



KADIR HAS UNIVERSITY
SCHOOL OF GRADUATE STUDIES
PROGRAM OF DESIGN

**OUTDOOR PLAY IN EARLY CHILDHOOD AND
PARENTAL INVOLVEMENT IN THE PLAY SPACE AND
EQUIPMENT DESIGN IN THE METROPOLITAN
CONTEXT OF ISTANBUL**

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MASTER'S THESIS

ISTANBUL, JUNE, 2020

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MASTER'S THESIS

Submitted to the School of Graduate Studies of Kadir Has University in partial fulfillment of the requirements for the degree of Master's in the Program of Design

ISTANBUL, JUNE, 2020

DECLARATION OF RESEARCH ETHICS /
METHODS OF DISSEMINATION

I, GÜLER AKDUMAN, hereby declare that;

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This work entitled **OUTDOOR PLAY IN EARLY CHILDHOOD AND PARENTAL INVOLVEMENT IN THE PLAY SPACE AND EQUIPMENT DESIGN IN THE METROPOLITAN CONTEXT OF ISTANBUL** prepared by **GÜLER AKDUMAN** has been judged to be successful at the defense exam held on **17.06.2020** and accepted by our jury as **MASTER'S THESIS**.

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TABLE OF CONTENTS

ABSTRACT	i
ÖZET.....	ii
ACKNOWLEDGEMENTS.....	iii
DEDICATION.....	iv
LIST OF FIGURES	v
LIST OF ABBREVIATIONS	vii
1. INTRODUCTION.....	1
1.1. Aim and Significance of the Research	3
1.2. Research Methodology.....	4
1.3. Limitations	5
2. LITERATURE REVIEW AND THEORETICAL BACKGROUND.....	6
2.1. Literature Review	6
2.2. Importance of Early Childhood.....	9
2.3. Play and Child Development	10
2.3.1. Role of Outdoor Play in Early Childhood.....	12
2.3.2. Parental Involvement in Play	14
2.3.2.1. Parent's Role in the Play Environment.....	16
2.3.2.2. Play for Family Well-being.....	18
2.3.2.3. Play Spaces as Social Sites for Parents	19
2.3.3. Developmental Skills of Young Children and Play Types	20
3. FIELD RESEARCH: OUTDOOR PLAY IN THE METROPOLITAN CONTEXT OF ISTANBUL	23
3.1. Effects of Urbanization on Child Development: Barriers to Outdoor Play.....	24
3.2. Analysis of Existing Play Spaces and Equipment Design In Istanbul	28
3.2.1. Research Areas.....	29
3.2.2. Methodology	32
3.2.2.1. Observation	33
3.2.2.2. Interview	34
3.2.3. Measurement and Evaluation Criteria.....	34

3.3. Outdoor Play Space 1: Beşiktaş	35
3.4. Outdoor Play Space 2: Maltepe	45
3.5. Outdoor Play Space 3: Eyüp	52
3.6. Results of Observation	58
3.7. Results of Interview	61
4. CONCLUSION.....	65
4.1. Implications for Practice: A New Design Approach for Encouraging Outdoor Play	66
4.2. Recommendations and Suggestions for Further Research.....	72
REFERENCES.....	73
CURRICULUM VITAE.....	82
APPENDIX A	83
A.1 Observation Sheets	83
A.2 Interview Questions.....	94
A.3 Interview Results.....	97

OUTDOOR PLAY IN EARLY CHILDHOOD AND PARENTAL INVOLVEMENT
IN THE PLAY SPACE AND EQUIPMENT DESIGN IN THE METROPOLITAN
CONTEXT OF ISTANBUL

ABSTRACT

A recent report published by Center on the Developing Child at Harvard University (2014) shows that 85% of the brain develops within first 1000 days of life. Since play is the way children express themselves and interact with others, it has a vital role in the early childhood development. Outdoor environment provides different play opportunities for children which can hardly be replicated indoors. This contributes to their emotional, social, and physical development. However, lack of access to play is a general issue in metropolitan cities like Istanbul. In this context, it is aimed to form a guideline proposal including a new design approach for outdoor play environment through the analysis of existing playground settings in terms of parental involvement in early childhood. Using semi-structured interviews and naturalistic observations, this study aimed to explore the ways to encourage and include parents and children to outdoor play, in existing urban settings of Istanbul.

Keywords: Outdoor play, parental involvement, child development, play environment, Istanbul

ERKEN ÇOCUKLUKTA DIŐ MEKÂNDÂ OYUN VE İSTANBUL BAĞLAMINDA OYUN ALANI VE EKİPMAN TASARIMINDA EBEVEYN KATILIMI

ÖZET

Harvard Üniversitesi'nde Gelişen Çocuk Merkezi (2014) tarafından yayınlanan yeni bir rapor, beynin% 85'inin yaşamın ilk 1000 günü içinde geliştiğini göstermektedir. Oyun, çocukların kendilerini ifade etme ve başkalarıyla etkileşim kurma şekli olduğundan, erken çocukluk gelişimi için hayati bir rol oynar. Dış ortam, iç mekanların izin vermediği fakat çocuğun duygusal, sosyal ve fiziksel gelişimi için gerekli olan birçok fiziksel aktiviteye ve oyun türüne olanak sağlar. Ancak, oyuna erişim eksikliği İstanbul gibi büyük şehirlerde genel bir sorundur. Bu bağlamda, mevcut oyun alanı ekipmanlarının analizi yoluyla erken çocukluk döneminde dış mekan oyun ortamı için yeni bir tasarım yaklaşımı içeren bir kılavuz önerisi oluşturulması amaçlanmaktadır. Metod olarak yarı yapılandırılmış görüşmeler ve oyun alanlarında gerçekleştirilen gözlemleri kullanan bu çalışma, İstanbul'un mevcut kentsel ortamlarında, ebeveynleri ve çocukları dış mekan oyunlarına teşvik etme ve dahil etme yollarını keşfetmeyi amaçlar.

Anahtar Sözcükler: Dış ortam oyunu, ebeveyn katılımı, çocuk gelişimi, oyun ortamı, İstanbul.

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To my mother,

LIST OF FIGURES

Figure 2.1	The main focuses of the research that form the theoretical background.....	6
Figure 2.2	Human brain development.....	9
Figure 2.3	Steps showing Bandura’s theory of learning through observation.....	17
Figure 2.4	Play categories according to related aspects of development.....	21
Figure 2.5	Milestones in children’s gross motor development along with playground equipment ideas for each stage	22
Figure 3.1	Comparison of the research areas by their mean real estate value	30
Figure 3.2	Comparison of the research areas by shares of 0-4 age group in the District population.....	30
Figure 3.3	Comparison of the research areas by socio-economic status.....	30
Figure 3.4	Selected areas are indicated in Istanbul Şehir Haritası	31
Figure 3.5	Assessment scale for play spaces.....	35
Figure 3.6	Views of the location of Bebek Türkan Sabancı Park in 3 different scales	36
Figure 3.7	Observation results for Türkan Sabancı Park	37
Figure 3.8	Iron fence surrounding the play space	38
Figure 3.9	Views of the location of Cemil Topuzlu Park in 3 different scale.....	38
Figure 3.10	Climber and slid.....	39
Figure 3.11	Circular elevations for jumping	39
Figure 3.12	Observation results for Cemil Topuzlu Park	40
Figure 3.13	Non-traditional play equipment for jumping	40
Figure 3.14	Non-traditional play equipment for climbing	41
Figure 3.15	Infants in adults’ exercise area.....	41
Figure 3.16	Infant using spring rider in old children’s play space.....	42
Figure 3.17	Views of the location of Kuruçeşme Park in 3 different scales.....	42
Figure 3.18	Observation results for Kuruçeşme Park.....	43
Figure 3.19	Mother supporting her baby in slide	44
Figure 3.20	Father helping his child to climb... ..	44
Figure 3.21	Father and child playing together in the exercise area.....	45
Figure 3.22	Views of the location of Küçükyalı Park in 3 different scales.....	46

Figure 3.23	Observation results for Küçükyalı Park	47
Figure 3.24	Mother observing her child playing	47
Figure 3.25	Grandmother observing her grandchild playing	48
Figure 3.26	Mother helping her baby to slide, and their baby stroller posing a danger in the play space	49
Figure 3.27	Views of the location of Girne Park in 3 different scales	49
Figure 3.28	Observation results for Girne Park	50
Figure 3.29	Trampoline that allows parental participation in play	50
Figure 3.30	Seperation of play spaces for different age groups	51
Figure 3.31	Views of the location of Zümrütevler Park in 3 different scales	51
Figure 3.32	Observation results for Zümrütevler Park.....	52
Figure 3.33	Views of the location of Milli Egemenlik Park in 3 different scales.....	53
Figure 3.34	Observation results for Milli Egemenlik Park	54
Figure 3.35	Ship shaped modular equipment.....	54
Figure 3.36	Signs indicating the playground rules.....	55
Figure 3.37	Views of the location of 8 Mayıs Park in 3 different scales	55
Figure 3.38	Observation results for 8 Mayıs Park	56
Figure 3.39	Views of the location of Abdülvedüt Park in 3 different scales	57
Figure 3.40	Observation results for Abdülvedüt Park.....	58
Figure 3.41	Overall evaluation for 9 play spaces	60
Figure 3.42	Word Cloud including most repeated keywords during interviews.....	63

LIST OF ABBREVIATIONS

AÇEV: Anne Çocuk Eğitim Vakfı

art. : article

BVL : Bernard van Leer Foundation

CDCHU: Center on the Developing Child at Harvard University

DOI : Digital Object Identifier

e.g. : for example (Lat. *exempli gratia*)

Ed(s) : Editor(s)

ed. : edition

et al. : and others (Lat. *et alia*)

GIS : Geographic Information System

m² : metrekaare

n. p. : no page numbers

n.d. : no date

NNCA : National Council for Curriculum and Assessment

p. : page

para. : paragraph

pp. : pages

SES : Socio-economic Status

TÜİK : Türkiye İstatistik Kurumu

UNICEF : The United Nations Children's Fund

Vol. : Volume

WHO : World Health Organization

1. INTRODUCTION

Interaction with toddlers is significant for their brain development. A recent report (2017) published by Center on the Developing Child at Harvard University states that 85% of the brain develops within first 1000 days of life. Since play is the way children express themselves and interact with others, it has a vital role in the early childhood development. It is considered as a 'right' by the United Nations. Young children need places where they can move and be active, and experience physical contact with nature. Outdoor environment provides different play opportunities for children which can hardly be replicated indoors. This contributes to their emotional, social, and physical development. With its specific features and stimulus, the outdoors can be described as an open and constantly changing environment, where children experience freedom, gross and boisterous movements.

Lack of access to play is a general issue in metropolitan cities. In the metropolitan context of Istanbul, there are various barriers to outdoor play, such as administrative, technical, and socio-cultural barriers. With 16 million residents, Istanbul is a megacity and is soon to become Europe's most populous metropolitan area. Urbanization process causes serious increases in urban areas while decreasing the amount of green areas. This results in a reduction of outdoor play areas for children. According to the data provided by Istanbul95 project, the total amount of active green space in Istanbul is 2081 hectares, and the province-wide amount of active green space per person is 1.44 m², far below the world average 10 m². Moreover, existing urban settings does not allow young children to be able to take routes to other parts of the city without accompany of an adult. Since the homogenous distribution of parks and playgrounds in the city is not ensured, outdoor play is not accessible for a serious amount of children in Istanbul. The quality of transportation and planning also affects the extent to which primary caregivers and toddlers can access outdoor play areas. From a technical point of view, existing playground equipment are unappealing and inefficient to younger children. There are age-related differences which should be taken into consideration while designing playground equipment, such as abilities and inabilities of younger children,

their need of protective support etc. However, standard playgrounds do not allow caregivers to be involved in the play environment. Lastly, there are socio-cultural codes which define who the caregiver is, dos and don'ts in raising a child, etc. These codes affect how families organize their everyday lives in relation to the children's outdoor play and leisure activities. For instance, safety concerns and weather conditions are some of the parent-related barriers to outdoor play. As a result, children spend most of their time indoors at home, behind the computer screen which may lead to alienation to the nature and also their cognitive, verbal and social skills may not develop as outdoor players.

Previous research conducted in the fields of psychology and child education investigate the critical role of parents or other caregivers in scaffolding early play. In infancy, interactions with adults help babies focus attention, build working memory, and manage reactions to stimulating experiences. This research focuses on involvement of caregivers in the play space and the role of design in the disposal of those technical and sociocultural limitations to outdoor play. In this context, it is aimed to form a design guideline proposal for outdoor play environment through the analysis of existing playground equipment in terms of parental involvement in early childhood. In this dissertation, practices of both qualitative and quantitative research are used. To achieve the richness in the data, 9 playgrounds from three different districts of Istanbul are observed through video recording and note-taking, to see the attitudes of parents in the play environment and when the young children need parental support. Structured interviews are made with 18 parents to understand their and children's needs and expectations from an outdoor play environment and also their thoughts on existing play equipment. This part of the research starts with closed-ended questions to see the general situation and continues with open-ended questions to hear the individual experiences. The ways to encourage and include parents and children to outdoor play, in existing urban settings of Istanbul are explored. The data collected from these interviews were discussed and compared amongst each other question by question in the analysis part in later chapters.

This research is aimed to be of value to advocates for the rights of children and families, to policy makers, and to anyone working to improve the living conditions, quality of experience and life chances of young children throughout the world. Expected results of this research are the positive outcomes of parental involvement in the play environment such as contribution to family well-being through play and also to emotional, social, and physical development of young children. Further research on this topic could involve inclusive design and ecological approach, which is leading a designer to a new, larger insight of human centered design.

1.1. Aim and Significance of the Research

Children's outdoor experiences and spatial perceptions have significantly changed with rapid urbanization. With 16 million residents, Istanbul is a megacity and is soon to become Europe's most populous metropolitan area. In the metropolitan context of Istanbul, there are various barriers to outdoor play which are explained in Chapter 3 in detail. This research aims to encourage outdoor play in Istanbul where young children's access to outdoor play is limited. In this context, it intends to form a guideline proposal including a new design approach for outdoor play environment in terms of parental involvement in early childhood.

In this study, the scope is only limited to the borders of Istanbul as the main focus. In order to understand and evaluate the situation properly, observations have been conducted in 9 play spaces located in 3 socio-economically different districts. Moreover, interviews have been conducted with 18 parents who have children aged zero to three.

The research questions are as such:

RQ1: Can design help to improve young children's physical contact with outdoor environment in the metropolitan context of Istanbul?

RQ2: Is it possible to motivate parents for taking their young children to the outdoor more often by involving them in the play environment?

1.2. Research Methodology

This study was conducted in 2 main parts: naturalistic observations in 9 playgrounds located in 3 different districts which are selected considering socioeconomic status, mean real estate value and shares of young children in the district population, and interviews with 18 parents who have children aged 0-3.

Child studies require observation methods because of the difficulty of gathering exact data from the child (Vasta, 1979). Conducting an observational study involves forethought and provides richness in data. It allows the researcher to see what their subjects really do when confronted with various choices or situations.

In this study, observational methods were used to analyze parent-child play interactions in the existing outdoor play settings. There are two ways to conduct observations; naturalistic observation and observation with intervention. This study used naturalistic observation in the natural settings where human behavior and events occur. The advantages of this type of observation is that investigator does not interfere with the subject's behavior while the participant is unaware of being observed (Gillham, 2000 & Vasta, 1979)

Interview is another important research method used in this study. In the interview, participants were asked to state their attitudes and opinions by the investigator. In this thesis, interviews will be held after the observation course. Considering the features of research methods above, objectivity and validity will form the main characteristics of this study.

1.3. Limitations

This research has two main challenges visible in the data collection and the analysis part of the both observation and the interviews: social factors and technical factors.

Safety concerns and over-protective attitudes of parents in the play environment are the social factors which limited the duration of the interviews. Some of the parents even refused to interview and did not want to be interrupted while observing their children.

Lack of communication with children is one of the main limitations. Babies and other non-verbal children are limited in their capacity to provide direct feedback. However, parents are the best proxy for understanding the needs of the very young, in evaluating play spaces and design of the play equipment. So that face to face interviews were conducted with them. Due to this kind of data collection, all the data that has been obtained is self-reported. Keeping the objectivity is the most important challenge in this self-reporting as data collection. The answers given and the data that has been obtained by these interviews were compared with observations and literature review at the end.

Among technical factors, the first one is the play equipment which is designed ignoring the age differences and inadequacy of play spaces in general which also play an important role shaping the safety concerns of parents. Additionally, since the study of children's playground behavior depends on the behavior that the available equipment allows, inadequacy of play equipment in the observed play spaces limited play behavior patterns of young children.

2. LITERATURE REVIEW AND THEORETICAL BACKGROUND

In this section, existing literature relating to the parent-child play interactions and importance of outdoor play were reviewed. The main focuses of the research that form the theoretical background are summarized in Figure 2.1 below, in order to justify the standpoint of the researcher to the reader. In order to conceptualize the new design approach focusing on parental involvement, the relationship between early childhood and outdoor play is explained through various elements.

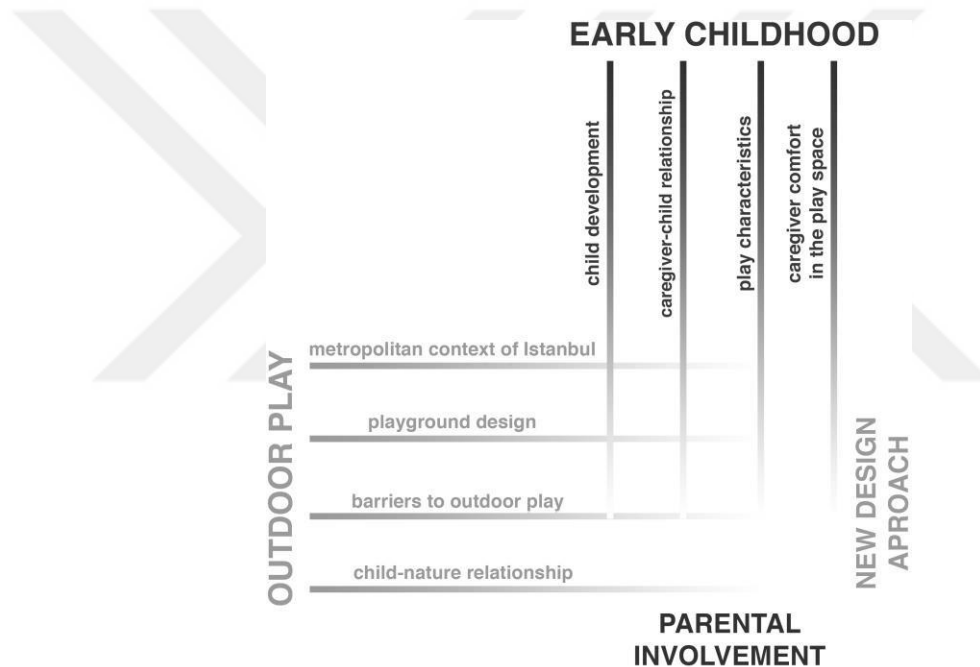


Figure 2.1. The main focuses of the research that form the theoretical background

2.1 Literature Review

The value of outdoor play in early childhood is considered by researchers from a range of disciplines including psychology, neuroscience, education, urban and regional planning. The explosion of research in neuroscience and other developmental and behavioral sciences in recent years highlighted that early experiences create a foundation for lifelong learning, behavior, and both physical and mental health. A

strong foundation in the early years is likely to generate positive outcomes and a weak foundation increases the probability of later difficulties.

