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An Investigation in the Playgrounds of Public and Private Preschools in Ankara*

Ankara'daki Devlet ve Özel Okul Öncesi Eğitim Kurumlarının Açık Oyun Alanlarının Değerlendirilmesi

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Abstract

This study aimed to determine the current status of 17 public and 17 private preschool playgrounds in Ankara, Turkey. The "Playground Rating System" was used to evaluate the playground environment and their equipment. According to the results, it is concluded that maintenance and safety issues were of the utmost importance. Unfortunately, the current status of the playground environment and equipment in the public and private schools as covered in this study were incapable of enhancing children's play. It is recommended that policies be developed to improve the outdoor physical environment of schools and further research be conducted to determine the optimum playground environment by analyzing children's play behaviors in different types of playgrounds.

Keywords: preschools, playground equipment, safety, play, young children

Öz

Bu çalışmada Türkiye'nin başkenti Ankara'da bulunan 17 devlet ve 17 özel anaokulunun açık oyun alanlarının özellikleri incelenmiştir. Bu okulların açık oyun alanları ve malzemeleri "Playground Rating System" isimli ölçek kullanılarak değerlendirilmiştir. Elde edilen bulgulara göre, anaokullarında en çok açık oyun alanlarının güvenliği konusuna önem verilmektedir. Öte yandan, çalışmaya dahil edilen devlet ve özel anaokullarının açık oyun alanları, çocukların farklı oyun tercihlerine yönelmelerini sağlamakta yetersiz kalmıştır. Okullardaki açık oyun alanlarının fiziksel koşullarının iyileştirilmesi için gerekli politikaların geliştirilmesi ve farklı yapılardaki açık oyun alanlarında çocukların oyun tercihleri incelenerek ideal açık oyun alanlarının belirlenmesi önerilmektedir.

Anahtar Sözcükler: Okul öncesi eğitim kurumu, açık oyun alanı malzemeleri, güvenlik, oyun, küçük çocuklar.

Introduction

Jean-Jacques Rousseau (1712-1778) and Fredrich Froebel (1782-1852), pioneers of early education emphasized the importance of play on children's development and since then the decades of research has documented that play has a crucial role in children's development. Play helps children not only to understand their environment, but also to practice social, cognitive, emotional, and physical skills (Wolfgang, 2004). While both indoor and outdoor play environments provide opportunities to young children to engage in play activities, the nature of

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the outdoor play environment encourages and supports different types of play that cannot be accomplished indoors. The design of the playground area and play materials are directly linked to young children's play preferences (Sutterby & Frost, 2006). Additionally, young children's choice of play activities is influenced by the availability of the materials on playgrounds (Frost, Wortham, & Refiel, 2001).

Depending on the design and materials used playgrounds can generally be categorized in three groups; adventure, creative/contemporary and traditional (Johnson, Christie, & Yawkey, 1999; Parnell & Ketterson, 1980). Ideally, playground areas should provide opportunities for all types of play. However, each of the three types of playground support different developmental areas of the young child. While traditional playgrounds provide opportunities only for gross-motor play, adventure playgrounds are more effective in providing all types of play activities for children (Johnson, Christie, & Yawkey, 1999). Traditional playgrounds contain large, metal equipment, such as climbers, slides, and swings, on which children can exercise (Parnell & Ketterson, 1980). Swings, slides, see-saws, and climbers are the most popular equipment in traditional playgrounds. The equipment is placed on a hard surface and they encourage functional and physical play rather than constructive or dramatic play (Heseltine & Holborn, 1987). Creative/contemporary playgrounds stand in the middle as they contain the equipment to support young children's both gross-motor and dramatic play activities (Johnson, Christie, & Yawkey, 1999).

The Playground and Children's Development

According to the literature, one of the most important features of outdoor play environments is that they allow children to explore the world at first hand. By experiencing their surroundings, young children can engage in different forms of play. Therefore, they can push their boundaries and express themselves freely (Maynard & Waters, 2007). In a well-designed playground area "playing helps children in their development" (Sheridan, 2001: 4). Development refers to more than just the growth of children's ability to achieve a whole range of skills. Rather, young children's development is a complex process and includes a mixture of progressive changes: physical (fine and gross motor skills), cognitive and symbolic, linguistic, emotional and social, and moral and spiritual (Berk, 2003).

