

Evaluation of Children's Playgrounds in Terms of Various Variables in Osmaniye Province

Serkan Necati METİN¹, Mehmet Ali KILIÇ²

¹Emniyet Genel Müdürlüğü, İstanbul İl Emniyet Müdürlüğü, İstanbul, TURKEY
<https://orcid.org/0000-0001-5951-2893>

²Milli Eğitim Bakanlığı, Gaziantep İl Milli Eğitim Müdürlüğü, Gaziantep, TURKEY
<https://orcid.org/0000-0002-0479-7032>

Email: serkanmetin1985@windowslive.com , mehmetalikilic080@gmail.com

Type: Research Article (Received:29.08.2020– Accepted: 24.10.2020)

Abstract

The aim of this study was to evaluate the children's playgrounds in Osmaniye province in terms of various variables by the users. A total of 932 participants (444 males and 488 females) were randomly selected on a voluntary basis. Along with the variables such as marital status, profession, and income, the "Evaluation Scale for Child Playground" (ESfCP), whose validity and reliability study was performed by Ulaş and Ayan (2016), was applied to the volunteers. The obtained data were evaluated in the SPSS 22 package program. According to the information obtained from the data; In the evaluation of children's playgrounds, it was understood that there was no significant difference in terms of marital status in general mean and all sub-dimensions ($p>0.05$). In terms of income and profession, it was understood that there was a statistically significant difference between the groups in terms of "hygiene and lighting competence", "general competence", "equipment competence", "safety and functionality competence", and overall mean ($p<0.05$). As a result, it can be said that the evaluation of children's playgrounds differs according to various variables in terms of users.

Keywords: Playgrounds, Safety and Functionality, Equipment, Hygiene and Lighting

Introduction

The most important way to share the world of children, and to communicate with them is the game. The game is a voluntary fun activity that takes children away from real life and has its own rules (Esen, 2008). The game was also accepted as a right by the United Nations Convention on the Rights of the Child (UNICEF, articles 31, 1989).

Many studies have shown that the game contributes significantly to the development of children in terms of their physical, mental, and psychological health (Rothon et al., 2010; Anderssen, 2006; Pawlowski, Thomsen, Schipperijin & Troelsen, 2014; Andersen, Riddoch, Kriemler & Hills, 2011; Timmons et al. , 2012; Blaes et al., 2013; Ayan & Memiş, 2012) and has an important role in their healthy growth (Janssen & LeBlanc, 2010; Ayan & Dündar, 2009). The physical activity of the individual also prevents many diseases in terms of public health (McKenzie, Crespo, Baquero, and Elder, 2010). Mobility of the individual in childhood can ensure that he/she is a healthy individual in adulthood.

It is thought that playgrounds in schools make an important contribution to children's play activities (Ridgers, Stratton and Fairclough, 2006, van Sluijs, McMinn and Griffin, 2007). Besides, outside of the school, there is an increasing interest in large children's playgrounds in cities in recent years (Broekhuizen, Scholten & Vries, 2014). Moreover, it has been found that many factors can be effective in the selection of children's playgrounds (van der Horst, Chin, Paw, Twisk & Van Mechelen, 2007, Hinkley, Crawford, Salmon, Okely & Hesketh, 2008).

It is also important that children's playgrounds, also known as green spaces in the city, are easily accessible expect of environmental impacts such as dust and noise. In addition, equipment used in playgrounds must be environmentally friendly, not harming the environment, and meeting security needs (Louicades, Jago and Charalambous, 2009; Stratton, 2000; Stratton & Mullan, 2005).

In the past, some studies suggested increasing the quality of materials used in playgrounds, making small grass areas (Herrington & Studtmann, 1998), and expanding the limited playground activities (Frost, 1992), while today it is seen that the number of playgrounds, which are colorful, many physical activities can be done and some of the problems are solved, has increased. (Quigg, Gray, Reeder, Holt, and Waters, 2010; Podolska, 2014).

Method

In this study, a relational screening model was used. The screening model is a research approach that aims to describe the situation that was present or is present (Karasar, 2013). With the likert type scale prepared for this purpose, user opinions about children's playgrounds in Osmaniye province were tried to be determined.

Study Group

932 people (488 men and 444 women) participated in the survey conducted in Osmaniye province on a voluntary basis.