A research by Center on the Developing Child at Harvard University (2007) emphasizes that emotional well-being, social skills and cognitive abilities together are the bricks and mortar that form the basis of human development. This research offers a set of ‘design principles’ that policymakers and practitioners in many different sectors can use to improve outcomes for children and families. These principles basically include supporting responsive relationships for children and adults, strengthening core life skills and reducing sources of stress in the lives of children and families. Considering these principles, this paper focuses on creating an outdoor environment that provide “scaffolding” for efforts to use young children’s skills before they must perform them alone and also foster responsive relationships between children and those who care for them.

Neuroscience and developmental research tell us that the building blocks of children’s capacities to retain and use new information, focus attention, control impulses, and make plans are acquired during early childhood, but the full range of executive function skills continues to develop into the adolescent years. Social play for children is believed to be a significant practice ground for the development of executive function skills. Environments that foster executive functioning are defined by interactions between adults and kids -both inside and outside the home- that direct kids from full reliance on adult assistance to gradually assuming their own “executive” position (CDCHU, 2011).

There are remarkable number of research conducted in the fields of psychology and child education investigate the critical role of parents or other caregivers in scaffolding early play. This dissertation receives strong support from theoretical perspectives such as: specifically, from attachment theory (Bowlby, 1969), zone of proximal development theory (Vygotsky, 1978), cognitive development (Piaget, 1936) and Erikson’s theory of psychosocial development. Although relying on different explanatory constructs, each of these perspectives suggests that early relationship directly influences the child development in many ways. To summarize, interactions with adults help babies learn

from their experiences, build working memory and manage reactions to stimulating experiences.

The physical environment also plays a vital role in the development of young children. Children need a physical context where there are objects and spaces to interact with using various sensory and motor skills. The significance of outdoor play in the child development was reaffirmed by several researches. Outdoor environment provides specific features and stimulus which allow learning and motivation to occur. CDCHU (2014) investigates how play can contribute to children development and which game types enhances their developmental skills. It aims to inform and guide parents/ caregivers about activities which enhance children's executive function skills. When it comes to the access to outdoor play, there are various barriers in existing urban settings of the metropolitan areas which create challenges for families to find opportunities for play and leisure. Vron & Cavanagh (1992) stress the importance of accessibility to play and propose a guideline describing how public spaces should be designed considering play, accessibility, safety, baby care facilities and transportation. Playgrounds are also sites for sociality for parents. Wilson, (2010) investigates how parents perceive the play spaces and details the fragile associations, friendships and mechanisms for social learning that develop within the prosaic spaces of the playground. Since caregivers play a crucial role both inside and outside of the play spaces, their concerns about safety and risky play affect the playing behavior of children. Loprinzi (2013) discusses the influence of parents on children's physical activity behavior. Overall, and in partial support of their hypotheses, parents who perceived physical activity as important for their children, had confidence in providing support for their children's physical activity, had good physical activity experiences as children themselves, and had high perceptions of their children's physical ability were more likely to employ activity-facilitating parenting practices and behaviors that were associated with their preschool children's physical activity behaviors. Bennet et al. (2012) studies the role of children's playgrounds in facilitating social interaction within a community. It argues that playgrounds are spaces designed to facilitate play and the interaction of children, but may also be important places of interaction between parents. Lastly, Withagen (2017) examines the design approach of Aldo Van Eyck, who is a great architect designed

hundreds of playgrounds, in terms of aesthetics, affordances and creativity. Eyck always considered accessibility and turned streets into playgrounds for children. This paper analyzes that play equipment and investigates positive and negative effects on children.

The importance of outdoor play in early childhood has been explored extensively by several authors. What remains to be explored however, is the need for parental support in the play environment and how design can help parents to involve in the play.

2.2. Importance of Early Childhood

Early moments matter. The right food, stimulation and care, or eat, play, love are crucial to a baby's brain development in the first 1,000 days of life (Ferguson, 2017). Recent developments in neurobiology clarifies the extent to which the interaction between genetics and early experience literally shapes brain architecture (CDCHU, 2007). A newborn's brain is a structure consisting of trillions of neural connections. Active neurons survive but some of them are unnecessary and die. Survivors develop synapses through experiences and this is a small-scale state of learning the world (Hammond, 2011).

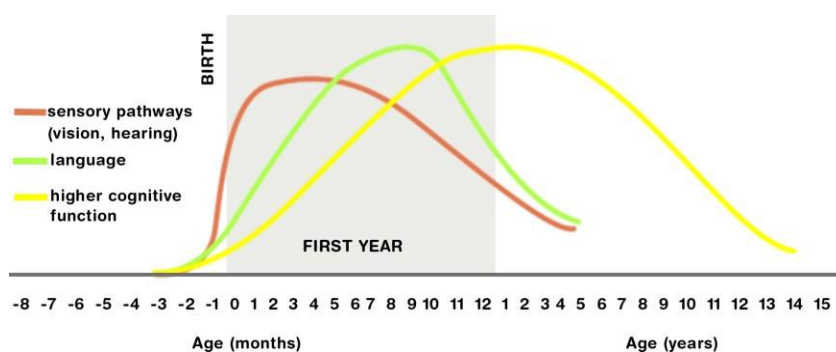


Figure 2.2. Human brain development. (Nelson, C., 2000)

In this formative stage of life, a baby's brain can form more than 1 million new brain connections at an unrepeated speed. Thus, the experiences in the earliest years of life play a fundamental role in the development of brain pathways and cortical networks. UNICEF's global report called Early Moments Matter for every child (2017), shows that the process beginning before birth to the start of school opens a critical and singular

window of opportunity to shape the development of a child's brain. Neural connections formed in this period give shape and depth to children's cognitive, emotional and social development so that the first years of life have a profound effect on a child's future. Health, happiness, ability to learn in school, well-being and even the amount of money the child can earn as an adult are affected by early experiences.

2.3. Play and Child Development

Play is considered as a 'right' by the United Nations. It is important to the health, well-being and development of children. Play is known as a crucial feature of young children's lives but it is not an easy concept for researchers to define. Through play, children at a very early age engage and interact with the world around them, and it becomes a means for them to derive meaning from their experiences. Adults also play for their mental and physical stimulation, and also to make connections and meanings (LEGO Foundation, 2011). Although play has been described differently by several researchers, there are some common features all definitions include. First, play is voluntary and requires internal motivation. Children play because they want. Second, play is process oriented. Rather than results, process is important. Moreover, play requires active participation. Children are involved physically and/or mentally. Lastly, it is metaphorical and includes imaginary play.

Play is a universal activity of children, but in the diverse contexts of childhood it takes different forms and assumes different kinds of importance. Gaskins et al. (2007) states that the value of play represents the significance that caregivers attribute to it, their belief in the development and learning of children, and their role in daily life. Ethnographic studies indicate that caregivers can 'cultivate', 'acknowledge' or 'curtail' play based on a society's specific cultural views.

For long years, it is described as a source of fun and pleasure for children with its own rules and scripts. However recent research investigates that play is a more complex experience and may serve multiple goals for children and adults. Winnicott (1971) evaluates play as a creative activity and the search for the self. To him, "It is in playing and only in playing that the individual child or adult is able to be creative and to use the

whole personality, and it is only in being creative that the individual discovers the self". On the other hand, play is a challenging experience. While helping children to gain the sense of achievement and self-security, to develop cooperative abilities and outlook; it also challenges them to take control in unfamiliar situations. It challenges children for being a part of adult-world. Play contributes significantly to all elements of children's growth and it allows children to acquire many early skills and competencies.

Contribution of play to child development is a subject which psychologists and educators have been willing to work on. Jean Piaget is one of those psychologists and his theories affected much of the 20th century's Western child development research. Piaget (1964) emphasized the importance of play for young children but according to him, play's main function is to practice newly acquired skills and concepts. Another psychologist whose theories strongly affected child development research is Lev Vygotsky. For Vygotsky, play has a key role in children's learning. He perceives play as a social and cultural activity which helps children work out the rules for social interaction and allows them to be at their best (Vygotsky, 1998). According to Erik Erikson, who is a notable psychologist discussed play as a way a child can gain skills for life and as a means of recreation and self-cure. Erikson states that personality development is gained through positive social experiences. In this process, the child uses the play as a tool to deal with real-world problems. The play, which includes the reflection of the past, present and future, changes as the child's developmental stages progress. Therefore, it can be said that the game is the key to a healthy personality development. The play is a need for children, and according to Erikson, thanks to these needs, children try to dominate the world and adapt to their dreams (Orenstein & Lewis, 2020). As a result, mental development is viewed as a process in which children first borrow other people's ideas and language while playing, and then turn it into mental structures which they can use and apply independently (Brooker et al, 2004).

Play has been scientifically proven to be crucial for the brain development of children. A newborn's brain is a structure consisting of trillions of neural connections. Some of them are unnecessary and die. Survivors develop synapses through experiences and this is a small-scale state of learning the world. When a baby is two months old, synapses

begin to merge in different parts of the brain according to a specific schedule: physical movements appear within first two months, visual signs in the third month, memory is in the ninth month, and so on. When children grow enough to recognize objects, they immediately start experimenting with them, which is the main way for synapses to connect. In this phase, "play" is a quest to collect and classify emotional evidence about the world (Hammond, 2011).

Play is also significant for children's ability to self-regulate and manage their own behavior and emotions. Executive function is an umbrella term for those self-regulatory skills which encompass aspects controlling attention, suppressing impulses in favor of adaptive responses, and combining information in working memory, as well as planning, organizing monitoring, and flexibly redirecting thought and behavior (Berk & Meyers, 2013). According to Shonkoff et al. (2011) there are three significant messages conveyed by scientific evidence on the development and consequences of executive functioning in the earliest years of life. First, executive function skills are main building blocks for early cognitive and social capacity development. Second, both the normative variations in the nature and pace of individual developmental trajectories and the effects of considerable adversity will influence how the development of executive functioning for any given child will develop. Lastly, several interventions concentrated on supporting the development of particular executive function skills have shown at least short-term efficacy, with proof that they can also have an impact on other learning aspects.

2.3.1. Role of Outdoor Play in Early Childhood

Play needs space. Physical environment plays a vital role in the growth and development of children. According to Olds (1982), environments for young children should be sensory-rich and varied, and there should be opportunities to learn to move and to learn by moving. The Piagetian sensorimotor learning stage is generally recognized as a powerful foundation for learning. Sensorimotor learning needs a physical setting where there are objects and spaces for the child to interact with using various sensory and motoric skills. Outdoor environment is a naturally sensory-rich

environment and it provides different play opportunities for children which can hardly be replicated indoors.

There is several research stressing for benefits of regular outdoor play at an early age. WHO Guidelines on Physical Activity, Sedentary Behavior and Sleep for Children Under 5 Years of Age (2019) suggests minimum 30-minute active play for infants per day and 180-minute for toddlers. For young children, active play includes activities such as walking, crawling, running, jumping, balancing, climbing in, through and over objects, dancing, riding wheeled toys, cycling, jumping rope etc. in which indoor environment is not suitable for the most.

Being outside also allows children to differentiate outer, social, reality from inner, imaginative, symbolic fantasy. However, time for outdoor play is diminishing, contributing to more sedentary lifestyles (Gray, 2011). With developing technology, children's movement patterns have changed significantly. Children spend most of their time indoors at home, behind the digital screens. This may lead to alienation to the nature and also their cognitive, verbal and social skills may not develop as outdoor players. In the last set of guidelines WHO (2019) stresses the importance of physical activity and suggests parents to limit the exposure to screens in young children. According to the guideline, "Early childhood is a period of rapid physical and cognitive development and a time during which a child's habits are formed and family lifestyle routines are open to changes and adaptations." So that lifestyle behaviors developed in early years can affect physical activity levels and patterns for life.

Outdoor environment provides unstructured and free play for children. Barker et al. (2014) found that children who spent more time in less structured play activities displayed better self-control and then did children who engaged in structured activities. Outdoor play also allows children to engage with nature and natural elements. Today's sedentary lifestyle may result in alienation to nature causing several developmental problems in early childhood. There are several factors and different contexts shaping the importance attached to play in nature in early childhood pedagogy. The concept called 'affordances' which is what an environment offers children, positive or negative, (Gibson, 1979) has proved to be a powerful tool in understanding children's play

experiences outdoors, and in ensuring that all children have opportunities to benefit from outdoor play in nature. When children play outdoors, they benefit from being exposure to sunlight, natural elements and outdoor air, which contributes to bone development, stronger immune system and physical activity (Bilton, 2010).

Besides these benefits, outdoor play is significant for social and emotional development of children. It is through play that children express themselves and interact with others. Outdoor environments offer interesting conditions for children and adults to show different aspects of their personality, which normally do not emerge during the time indoors. Outdoor play also fosters the interaction between child and parent. When adults are relaxed and calm, they feel more available to support children outside. This statement suggests that the outdoor environment is not only a healthy environment for children, but also for adults, with reduced levels of stress and anxiety (Bento & Dias, 2017).

Consequently, playing outdoors is significant for young children to learn and develop, and to inspire and challenge others to take advantage of the opportunities that the outdoors can offer.

2.3.2. Parental Involvement in Play

Young children learn about themselves and about the world they live in through playful interactions with their early caregivers. (Brooker et al, 2014). When a baby is born, it is far from being a tabula rasa. Although the brain of a newborn already contains the 100 billion specialized brain cells, the ‘neurons’, or ‘grey matter’, that make up the adult brain (Oates et al, 2012) it is not completely developed and continues to develop during the firsts year of life (Paquette, 2004). In this period, the baby has a tendency to be activated by external stimuli coming from people around. Young children are likely to answer auditory, visual, tactile and kinesthetic stimulus in certain ways. (Bowlby, 1969) In infancy, interactions with adults help babies focus attention, build working memory, and manage reactions to stimulating experiences. Vygotsky (1978) sees adults as ‘more experienced others’ who are required to teach young children to transform the

‘common-sense knowledge’ gained from interactions with objects and people into a more accurate understanding of the world. Vygotsky’s concept of the Zone of Proximal Development (ZPD) emphasizes the role of adults in and guiding children’s learning and development.

In this section, the focus is the role of parents in supporting, or scaffolding the developmental skills of children through play. The term “scaffolding” means first helping children complete challenging tasks, and then by gradually stepping back to let children manage the process independently, and learn from their mistakes—as they are ready and able to do so (CDCHU, 2014). Children are natural problem solvers from birth. In order to overcome challenges in life, their efforts are assisted and fostered by others who are more knowledgeable than they are, mostly their parents. These are the tutorial interactions which are the crucial feature of infancy and childhood. (Wood et al, 1976; p. 89) Play is also a critical way that children interact with their parents. Parents who play more with their children have a more secure parent–child attachment (Slade, 1987). Bowlby’s attachment theory emphasizes the significance of parent-child attachment and how the parent-child relationship emerges and influences subsequent development. According to this theory, attachment behavior is exhibited in a very strong and orderly manner by a child until the end of the third year (Bowlby, 1969). Bowlby explains that development of attachment behavior in infants is the product of 4 processes:

1. The built-in tendency of listening to, looking at and staring at a particular class of stimuli rather than others, causes a baby to start paying special attention to people who are interested in him/her.
2. Exposure learning arises when the baby learns the conceptual nature of who is taking care of him/her and separates this person from all other people and things.
3. The built-in tendency to get closer to the familiar one causes leading to such familiar figures when a baby learns to distinguish, with the appropriate motor skills.
4. This one is a well-known type of learning which focuses on strengthening of the behavior as a result of feedback on certain consequences of certain behavior.

Thus, the most important fact in forming attachments is not who just feeds the child but who cares, plays and communicates with the child regularly.

Play interactions of parents and children are affected by various factors including the abilities of the child, parent–child relationships, play preferences, and opportunities for play. Following sections cover the adult’s role in play interactions, benefits of playing together and other opportunities for parents in the play environment.

2.3.2.1. Parent's Role in the Play Environment

Early childhood is not a uniaxial structure consisting only of children. This period is experienced in a multi-layered structure affected by family, caregivers, households, neighborhoods, schools, services and policies and the current time. Every person, institution, service and policy that affects the child has a direct or indirect influence on the child's development (Açev, 2017). In early childhood, the most important and effective element of this system is the parents. This section presents a brief descriptions of parent’s role in the play environment and importance of parent-child play interactions in early childhood development.

Play is an activity that occurs individually, among friends, among siblings, and also between a parent and a child. Considering parent-child play interactions, this part of the study focuses on the role of parents in the play space. In order to make the best use of what the outdoors has to offer and to effectively support child-led learning, adult’s role in the play environment should be considered carefully. There are several situations, especially in young children’s play, that requires parental support. Based on the ZPD concept of Vygotsky, parents also can be seen as ‘more experienced players’ in the play environment. They did play, know how to do it and may guide children in their play discovery. This type of play experience plays an important role in the development of fine and gross motor skills of young children. According to this theory, children follows five steps shown in Figure 2.3 in the process of learning through observation (Bandura, 1977).

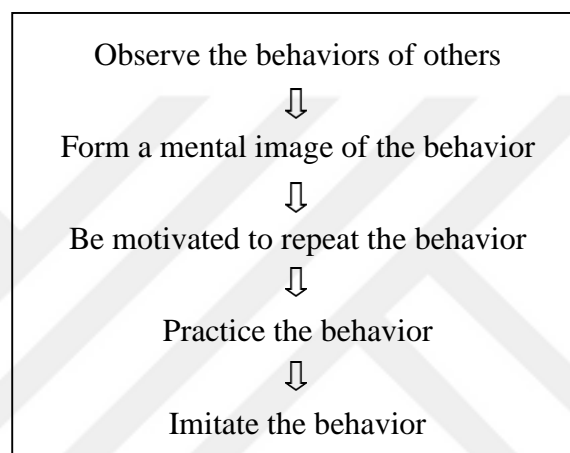


Figure 2.3. Steps showing Bandura's theory of learning through observation

Parent-child play interactions and parent's role in the play are the subjects studied for decades. Aistear (NCCA, 2009) is one of those works which offers information and suggestions on how the adult can extend and enrich children's learning and development through play. In this early childhood curriculum framework, it is stated that to make the most of the opportunities that play provides the adult needs to plan for, support and review play.

Russell and Saebel (1997) classified parent-child play styles in three different categories: facilitator style, director style, and co-player style. In facilitator play, the parent is centered on the child and actively attempts to engage the child in play. The director style of play occurs when the parent is mostly in control of the play, and in co-player play style parent takes part in joint play as a player. Thus, parents play an important role in shaping and maintaining their children's physical activity behavior in

early childhood which is an important time period in the learning process of establishing health behaviors (Loprinzi & Trost, 2010). Adequate parenting with regular participation in physical activity in early childhood can help reduce the increasing trajectory of childhood obesity and other health problems caused by sedentary lifestyle. A recent study indicates that there is an association between parental importance of children's physical activity, parental confidence in providing support, and parental perceptions of children's physical competence on various activity-facilitating practices and behaviors, such as parental support and parental monitoring of children's physical activity (Loprinzi et al, 2013).

In addition to observing, supporting and assisting play activities, parents may also be an active player in the play space. Adults play for their mental and physical stimulation, and also to make connections and meanings. Adult play includes sport and physical activity of all kinds. It represents a physical challenge, risk and danger, and are mostly individual. It may also include playing in a team, an aesthetic element taking pleasure through physical exercise. More specifically, walking, dancing, gymnastic, aerobics, running, working out are some of the play activities adults may take part in (LEGO Foundation, 2011).