In a safe world of play, children can digest both pleasant and unpleasant experiences in their lives and start taking control of their feelings related to the experiences (Sheridan, 2001; Wolfang, 2004). Both indoor and outdoor play opportunities enable young children to master both an understanding of their bodies and the ability to control their bodies more effectively by using the senses of taste, smell, touch, sight, and hearing (Wolfgang, 2004). It is also through play that children learn to use language effectively and gain the knowledge and skills in to process as well as use information in a meaningful way. Thus, outdoor play areas have several resources to support young children's development by providing attractive and age appropriate equipment to encourage play activities, stimulate their senses, and allow interaction between children and adults as well as among children (Frost, Wortham, & Reifel, 2001).

Equipment and Materials

During outside play activities, the size, condition, and location of the outdoor space should be taken into consideration for the effective use of the environment (Frost, Wortham, & Reifel, 2001; Johnson, Christie, & Yawkey, 1999). Public and school playground areas can provide many opportunities for children to engage in enjoyable play activities (Üskün, Kişioğlu, Altay, Çıkınlar, & Kocakaya, 2008). While public playground areas are open to children and adults from any age group, school playground areas are designed for children attending a specific public or private school. Therefore, their equipment, general conditions, design, and educational purposes are

expected to be different and also more supportive of children's development in different areas. Most importantly, school playgrounds should not only provide a safe place to play but also allow children to interact with each other and stimulate their curiosity. For that reason, different play equipment/areas and materials should be available for children. These equipment/areas include, but are not limited to; sand and sand play area, water play areas, natural areas for nature study, construction area with junk materials (tires, crates, planks, boards, and bricks), equipment for active play (climbers, slides, swings, etc.), garden tools. They should also provide easy access from outdoor to toilets, to shaded areas, to support materials for group activities, to materials, and to equipment for children (Frost, Wortham, & Reifel, 2001). Moreover, children with disabilities or special needs have the right to be provided with accessible routes (platforms and ramps) and design features to facilitate easy transfer and access (Nabors, Willoughby, Leff, & McMenamin, 2004).

Safety and Maintenance

Although playgrounds are good places for children to learn new skills and support their development in various areas, they are also known to be places where they can suffer injury. There are several risk factors for playground injury, such as falling from the playground equipment, type and depth of the playground surface and inappropriate design (Ferré, Guitart, & Ferret, 2006; Frost, Wortham, & Reifel, 2001; Kieff & Casbergue, 2000; Mitchell, Cavanagh, & Eager, 2006). For children's safety, playgrounds should have protective boundary fences around hazardous areas (streets, ornamental pool, etc.). There should be an adequate space between equipment with no metal slides or decks exposed to sun and no loose ropes or cables in movement areas. Moreover, to prevent unwanted injuries, the size of the equipment should be age appropriate to the target group (Frost, Wortham, & Reifel, 2001).

Playgrounds should be constructed properly and well maintained because broken fences, defects in moving parts, broken, loose, and missing parts of equipment, and tripping hazards can pose serious safety risks (Kieff & Casbergue, 2000; Sherker, Short, & Ozanne-Smit, 2005). Since children will use or play with broken or inappropriate materials, maintaining equipment and keeping extraneous and foreign items out of play areas ensures that users are safe (North Carolina Outdoor Learning Environments Alliance, 2007).

Method

This study aimed to determine current status of school playground areas for young children in Ankara, the capital city of Turkey. In the study, a rating scale was used to investigate the observed conditions of preschool playgrounds and the study benefited from quantitative data analyses. Furthermore, a cross-sectional analysis was conducted in order to collect data at one point in time from a sample selected to describe a population (Fraenkel & Wallen, 2005). The selection of schools was random. The data was restricted to public and private preschools with a total of 45 or more students. The final sample consisted of 17 public and 17 private, a total of 34 preschools in Ankara.

