisfaction

could be achieved.

Among answered questions, the highest percentage was related to the A option (Playing with the ball) showing that 83% of those children like to play with ball. Providing play grounds and a condition where they can play with a ball can lead to their satisfaction. Moreover, one of the other options selected by the children was playing with the skating rink and swinging (88%). Therefore, the color, size, materials, and numbers of these tools should also be adequate and appropriate for disabled children. The third activity selected in the questionnaires was swimming. Supplying specific pools or places for them in order to make them able to swim is another consideration which should be considered by pertinent designers. Furthermore, others activities which was opted by children were playing with water, Paintings on the wall, and playing with toys respectively (Table 6).

### 4. Discussion

The development of children starts at birth and continues into adulthood. Children need to develop in five crucial areas for proper growth: social/emotional, intellectual, sensory, perceptual-motor, and physical development (Ministry of Education 1993). All children, regardless of their abilities, pass through the same developmental stages in the same sequence; only the timing and rate vary (Federlein 1981). The crucial concept to understand is that the similarities between children with disabilities and able-bodied children are far greater than the differences. Furthermore, differences in the rate of development may occur in one, or more, developmental areas according to the child's disability: social emotional disabilities, perceptual-intellectual disabilities, and physical disabilities (Potter, 2001, 2002). These disabilities should not, however, lead to their separation from other children or the underestimation of their needs in public places.

The disabled children have greater need for recreation or play services because their limited circumstances prevent them from exploring opportunities for themselves (Ellis 1973). Ad-

ditionally, “many [children with disabilities] spend a disproportionate part of their time in [an] environment, such as a school or institution, where play tends to be structured, organized and restricted. In order to provide meaningful play opportunities for all children, especially those with disabilities, it is necessary to understand the needs of children and the implications of a disability on the child. Children need a place to play and they also need space with informality, and freedom to move around and make noises. They should express themselves through experiment and investigate the world around. Disabled children need this freedom even more than others. In surroundings which stimulate their imagination and challenge them to face and overcome risks, they will be given opportunities to build their self-confidence and independence (Khalife Soltani et al. 2012).

The most common result of any child's disability is peer isolation. As landscape architects involved in the design of children's play environments, the inclusion of children with disabilities among their peers should be one of the principal goals of the design of outdoor play settings. Understanding children with disabilities, and what they are capable of is the first step toward designing truly ‘inclusive’ environments. The issues to review fall into two broad categories: social issues and technical and physical factors. Reviewing social issues involves thinking about how to create opportunities for disabled and non-disabled children to play together. For disabled children and their families who are often not visible in communities, there are many benefits for being involved in consultation. Inclusion in consultation processes is often valued in itself as it raises the self confidence of individuals and group and affirms entitlement as community members and organizations. Parents of disabled children report that being consulted about the nature of a play space and involved in its development is one of the factors which increase the likelihood that they will take their children there (ODOM, 2002, 2003).

Society has often viewed people with disabilities as less attractive, helpless

and needy. These societal attitudes and perceptions have caused people with disabilities to be less likely to partake in recreation programs (West, 1984; Herbert, 2000). “Lack of participation does not make them ‘less of a person’ (a common perception of utility measures) as the cause may well be environmental or societal.” (Forsyth & Jarvis, 2002). This feeling of inferiority of children with disabilities is one factor that may limit participation in recreation programs. There is an inconsistency of the inclusion of children with disabilities in recreation programs due to a host of other barriers (Scholl, Smith & Davison, 2005).

In fact, every child receives rewards from play and activities in the garden and park but for children with disabilities it provides particular benefits. It may help to improve: 1. Communication and social skills; as a result of being involved in group and community activities, 2. Fitness; it is a great form of physical activity, 3. Confidence; provides an opportunity to develop a range of new skills, 4. Well-being; gardening is a great way to relax and reduce stress levels, 5. Physical ability; improved motor skills, 6. Knowledge; about the environment and nature, 7. Enjoyment of life; a wonderful leisure activity in which tasks and routines can be varied and shared (Horticultural Therapy Association of Victoria Gardening, 2015).

## 5. Result

The frequency analysis of the proportions of the inventories showed that 48.2 % of the parents went to playgrounds with their children one day a week, 48.9 % of them spent nearly one hour in playgrounds and 50 percent of these families go to the parks with their children on foot and they mostly complain about the inappropriate paths of public places (such as the high stairs, harsh ramp, and narrow ways), the inconvenience of the playgrounds (such as irrelevant bed materials and tool's sizes), the annoying behaviors of the public, and the crowdedness and noise of the parks. The most fascinating and exciting sports for disabled children were also determined to be playing with the ball and swimming.

The results of this research



showed that facilities in public playground are not sufficient to accommodate children with social needs. The facilities of the modern day public parks are not appropriate. It asserts to increase government to make well equipped public parks which accommodate the needs of children with disability. It also stated that government decisions regarding disabled children should be based on knowledge about their special needs in public playground. In this research, it was shown that the current design of playground does not amuse the children with disabilities and the concept of modern day public playground does not satisfy their needs in Turkey. It was also recommended that the design of the public playground should not be discriminatory, and the playground should accommodate the physical needs of disabled children. Designers and builders should keep the disabled children needs into their mind while providing public facility such as play areas. Providing play equipment and other facilities in public parks increases the possibility that parents come and enjoy along with their disabled children. As a result, placing disabled children along with other normal ones enhances the culture of the society and improves their manners toward those children. However, consideration of educational instructions and natural rights for these children, as members of the society, by the governmental organizations and other institutions will help people to accept and respect them in the society. Every child in the world looks different ideas, experience, traditions and abilities. These differences create new possibilities, new hopes, new dreams and new friendships. The differences among the people of the world are a treasure for all to appreciate and share. Each child is part of the world family and contributes own unique abilities (Khalife Soltani et al. 2012).

The study of gardens demands research in both the environment and behavior because they must be designed, maintained and managed to fulfill the users' needs. In order to meet those needs, landscape architects should understand how these users behave, use and engage with the attributes in the

garden (Hussein, 2009a). During the preliminary site studies, the researcher discovered that there are many precedents set for natural setting but none of them are designed to fulfil the users' needs (Hussein, 2009b). Thus, environment and behavior studies that include systematic investigation of the relationships between the environment and human behavior, and their implication in the design of green landscape is of great importance.

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