2.3.2.2. Play for Family Well-being

Family well-being is an integral part of a child's healthy development. Evidence from around the world indicates that to ensure children develop into healthy and responsible individuals, it is important to strengthen the family as an essential unit of society. There are several research emphasizing the significance of play in promoting healthy child development and maintaining strong parent-child bond. The architecture of the developing brain is mostly shaped by the interactive effects of genes and experience, and the active component is the "serve and return" nature of children's involvement in relationships with their parents and other caregivers in their families or communities. (CDCHU, 2007). The process of "serve and return" consists of mutually rewarding interactions which are essential prerequisites for the development of healthy brain circuits and increasingly complex skills.

Substantial research indicates that positive parent–child involvement, including play, promotes children’s cognitive, social, and emotional well-being. Play is also a way of communication for young children. It helps parents to see the world from the perspective of the child. According to Deci and Ryan (2002), when people spend time together, they fulfill one of humanity's most basic psychological needs: to feel connected and cared for by important others. Although the interests and demands of each family and each family member may differ, to purposefully engage in family leisure activities together may provide all members of the family a mechanism to work together, improving individual and family well-being through a concentrated effort toward leisure that promotes bonding and communication (Duncan et al, 2018).

2.3.2.3. Play Spaces as Social Sites for Parents

“When parents chat, children meet. When children chat, parents meet. Benefits for all.” Day (2007) says. In this context, the public playground may be perceived as attractive meeting points for everyone, including adults, if it is to be established. It should be accepted by the city without children's movement and the city also should adopt the forms in the playground, to van Eyck (1962/2008). Play spaces are designed to foster the play and interaction of children. However, some features of play spaces may also contribute to interactions between parents who supervise their children during play. Seating and shady areas may create opportunities for the spatial congregation and interaction of parents. Playgrounds facilitating interaction between parents have also potential to promote greater play space use, which would further benefit the social and physical development of children.

The playground is a site where the common needs and experiences of parenting are shared (Wilson, 2010). Although socio-economic status affects parenting in several ways, Lareau (2003) who wrote a book identifies the ways that parents’ social class impacts children’s life experiences, states that its effects are not observed in the behavior of parents in the play spaces. Bennet et al (2012) also evaluate parks as gathering points for neighbors and state that understanding the characteristics of green spaces that contribute to positive social interaction is important not only for green space design, but also for understanding how social interactions in green spaces can contribute

to individual and neighboring health. Thus, parks and play spaces are important sites for people from all walks of life to come together and cultivate a sense of social connection among and across communities.

2.3.3. Developmental Skills of Young Children and Play Types

Play in childhood takes specific forms, each of which contributes to child development in significant ways. There have been several attempts to categorize different types of play. Some categorize play according to developmental functions others according to assumed purposes such as exploration, imagination, skill development, or the area of learning involved mathematical play, play with language, etc. There are also categories focus on the equipment, materials or contexts used such as sand play, computer play, natural play.

Today it is almost universally accepted by developmental psychologists that children develop and learn principally through play (LEGO Foundation, 2011). Figure 2.4 shows the forms of play and their contributions to the developmental skills including physical, intellectual, social and emotional.

<i>Basic form</i>		<i>Detail</i>	<i>Examples</i>
PHYSICAL PLAY	Gross motor	Construction Destruction	Building blocks Clay/sand/wood
	Fine motor	Manipulation Coordination	Interlocking bricks Musical instruments
	Psychomotor	Adventurous Creative movement Sensory exploration Object play	Climbing apparatus Dance Junk modelling Finding out table
INTELLECTUAL PLAY	Linguistic	Communication/function/ explanation/acquisition	Hearing/telling stories
	Scientific	Exploration/investigation/ problem solving	Water play/cooking
	Symbolic/mathematical	Representation/pretend/ mini-worlds/	Doll's house/homes/ drama/number games
	Creative	Aesthetics/imagination fantasy/reality/ innovation	Painting/drawing/ modelling/ designing
SOCIAL/ EMOTIONAL PLAY	Therapeutic	Aggression/regression/ relaxation/solitude/ parallel play	Wood/clay/music
	Linguistic	Communication/interaction cooperation	Puppets/telephone
	Repetitious	Mastery/control	Anything!
	Empathic	Sympathy/sensitivity	Pets/other children
	Self-concept	Roles/emulation/ morality/ethnicity	Home corner/service 'shop'/discussion
	Gaming	Competition/rules	Word/number games

Figure 2.4. Play categories according to related aspects of development (Moyles, 1989)

In current information sources, play types are generally divided into five broad categories according to the developmental purposes which each serves. They are physical play, play with objects, symbolic play, pretend/ socio-dramatic play, games with rules. Since this research focuses on play behaviors of children up to 3 years of age, it is important to pay attention to the stages of development and play types seen in this process. Figure 2.5 summarizes the milestones in children's gross motor development, along with playground equipment ideas for each stage. According to Gillman et al (2005), these guidelines can be beneficial in assessing the suitability of outdoor equipment and activities for children of different ages.

AGE	DEVELOPMENTAL MILESTONES
INFANTS (0-15 MONTHS)	<ul style="list-style-type: none"> • Develop on individual timetables • Push and pull up • Sit without support • Crawl • Cruise or walk using objects or adults for support • Begin to stand and walk alone
TODDLERS (15-33 MONTHS)	<ul style="list-style-type: none"> • Become increasingly mobile • Push and pull toys while walking • Learn to climb stairs • Begin to use riding toys (with feet on ground) • Run short distances • Squat and balance on feet while playing • Kick and throw balls • Jump in place

Figure 2.5. Milestones in children’s gross motor development along with playground equipment ideas for each stage. (Gillman et al, 2005, p.2)

Figure 2.4 and 2.5 are used as information sources in the formation of the structure of the field research. Especially the evaluation criteria for the observation of the play spaces (Figure 3.5) which will be reviewed in the next chapter, is prepared considering play types and related examples above. The table showing the developmental milestones of children between the ages of 0-3 has been greatly helpful in understanding the abilities and needs of young children and evaluating the playgrounds accordingly. While emphasizing play diversity, the tables also clearly explain the dynamic relationships between motor skills, play equipment and different developmental stages with examples. Thus, they can play a significant role both in the evaluation of existing playgrounds and in the playground design processes with the details and play equipment ideas they contain.

3. FIELD RESEARCH: OUTDOOR PLAY IN THE METROPOLITAN CONTEXT OF ISTANBUL

*“To consider the city is to encounter ourselves.
To encounter the city is to rediscover the child.
If the child rediscovers the city,
the city will rediscover the child – ourselves.”*

van Eyck (1962/2008, p. 25)

Modern societies and advanced technological developments creates new opportunities for children to exercise their right to play, but these rights are often accompanied by new constraints (Brooker & Woodhead, 2013). In big cities like Istanbul, rapid urbanization caused significant changes in children’s outdoor experiences and spatial perceptions. Today’s children’s outdoor play opportunities are restricted and they are dependent to indoor oriented facilities. Outdoor environment provides different play opportunities for children which can hardly be replicated indoors.

“Young children can and will play anywhere at any time, but to fully realize their potential they will need an enriching environment”, Sanoff (1995) says. With its specific features and stimulus contributing to their emotional, social, and physical development of children, the outdoors can be described as an open and constantly changing environment, where children experience freedom, gross and boisterous movements. This part of the study focuses on the outdoor play environments in Istanbul. In order to have a comprehensive understanding of the outdoor play in the metropolitan context of Istanbul, a field research is conducted. This field research consisting of observations and interviews, is an integral part of this dissertation. While there are many information sources emphasizing the importance of outdoor play and parent-child play interactions in early childhood, the literature on the role of design in terms of parental involvement in the play space is extremely insufficient. Analyzing outdoor play environments in Istanbul in terms of addressing the needs of young children and their

caregivers, this study opens new horizons for designers, and also makes significant contributions to the literature.

3.1. Effects of Urbanization on Child Development: Barriers to Outdoor Play

Several information sources rendered in the literature review emphasized that outdoor play is crucial for healthy development of young children. However, there are several barriers to outdoor play in Istanbul.

Istanbul has over a million children aged up to 4 (Tüik, 2018). It is also the most populous city in Europe in terms of child population (Eurostat & Tüik, 2018). Rapid urbanization and the problems that arise with it have brought the concepts such as the right to the city, access to the city and the quality of urban life to the discussion center during the process of determining the urban policies (Güvenç, M. & Tülek, M.,2018). All these concepts are becoming challenges for young children and caregivers in existing urban settings. Following sections include the types of barriers to outdoor play caused by the metropolitan context of Istanbul.

Administrative Barriers

With 16 million residents, Istanbul is a megacity and is soon to become Europe's most populous metropolitan area. Urbanization process causes serious increases in urban areas while decreasing the amount of green areas. This results in a reduction of outdoor play areas for children. According to the data provided by Istanbul95 project (2018), the total amount of active green space in Istanbul is 2081 hectares, and the province-wide amount of active green space per person is 1.44 m², far below the world average 9m².

“Administrative policies shape the types of play spaces which are available, when they are available and to whom they are available” Spodek and Saracho says (2014). As children's behavior is molded by their ongoing interaction with the urban environment, administrative policies must be influenced and strengthened in order to make cities child-responsive. In Istanbul, there are no regulations or legislations for playgrounds.

Although Directorate of Parks and Gardens in Istanbul carry out their works in accordance with the *Law Regarding the Approval of the European Landscape Convention No. 4881, Spatial Planning and Construction Regulation published in the Official Gazette No. 29030, the Zoning Law No. 3194, the Shanty Law No. 775, the Metropolitan Law No. 5216 and TSE standards related to landscape arrangement and maintenance, none of these cover regulations or standards about play space or equipment design. For this reason, information such as square meters of playground per family or per child, walking distance between a child's house and playground is not available in a neighborhood, and most importantly, playgrounds are built without consideration of this data. As a result, homogenous distribution of parks and playgrounds in the city is not ensured and outdoor play is not accessible for a serious amount of children in Istanbul.

Moreover, the quality of transportation and planning also affects the extent to which primary caregivers and toddlers can access outdoor play areas. Play spaces need to be accessible with multiple modes of transportation.

* “The Law Regarding the Approval of the European Landscape Convention No. 4881” translated from “4881 sayılı Avrupa Peyzaj Sözleşmesinin Onaylanmasını Uygun Bulduğuna Dair Kanunu”
“The Zoning Law No. 3194” translated from “3194 sayılı İmar Kanunu”
“The Shanty Law No. 775” translated from “775 sayılı Gecekondu Kanunu”
“The Metropolitan Law No. 5216” translated from “5216 sayılı Büyükşehir Kanunu”
“Spatial Planning and Construction Regulation published in the Official Gazette No. 29030” translated from “29030 sayılı Resmî Gazete’de yayımlanan Mekânsal Planlar Yapım Yönetmeliği” by the author.

Socio-cultural Barriers

The social aspects caused by urban life conditions are important factors that influence people's attitudes to children's play. While adults are adjusting their priorities to city life, children's needs may fall behind. Furthermore, the social context of urban life may have consequences such as a competitive social hierarchy, a fast paced way of life and a degree of social isolation that may be impacting on changing perceptions towards children's play (Levesque, 2011). These factors may have undermined the perceived importance of children's play as a legitimate and meaningful activity and inhibited play opportunities for children.

Moreover, literature presents the growing concern about safety among Turkish parents in terms of children's outdoor play, in especially big cities like Istanbul. Fears of traffic, stranger-dangers and accidents such as falling and crashing are the major concerns that causes Turkish parents to limit children's play (Cevher-Kalburan, 2014). Additionally, lack of knowledge of outdoor play, environmental features and motivation also causes limited outdoor experiences (McClintic and Petty, 2015). As a result, children are drawn away from streets and neighborhoods into closed spaced where they only play in organized and timetabled ways (Valentine, 1996).

In Turkey, there are also some socio-cultural codes which affect family structures and parenting roles. Sometimes fathers may not be recruited or encouraged with their children and be unaware of the benefits of physical play and interactive difficulties. In order to disposal of these barriers to outdoor play, it is important to ensure that what fathers do with their children contributes to their socioemotional well-being, self- concept, and attachment security.

Technical Barriers

Playgrounds are urban outdoor spaces specifically designed for children, but they are generally designed without much thought for the needs of young children. There are

several technical factors which do not allow infants and toddlers to play in a safe and comfortable way in the play space.

Not all play equipment is appropriate for all children who use a play space. Lack of age appropriate equipment is one of the main obstacles to outdoor play for young children. The first 3 years in human life are full of changes. Children's bodies and skills change and develop within months (İstanbul95 Studies, 2019). This results in age-related differences in the use of play equipment which should be taken into consideration. Abilities and inabilities of young children shape their play behaviors. For the development of their motor skills, they should be capable of the activity which play equipment offer.

One of the biggest challenges in designing a playground is creating developmentally appropriate play experiences for children of different ages. There are several categorization systems used to differentiate the play types and the developmental function they focus. Based on the current literature, the categorization used in this thesis is stated in Chapter 2. Since each type of play addresses a developmental function or focus, arguably each of them supports aspects of physical, intellectual and social- emotional growth (Lego Foundation, 2011). Thus, play environments that lack the facilities that encourage children to exercise, to experiment and to explore, limit their play experiences. Moreover, children's engagement with outdoor play is highly dependent on parents' preferences. Thus, design features that do not support caregiver comfort and play space conditions that reduce the efficiency of environment are among the technical barriers to outdoor play.

In recent years, there have been some interventions to remove those barriers and incorporate a focus on early childhood development into the planning and management of cities such as Urban95 Project. Urban95 offers a platform which is designed to facilitate the spatial monitoring of education and health services for children and families. Collaborating with the municipalities, this project aims to render all kind of barriers to healthy development of young children in the cities and to find comprehensive solutions. While drawing a general framework about the technical

barriers to outdoor play in Istanbul, publications and data produced by Urban95 project are used as main data resources. Its main focus areas in Istanbul are public space, mobility, data-driven decision-making and parent-coaching (Bernard Van Leer Foundation, 2019).

This dissertation focuses on the disposal of technical barriers to outdoor play caused by the metropolitan context of Istanbul. First of all, there is no legislations or regulations followed by designing playgrounds in Istanbul. Most of the parks include standard, traditional play equipment. Secondly, because of rapid urbanization and high population, location of outdoor play areas is important. The playground can be located on the coastline, in a neighborhood, business district, a larger public park or a busy street of the city, in Istanbul. However, since most of the playgrounds consist of standard play equipment, play areas are built without consideration of environmental characteristics. Lastly, existing urban settings of Istanbul creates challenges for families to find opportunities for play and leisure. Thus, it requires an extra effort to make playgrounds a part of everyday experiences and include in daily routines.

3.2. Analysis of Existing Play Spaces and Equipment Design in Istanbul

There are theories like that of Piaget stressing the measurable impacts of physical components of the environment on young children's cognitive development are mentioned in Chapter 2 in details. In this context, this section of the dissertation includes the analysis of existing play spaces and equipment design in Istanbul in terms of addressing the developmental needs of young children and also needs and expectations of their caregivers.

In order to achieve reliable and comprehensive analysis of physical activity settings, 9 playgrounds from 3 socioeconomically different districts are selected. The data which is obtained from the literature review, previous observations and research questions are used for preparing the structure of observational analysis. Interviews including the opinions of 18 parents also supported and strengthened the study.

In order for this study to be consistent, it is important that the observed play spaces to reflect the general profile of Istanbul parks. To verify this analysis, all the playgrounds exists in the website of the Istanbul Metropolitan Municipality Department of Parks, Gardens and Green Areas (<http://www.parkvebahceler.com/>) are examined and it is seen that observed areas are similar with most of the play spaces in Istanbul, in terms of their quality and condition whereas repetition of the data and statistically significant results indicate that the findings obtained were reliable. Thus, selected play spaces reflect the general play equipment patterns of Istanbul.

3.2.1. Research Areas

In this part of the study, the major aim is to outline the needs of young children and their caregivers for the outdoor play spaces. In this context, three different residential areas of Istanbul including Besiktas, Maltepe and Eyup are selected considering socioeconomic status which is typically broken into three levels; high, middle, and low, and also physical, spatial and demographic aspects. Main data resources used in the selection process are the interactive platform “<http://harita.kent95.org/istanbul>” which is the product of the Project for Examining and Mapping Services for Children and Family in Istanbul District Municipalities, developed within the scope of Istanbul95 project, and publications of Istanbul University Center for Research and Practice in City Policies Center such as Mahallem Istanbul project (Şeker, M., 2017) and Şehir Notları-3 (Özgül et al,2019). Kent95 platform includes maps combining data on age group population per neighborhood with data on property prices, as a proxy indicator for income. Moreover, Mahallem Istanbul Project aims to develop and implement innovative applications in urban services for the purpose of improving the quality of life in Istanbul. In this project, neighborhoods that are the smallest administrative unit were examined from demographic structure to education, from health to culture, from economy to social life, from infrastructure and transportation to the housing market. The figures below show the data coming from these two information sources and represents the differences of selected areas in terms of real estate value, 0-4 age population and socio-economic status.

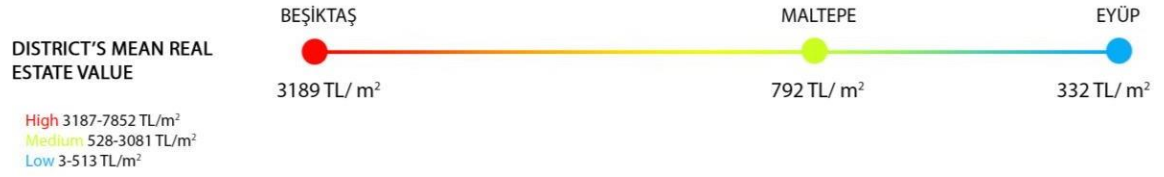


Figure 3.1. Comparison of the research areas by their mean real estate value (Güvenç, M., Tülek, M.,2018).

Güvenç and Tülek (2018), mapped İstanbul using neighborhood underlays valid on a geographic information system (GIS) medium according to age group and income dimensions. They determined the mean real estate value as an indicator of income. Based on this study, it is also assigned as one of the criteria in the selection of field research areas. Figure 3.1 shows the comparison of 3 Istanbul districts selected to represent 3 different income groups.



Figure 3.2. Comparison of the research areas by shares of 0-4 age group in the district population (Özgül et al, 2019).

It is very important for decision makers to be able to see the proportion of the child population relative to other age groups in the districts. Figure 3.2 clearly reveals the comparison of the distribution of child populations in the selected districts.

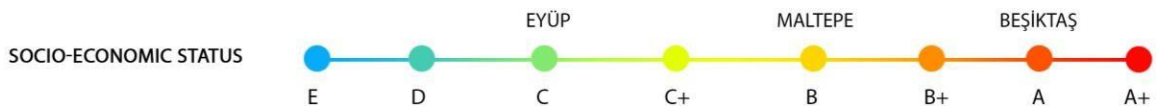


Figure 3.3. Comparison of the research areas by socio-economic status (Şeker, 2017).

When socio-economic status is evaluated together with the real estate value data, it provides comprehensive information about the economic and social life styles of the residents in a district. In order to understand these variables, two basic descriptive features are discussed; education level and occupational variables (Şeker, 2017). Mahallem Istanbul project created the SES index of the neighborhoods and districts with variables that reflect their economic and social life styles. Figure 3.3 indicates the SES groups to which the selected research areas belong.