In the current study, data was collected by the "Playground Rating System" (Frost, Wortham, & Reifel, 2001) which was developed aid to the planning and evaluation of playgrounds. The scale contains three subgroups: (i) "What does the playground contain?" (ii) "Is the playground in good repair and relatively safe?" and (iii) "What should the playground do?" For this instrument, the researchers rated preschool playgrounds on a six-point scale as follows: 0: nonexistent, 1: some elements exist but not functional, 2: poor, 3: average, 4: good and 5: all elements exist: excellent function. Before conducting the study, in order to ensure that the instrument was appropriate in terms of its content, the instrument was evaluated by two experts from the early childhood field

to check the instrument in terms of the language, cultural appropriacy of the items and the format of the scale. Both experts agreed on the appropriateness of the instrument.

Official permission was obtained from the public and private schools before data collection was initiated. First, the administrations of the schools were informed about the purpose of the study. After receiving permission to conduct the study, all visual inspections and measurements were made by the same researchers (the authors) independently in order to meet inter-rater reliability requirement. The researchers reached full agreement on ratings. The entire scale took approximately 20 minutes to complete for each playground. The data was analyzed using both descriptive and inferential statistics. The analyses were all conducted using the Statistical Program for the Social Sciences (SPSS15.0). Frequency tables were employed in order to describe the distribution of some playground features. Additionally, the effect of the independent variable, namely the school type, was measured by Independent Sample t-test. Moreover, in order to evaluate the relationship between the subgroups of the scale the Pearson Moment Correlation analysis was conducted.

Results

After the assumptions were satisfied, an independent sample *t*-test was employed to compare the playground scores for both public and private preschools. The overall results indicated that there were no significant differences in the scores of the public schools (M= 144.91, SD= 50.708), and private schools [M= 151.71, SD= 49.991; $t(32)= .392$, $p=.698$]. The magnitude of the differences in the mean scores was very small (eta squared= .005). In addition, there was no statistically significant difference between the public (M= 38.06, SD= 16.765) and private (M= 40.82, SD= 20.610) schools based on the area of the playground and the materials contained within it [$t(32) =.429$, $p=.671$]. Similarly, in terms of safety characteristics, the public (M= 60.65, SD= 16.01) and private schools (M= 63.71, SD= 13.660) did not differ from each other [$t(32) =.599$, $p=.553$]. Moreover, there was no significant difference between the public (M=46.24, SD= 20.930) and private schools (M=47.18, SD= 20.881) in terms of how they promote play among preschool children. Moreover, the relationship between "what does the playground contain" and "what should playground do" was investigated using the Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a strong positive correlation between the two variables for both public [$r=.97$, $p<.0005$] and private [$r= .94$, $p<.0005$] preschool playgrounds. Additionally, both public (M= 60.65, SD=16.2) and private (M=63.71, SD= 20.62) preschools had highest scores in "Is the playground in good repair and relatively safe?" This result indicated that both public and private preschools give highest importance to safety rather than features and roles of playground. Findings from 34 preschool playgrounds based on school type are summarized below (Table 1, 2, & 3).

Table 1.
What Does Playground Contain? (%)

	Public						Private					
	Nonexistent	Not functional	Poor	Average	Good	All exist	Nonexistent	Not functional	Poor	Average	Good	All exist
Surface area	5.9	5.9	11.8	29.4	17.6	29.4	5.9	11.8	11.8	41.2	11.8	17.6
Sand play	35.3	17.6	17.6	5.9	17.6	5.9	35.3	5.9	5.9	17.6	11.8	23.5
Water Play	64.7	11.8	11.8	5.9	-	5.9	58.8	-	11.8	23.5	-	5.9
Dramatic play	35.3	5.9	-	35.3	11.8	11.8	23.5	5.9	17.6	17.6	29.4	5.9
	17.6	-	23.5	5.9	47.1	5.9	11.8	23.5	5.9	29.4	23.5	5.9
Mounds of Earth	11.8	11.8	23.5	35.3	17.6	-	17.6	11.8	29.4	35.3	5.9	-
Natural areas	11.8	17.6	17.6	17.6	29.4	5.9	-	35.3	17.6	11.8	29.4	5.9
Hills/Valley	17.6	-	23.5	23.5	35.3	-	5.9	29.4	23.5	17.6	17.6	5.9
Construction area	100	-	-	-	-	-	100	-	-	-	-	-
Purchased Material	76.5	-	5.9	5.9	11.8	-	35.3	11.8	23.5	11.8	17.6	-
Active play equipment	11.8	5.9	23.5	17.6	23.5	17.6	5.9	11.8	29.4	29.4	17.6	5.9
Large soft area	11.8	-	35.3	35.3	11.8	5.9	5.9	11.8	35.3	23.5	17.6	5.9
Semi-private space	29.4	5.9	5.9	23.5	35.3	-	11.8	23.5	5.9	17.6	29.4	11.8
Adaptable fence	-	17.6	-	41.2	35.3	5.9	-	-	17.6	47.1	17.6	17.6
Garden	11.8	5.9	41.2	17.6	17.6	5.9	29.4	29.4	5.9	17.6	5.9	11.8
Housing of pets	82.4	5.9	5.9	-	-	5.9	76.5	-	5.9	-	5.9	11.8
Transitional space	41.2	23.5	17.6	17.6	-	-	-	41.2	29.4	23.5	-	5.9
Storage	64.7	-	23.5	5.9	5.9	-	76.5	5.9	5.9	-	5.9	5.9
Easy access	-	29.4	23.5	47.1	-	-	-	11.8	23.5	41.2	17.6	5.9
Accessible	29.4	35.3	35.3	-	-	-	17.6	23.5	47.1	5.9	5.9	-