Data Collection Tools

In this study, "Evaluation Scale for Child Playground (ESfCP)", which was developed by Ulaş and Ayan (2016), was used. The Evaluation Scale for Children's Playground has four factors. The first of the factors determined to be important is 28.93% of the total variance

(Hygiene and lighting adequacy: 4,920), the second factor is 8,72% (general competence: 1,483), the third factor is 6,349 (equipment adequacy: 1,079) and the fourth factor explains

5,94% (safety and functionality adequacy: 1,011).The total variance explained by the four factors is 49.963%.

Considering the content of the items in the I. factor (14,13, 15, 20, 21), “Hygiene and lighting adequacy dimension”, II. Considering the content of the items in the factor (1, 2, 3, 4), this factor is referred to as the “general adequacy dimension”, III. Considering the content of the items in the factor (18, 16, 12, 19, 8), "Hardware adequacy dimension", IV. When looking at the content of the items in the factor (11, 7, 9), this factor is named as “Safety and functionality adequacy dimension”. Cronbach Alpha coefficient of Evaluation Scale for Child Playground applied in the study was determined as .84.

Data Analysis

SPSS 22.0 statistical package program was used to analyze the data obtained in the study. Percentage and frequency were given as descriptive statistics. In the analysis of normally distributed data Independent samples t-test and One-way ANOVA were used to analyze the data. Significance was set at $p < ,05$.

Results

Table 1. Descriptive Information of Research Group

Variables		n	%
Gender	Man	444	47,6
	Woman	488	52,4
Marital Status	Married	703	75,4
	Single	229	24,6
Profession	Public Employees	364	39,1
	Private Sector	154	16,5
	Self-Employed	217	23,3
	Others	197	21,1
Income	0-1000 TL	174	18,7
	1001-2000 TL	269	28,9
	2001-3000 TL	201	21,6
	3001 and above	288	30,9

A total of 932 people, 444 men, 488 women, participated in the study voluntarily. 703 of the participants are single, 229 are married. When the working groups of the participants are examined, 364 people are classified as public employees, 154 private sector, 217 self-employed, and 197 others. The income level of the participants was determined as 174 people between 0 - 1000 TL, 269 people between 1001 - 2000 TL, 201 people between 2001 - 3000 TL, and 288 people from 3001 and above.

Table 2.T-Test Results of ESfCP Scores Based on the Marital Status of Users

Evaluation of Children's Playgrounds	Married/Single	\bar{X}	S.D.	t	df	p
Hygiene and Lighting Competence	703	2,81	,92	-,366	930	,714
	229	2,84	,89			
General Competence	703	2,93	,95	-,698	930	,485
	229	2,98	,89			
Equipment Competence	703	2,97	,86	-,215	930	,830
	229	2,99	,78			
Safety and Functionality Competence	703	2,85	,91	-,436	930	,663
	229	2,89	,88			
ESfCP Score	703	2,91	,77	-,453	930	,651
	229	2,93	,72			

$p < 0.05$

In Table 2, T-test results were given depending on the marital status variable according to the ESfCP. Accordingly, it was concluded that there was no statistically significant difference in the overall mean and all sub-dimensions of the ESfCP ($p > 0.05$).

Table 3.ANOVA Test Results of ESfCP Scores based on Income Variable of Users

Evaluation of Children's Playgrounds	Intergroup		Sum of Ranks	df	Mean of Ranks	F	p	Tukey
	Intragroup	Total						
Hygiene and Lighting Competence	Intragroup		13,519	3	4,506	5,513	,001*	4<1-2-3
	Intragroup		758,488	928	,817			
	Total		772,007	931				
General Competence	Intragroup		15,467	3	5,156	5,965	,000*	4<1-2-3
	Intragroup		802,136	928	,864			
	Total		817,603	931				
Equipment Competence	Intragroup		16,390	3	5,463	7,843	,000*	4<1-2-3
	Intragroup		646,470	928	,697			
	Total		662,860	931				
Safety and Functionality Competence	Intragroup		20,983	3	6,994	8,755	,000*	4<1-2-3
	Intragroup		741,382	928	,799			
	Total		762,365	931				
ESfCP Score	Intragroup		15,337	3	5,112	9,067	,000*	4<1-2-3
	Intragroup		523,241	928	,564			
	Total		538,578	931	4,506			