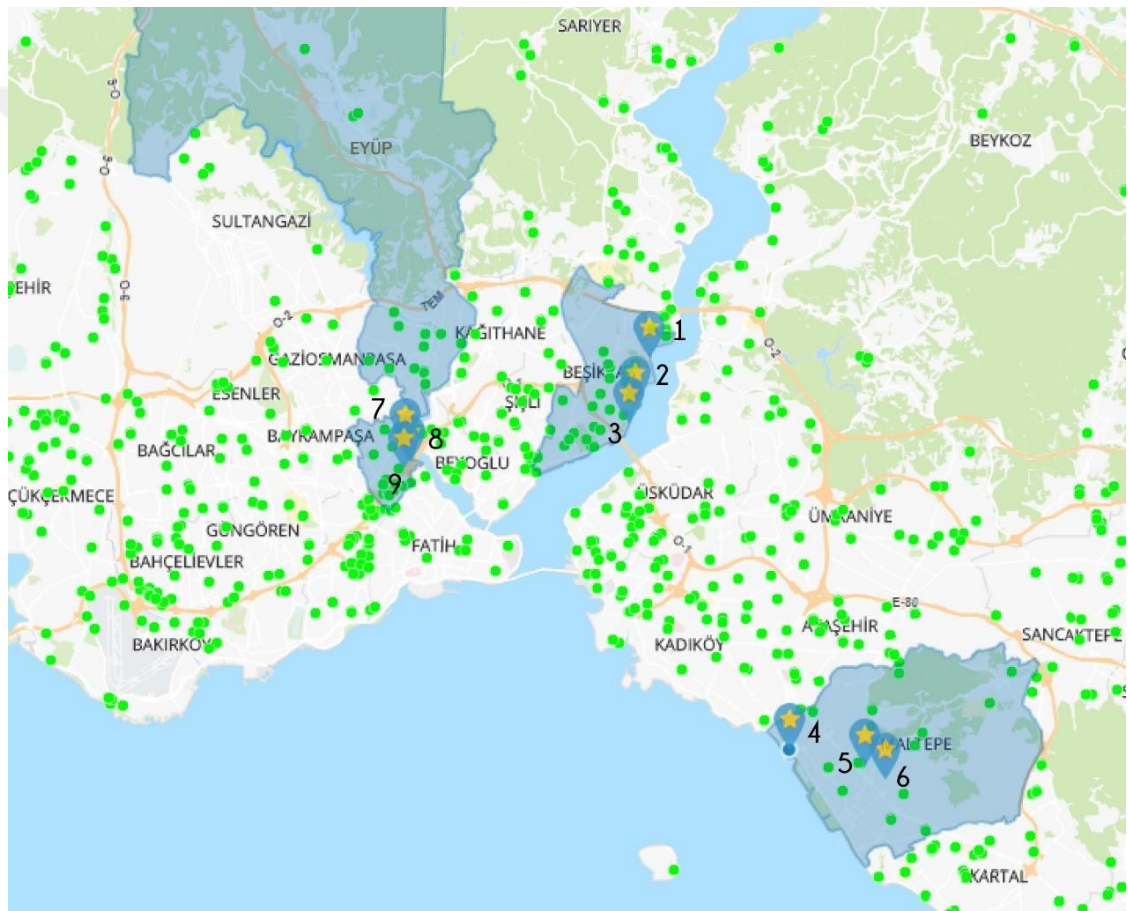


Figure 3.4. Selected areas are indicated in Istanbul Şehir Haritası. (Accessed on January 18, 2020 from <https://sehirharitasi.ibb.gov.tr/>)

To achieve the richness in the data, 9 playgrounds from those three districts are observed through photographing, video recording and note-taking (Figure 3.4). In Beşiktaş; Bebek Park, Cemil Topuzlu Park, Kuruçeşme Park, in Maltepe; Zümrütevler

Park, Girne Park, Küçükyalı Park and in Eyüp; 8 Mayıs Park, Milli Egemenlik Park and Abdülvedüt Park are visited during the field research.

3.2.2. Methodology

Naturalistic observation and interviews referred throughout the dissertation methodology is an integral part of scientific study of children. It allows the researcher to examine child behaviors in natural settings without interfering the usual course of events (Vasta, 1979).

To achieve the fruitfulness in the data, 9 playgrounds from three different districts of Istanbul are observed through video recording and note-taking, to see the play interaction between young children and their caregivers, and also the ways children play outdoors and use existing play equipment.

Neuman (2006) states that adopting qualitative research can explain the social reality and cultural context better because it gives the opportunity to concentrate on interactive processes and events and make thematic inquiry. Because of its flexible nature and ability to include variegated and unexpected replies and feedbacks, a qualitative approach was more fitted to the objectives of this study. Since qualitative research occurs in natural settings where human behavior and events occur (Creswell, 2009 p. 195), interviews were conducted in the play spaces selected for observations.

Semi-structured interviews are made with 18 parents to understand their and children's needs and expectations from an outdoor play environment. The data which is obtained from the literature review, observation and research questions are used for preparing the conducted interview questions and structure of these methods. This part of the research includes both closed-ended questions to see the general situation and open-ended questions to hear the individual experiences. In the following parts, the findings of the field research are represented along with descriptive statistics, tables, graphs and coded transcripts. Observations results are indicated with tables through coloring the sections. In general, the findings of the observations are evaluated for each play spaces and

described separately. Additionally, the statistics, graphs and coded transcripts reflect the interview results.

3.2.2.1. Observation

Reliable and comprehensive measurement of physical activity settings requires analysis of environment-behavior relations (Saelens et al., 2016). In child studies, children's behavior patterns become evident when there are a number of repeated observations (Sanoff, 1995). In this dissertation, in order to examine outdoor play interactions of children and parents, naturalistic observations are conducted in 9 different play spaces. This method allowed to see how adequate the existing settings in meeting the developmental needs of young children and when they need parental support. In qualitative studies using observational methods, events, behaviors and objects in the settings are required to be recorded. This recording is generally called as field notes (Marshall & Rossman, 2011). In this study, qualitative information about the physical site, the people, activities, interactions, conflicts and the specificities of the surrounding environment was noted without any subjective interpretation of the observer.

It is important to understand what kind of outdoor environment contributes to the needs and expectations of young children and their caregivers. For the observations, three different residential areas of Istanbul including Besiktas, Maltepe and Eyup are selected considering socioeconomic status which is typically broken into three levels; high, middle, and low. To achieve the richness in the data, 9 playgrounds from those three districts are observed through photographing, video recording and note-taking. The results are demonstrated in tables through coloring the sections which indicates play space characteristics.

During the observation period, major concerns are the play activities of young children in the outdoor environment and their interaction with existing play equipment, the attitudes of parents, and children's need for parental support. Observation process is spread into 11 days: 4 days for Beşiktaş, 4 days for Maltepe and 3 days for Eyüp, at different times a day. These time periods during the day were the times that children were in the field, which are between 16.00 to 19.00 on the weekends and mostly before

school exit hours on the week days. The evaluation criteria for the features of the play spaces is categorized under five headings; appropriation for young children (0-3), basic requirements of a playground, common play types and characteristics, comfort and efficiency of play space for caregivers, and safety & security.

3.2.2.2. Interviews

According to et al. (2004), “Designers can only predict or manipulate the emotional impact of their designs when they are aware of the concerns of the particular person for whom they design these products”. It is a fact that the frequency and duration of outdoor play in early childhood highly depend on the parents’ preferences. Therefore, semi-structured interviews are made with 18 parents, to understand their needs and expectations from an outdoor play environment, and also their thoughts on existing play equipment. Semi-structured interviews are preceded by observation and it allowed to develop various topics necessary for developing semi-structured questions.

This part of the research starts with closed-ended questions to see the general situation and continues with open-ended questions to hear the individual experiences. The data collected from these interviews were discussed and compared amongst each other question by question. Since this method provided both qualitative and quantitative data, graphs and coded transcripts are combined to demonstrate the results.

3.2.3. Measurement and Evaluation Criteria

The spatial layout of a play space is an important factor to be considered for the integration between developmental needs and children's play behaviors. The play space can be designed to achieve specific objectives, and to create defined play zones that allow for integrating a variety of outdoor activities. The quality of the play space is determined by various criteria. In this research, there are certain criteria used to measure the components of physical environments and evaluate the results. Observations and interviews are conducted in a systematical way. In the preparation of the observation sheet, the data gathered from literature review is used. Major information sources are the play categories by Moyles (1989), Gillman’s guidelines for outdoor play equipment

(2005), Play Observation Scale (Rubin, 1989) which is a combination of Piaget's (1962) classification of play types and Parten's (1932) social participation categories, Old's (1989) guideline for designing play environments for children under three and Ideas Guide for Playgrounds for 0-3 year olds (2018) prepared by Superpool. Besides the evaluation of play spaces and equipment from a technical point of view, particular attention was paid to the role of the parents in the play environment, play interactions and the situations where young children need parental support.

The method used in this section of the study is naturalistic observation which means observing people in their normal settings without any attempt to manipulate their behavior (Papalia & Olds, 1993). During observations, field notes on the behavior and activities of children and their caregivers are taken at the play spaces. The data gathered from observations consists of qualitative visual materials in the form of videos and photographs. To be able to evaluate the play spaces in a systematic way, the characteristics of the play spaces are coded as:



Figure 3.5. Assessment scale for play spaces

To evaluate the outcomes in terms of efficiency and adequacy of play spaces, an assessment scale is formed. This scale (Figure 3.3) consist of 5 categories; 2 of them are evaluated over 8 criteria and 3 are evaluated over 9. The scores are categorized as low (0-3), fair (4-6) and high (7-9).

3.3. Outdoor Play Space 1: Besiktas

Besiktas is one of the oldest districts of Istanbul, located on the European side of the city. Among the selected areas, Besiktas represents the one with high socioeconomic status. There are 77 active green space in total in the district and green space per person is 4,1 m². Additionally, total number of parks is 127, parks with children playground is 81.

During a one-week period, 3 play spaces in Besiktas including Bebek Turkan Sabancı Park, Kurucesme Park and Cemil Topuzlu Park are observed. The results are examined for each play spaces separately in the headings below:

- **Bebek Turkan Sabancı Park**

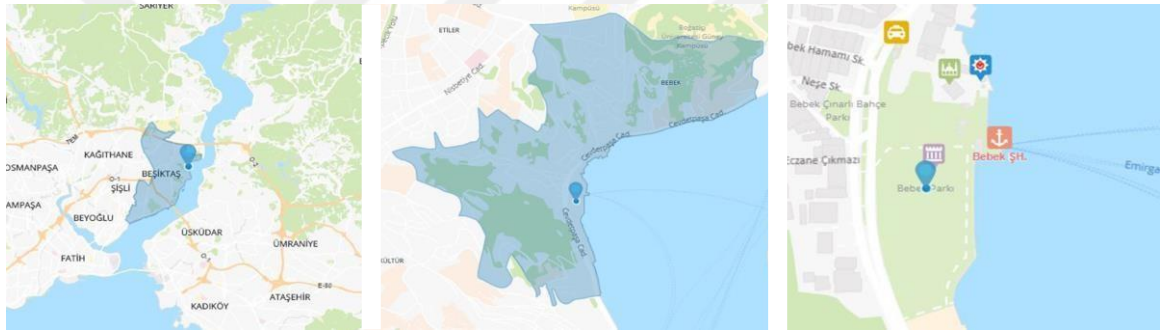


Figure 3.6. Views of the location of Bebek Türkan Sabancı Park in 3 different scales

(Accessed on March 13, 2020 from Google Maps)

Bebek Turkan Sabancı Park was visited and observed for three hours in total, on weekdays and the weekend. Turkan Sabancı Park has been built on a total area of 16.00 m² including 8,800 m² green area, 5,500 m² walkway, 1,000 m² playground and 820 m² dog walk. The play space has modular traditional playground equipment made from plastic and metal and including swings, seesaws, slides, sandbox, and climber and variety is relatively sufficient. While evaluating the park in terms of appropriation for children aged 0-3 (section A in the Figure 3.4.), there are some positive and negative aspects to consider. First, equipment designed to be used by young children have smaller sizes than others, but still not appropriate for infants and toddlers. The play space has a sand box which increases sensory skills and also the mother-baby swing

allows toddler and caregiver to play together in a fun and safe way. On the other hand, the park does not support children to move alone. There is no crawling area, standing supports or paths defined by elevations. The score of the play space for section A is 4 out of 8, means fair. Since the playground has the basic requirements such as seating areas, toilets and fountain and sufficient diversity of play activities, it is evaluated as high in section B. Although the playground lacks several play activities supporting child development, it has a few facilities such as sand box, allowing, private and sensory play. Thus, in section C it is scored as fair. When it comes to caregiver comfort, the score of the park is 3 (D = low). The park is surrounded by metal fences and has a gate that children cannot open easily. This forms a deterrent border between vehicle traffic and play space. However, due to a large number of physical components placed in a narrow space, the park lacks careful zoning and ease of child supervision. So that, in section E it is evaluated as fair (E = fair).

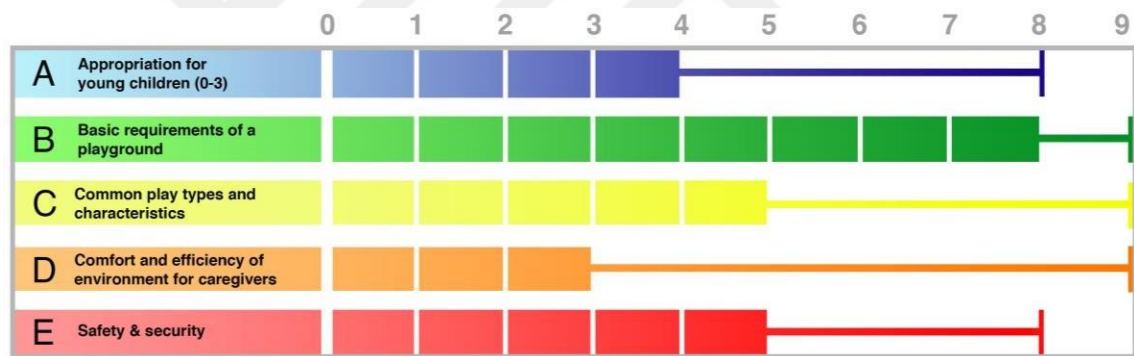


Figure 3.7. Observation results for Türkan Sabancı Park

Besides the evaluation of play spaces and equipment from a technical point of view, particular attention was paid to the role of the parents in the play environment, play interactions and the situations where young children need parental support. In Turkan Sabancı Bebek Park, unlike the majority of playgrounds in Istanbul, there is a mother-baby swing allowing an adult and child interact face to face and eye to eye which enhances the social, emotional and cognitive well-being of both children and adults. One of the most important features of this play structure is that it allows older caregivers to involve in the play too. The park has also traditional swings which young children can only swing with parental support. It is observed that children and parents

spend longer time using the mother-baby swing than the traditional one. After a brief amount of time using the traditional swing, interest in it decreases. Seesaws are one the most problematic equipment which do not allow young children to use it with or without parental support. Climbing and balancing facilities are also designed without considering the youngest. Outside the play space, the park has a large green area which is not connected to the play activities. Since there is no any border between the green space and vehicle traffic, children's contact with natural elements is limited.



Figure 3.8. Iron fence surrounding the play space (18.10.2019, Taken by the author)

When it comes to caregiver needs, it is seen that there is no convenient storage area for baby strollers and parents' belongings. Such items take up space and prevent children from moving freely, and also pose a danger for young children.

- **Cemil Topuzlu Park**

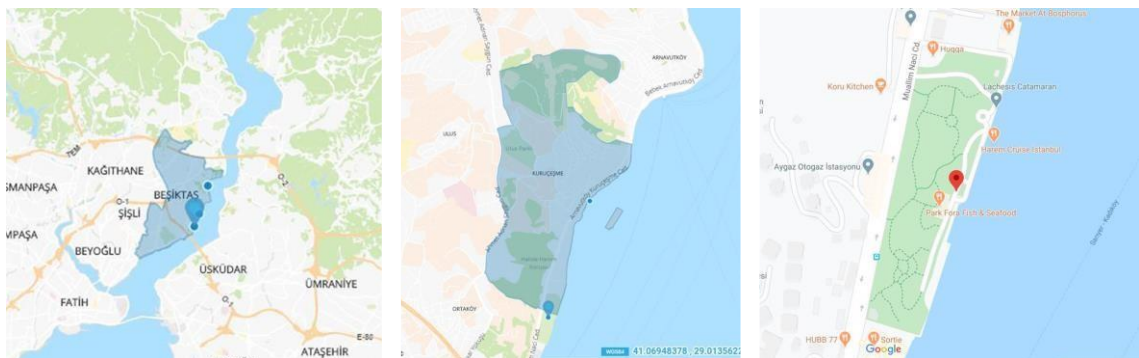


Figure 3.9. Views of the location of Cemil Topuzlu Park in 3 different scales

Cemil Topuzlu Park was visited and observed on 20th September, for 1 hour. The area in total is 30.810.25 m² and has one children playground and two fitness areas for adults.

In the playground, there are two separate zones for different age groups. Young children's play space include a climber, slide and circular elevations that allow unstructured play. In terms of appropriation for children aged 0-3 (section A in the Figure 3.12), the park is evaluated as fair. Although there is equipment designed considering the needs and abilities of young children, it is insufficient in terms of number and diversity. However, regardless of age differences, the park generally has many of the standard features that a park should have. Thus, its score is high in section B, which is basic requirements of a playground.



Figure 3.10. Climber and slide (20.10.2019, Taken by the author)



Figure 3.11. Circular elevations for jumping (20.10.2019, Taken by the author)

Although the park has facilities for jumping and climbing (Figure 3.13 & Figure 3.14) in addition to traditional play equipment, it is not rich enough in play variety. So that the park's score for section C is 4 which corresponds to 'fair'. When it comes to

caregiver comfort, the score of the park is 1 (D = low). One of the biggest deficiencies of the park is that, there is no seating area for adults to observe their children. Additionally, the park is fairly safe and secure. Besides supervision and accessibility issues, it has age-appropriate equipment, even though insufficient in number, carefully zoned play areas and deterrent border between vehicular traffic and play space (E =fair).

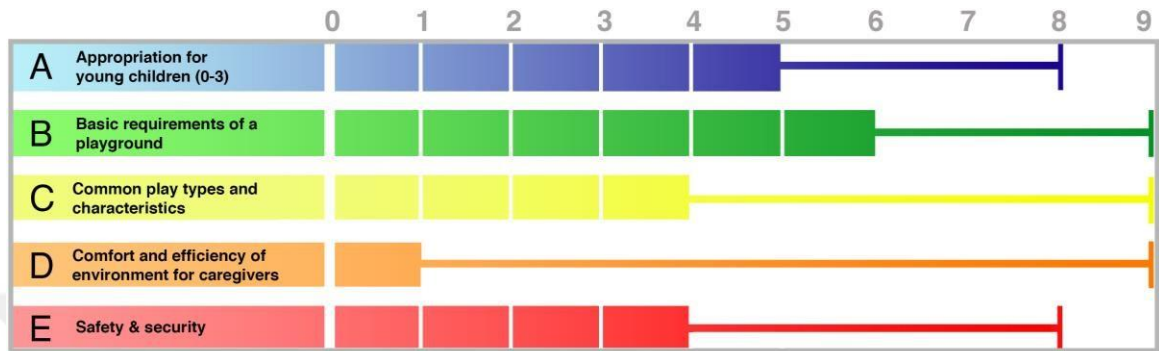


Figure 3.12. Observation results for Cemil Topuzlu Park



Figure 3.13. Non-traditional play equipment for jumping (20.10.2019, Taken by the author)



Figure 3.14. Non-traditional play equipment for climbing (20.10.2019, Taken by the author)

The playground was visited at the weekend and mostly families were observed. During a one hour observation, any of the infants or toddlers were observed in young children's play space. As it can be seen in Figure 3.15 and Figure 3.16, they mostly spend their time in adults' exercise area and using relatively more stable equipment such as spring rider in older children's play space. Parents' opinions on this subject is explained in the interview section.