What Does a Playground Contain?

All of the schools included in this study had *traditional* playgrounds consisting of large, open areas with monkey bars and swings with limited opportunities for children to play. According to the data, most of the schools had hard-surfaced area with space for games and a network of paths for wheeled toys (public; 76.4% and private; 70.6%). More than 35% of the preschool playgrounds (both public and private) did not have sandpit or sand play equipment for children. Indeed, only one public school had a fully equipped sand area. Again, two-thirds of the schools did not provide water play areas with fountains, pools, and sprinklers for the children. Interestingly, none of the schools had a construction area with junk materials such as tires, crates, planks, boards, and bricks. Most of the public school playgrounds (76.5%) did not have a purchased or built a model play vehicle, such as an airplane, boat, or car. Most of the public and private schools did not have provisions for housing pets (82.4% and 76.5%, respectively). A transitional space outdoors to indoors protecting the children from sun and rain and extend indoor activities to the outside was not provided in both public and private schools. Accessibility levels indicated that public school outdoor play areas were not designed to facilitate easy transfer and access for children who are blind or partially sighted, deaf or hearing impaired, wheelchair users and those with other disabilities (Table 1).

Table 2.
Is the Playground In Good Repair and Relatively Safe? (%)

	Public						Private					
	Nonexistent	Not functional	Poor	Average	Good	All exist	Nonexistent	Not functional	Poor	Average	Good	All exist
Protective fence	5.9	5.9	17.6	29.4	41.2	-	-	5.9	35.3	17.6	29.4	11.8
Soft surface	47.1	5.9	5.9	11.8	23.5	5.9	5.9	11.8	23.5	23.5	11.8	23.5
Equipment size	11.8	5.9	5.9	23.5	17.6	35.3	-	-	5.9	17.6	47.1	29.4
Free of litter hazards	-	-	11.8	23.5	52.9	11.8	-	-	17.6	17.6	41.2	23.5
Free of defects	17.6	-	11.8	17.6	47.1	5.9	-	-	23.5	11.8	41.2	23.5
Free of sharp edges	11.8	-	11.8	11.8	64.7	-	-	-	23.5	23.5	47.1	5.9
Lightweight swing	11.8	11.8	11.8	11.8	35.3	17.6	5.9	11.8	23.5	17.6	23.5	17.6
Good repair	11.8	-	5.9	17.6	52.9	11.8	-	5.9	11.8	29.4	47.1	5.9
No openings entrapping a child's head	11.8	5.9	-	11.8	23.5	47.1	-	17.6	23.5	23.5	11.8	23.5
Adequate space	11.8	5.9	23.5	17.6	35.3	5.9	-	17.6	17.6	29.4	29.4	5.9
No sign of underground rotting	-	-	-	23.5	23.5	52.9	5.9	-	-	17.6	17.6	58.8
No metal slides exposed to sun	11.8	5.9	35.3	35.3	5.9	5.9	5.9	5.9	58.8	23.5	5.9	-
Guardrail barriers	5.9	-	5.9	41.2	35.3	11.8	-	17.6	47.1	5.9	29.4	-
No loose ropes/cables	-	-	17.6	23.5	23.5	35.3	-	5.9	17.6	11.8	29.4	35.3
Low height balance beams	11.8	-	5.9	17.6	35.3	29.4	-	-	11.8	5.9	58.8	23.5
Sign at entry	100	-	-	-	-	-	88.2	-	5.9	-	-	5.9
No protrusion hazards	5.9	17.6	23.5	47.1	5.9	-	-	-	41.2	47.1	5.9	5.9
No tripping hazards	5.9	5.9	41.2	41.2	5.9	-	-	-	47.1	35.3	11.8	5.9
No water hazards	-	5.9	29.4	23.5	35.3	5.9	-	-	11.8	35.3	52.9	-