1= 0-1000 TL 2=1001-2000 TL 3=2001-3000 TL 4=3001 and above

p<0.05

Table 3 shows the ANOVA test results of the levels of children's playgrounds according to the income variable of the users. According to the income variable, there is a statistically significant difference between the groups in terms of "Hygiene and Lighting Competence", "General Competence", "Equipment Competence", "Safety and Functionality Competence", and overall mean (p<0.05). As a result of the Tukey test conducted to determine which groups the significant difference was between, it was stated that the users with income levels of 3001 and above were said children's playgrounds are insufficient then the other income users.

Tablo 4.One-way ANOVA Test Results of ESfCP Scores Based on Users' Profession Variables

Evaluation of Children's Playgrounds	Intergroup Intragroup Total	Sum of Ranks	df	Mean of Ranks	F	p	Tukey
Hygiene and Lighting Competence	Intergroup	11,685	3	3,895	4,754	,003*	1<4
	Intragroup	760,322	928	,819			
	Total	772,007	931				
General Competence	Intergroup	13,437	3	4,479	5,169	,002*	1<2
	Intragroup	804,166	928	,867			
	Total	817,603	931				
Equipment Competence	Intergroup	10,632	3	3,544	5,043	,002*	1<2-4
	Intragroup	652,228	928	,703			
	Total	662,860	931				
Safety and Functionality Competence	Intergroup	14,267	3	4,756	5,899	,001*	1<2-4
	Intragroup	748,098	928	,806			
	Total	762,365	931				
ESfCP Score	Intergroup	10,120	3	3,373	5,923	,001*	1<2-4
	Intragroup	528,458	928	,569			
	Total	538,578	931				

1= Public Employees 2=Private Sector 3=Self-employed 4=Other

p<0.05

Table 4 shows the ANOVA test results of the ESfCP according to the profession variable of the users. According to the profession variable, there was a statistically significant difference between the groups in terms of "Hygiene and Lighting Competence", "General Competence",

"Equipment Competence", "Safety and Functionality Competence", and overall mean (p<0.05). As a result of the Tukey test conducted to determine which groups the significant

difference was between, it was stated that the users working in the public sector were said children's playgrounds were insufficient then the users working in other sectors.

Discussion

In the company of increasing city life, areas, where children can play and spend time has been restricted and children's playgrounds in cities have gained importance. In the studies conducted in some countries, it was understood that the time spent in the playgrounds of children varies between 30 minutes and 100 minutes. It was stated that school-age children in Denmark spent about 60 minutes for physical activity in the playgrounds and this time decreased between the ages of 9 and 15 (Currie et al., 2012, Nader, Bradley, Houts, McRitchie and O'Brien, 2008). In European countries, this rate varies between 30 and 105 minutes (Mota et al., 2005). In addition, in Australia, the necessary free area in the playgrounds and the equipment to meet the basic need for children are insufficient, and the playgrounds are said to be open, and the playgrounds are affected by weather variability (Stanley, Boshoff & Dollman, 2012., Ridgers, Salmon, Parrish, Stanley and Okely, 2012).

Nowadays, with the increase in the need for children's playgrounds, it can be said that the expectation as a proficiency from the playgrounds has also increased. Uysal (2015), in his study in Çanakkale province for this expectation, revealed the conclusion that children's playgrounds are spatially inadequate and unqualified. Similarly, Aksoy (2011) stated that children's playgrounds in Isparta, Eskişehir, Erzurum, Kayseri, Ankara, Istanbul, Trabzon, and Zonguldak were insufficient to meet the needs of children both in terms of quality and quantity and that children were not able to move freely in terms of safety and space.

In other studies, it was also found that there was an average of 4 to 6 donuts on the playgrounds and that they consisted mainly of swing, slide, seesaw, and climbing inventories. It was emphasized that this situation was insufficient in terms of modern game donkeys. Also, it was found that the necessary equipment such as toilet, lighting, and shading in the playgrounds were mostly absent (Duman ve Koçak, 2013; Kuşuluoğlu, 2013).