Figure 3.15. Infants in adults' exercise area (20.10.2019, Taken by the author)



Figure 3.16. Infant using spring rider in old children's play space (20.10.2019, Taken by the author)

- **Kurucesme Park**

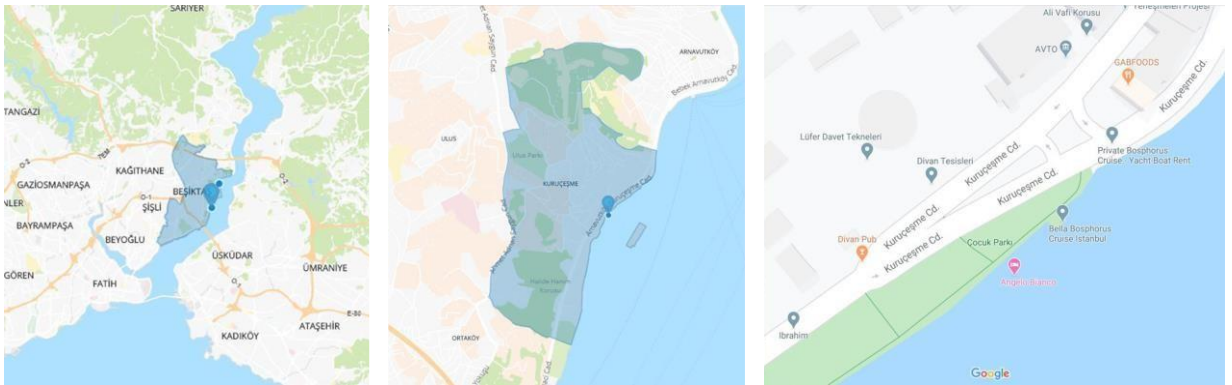


Figure 3.17. Views of the location of Kurucesme Park in 3 different scales

The third play area observed in Besiktas is Kurucesme Park. The park was visited and observed for three hours in total, on weekdays and the weekend. It has been built on a total area of 12.836,09 m² including one play area and one fitness area. The equipment

on the playground is limited to swing and slide sets which do not appeal to young children, and do not include many of the play types that address the developmental skills of infants and toddlers. Since it does not meet any of the requirements in terms of appropriation for young children, it is scored 1 (A = low). On the other hand, the playground has some of the basic requirements such as seating areas, toilets and fountain and green space and plants, so it is evaluated as fair this section (B = fair). In section C, the park is scored low because it only contains 1 of the 10 options (C = low). When it comes to caregiver comfort, it contains 3 out of 9 characteristics in the evaluation criteria which is having shady spots (D = low). The park does not have one of the most important things for the security of a playground which is a deterrent border between traffic and play area. Inside the play area, the park has several problems related with safety such as lack of careful zoning and age appropriate equipment (E = low).

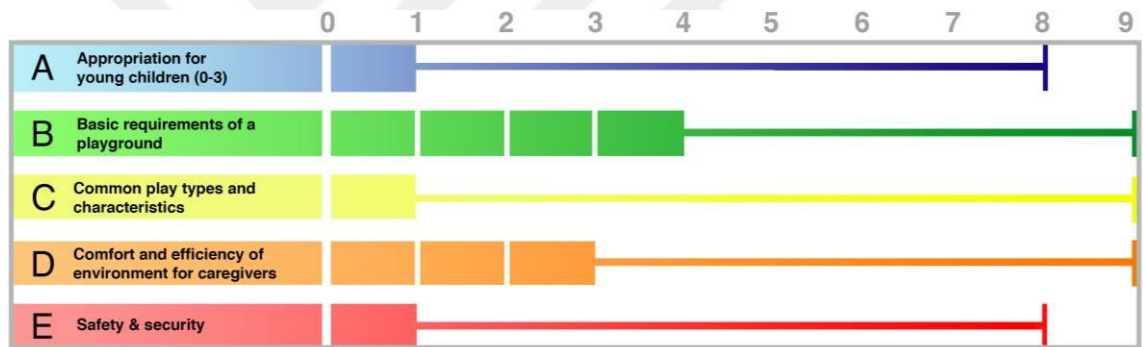


Figure 3.18. Observation results for Kuruçeşme Park



Figure 3.19. Mother supporting her baby in slide (21.10.2019, Taken by the author)



Figure 3.20. Father helping his child to climb (21.10.2019, Taken by the author)

During observations, particular attention was paid to the role of the parents in the play environment, play interactions and the situations where young children need parental support. The park was mostly visited by families; mother-child groups were rarely

observed. As it can be seen in Figure 3.19 and Figure 3.20, the equipment in the park does not allow children under three to play alone. Moreover, an effective parental support cannot be achieved too, because of the form and size of the equipment. Since these limits the time children spent using the equipment, young children's recorded outdoor play time is ranging from 1:37 sec to 5:26 sec. in Kuruçeşme Park. Additionally, some of the children were observed in the exercise area, using the sport equipment with their parents (Figure 3.21).



Figure 3.21. Father and child playing together in the exercise area (21.10.2019, Taken by the author)

3.4. Outdoor Play Space 2: Maltepe

Maltepe represents the site with middle-class status according to the data from Istanbul95 report (2018). There are 151 active green space in total in the district and green space per person is 3,2 m². Additionally, total number of parks is 118, parks with children playground is 55.

In Maltepe 3 play spaces including Küçükyalı Park, Girne Park and Zümrütevler Park are observed. The results are examined for each play spaces separately in the headings below:

- Küçükyalı Park



Figure 3.22. Views of the location of Küçükyalı Park in 3 different scales

Küçükyalı Park or Küçükyalı Sahil Park is the first one among the visited play spaces in Maltepe. The park was visited and observed for three hours in total, on weekdays and the weekend. No information was found on how much space the park occupies. The play space has modular traditional playground equipment made from plastic and metal and including swings, seesaws, slides and a spring rider. It has only a few of the requirements in terms of appropriation for young children such as crawling area and contact with natural elements so that scored 2 (A = low). Although the playground is located close to the hiking and cycling path, functional areas are carefully zoned and separated from the play area so they do not pose a risk for children. On the other hand, the playground does not have most of the basic requirements such as seating areas, accessibility and age appropriate equipment, so its score is 2 for section B (B = low). Since the modular play equipment are located in a large area, there are space allowing free movement and large muscle activities which are the play types contributing physical development of children. So in section C, the park is scored low because it contains 1 of the 10 play space characteristics (C = low). The playground has flat areas where all can be seen at once and paths easy to walk with a young child which needed for caregiver comfort. However it only contains 3 out of 9 characteristics in the evaluation criteria for section D (D = low). When it comes to safety and securtiy, the playground has several problems such as lack of careful zoning and deterrent border between vehicular traffic and play space (E = low).

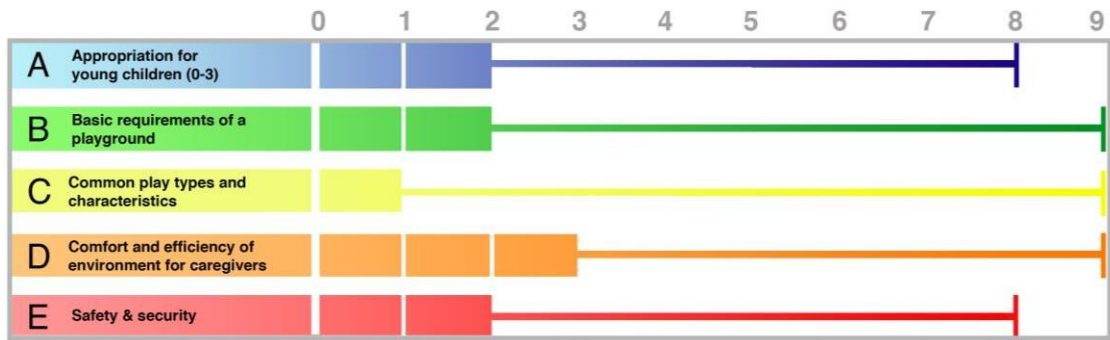


Figure 3.23. Observation results for Küçükyalı Park

The park was mostly visited by mother-child or father-child groups; families were rarely seen. The play space has nothing except traditional play equipment, hence the play diversity and opportunities are limited. In terms of age appropriateness, slides and swings are available in two different sizes yet the smaller ones still do not appeal to infants. Youngest children's outdoor play time is recorded as 3:21 sec in the observation of Küçükyalı Park. On the other hand, the play equipment do not allow an effective parental support or parental involvement. As it can be seen in Figure 24 and Figure 25, the role of the young children's parents has been limited to that of a passive observer in the play environment. Lack of seating in the area makes it more difficult for parents to observe children.

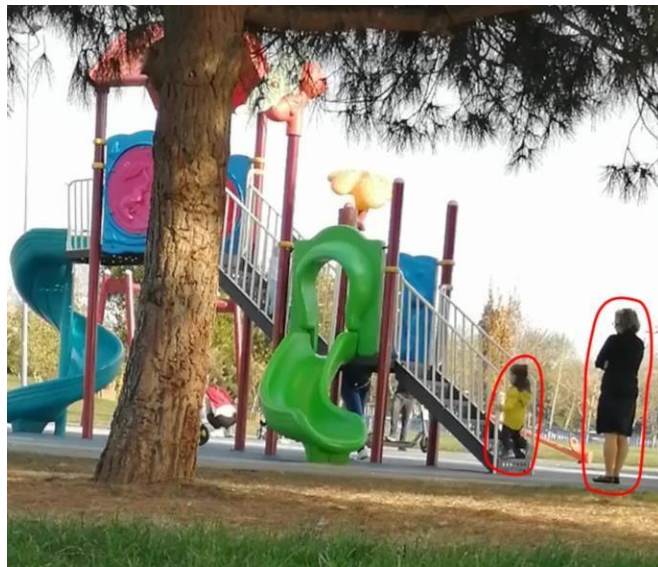


Figure 3.24. Mother observing her child playing (16.11.2019, taken by the author)



Figure 3.25. Grandmother observing her grandchild playing (16.11.2019, taken by the author)

Young children may need parental support in the play area, however existing settings in Küçükyalı Park do not allow an effective parental support. Parents can intervene to the extent allowed by the equipment, and these interventions have no significant contributions to child's play generally (Figure 3.24 & Figure 3.25), sometimes even cause children to behave aggressively. Moreover, lack of storage area for baby strollers, personal belongings, etc. is one of the factors affecting caregiver comfort negatively and also posing a danger in the play space as highlighted in Figure 3.26.



Figure 3.26. Mother helping her baby to slide, and their baby stroller posing a danger in the play space (16.11.2019, taken by the author)

- **Girne Park**

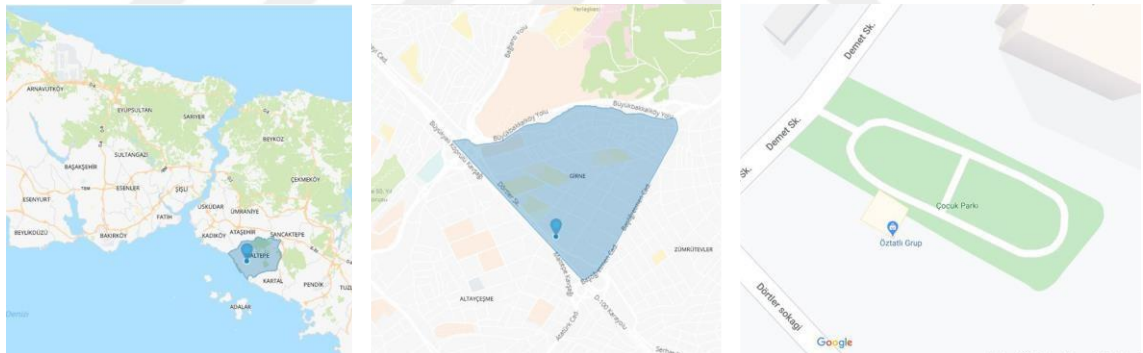


Figure 3.27. Views of the location of Girne Park in 3 different scales

Secondly, Girne Park is visited in Maltepe district. The park has been observed for three hours in total, on weekdays and the weekend. No information was found on how much space the park occupies. The park has 1 playground and 1 fitness area. In the playground, there are two separate zones for different age groups. Besides traditional play equipment the play space has a trampoline which is beneficial for young children’s motor skills. However, among 8 requirements needed for appropriation for young children, it has none (A = low). The park generally has many of the standard features that a park should have. Thus, its scored 4 in section B (B = fair). Although the park has

facilities in addition to traditional play equipment, it is not rich enough in play variety. So that the park's score for section C is 3 which corresponds to 'low'. The park contains 3 out of 9 characteristics in the evaluation criteria for caregiver comfort (D = low). The seating units are located in an appropriate distance to play area that make play supervision easier. The paths allow parents to walk comfortably in the park with a small child and equipment like trampoline allows parental participation in play (Figure 3.29). When it comes to safety and security, there are issues like lack of careful zoning and identified routes to play space. On the other hand, has age-appropriate equipment, even though insufficient in number and deterrent border between vehicular traffic and play space (E =low).



Figure 3.28. Observation results for Girne Park



Figure 3.29. Trampoline that allows parental participation in play

The park was mostly visited by mother-child or father-child groups. In the play area, there is no equipment that allows parents to participate in or support the play except the trampoline. Children find fitness area attractive and use the equipment there with their parents. However, since the fitness equipment designed for the adults they pose a danger for especially young children. Moreover, Figure 3.30 shows that play areas are separated for different age groups but insufficient number and variety of play equipment and causes children to get bored in a short time and switch between playgrounds.



Figure 3.30. Separation of play spaces for different age groups

- **Zumrutevler Park**



Figure 3.31. Views of the location of Zümürteveler Park in 3 different scales

The third park visited in Maltepe site is Zümürtevlcr Park. It was observed for three hours in total, on weekdays and the weekend. No information was found on how much space the park occupies. The park has 1 playground and 1 fitness area. The equipment on the playground is limited to swing and slide sets which do not appeal to young children, and do not include many of the play types that address the developmental skills of infants and toddlers. Since it does not meet any of the requirements in terms of appropriation for young children, it is scored 0 (A = low). On the other hand, the playground does not have most of the basic requirements such as seating area and age appropriate equipment, so its score is 1 for section B (B = fair). The playground has only one of the common play types and characteristics and scored 1 which corresponds to ‘low’ in section C (C = low). When it comes to caregiver comfort, it only contains 1 out of 9 characteristics in the evaluation criteria which is having paths easy to walk with a young child (D = low). Lastly, there are serious safety issues in the playground such as squalid equipment, use of poor quality materials and lack of age appropriate equipment (E = low).

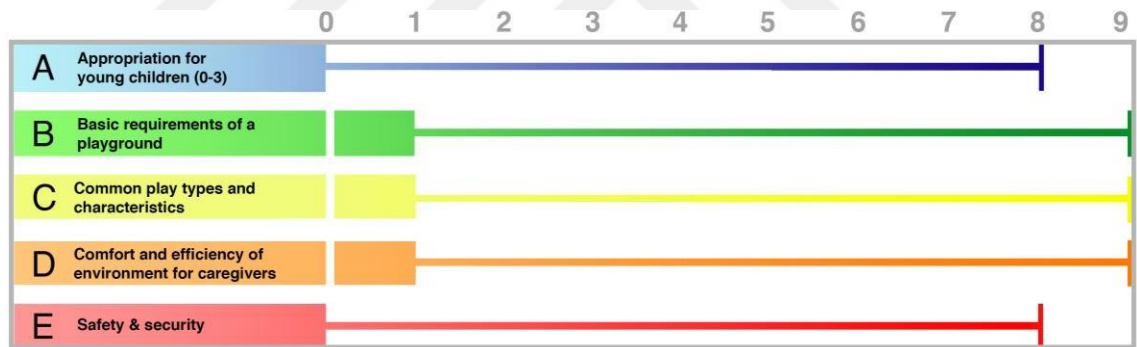


Figure 3.32. Observation results for Zümürtevlcr Park

3.5. Outdoor Play Space 3: Eyüp

Among the selected areas, Eyüp represents the one with low socioeconomic status according to the data from Istanbul95 report. There are 88 active green space in total in the district and green space per person is 2,4 m². No data found about the total number of parks and parks with children playground.

During a one-week period, 3 play spaces in Eyüp including Milli Egemenlik Park, 8 Mayıs Park and Abdülvedüt Park are observed. The results are examined for each play spaces separately in the headings below:

- **Milli Egemenlik Park**



Figure 3.33. Views of the location of Milli Egemenlik Park in 3 different scales

The first park visited in Eyüp is Milli Egemenlik Park (Otağcılar Park). The park was observed for two hours in total, on weekdays and the weekend. It has been built on a total area of 9.971,67 m² including two play areas and two fitness areas. In the park, there are two separate play spaces for different age groups and for this research, the one for smaller children (2-6) was observed. Besides traditional play equipment the play space has a play facility that allows children to engage in dramatic play which is beneficial for children's cognitive and social skills (Figure 3.34). However, among 8 requirements needed for appropriation for young children, it has only one (A = low). The park has many of the standard features that a park should have. Thus, its scored 6 in section B (B = fair). Although the park has facilities encouraging social play and dramatic play, it is not rich enough in play variety. So that the park's score for section C is 5 which corresponds to 'fair' (C = fair). The park contains 3 out of 9 characteristics in the evaluation criteria for caregiver comfort (D = low). The seating units are located in an appropriate distance to play area that make play supervision easier. The paths allow parents to walk comfortably in the park with a small child. On the other hand, the park has several problems related with safety & security. The play space lacks age appropriate equipment. Moreover, since functional areas such as walking and cycling paths are too close to play area and there is no any border between them, it poses a danger for young children (E = fair).

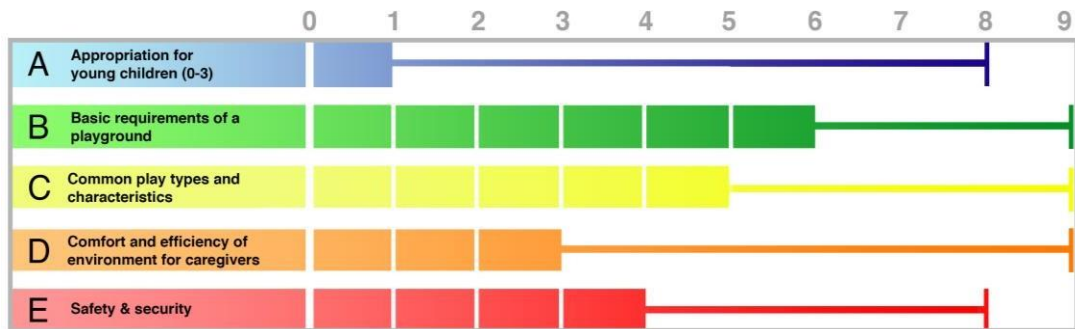


Figure 3.34. Observation results for Milli Egemenlik Park



Figure 3.35. Ship shaped modular equipment (21.11.19, taken by the author)

The park was mostly visited by mother-child groups. Although weather conditions were suitable for playing outdoors, only a few small children could be observed. In the play area, there is no equipment that allows parents to participate in play or offers an effective support. In the park, there are instruction signs for the play (Figure 3.36) and sports equipment which are located by Directorate of European Side Parks and Gardens. The instructions for play equipment include a statement which prohibits the use of equipment without adult control. Since the equipment does not allow parental

involvement in play, it limits the role of parents to passive observers. Although the instruction sign for the use of outdoor sport equipment says that the use of sports equipment under the age of 15 is prohibited, there is no a deterrent border between playground and fitness area.