Is the Playground in Good Repair and Relatively Safe?

Seventy-one percent (70.6%) of the public and 47% of the private schools had "average" to "good" protective fence (with lockable gates) to prevent the children accessing hazardous areas such as, streets, deep ditches and open water. In terms of the surface under all climbing and moving equipment, the results revealed that 47.1% of the public preschool playgrounds did not contain non-compacted sand and wood mulch. On the other hand, only 5.9% of the private preschools had a safe ground surface. Both public and private school playground areas were free of litter (e.g., broken glass), electrical hazards, high voltage power lines, and toxic hazards. The results also illustrated that more than 50.0% of both public and private schools provided equipment free of sharp edges and broken, loose, and missing parts, swing seats constructed of soft or lightweight material, and safety equipment in good repair (e.g., guardrails, padded areas, protective covers). While, 70.0% of public schools were categorized in both "good" and "all exist" conditions in terms of openings that can entrap a child's head, in private schools it was only 35.3%. Out of 34 public and private schools, in only one public school did the playground equipment had no metal slides or decks exposed to sun. Last but not least, 64.7% of the public and 88.2% of the private schools had no water hazards – access to pools and creeks or traffic hazards – streets, parking lots, or delivery areas (Table 2).

What Should the Playground Do?

The third subgroup of the rating scale measured the effectiveness of playground equipment and evaluated how the playground promotes play activities among young children. According to the results, 35.3% of the public and 47.0% of the private schools playground equipment was designed to encourage children's play activities through easy access from indoors to outdoors and age appropriate equipment. Looking at the features that stimulate young children's senses and support diverse

Table 3.
What Should the Playground Do? (%)

	Public						Private					
	Nonexistent	Not functional	Poor	Average	Good	All exist	Nonexistent	Not functional	Poor	Average	Good	All exist
Encourages play	-	29.4	11.8	23.5	23.5	11.8	-	11.8	11.8	29.4	29.4	17.6
Stimulates senses	5.9	23.5	11.8	29.4	17.6	11.8	-	17.6	23.5	17.6	23.5	17.6
Nurtures curiosity	11.8	17.6	23.5	35.3	5.9	5.9	5.9	35.3	11.8	23.5	11.8	11.8
Supports social/ physical needs	11.8	17.6	5.9	23.5	23.5	17.6	-	11.8	29.4	29.4	29.4	-
Interaction between child and resources	11.8	17.6	29.4	17.6	17.6	5.9	5.9	23.5	23.5	11.8	29.4	5.9
Interaction between children	-	11.8	23.5	17.6	29.4	17.6	-	23.5	17.6	17.6	29.4	11.8
Interaction between child and adults	5.9	11.8	17.6	35.3	29.4	-	-	23.5	29.4	11.8	29.4	5.9
Supports active play	-	11.8	11.8	23.5	35.3	17.6	-	11.8	23.5	29.4	23.5	11.8
Supports constructive play	-	35.3	29.4	23.5	5.9	5.9	5.9	29.4	29.4	17.6	11.8	5.9
Supports dramatic play	-	35.3	35.3	5.9	17.6	5.9	5.9	29.4	17.6	11.8	29.4	5.9
Supports organized games	-	5.9	23.5	17.6	41.2	11.8	-	11.8	17.6	35.3	23.5	11.8
Supports special play form	-	5.9	17.6	29.4	29.4	17.6	-	23.5	11.8	35.3	23.5	5.9
Promotes private play	-	23.5	35.3	23.5	17.6	-	-	35.3	17.6	23.5	23.5	-
Promotes group play	-	11.8	11.8	35.3	29.4	11.8	-	11.8	23.5	29.4	35.3	-