Ayan ve Ulaş, (2015) In her study of playground used in Turkey, located in the playground of our country remains far behind many countries in terms of the current situation, it is stated that there are deficiencies both in design applications in both large steps. It was concluded that due to the neglect of the developmental and expectations of the children, this situation could not fully discard their daily energies and therefore health problems occur (Ayan ve Ulaş, 2015).

Conclusion

In this study we conducted in Osmaniye, it was understood that the expectation in children's playgrounds differs according to the income and professional status of the users, and the expectation increases as the income level increases. It can be said that the people with low-income level are more satisfied with the opportunities provided by the playgrounds and the expectations are lower.

REFERENCES

- Aksoy, Yıldız (2011), “Çocuk Oyun Alanları Üzerine Bir Araştırma: İstanbul, Isparta, Eskişehir, Erzurum, Kayseri, Ankara, Zonguldak ve Trabzon İlleri Örneği” acikerisim.aydin.edu.tr , Erişim Tarihi : 03.06.2020
- Andersen LB, Riddoch C, Kriemler S, Hills A. (2011). “Physical activity and cardiovascular risk factors in children”. *Br J Sports Med* 2011, 45:871–876.
- Anderssen SA. (2006). “Physical activity and clustered cardiovascular risk in children: a cross-sectional study (The European Youth Heart Study)”. *Lancet* 2006, 368:299–304.
- Aurélie Blaes, Nicola D. Ridgers, Julien Aucouturier, Emmanuel Van Praagh, Serge Berthoin, Georges Baquet. (2013). “ Effects of a playground marking intervention on school recess physical activity in French children” *Preventive Medicine* 2013 57:580-584
- Ayan, S., DüNDAR, H. (2009). “Eğitimde okul öncesi yaratıcılığın ve oyunun önemi”. *Selçuk Üniversitesi Ahmet Keleşoğlu Eğitim Fakültesi Dergisi*, 28:63-74.
- Ayan, S., Memiş, U.A. (2012). “A research related to the importance of play in early childhood”. *Selçuk Üniversitesi Beden Eğitimi ve Spor Bilim Dergisi*. 2012 14(2):143-149.
- Ayan, S., Ulaş, M. (2015). “Türkiye’de Kullanılan Oyun Alanı Donatılarının Gelişmiş Ülkelerdeki Modellere Göre İncelenmesi”. *Route Educational and Social Science Journal*. 2(3):130-145
- Başaran Uysal, Arzu (2015). “Çocuk Oyun Alanlarının Geliştirilmesinde Bir Yerel Katılım Deneyi”. *Megaron Vol:10 Sayı:3 DOI: 10.5505/MEGARON.2015.53215*
- Pawlowski CS., Thomsen TT., Schipperijn J., Troelsen J., (2014). “Barriers for recess physical activity: a gender specific qualitative focus group exploration”. *BMC Public Health* 2014, 14:639
- Currie C, Zanotti C, Morgan A, Currie D, de Looze M, Roberts C, Samdal O, Smith ORF, Barnekow V (2012). “Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study” international report from the 2009/2010 survey. Copenhagen: WHO Regional Office for Europe; 2012.
- Duman, G., ve Koçak, N. (2013). Çocuk oyun alanlarının biçimsel özellikleri açısından değerlendirilmesi (Konya ili örneği). *Türk Eğitim Bilimleri Dergisi*, 11(1).
- Esen, M.A. (2008). “Geleneksel çocuk oyunlarının eğitimsel değeri ve unutulmaya yüz tutmuş Ahıska oyunları”. *Uludağ Üniversitesi Eğitim Fakültesi Dergisi*, 21(2), 357-367, Bursa.
- Frost, J. L. (1992). “Reflections on research and practice in outdoor play environments”. *Dimensions of Early Childhood*, 20(4), 6 - 10.
- Herrington, S., & Studtmann, K. (1998). “Landscape interventions: New directions for the design of children’s outdoor play environments”. *Landscape and Urban Planning*, 42, 191 - 205.
- Hinkley BA, Crawford D, Salmon J, Okely AD, Hesketh K. (2008). “Preschool children and physical activity: a review of correlates”. *Am J Prev Med* 2008, 34(5):435–441.