Figure 3.36. Signs indicating the playground rules (21.11.19, taken by the author)

• 8 Mayıs Park

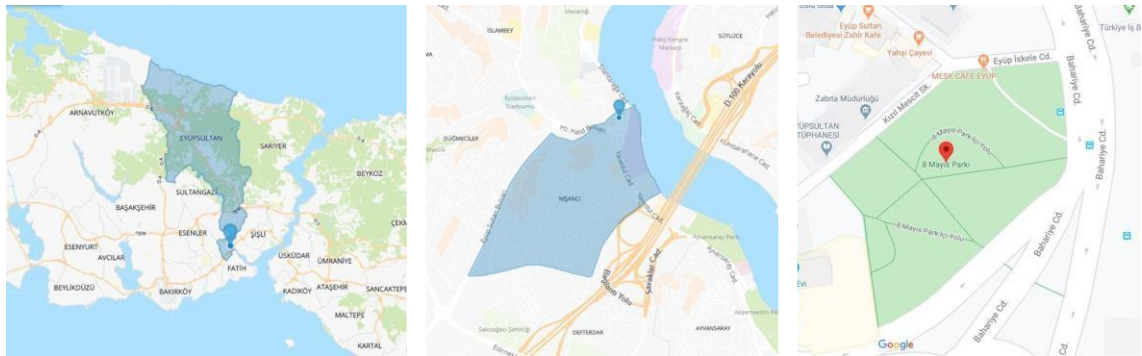


Figure 3.37. Views of the location of 8 Mayıs Park in 3 different scales

The second park visited in Eyüp site is 8 Mayıs Park. It was observed for one hour in total, on weekdays and the weekend. 8 Mayıs Park has been built on a total area of 7.524,12 m². The park has 1 playground. The equipment on the playground is limited to swing and slide sets and a seesaw which do not appeal to young children. It does not include many of the play types that address the developmental skills of infants and

toddlers. Since it only meets one of the requirements in terms of appropriation for young children, which is allowing contact with natural elements, it is scored 1 (A = low). On the other hand, the playground does not have most of the basic requirements such as seating areas, accessibility and age appropriate equipment, so its score is 3 for section B (B = fair). The playground contains only one of the common play types and characteristics and scored 1 which corresponds to ‘low’ in section C (C = low). When it comes to caregiver comfort, it only contains 1 out of 9 characteristics in the evaluation criteria which is having paths easy to walk with a young child (D = low). Lastly, there are serious safety issues in the playground such as squalid equipment, use of poor quality materials and lack of age appropriate equipment (E = low).



Figure 3.38. Observation results for 8 Mayıs Park

The park was only visited by mother-child and grandmother-child groups; no father was seen. It has been built on a narrow space and this limits free movement of children. Moreover, it has a limited number of seating units so that most parents observe their children inside the playground. Since there is no separate zones for different age groups, small and older children could be observed together. While older children can use the equipment alone, it is impossible for young children to play without company of an adult. On the other hand, among three types of play equipment including swing, slide and seesaw, swing is the only one which young children can use. Seesaws are one the most problematic equipment which do not allow young children to use it with or without parental support. Slides also pose a great danger when young children use it with older ones. Although swing is the only possible and safest option for them, after a

brief amount of time using it the interest decreases. As a result, outdoor play time young children spend in 8 Mayıs Park is very limited.

- **Abdulvedut Park**



Figure 3.39. Views of the location of Abdülvedüt Park in 3 different scales

The last park visited in Eyüp is Abdülvedüt Park. The park was observed for one hour in total, on weekdays. It has been built on a total area of 6.471,17 m² including one play area. The play area consists of plastic swing nests, slide set, seesaws and a balance equipment. However, among 8 requirements needed for appropriation for young children, it has only two (A = low) which are allowing contact with natural elements and having crawling area. In terms of appropriation of play equipment for infants and toddlers, any of them are suitable for children aged 0-3. The park does not have many of the standard features that a park should have. Thus, its scored 2 in section B (B = two). Although the park has facilities allowing free movement and addressing large muscle development, it is not rich enough in play variety. So that the park's score for section C is 1 which corresponds to 'low' (C = low). The park does not contain any of the characteristics in the evaluation criteria for caregiver comfort (D = low). The paths allow parents to walk comfortably in the park with a small child. On the other hand, the park has several problems related with safety & security such as squalid equipment, use of poor quality materials and lack of age appropriate equipment. Although the park includes transitional zones, there is still no a deterrent border between vehicular traffic and play area (E = low).

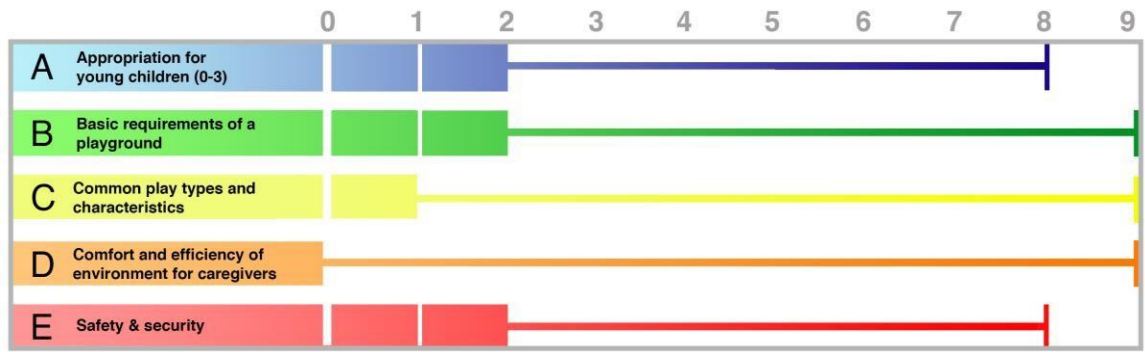


Figure 3.40. Observation results for Abdülvedüt Park

3.6. Results of Observation

Observation results show that outdoor play areas with different design can affect the play types, children's and parent's play preferences and the time they spend in the area. Among the selected areas for field research, Bebek Türkan Sabancı Park has the highest score in overall evaluation. The main reasons for that is it is located on the shore and has walkways which are attractive for both children and parents, the metal fence surrounding the play space and forms a deterrent border between external dangers and playground, and also availability of equipment which support parent's participation in play. The second play area, Cemil Topuzlu Park has also a high score compared to other play areas. It is also located on the shore; however, the walkways are not suitable to walk with a small children or a baby stroller. Moreover, there is not an appropriate distance for supervision between the play equipment and parents' seating area. Those are the negative aspects in terms of comfort and efficiency of environment for caregivers and can affect parents' play space preferences. On the other hand, variety and number of play equipment are sufficient and the play area includes age-appropriate equipment and separated play spaces for different age groups. For these reasons, it has a higher score than most of the parks selected and is one of the more preferred play spaces in general. Kuruçeşme Park received the lowest score among the parks visited in Beşiktaş district. The most important reasons for that are safety problems and lack of play equipment in the play space. There is no a deterrent border between vehicular traffic and the play space, and also functional areas like walkways are not separated from play areas which poses danger for especially young children.

When it comes to the second district visited, Maltepe, it has the lowest score between three districts in general. The first outdoor play area observed in Maltepe is Küçükyalı Sahil Park. This park scored low in all 5 categories. Although the park is located on the shore and has walkways and natural elements around, it lacks some main elements which a play space should have such as seating areas, diverse and sufficient number of play equipment, separation of functional areas from play areas etc. The second play space in the second field research area is Girne Park. Unlike previous play spaces, this one is a neighborhood park and very small and active. It scored highest among three parks observed in Maltepe. The most distinctive and high-score features of this play space are the availability of equipment which facilitate positive peer interaction and environment support parents' participation in play. Moreover, it has a border that separates the play space from vehicular traffic which is one of the other features increasing the score of the park. The last play area in Maltepe, Zümrütevler, is the district with the highest child population in Anatolian side of the city. However, Zümrütevler Park scored the lowest among 9 play spaces. The most important problem seen in the play space is safety and security issues. The park is highly unprotected and play equipment needs maintenance. Moreover, the number and variety of play equipment are not sufficient.

The third outdoor play area of the field research is Eyüp. Milli Egemenlik Park is the first space visited in Eyüp. It is a relatively high scored play space and the most important reason for that is diversity of play activities and play types the park and play equipment involves. For instance, there is a ship shaped modular equipment which allows dramatic play and also fosters peer interaction. Moreover, the park is surrounded with natural elements and large green areas which attract both children and caregivers. The second park observed in Eyüp is 8 Mayıs Park. First of all, this is a very small play space with a few play equipment inside. It also has natural elements like Otağcılar Park but the green area is not connected with the play area and is not available for children and caregivers to use it together or separately. For all these reasons, it has a very low score. When it comes to the last play space, Abdülvedüt Park, it is the least preferred park observed in all play spaces. The main reason for that is its location and the park is

unprotected against external dangers such as vehicular traffic. Besides, it lacks the diversity of play equipment and some main design features of a playground such as seating areas, shady spots, toilet and fountain etc.

To conclude, the parks observed in Beşiktaş have relatively higher scores because of their location and the design features that support both caregiver and children comfort. Beşiktaş is followed by Eyüp, and the most distinctive characteristic of the parks with high score is the relationship between play area and natural elements that appeal children and caregivers. Moreover, it is seen that non-traditional play equipment also attracts children's attention more than standard ones. Maltepe has the lowest score which is caused by the parks having a small number of play equipment and lack the basic requirements of a play space.

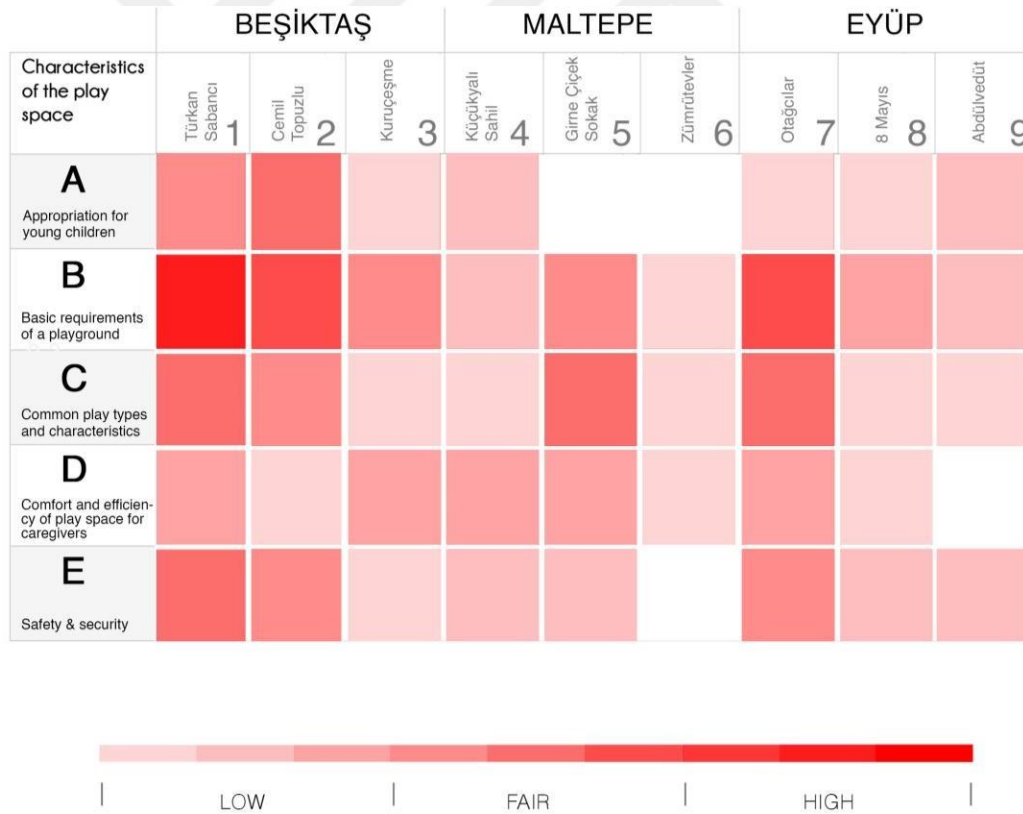


Figure 3.41. Overall evaluation for 9 play spaces

3.7. Results of Interviews

Interviews were conducted with eighteen parents who accompany their children in the play spaces. Two parents were interviewed on each playground visit. Semi-structured interviews lasted between fifteen and thirty minutes on average. The first and second question in the interview aims to find out the frequency and duration of children's outdoor play. According to the results, about 83% of the children in this sample did not have even 1 parent-supervised outdoor play opportunity per day. However, WHO Guidelines on Physical Activity, Sedentary Behavior and Sleep for Children Under 5 Years of Age (2019) suggests minimum 30-minute active play for infants per day and 180-minute for toddlers. For young children, active play includes activities such as walking, crawling, running, jumping, balancing, climbing in, through and over objects, dancing, riding wheeled toys, cycling, jumping rope etc. in which indoor environment is not suitable for the most. Only 3 interviewees among 18 were reported to go outside to play per day and spend 1-2 hours in accordance with the WHO guideline recommendations.

In the third question of the interview, the features a play space must have are asked to the parents in order to understand their needs, wants and expectations. Following questions also aim to find out to what extent parents' expectations match existing circumstances. All participants agreed that easy access by walking, safety and easy supervision are the features play spaces must necessarily have. Seating area (%94), opportunity for parental involvement in play (%89), toilet and fountain (%78), zones to socialize for parents (%78), being comfortable for parents (%72) and being enjoyable for parents (%71) are also other noted facilities. Easy access via public transport (%61) and private vehicle (%50), and shading (%50) are the features relatively fewer mentioned but they still play important roles in effecting parents' outdoor play preferences.

The fifth question is prepared by using the data obtained from literature review and previous observations. It investigates how parents evaluate existing outdoor play settings. Since the interviews were conducted during observation days, the play spaces which the parents evaluated are the ones selected as research areas. 89% of the parents

stated that in existing settings, young children need assistance of an adult during play. Secondly, most of the interviewees agreed that the play spaces do not encourage creativity and exploration (83%). Some parents (39%) noted that play spaces include appropriate zones for different age groups, while only 22% think that playgrounds are suitable for young children. The results reveal that parents are not satisfied with the variety and number of play equipment and also the quality of the material used. When it comes to design of the equipment, only 11% of the interviewee stated that they are satisfied with the design. On the other hand, most of them are happy with the sufficient use of natural elements.

Selection criteria of the research areas were explained in detail in Chapter 2. Based on this, it can be said that sociocultural codes have a high impact on the caregiver profile seen in the play spaces. Among 18 interviewees, 9 mothers, 7 fathers, 1 grandmother and 1 grandfather have been interviewed. It was targeted to get a balanced interviewee profile in order to reach a general conclusion, however, in sites with low socioeconomic status like Eyüp, the caregiver profile is mostly women; mother and grandmother. The reason for interviewing with grandparents less is that they were more afraid of not being able to follow young children and did not want to be interrupted while observing them.

The results of the seventh question show the age of the children whose parents have been interviewed. Among eighteen parents interviewed, half of them have children aged 3, 33% of them aged 2 and 17% aged 1. The results can also be interpreted as age distribution of young children visiting the playgrounds.

In order to evaluate the results of the unstructured part of the interview, coding techniques were used. In the coding process the steps suggested by Tesch (1990, pp. 142-145) are applied. All transcriptions were read carefully and required notes were taken. The topics mentioned in the interviews were noted and related ones were clustered. The most repeated subjects have been highlighted as shown in Figure 3.39.

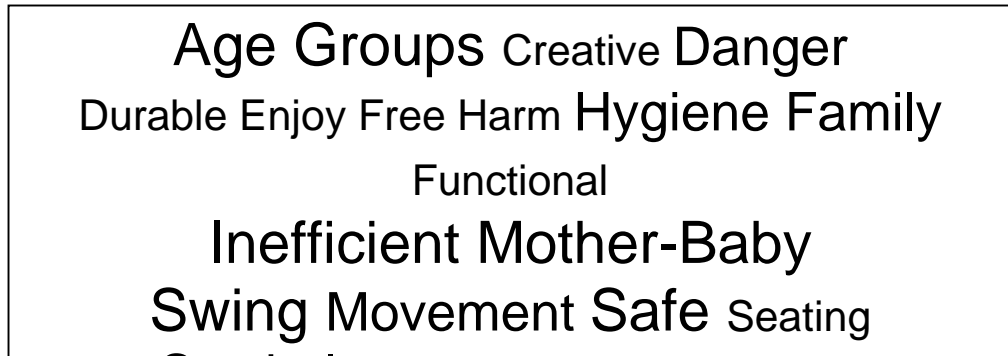


Figure 3.42. Word Cloud representing most repeated keywords during interviews

Lastly, the most descriptive wordings were detected and coded under 4 categories.

1. Age Appropriation

14 parents among 18 stated that existing outdoor play settings do not appeal for young children. Besides, they all agreed that there should be different play zones for different age groups.

“The area should be separated according to age groups and the separation must be indicated by symbols.”

2. Safety

Safety concerns of parents are one of the main barriers to young children’s outdoor play. In the interviews, all parents stressed the issue of safety in existing playgrounds.

“When I had to use the play equipment to help my child during play, I realized how poor-quality products they are. I’ve even seen some parents damage the equipment while playing together with children.”

“I want my children to take off their shoes and play freely in the green area when we come to the park but it is not safe and hygienic.”

3. Equipment Design

When it comes to design of the play equipment, 16 parents among 18 stated that they are not happy with the equipment design in play spaces. 15 of them agreed that the play equipment does not spark curiosity and playfulness among young children.

“There should be more creative equipment, like mother-child swing.”

“The appearance of the equipment is nice but they are not useful. They are done without much thought, in my opinion.”

4. Play Interactions

Parents’ opinions about play interactions with their child are essential for this research. Most of the interviewees noted that existing play facilities limits their play behavior.

“I’m reluctant to come to the playground. I don’t have fun cause my child doesn’t have fun.”

A grandmother also stated that:

“I love spending time with my granddaughter, but I’m tired of chasing her, and I can’t leave her alone because I’m afraid of the possible dangers. I’d like to exercise or walk while she is playing.”

The results of interview reveal that parents are quite aware of the importance of being outdoors and exercising physically. However, they are not satisfied with the provision of play facilities in their neighborhood. Since, frequency and duration of outdoor play in early childhood highly depend on the parents’ preferences, the results show that existing circumstances do not motivate parents for taking their young children to the outdoors.

4. CONCLUSION

This chapter includes a summary of the study, findings and discussions, implications for practice, and recommendations for further research.

According to the findings of this dissertation, there are several barriers to outdoor play in the metropolitan context of Istanbul. Based on the observations and interviews, play spaces in Istanbul are inadequate to meet the needs of children aged 0-3. The main reason to this is that equipment are not age appropriate and not designed considering young children's developmental skills, abilities and inabilities. Most of them do not allow infants and toddlers to play either alone or with parental support.

Parental concerns related with safety and security issues are also among the main barriers to outdoor play. Observation results show that deterrent border between vehicular traffic and play space and separation of functional areas from play area affect playground preferences of parents. Moreover, most of the interviewees stated the importance of careful zoning in the parks such as separation of play space for different age groups.

The third finding is that the play spaces do not have sufficient variety and number of equipment and the play facilities exclude the essential play types and characteristics. For instance, most of the play spaces do not allow children to experience sensory play or dramatic play. Since the metropolitan context of Istanbul offers limited opportunities for young children to contact with outdoor spaces, the time they spend in the play environments are very valuable. However, existing play facilities do not encourage children to think critically, search and discover so after a brief amount of time using the same equipment, interest in it decreases and this reduces the amount of time they spend playing outside.

Moreover, existing outdoor play settings in Istanbul ignores the needs and wants of caregivers. As the basic needs of caregivers such as comfortable seating close to the play area, shading, toilet and fountain etc. are not met, longer stays in play spaces cannot be facilitated. Besides, as mentioned in Chapter 2, play interactions between

children and parents are important for healthy brain development. However, the results show that play equipment in Istanbul are not parent-inclusive in terms of supporting the play, helping or playing together.