experiences by offering changes and contrasts in scale, light, texture and color with flexible equipment, private schools paid more attention to this aspect than public schools, 41.1% and 29.4%, respectively. Moreover, 41.2% of the private and 47% of the public schools received "good" and "all exist" ratings for allowing interaction between children with adequate spaces to avoid conflicts and equipment that invites socialization. The results regarding playground features supporting different play types revealed remarkable findings. It indicated that both public and private schools mostly failed to support creative, dramatic/make-believe, games with rules, rough and tumble, solitary and cooperative play activities. However, these playground areas were only designed to support functional, exercise, gross motor and active play types (Table 3).

Discussion

In this study, the conditions of the environment and equipment of public and private preschool playgrounds and how these playgrounds augment the play activities of preschool

children were investigated. The results of this study revealed that all the schools that took part in the study have *traditional* playgrounds consisting of large, open areas equipped with monkey bars and swings that limit the type of play that children can engage in. It is stated in the literature that the best playgrounds for schools and communities are the creative/contemporary type since they provide stimulating environment for augmented play experiences (Johnson, Christie, & Yawkey, 1999). However, as this study reveals, the traditional style of playground is more common in this part of Turkey although they only support nonsocial, solitary, or parallel play among children (Boyatzis, 1985).

In general, the structures of both public and private preschool playgrounds did not have any differences in terms of their equipment and materials, safety measures, maintenance, and how they augment the play of the young students. In Turkey, there is a great diversity of organizations that run preschool education service; namely, Ministry of National Education, Ministry of Labor, Ministry of Social Service, universities, and foundations. Nevertheless, public and private preschools are required to be administered in accordance with the relevant laws and regulations and are supervised by Ministry of National Education and Ministry of Social Service (Akcay, 2006). Although both public and private preschools differ in aspects of organization and administration, none of the institutions satisfy all of the basic standards regarding the physical conditions in the Preschool Education Institutions Regulation (Okul Öncesi Eğitim Kurumları Yönetmeliği, 2007). This might indicate that the school staff lack the knowledge of the advantages of the various types of appropriate play equipment for outdoor environments (AÇEV, 2005).

The schools included in this study preferred to purchase *traditional* playground equipment that were not recommended by educators for use in a school environment (Sutterby & Frost, 2006). These playground spaces were designed only to enhance youngsters' functional, exercise, gross motor and active play activities (Heseltine & Holborn, 1987; Sutterby & Frost, 2006). Interestingly, Naylor (1985) states that if given a choice of playing in an environment containing traditional playground equipment, children would prefer to play in the street. Frost, Shin, and Jacobs (1998) investigated why traditional playgrounds attract a lower number of users than creative playgrounds. They concluded that this might be the result of the ineffectiveness of the traditional playgrounds in fostering the high level social and cognitive play of young children. Also the results of the study conducted by Campbell and Frost (1985) verify this opinion, stating that 77% of the playtime spent from a traditional playground was gross-motor related while only 3% of the activities observed were dramatic play. In general, traditional playgrounds do not contain water play areas, sand areas, construction areas with junk materials, outdoor toys such as model vehicles; plane, boat or car, and natural areas that provide richer and broader developmental benefits for youngsters (Frost, Wortham, & Reifel, 2001; Sutterby & Frost, 2006). Moreover, natural areas containing water and sand not only promote children's love of nature but also induce their creativity, wonder and enthusiasm (North Carolina Outdoor Learning Environments Alliance, 2007). The importance of a gardening area and relevant activities were emphasized since Frobel that youngster can engage in both self and directed activities and experience the cycles of nature and develop habits of responsibility (Sutterby & Frost, 2006).

Outdoor playgrounds encourage risk-taking behaviors so that they should be designed so as to prevent young children's injuries. Our current data showed that maintenance and safety issues were of the utmost importance in both public and private schools. It is important because several research results revealed that most childhood injuries occurred either in school or playground environments. Thus, safety issue is crucial to maintain healthy play experiences for children (Bombacı et. al., 2008; Ferré, Guitart, & Ferret, 2006; Frost, 1995; Frost & Sweeney, 1995; Frost, Wortham, & Reifel, 2001; Johnson, Christie, & Yawkey, 1999; Kieff & Casbergue, 2000; Mitchell, Cavanagh, & Eager, 2006). In schools, teachers and other personnel should alert the administration to problems and issue related to playground safety issues and the administration should develop a systematic playground maintenance programs (Frost, 1992; Frost & Sweeney,

1995). Most of the reported playground injuries were caused by inappropriate ground surfaces and equipment including swings slides, climbers, superstructure components, and bare metal (Frost, 1995). As educators we have to keep in mind that in the early childhood period, from two up to seven is preoperational period of development characterized as pre-logical by Piaget (Berk, 2009; Frost, 1995). In this period, young children are unable to understand the hazards of their behaviors and assess risks associated with play. Other factors may include immature physical skills of youngsters, extensive time spend on the playgrounds, and hazardous playgrounds (Frost, 1995; Frost & Sweeney, 1995). Therefore, training for teachers concerning playground supervision including instructions on safety guidelines, the nature and value of play, observation techniques, behavior management, and emergency procedures are essential (Frost & Sweeney, 1995).

Statistical analyses revealed the possibility of a strong relationship between the type of equipment supplied by the schools and different forms of the play that young children engage in. Since, the schools included in this study had the same type of traditional- playgrounds we were unable to explore such relationship. The products of our study suggested that all the public and private preschool playgrounds included in this study were of the traditional types and these outdoor playgrounds only offer physically challenging activities for preschool children (Frost, Shin, & Jacobs, 1998; Heseltine & Holborn, 1987; Sutterby & Frost, 2006). In other words, these public and private school playgrounds failed to support different types of children's play such as, creative, dramatic/make-believe, games with rules, rough and tumble, solitary and cooperative play activities (High Scope, 2006).

There is also a gap, especially in Turkish literature, because most of the studies related to playgrounds were conducted by researchers in the field of landscape architecture (Akkulah, 2007; Bal, 2005; Baran, Yılmaz, & Yıldırım, 2007; Ulug, 2007; Yılmaz & Bulut, 2003) and they mostly investigated features of public play areas that served different age groups. In preschool playground settings, although different studies have been conducted by the researchers from the education field (Onur, Cok, Artar, Sener, & Baglı, 2004, Baglı, 2004; Cok, Artar, & Demir, 2004), these studies mostly aimed to explore young children's play behaviors in school or public playgrounds based on gender differences and social interaction among children but not focusing on the nature and type of the playgrounds. Thus, it is expected that the findings of the current study will encourage researchers to engage in further work to explore possible effects of different types of playgrounds on young children's play preferences and behaviors from various perspectives.

Conclusion and Suggestions

In conclusion, although playgrounds can be designed to foster young children's decision making through the consideration of various learning opportunities, the design of playground equipment available at the 34 public and private schools in this study were incapable of enhancing children's play. The structures of both public and private preschool playgrounds showed no differences in terms of their equipment and materials, safety measures, maintenance, and how they upgrade youngsters' play.

In Turkey, in the context of preschool education apart from basic standards specified by the Ministry of National Education there is no regulation or framework regarding the types of playground materials and equipment that should be used in play areas for preschool children. Given the importance of play in the development of young children it is necessary that appropriate policies be developed to ensure the improvement of the outdoor physical environments of schools. As educators, we have to keep in mind that a quality preschool playground should include sand and sand play area, water play area, construction area with junk materials, outdoor toys such as model vehicles; plane, boat or car, equipment for active play, and natural areas that provide richer and broader developmental benefits for youngsters (Frost, Wortham, & Reifel, 2001).

One of the limitations of the current study is that our study was carried out within a certain region and although we believe that a similar situation exists throughout Turkey we cannot state categorically that this study represents the status of playgrounds throughout the country. However, our study can be seen as a pilot one for a major countrywide examination of all preschool institutions. In addition, we recommend that further research should be conducted to determine and analyze children's play behaviors in different types of playgrounds and children can be observed while in playgrounds. Children can also be interviewed and asked to draw pictures to gain detailed information about their ideas related to playgrounds of their schools and their playground preferences.

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