Lastly, there is no regulations or legislations about play space design in Istanbul. Thus, in the creation of play spaces, environmental characteristics are ignored. Since the full potential of the environment is not used, duration and quality of time parents and children spend in parks are affected negatively.

Even though more research is needed to substantiate the links between parental involvement in the play environment and encouragement of outdoor play, it appears that, in general, an understanding of the significance of outdoor play and a valuing of parent-child play are related to greater developmental skills of young children.

4.1. Implications for Practice: A New Design Approach for Encouraging Outdoor Play

Ware and Cavanagh (1992) says that, “A public building or space designed with the needs of caregivers and children in mind reflects positive attitudes towards children generally”. However, according to field research outcomes, the outdoor play spaces in Istanbul are generally designed without taking into account the needs of young children and their caregivers. Findings show the most seen and repeated barriers to outdoor play in the metropolitan context of Istanbul. This dissertation aims to contribute to disposal of those barriers through a new design approach. Following principles focuses on the improvement of outdoor play spaces in Istanbul through parental involvement in the play environment in order to allow young children to spend more time playing outside.

I. Designing play space or equipment with the consideration of:

- Parent-child play styles

Russell and Saebel (1997) classified parent-child play styles in three different categories: facilitator style, director style, and co-player style. Because of the technical barriers, parent-child play interactions are restricted and parents’ role in the play space

is reduced to passive observer. Thus, play environments can be redesigned considering those play styles and parents' role can be changed to the 'active player'.

In the metropolitan context of Istanbul, it is observed that parent-child play styles are also affected by socio-cultural factors. In the nine different play spaces, several play interactions are noted. For instance, Bebek and Eyüp represent two research field profile that are completely opposite of each other. In Bebek, Türkan Sabancı Park is built on the coastline, there are long walkways, many cafes and restaurants around, and also a play space with good conditions. Due to all these features, it is a park not only used by the district residents but also many guests from outside. However, the available data allows to draw a general framework about the playground user profile. This user group is generally educated and conscious about child development and importance of outdoor play. For this reason, this is the park where the 0-3 age group is seen most during the observations. In parallel, parents observed in this park are more likely to be involved in the play as co-players. On the other hand, parks in Eyüp such as 8 Mayıs Park or Abdülvedüt Park are the play spaces where parents are not involved in the play and their role in the play environment is 'director of the play', mostly. Thus, it is important to consider that designing a play equipment which a parent and child can use together may not be an effective solution alone, in such cases in Istanbul. It requires deeper knowledge about the playground user profile and socio-cultural factors that affect parent-child play interactions, and design solutions to motivate parents to be involved in the play as an active player.

- Play types

Play in childhood takes specific forms, each of which contributes to child development in significant ways. According to field research results, play spaces in Istanbul mostly lack the diversity of play activities. Some of the play types like scientific play and language play are not seen in any of the observed areas. Absence of product designers working on playground and play equipment design in IBB Directorate of Parks and Gardens and the use of standard modular playground equipment in most parks is one the most important reasons of this problem. Play spaces should be designed with the

knowledge of play types and their contributions to the development of different age groups. While designing for 0-3 age group, it is important to pay attention to developmental milestones in this age range and their capabilities.

- **Age-appropriation and developmental needs**

With reference to the scope of the research, it is important to pay attention to the stages of development seen in this process. None of the parks observed has a high score in terms of age-appropriation (0-3). This is because, most of the parks include standard, traditional play equipment and they generally appeal to children between 4 and 9. This situation forms a strong barrier to outdoor play in early childhood and limits the duration of play. So that, play environments designed with the new design approach should involve the consideration of age differences and developmental needs of young children.

II. Fostering sociability among caregivers

- **Through play**

Field research results and also the data coming from literature review show that playgrounds are also social sites for parents. In addition to observing, supporting and assisting play activities, parents may also be an active player in the play space. Adults play for their mental and physical stimulation, and also to make connections and meanings. Adult play includes sport and physical activity of all kinds. It represents a physical challenge, risk and danger, and are mostly individual. It may also include playing in a team, an aesthetic element taking pleasure through physical exercise. More specifically, walking, dancing, gymnastic, aerobics, running, working out are some of the play activities adults may take part in. Thus, play equipment that foster sociability has potential to motivate parents to go outdoors more often.

- **Through non-play activities**

It is clear that these spaces are not only for children, are actually a rich community resource. Both passive and active spaces are important in a play environment so that the new design approaches shall focus on blurring the boundaries between play and park.

There are several non-play activities that constitute a significant amount of the time parents and children spend in the play space. Eating, meditating, resting, reading, observing their children, baby care, etc. are some of the caregiver activities of which their availability highly affects the frequency and duration of outdoor play time. Both observation and interview results show that playgrounds near the coastline, have natural elements or cafes restaurants around are more preferred by parents.

Moreover, neighborhood playgrounds in Istanbul, such as Girne Park in Maltepe, serve as meeting points for parents. When a play space allows parents to socialize, share their knowledge and experiences, and help each other, the act of ‘taking a child to the playground’ may turn into ‘going to the playground with a child’.

III. Considering environmental characteristics

Because of rapid urbanization, location of play areas varies a lot in Istanbul. It may be on the coastline, in a neighborhood, business district, a larger public park or a busy street of the city. However, most of the time, the differences that can be caused by environmental factors are ignored and standard, traditional play equipment consisting of slide, swing and seesaw are built in a park in Istanbul.

Designing play environments considering environmental features requires to be knowledgeable about the place, climate, culture, natural elements, daily relationships of users with the environment, etc. For instance, water play is known as essential for supporting both large and small motor development in early childhood, and also may be signifying the relationship between the city and water. This design principle allows the most effective use of the existing environment, and also can enable children to learn more about their neighborhood. When spaces are used and experienced in a meaningful way, a sense of place may occur for both children and parents.

Istanbul has a special position in the country, in terms of climate and geography. Due to the size of the city, its topographic structure and the coast to the two different seas in the north and south directions, different microclimates are seen in the city. For instance, each district selected for the field research has a different microclimate. Beşiktaş is located in the temperate sub-tropical climate area, Maltepe; in the Mediterranean climate area, and Eyüp has temperate subtropical climate, along with the oceanic climate. Therefore, the amount of precipitation, sunlight and wind may differ from district to district within the boundaries of Istanbul. In the Bosphorus shores which are included in the temperate subtropical and oceanic climate area, rains much more than the southern parts of the city overlooking the Sea of Marmara which are in the Mediterranean climate area (Finlayson, McMahon, 2007). Whether conditions highly affect outdoor play experience and also parents' play space preferences. Parents interviewed in Maltepe Küçükyalı Park stated that they do not prefer to come to the park in the winter due to the weather conditions, especially the high winds, which make it difficult to play in the park. Thus, a play space designer should have a knowledge about the climate of the environment and develop solutions like sheltering, wind and rain protection, use of durable materials or, new approaches to turn bad conditions into advantages.

Another environmental factor that is specific to Istanbul is that it has a rich natural life thanks to its special location in terms of climate and geography. 2500 plant species live in Istanbul and 10 of these plants are endemic only to this city (Tuncay, Akalın-Urusak, 2018). Natural elements make outdoor play spaces sensory-rich environments. Istanbul's plants can be inspiration sources in the play space design process and also be used to enrich outdoor play environments and teach children this rich natural life of Istanbul.

IV. Integrating outdoor play area into daily patterns and activities

There is a wide variety of factors that affect individual activity patterns. Socio-economic status is one of the more important ones which is also one of the criteria used

in the selection of field research areas. The daily activities of a family with high income and high education, where both parents work are different than the daily activities of an uneducated family with low income where only the father works.

Existing urban settings of Istanbul creates challenges for working parents to find opportunities for play and leisure. Thus, it requires an extra effort to make playgrounds a part of everyday experiences and include in daily routines.

The neighborhoods with different socioeconomic status have even different park visiting hours and caregiver profiles. In Bebek Park, the person who has a caregiver role in the park during the weekdays, working hours is mostly the baby sitters. However, in Eyüp Milli Egemenlik Park, it is unemployed mothers and grandmothers. All these caregiver profiles have different daily activity patterns. An unemployed mother with more than one child can have a routine like taking her young child to the park in the morning after leaving her older child to school. On the other hand, daily routine of a family where both mother and father work can be like the father playing in the playground with the child while the mother is walking their dog, after work.

Regardless of the socio-economic status, observation and interview results show that parents enjoy exercising while their children play. Based on this information, it can be claimed that sport facilities have potential to motivate parents to go outdoors more often. However, it is observed that parents prefer to exercise in the neighborhood parks rather than the parks located on the coast or have a more central position. Coastal parks are visited on weekends mostly, for walking, running, having contact with natural elements and the sea.

V. Increasing efficiency of environment for caregiver comfort

Outdoor play frequency and duration of children is highly dependent on parents' preferences. Thus, it is important to determine caregiver behaviors desired, as much as children, and suggest the ways that the design can support them. Interview results show that one of the biggest barriers to outdoor play caused by the metropolitan context of

Istanbul is parental concerns related with safety and security. However, field research findings point that there are ways to remove this barrier; such as creating a deterrent border between vehicular traffic and play space, appropriate distance for supervision during play and separation of functional areas from young children's play area.

As discussed in throughout the chapters of the dissertation, due to the rapid urbanization, the parks in Istanbul are far away from the majority of residential areas, which results in lack of access to outdoor play. Thus, parents who travel long distances to take their children to the park, have to take baby stroller, baby care products, and food or personal belongings with them. However, observations held on 9 different play areas also showed the general problems seen in the play environment affecting caregiver comfort in negative ways. Lack of convenient storage areas for the stuffs of caregiver and children limits the duration of outdoor play. Moreover, walkways which are not easy to walk with a young children or baby stroller are another challenging issue seen commonly in play spaces. In order to encourage outdoor play for young children, this kind of barriers that distract caregivers should be removed and efficiency of environment should be increased for their comfort.

4.2. Recommendations and Suggestions for Further Research

In this research, 9 playgrounds from 3 different districts of Istanbul were selected and analyzed. The selected play spaces were examined in terms of adequacy for young children and their parents. The novelty of this study is to stress the role of parents in encouraging outdoor play and evaluate them not only as observers but also players and active users of play spaces. However, since play behaviors depend on what the equipment offers, inadequacy of existing play equipment limited the study. In order to carry this research forward, it is necessary to increase and improve the components of the play environments.

More research is needed to examine the play environment as a total concept from micro scale to macro scale and to examine all the individual choices of children and parents. Participatory methods can be useful to hear the individual voices in detail and to

develop new design strategies. If the research takes place over a wider period, more data can be collected and this limitation can be avoided. In addition, more comprehensive data can be obtained by increasing the number of participants with more children and parents for future study.

Further research on this topic could also involve inclusive design and ecological approach, which is leading a designer to a new, larger in sight of human centered design.



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APPENDIX A

A.1 Observation Sheets

Characteristics of the play space	1.Türkan Sabancı Bebek Parkı	2.Cemil Topuzlu Parkı	3.Kuruçeşme Parkı	1.Küçükyalı Sahil Parkı	2.Çiçek sokağı Girne parkı	3.Zümrütevler parkı	1.Milli Egemenlik Parkı	2.8 Mayıs Parkı	3.Abdülvedüt Parkı
A	4/8	5/8	1/8	2/8	0/8	0/8	1/8	1/8	2/8
B	8/9	6/9	4/9	2/9	4/9	1/9	6/9	3/9	2/9
C	5/9	4/9	1/9	1/9	5/10	1/9	5/9	1/9	1/9
D	3/9	1/9	3/9	3/9	3/9	1/9	3/9	1/9	0/9
E	5/8	4/8	1/8	2/8	2/8	0/9	4/8	2/8	2/8

1. Türkan Sabancı Bebek Park

A		B		C		D		E	
Standing support	X	Age-appropriate equipment and separated playspaces for different age groups	√	Gross motor skills	√	Shady spots	X	Well maintained equipment	√
Paths defined by elevations	X	Seating areas	√	Fine motor skills	√	Flat areas where all can be seen at once	X	Deterrent border between vehicular traffic and play space	√
Resting opportunities	X	Toilets and fountain	√	Psychomotor skills	√	Comfortable adult furniture	X	Transitional zone/ front porch	√
Crawling area	√	Opportunity for risky play	√	Scientific play	X	Zones to socialize	X	Careful use of surface materials and surfaces	X
Many rooms in a space	√	Diversity of play activities	√	Creative play	√	Appropriate distance for supervision	√	Identified routes to play space	X
Contact with natural elements	√	Green space & plants	√	Risky play	X	Convenient outdoor storage	X	Protection against pollution at 95cm eye-level	√
Opportunities to observe surroundings (95cm eye level)	X	Ability to access the place with multiple modes of transportation	√	Sensory play (hangi senseler olduğundan bahset)	√	Environment support participation in play	√	Age appropriate equipment design	√
Stimulating built environment	√	Equipment facilitate positive peer-interaction	X	Dramatic play	X	Space for baby care	X	Climatic comfort	X
		Functional areas separated from activity areas	√	Linguistic play	X	Walkability with children stroller	√		

2. Cemil Topuzlu Park

A		B		C		D		E	
Standing support	√	Age-appropriate equipment and separated playspaces for different age groups	√	Gross motor skills	√	Shady spots	√	Well maintained equipment	√
Paths defined by elevations	X	Seating areas	√	Fine motor skills	√	Flat areas where all can be seen at once	X	Deterrent border between vehicular traffic and play space	√
Resting opportunities	X	Toilets and fountain	√	Psychomotor skills	√	Comfortable adult furniture	X	Transitional zone/ front porch	√
Crawling area	√	Opportunity for risky play	√	Scientific play	X	Zones to socialize	X	Careful use of surface materials and surfaces	X
Many rooms in a space	√	Diversity of play activities	√	Creative play	X	Appropriate distance for supervision	X	Identified routes to play space	X
Contact with natural elements	√	Green space & plants	√	Risky play	√	Convenient outdoor storage	X	Protection against pollution at 95cm eye-level	X
Opportunities to observe surroundings (95cm eye level)	√	Ability to access the place with multiple modes of transportation	X	Sensory play (hangi senseler olduğundan bahset)	X	Environment support participation in play	X	Age appropriate equipment design	√
Stimulating built environment	X	Equipment facilitate positive peer-interaction	X	Dramatic play	X	Space for baby care	X	Climatic comfort	X
		Functional areas separated from activity	X	Linguistic play	X	Walkability with children stroller	X		

		areas							
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3. Kuruçeşme Parkı

	A	B	C	D	E				
Standing support	X	Age-appropriate equipment and separated playspaces for different age groups	X	Gross motor skills	√	Shady spots	√	Well maintained equipment	√
Paths defined by elevations	X	Seating areas	√	Fine motor skills	X	Flat areas where all can be seen at once	X	Deterrent border between vehicular traffic and play space	X
Resting opportunities	X	Toilets and fountain	√	Psychomotor skills	X	Comfortable adult furniture	X	Transitional zone/ front porch	X
Crawling area	X	Opportunity for risky play	X	Scientific play	X	Zones to socialize	X	Careful use of surface materials and surfaces	X
Many rooms in a space	X	Diversity of play activities	X	Creative play	X	Appropriate distance for supervision	√	Identified routes to play space	X
Contact with natural elements	√	Green space & plants	√	Risky play	X	Convenient outdoor storage	X	Protection against pollution at 95cm eye-level	X
Opportunities to observe surroundings (95cm eye level)	X	Ability to access the place with multiple modes of transportation	√	Sensory play (hangi senseler olduğundan bahset)	X	Environment support participation in play	X	Age appropriate equipment design	X

Stimulating built environment	X	Equipment facilitate positive peer-interaction	X	Dramatic play	X	Space for baby care	X	Climatic comfort	X
		Functional areas separated from activity areas	X	Linguistic play	X	Walkability with children stroller	√		

1. Küçükyaılı Sahil Park

A		B		C		D		E	
Standing support	X	Age-appropriate equipment and separated playspaces for different age groups	X	Gross motor skills	√	Shady spots	X	Well maintained equipment	√
Paths defined by elevations	X	Seating areas	X	Fine motor skills	X	Flat areas where all can be seen at once	√	Deterrent border between vehicular traffic and play space	X
Resting opportunities	X	Toilets and fountain	√	Psychomotor skills	X	Comfortable adult furniture	X	Transitional zone/ front porch	√
Crawling area	√	Opportunity for risky play	X	Scientific play	X	Zones to socialize	X	Careful use of surface materials and surfaces	X
Many rooms in a space	X	Diversity of play activities	X	Creative play	X	Appropriate distance for supervision	X	Identified routes to play space	X
Contact with natural elements	√	Green space & plants	√	Risky play	X	Convenient outdoor storage	X	Protection against pollution at 95cm eye-level	X
Opportunities to observe surroundings (95cm eye level)	X	Ability to access the place with multiple	X	Sensory play (hangi senseler olduğundan bahset)	X	Environment support participation in play	√	Age appropriate equipment design	X

		modes of transportation							
Stimulating built environment	X	Equipment facilitate positive peer-interaction	X	Dramatic play	X	Space for baby care	X	Climatic comfort	X
		Functional areas separated from activity areas	X	Linguistic play	X	Walkability with children stroller	√		

2. Girne Mahallesi Çocuk Parkı

A		B		C		D		E	
Standing support	X	Age-appropriate equipment and separated playspaces for different age groups	√	Gross motor skills	√	Shady spots	X	Well maintained equipment	√
Paths defined by elevations	X	Seating areas	√	Fine motor skills	X	Flat areas where all can be seen at once	X	Deterrent border between vehicular traffic and play space	√
Resting opportunities	X	Toilets and fountain	X	Psychomotor skills	√	Comfortable adult furniture	X	Transitional zone/ front porch	X
Crawling area	X	Opportunity for risky play	√	Scientific play	X	Zones to socialize	X	Careful use of surface materials and surfaces	X
Many rooms in a space	X	Diversity of play activities	X	Creative play	X	Appropriate distance for supervision	√	Identified routes to play space	X

Contact with natural elements	X	Greenspace & plants	X	Risky play	√	Convenient outdoor storage	X	Protection against pollution at 95cm eye-level	X
Opportunities to observe surroundings (95cm eye level)	X	Ability to access the place with multiple modes of transportation	X	Sensory play (hangi senseler olduğundan bahset)	X	Environment support participation in play	√	Age appropriate equipment design	X
Stimulating built environment	X	Equipment facilitate positive peer-interaction	X	Dramatic play	X	Space for baby care	X	Climatic comfort	X
		Functional areas separated from activity areas	√	Linguistic play	X	Walkability with children stroller	√		

3. Zümrütevler Çocuk Parkı

	A	B	C	D	E				
Standing support	X	Age-appropriate equipment and separated playspaces for different age groups	X	Gross motor skills	√	Shady spots	X	Well maintained equipment	X
Paths defined by elevations	X	Seating areas	√	Fine motor skills	X	Flat areas where all can be seen at once	X	Deterrent border between vehicular traffic and play space	X
Resting opportunities	X	Toilets and fountain	X	Psychomotor skills	X	Comfortable adult furniture	X	Transitional zone/ front porch	X

Crawling area	X	Opportunity for risky play	X	Scientific play	X	Zones to socialize	X	Careful use of surface materials and surfaces	X
Many rooms in a space	X	Diversity of play activities	X	Creative play	X	Appropriate distance for supervision	X	Identified routes to play space	X
Contact with natural elements	X	Greenspace & plants	X	Risky play	X	Convenient outdoor storage	X	Protection against pollution at 95cm eye-level	X
Opportunities to observe surroundings (95cm eye level)	X	Ability to access the place with multiple modes of transportation	X	Sensory play (hangi senseler olduğundan bahset)	X	Environment support participation in play	X	Age appropriate equipment design	X
Stimulating built environment	X	Equipment facilitate positive peer-interaction	X	Dramatic play	X	Space for baby care	X	Climatic comfort	X
		Functional areas separated from activity areas	X	Linguistic play	X	Walkability with children stroller	√		

1.Otağcılar Parkı

A	B	C	D	E					
Standing support	X	Age-appropriate equipment and separated play spaces for different age groups	√	Gross motor skills	√	Shady spots	X	Well maintained equipment	√
Paths defined by elevations	X	Seating areas	√	Fine motor skills	√	Flat areas where all can be seen at once	X	Deterrent border between vehicular traffic and play space	√

Resting opportunities	X	Toilets and fountain	X	Psychomotor skills	√	Comfortable adult furniture	X	Transitional zone/ front porch	√
Crawling area	X	Opportunity for risky play	√	Scientific play	X	Zones to socialize	X	Careful use of surface materials and surfaces	X
Many rooms in a space	X	Diversity of play activities	X	Creative play	√	Appropriate distance for supervision	√	Identified routes to play space	X
Contact with natural elements	√	Green space & plants	√	Risky play	X	Convenient outdoor storage	X	Protection against pollution at 95cm eye-level	X
Opportunities to observe surroundings (95cm eye level)	X	Ability to access the place with multiple modes of transportation	√	Sensory play (hangi senseler olduğundan bahset)	√	Environment support participation in play	√	Age appropriate equipment design	√
Stimulating built environment	X	Equipment facilitate positive peer-interaction	√	Dramatic play	X	Space for baby care	X	Climatic comfort	X
		Functional areas separated from activity areas	X	Linguistic play	X	Walkability with children stroller	√		

2.8 Mayıs Parkı

	A	B	C	D	E				
Standing support	X	Age-appropriate equipment and separated play spaces for different age groups	X	Gross motor skills	√	Shady spots	X	Well maintained equipment	√
Paths defined by elevations	X	Seating areas	√	Fine motor skills	X	Flat areas where all can be seen at once	X	Deterrent border between vehicular	X

								traffic and play space	
Resting opportunities	X	Toilets and fountain	X	Psychomotor skills	X	Comfortable adult furniture	X	Transitional zone/ front porch	√
Crawling area	X	Opportunity for risky play	X	Scientific play	X	Zones to socialize	X	Careful use of surface materials and surfaces	X
Many rooms in a space	X	Diversity of play activities	X	Creative play	X	Appropriate distance for supervision	X	Identified routes to play space	X
Contact with natural elements	√	Greenspace & plants	√	Risky play	X	Convenient outdoor storage	X	Protection against pollution at 95cm eye-level	X
Opportunities to observe surroundings (95cm eye level)	X	Ability to access the place with multiple modes of transportation	√	Sensory play (hangi senseler olduğundan bahset)	X	Environment support participation in play	X	Age appropriate equipment design	X
Stimulating built environment	X	Equipment facilitate positive peer-interaction	X	Dramatic play	X	Space for baby care	X	Climatic comfort	X
		Functional areas separated from activity areas	X	Linguistic play	X	Walkability with children stroller	√		

3.Abdülvedüt Parkı

A	B	C	D	E					
Standing support	X	Age-appropriate equipment and separated play spaces for different age groups	X	Gross motor skills	√	Shady spots	X	Well maintained equipment	√

Paths defined by elevations	X	Seating areas	X	Fine motor skills	X	Flat areas where all can be seen at once	X	Deterrent border between vehicular traffic and play space	X
Resting opportunities	X	Toilets and fountain	X	Psychomotor skills	X	Comfortable adult furniture	X	Transitional zone/ front porch	√
Crawling area	√	Opportunity for risky play	X	Scientific play	X	Zones to socialize	X	Careful use of surface materials and surfaces	X
Many rooms in a space	X	Diversity of play activities	X	Creative play	X	Appropriate distance for supervision	X	Identified routes to play space	X
Contact with natural elements	√	Green space & plants	√	Risky play	X	Convenient outdoor storage	X	Protection against pollution at 95cm eye-level	X
Opportunities to observe surroundings (95cm eye level)	X	Ability to access the place with multiple modes of transportation	X	Sensory play (hangi senseler olduğundan bahset)	X	Environment support participation in play	X	Age appropriate equipment design	X
Stimulating built environment	X	Equipment facilitate positive peer-interaction	X	Dramatic play	X	Space for baby care	X	Climatic comfort	X
		Functional areas separated from activity areas	√	Linguistic play	X	Walkability with children stroller	X		

A.2 Interview Questions

1. Oyun parklarına ne sıklıkta gidiyorsunuz?

- Her gün
- Haftada birkaç kez
- Ayda birkaç kez
- Hiç
- Diğer (lütfen belirtin)

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2. Parkta ne kadar vakit geçiriyorsunuz?

- 2 saatten fazla
- 1-2 saat
- 30 dakika- 1 saat
- 30 dakikadan az
- Hiç
- Diğer (lütfen belirtin)

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3. Aşağıdakilerden hangileri bir oyun alanında mutlaka olmalıdır?

- Oyun toplu taşıma ile ulaşım kolay olmalı
- Oyun alanına özel aracım ile ulaşım kolay olmalı
- Oyun alanına yürüyerek ulaşım kolay olmalı
- Güvenli olmalı
- Benim için konforlu olmalı
- Benim için sosyal bir alan olmalı

- Benim için eğlenceli bir alan olmalı
- Tuvalet ve çeşme olmalı
- Gölgeleme olmalı
- Oturma alanı olmalı
- Park koşulları benim de oyuna dahil olmama izin vermeli
- Çocuğum oynarken rahatça izleyebilmeliyim
- Diğer (lütfen belirtin)

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4. Bulduğunuz oyun alanına sıklıkla geliyor musunuz?

- Evet
- Hayır
- Diğer (lütfen belirtin)

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5. Bulduğunuz oyun alanı için aşağıdakilerden hangileri uygundur?

- 0-3 yaş için uygun
- Farklı yaş grupları için uygun alanlar var
- Oyun ekipmanlarında kaliteli malzeme kullanılmış
- Oyun ekipmanlarının çeşidi yeterli
- Oyun ekipmanlarının sayısı yeterli
- Oyun alanının düzenlenmesinde doğal elemanlar yeterince kullanılmış
- Oyun ekipmanlarının tasarımını beğeniyorum
- Çocuğum oyun alanında yalnız oynayabiliyor
- Çocuğum oyun alanında oynarken birine / bir yetişkine ihtiyaç duyuyor

- Oyun alanı yaratıcılığı, keşfetmeyi, araştırmayı teşvik ediyor
- Oyun alanında çocuğumun başarıma duygusunu yaşadığını, oynadıkça cesaret ve motivasyonunun arttığını gözlemliyorum
- Diğer (lütfen belirtin)

.....

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6. Çocuğa olan yakınlığınız nedir?

- Anne
- Baba
- Büyükanne
- Büyükbaba
- Büyük kardeş (abla)
- Büyük kardeş (ağabey)
- Komşu
- Bakıcı
- Diğer (lütfen belirtin)

.....

.....

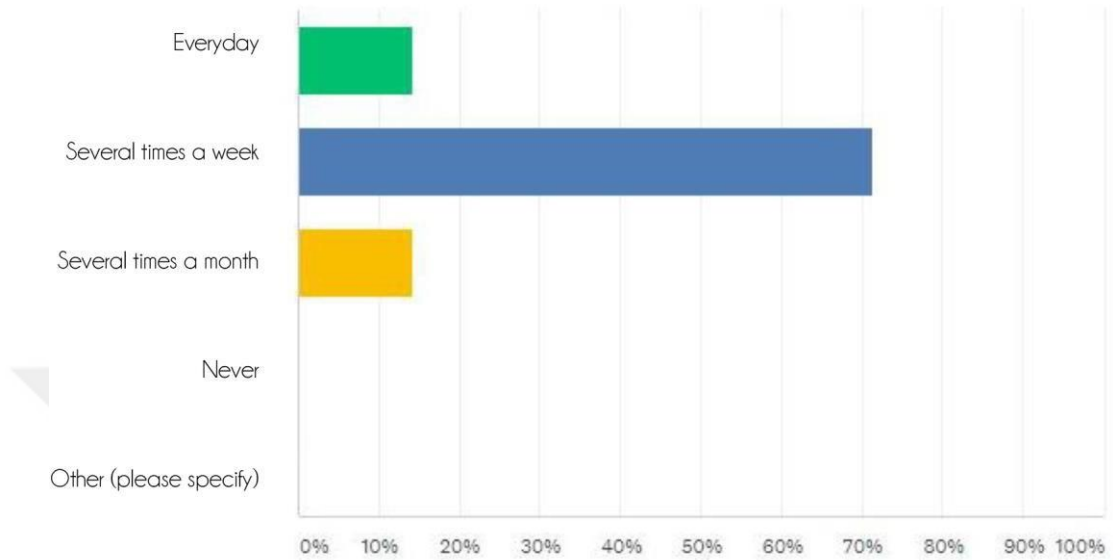
.....

7. Çocuğunuzun yaşı?

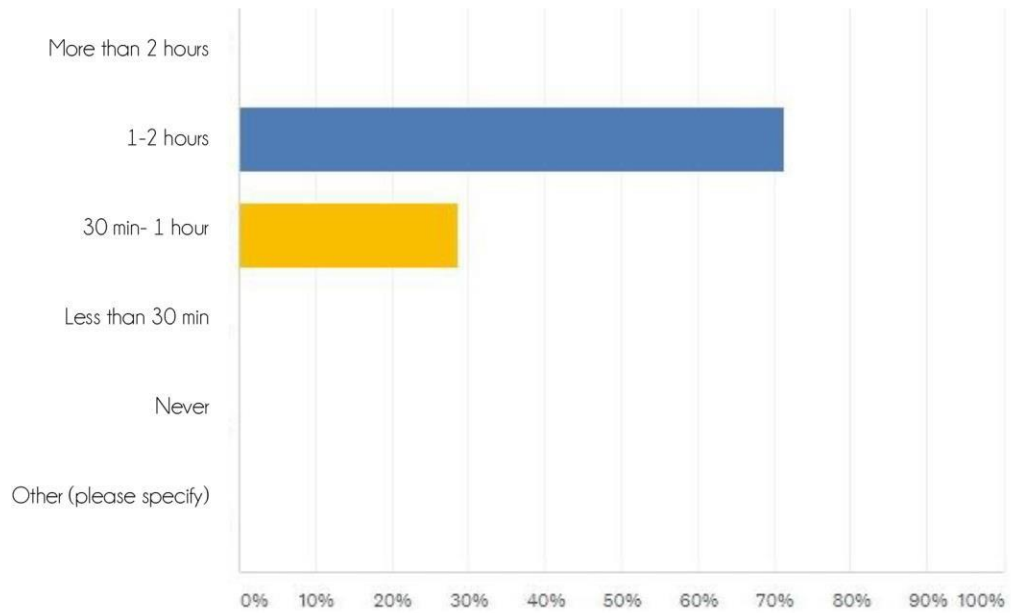
.....

A.3 Interview Results

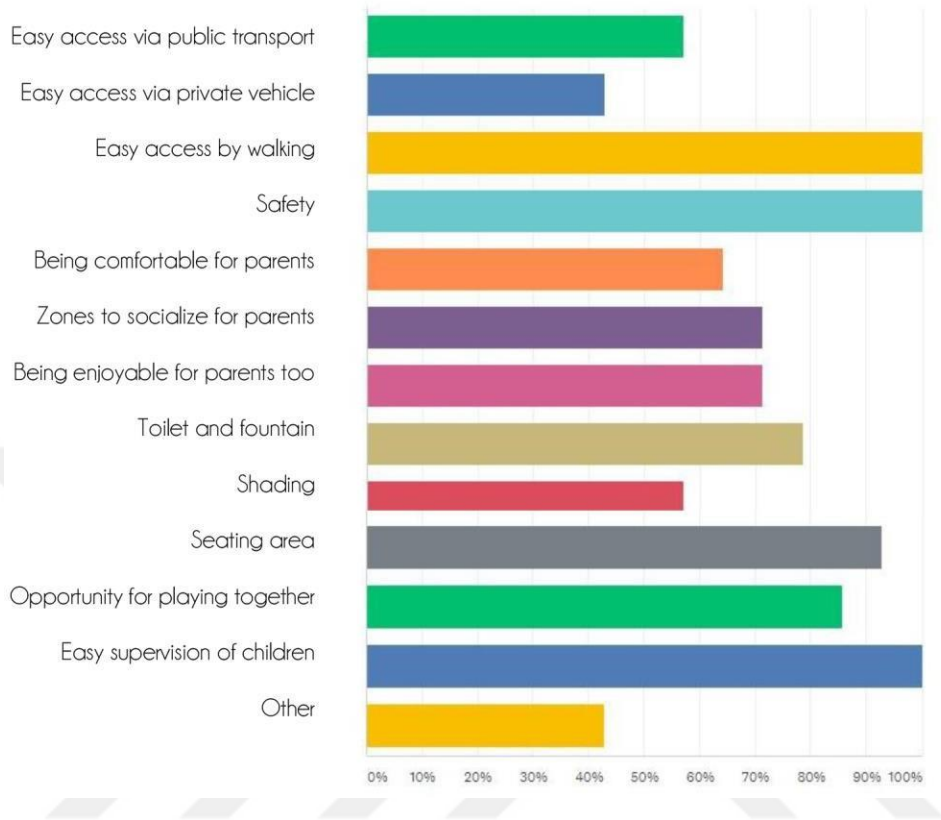
1. How often do you go to the playgrounds?



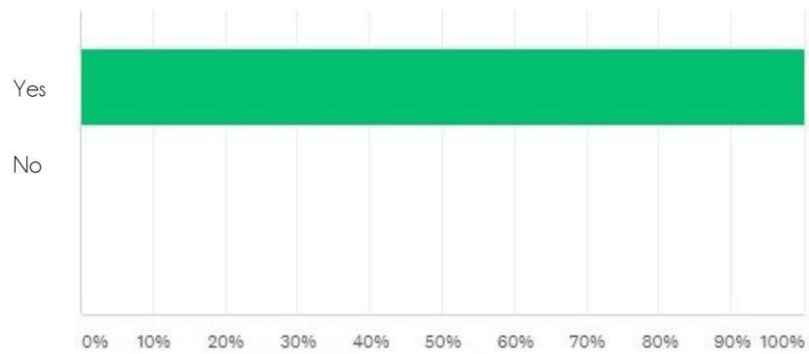
2. How much time do you spend in the playground?



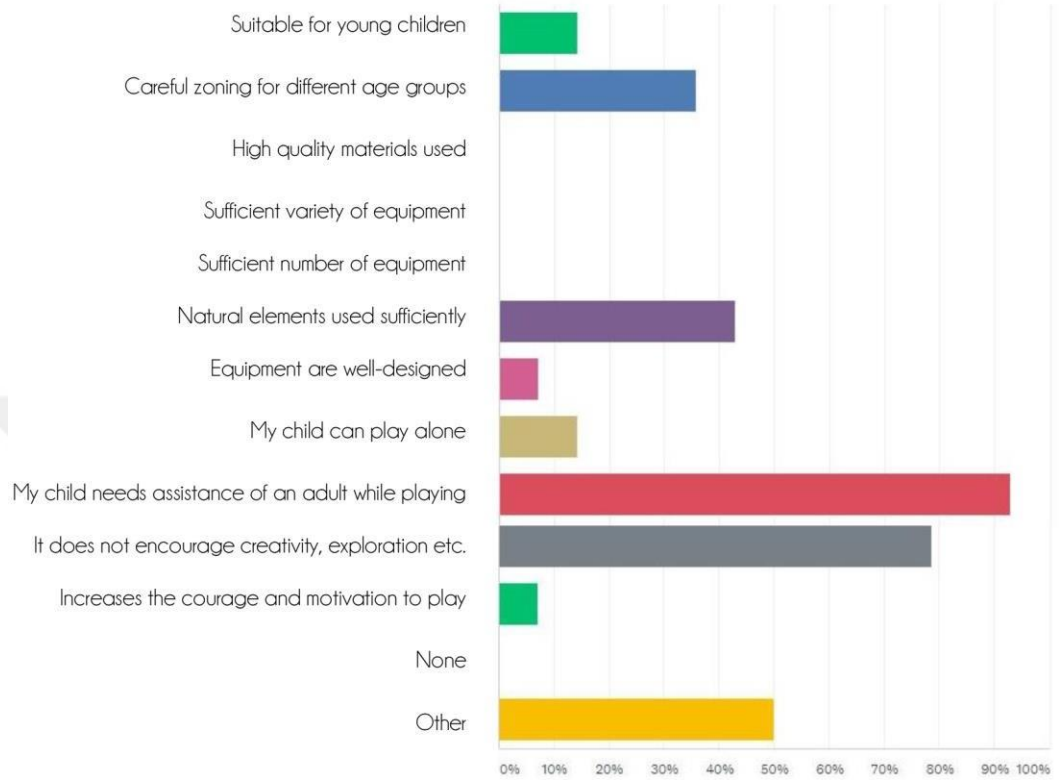
3. Which feature(s) in the following a play space must have?



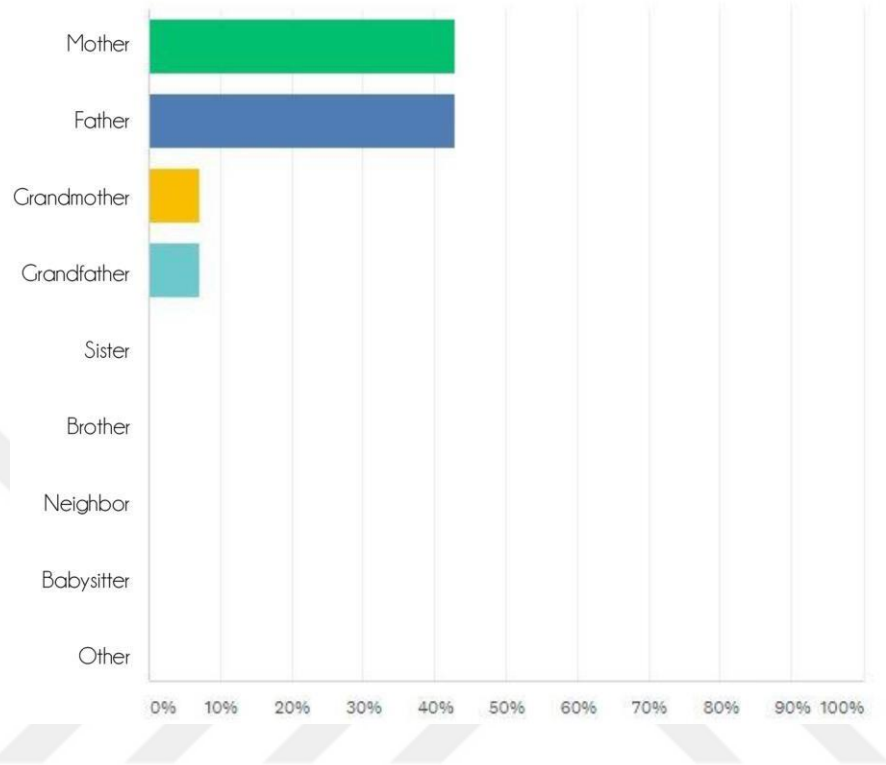
4. Do you come to this playground often?



5. Which one(s) of the following do you think is suitable for this playground?



6. What is your relationship with the child?



7. How old is your child?