- Thomas L. McKenzie, Noe C. Crespo, Barbara Baquero, John P. Elder. (2010). "Leisure-Time Physical Activity in Elementary Schools: Analysis of Contextual Conditions" *Journal of School Health* 2010 Vol:80 No:10:470-477
- Janssen I, LeBlanc AG. (2010) "Systematic review of the health benefits of physical activity and fitness in school-aged children and youth". *Int J Behav Nutr Phys Act* 2010, 7:40.
- Karasar, N. (2013). *Bilimsel Araştırma Yöntemi*. Ankara: Nobel Yayın Dağıtım.
- Karen Broekhuizen, Anne-Marie Scholten, Sanne I de Vries. (2014). "The value of (pre)school playgrounds for children's physical activity level: a systematic review". *International Journal of Behavioral Nutrition and Physical Activity* 2014,11:59
- Louicades CA, Jago R, Charalambous I. (2009) "Promoting physical activity during school break times: piloting a simple, low cost intervention". *Prev Med* 2009, 48:332-334.
- Magdalena Czalczynska-Podolska. (2014). "The Impact of playground spatial features on children's play and activity forms: An evaluation of contemporary playgrounds play nad social value". *Journal of Environmental Psychology* 2014, 38:132-142
- Mota J, Suva P, Santos MP, Ribeiro JC, Oliverira J, Duarte JA. (2005). "Physical activity and school recess time: differences between the sexes and the relationship between children's playground physical activity and habitual physical activity". *J Sports Sci* 2005, 23:269-275.
- Nader PR, Bradley RH, Houts RM, McRitchie SL, O'Brien M. (2008). "Moderate-to-vigorous physical activity from ages 9 to 15 years". *JAMA* 2008, 300:295-305.
- Ridgers ND, Stratton G, Fairclough SJ. (2006). "Physical activity levels of children during school playtime". *Sports Med* 2006, 36:359-371.
- Rothon C, Edwards P, Bhui K, Viner RM, Taylor S, Stansfeld SA. (2010). "Physical activity and depressive symptoms in adolescents: a prospective study". *BMC Med* 2010, 8:1-9.
- Sakici, Ç., Ayan, E., Ayan, Ö., VE Çelik, S. (2013). *Kastamonu Kentindeki Açık Yeşil Alanların Farklı Kullanıcılar Tarafından Kullanılabilirliğinin İrdelenmesi*. Kastamonu Üniversitesi Orman Fakültesi Dergisi, 13(1).
- Stanley RM, Boshoff K, Dollman J. (2012). "Voices in the playground: a qualitative exploration of the barriers and facilitators of lunchtime play". *J Sci Med Sport* 2012, 15:44-51.
- Stratton G. (2000). "Promoting children's physical activity in primary school: an intervention study using playground markings". *Ergonomics* 2000, 43:1538-1546.
- Stratton G, Mullan E. (2005). "The effect of multicolor playground markings on children's physical activity levels during recess". *Prev Med* 2005, 41:828-833.
- Timmons BW, Leblanc AG, Carson V, Connor Gorber S, Dillman C, Janssen I, Kho ME, Spence JC, Stearns JA, Tremblay MS. (2012). "Systematic review of physical activity and health in the early years (aged 0-4 years)". *Appl Physiol Nutr Metab* 2012, 37(4):773-792.
- Ulaş, M., Ayan, S., (2016). "Çocuk Oyun Alanları Değerlendirme Ölçeği: Geçerlik – Güvenirlik Çalışması". *CBÜ Beden Eğitimi ve Spor Bilimleri Dergisi* 2016, 11(2):10-24

UNICEF (1989), “The United Nations Convention on the Rights of the Child” http://www.unicef.org/crc/files/rights_overview.pdf, [Erişim tarihi 21.05.2020]

Van der Horst K, Chin A, Paw MJ, Twisk JWR, van Mechelen W. (2007). “A brief review on correlates of physical activity and sedentariness in youth”. *Med Sci Sports Exerc* 2007, 39(8):1241–1250.

Van Sluijs EM, McMinn AM, Griffin SJ. (2007). “Effectiveness of interventions to promote physical activity in children and adolescents: systematic review of controlled trials”. *BMJ* 2007, 336:703.

Quigg, R., Gray, A., Reeder, A. I., Holt, A., Waters, D. L. (2010). “Using accelerometers and GPS units to identify the proportion of daily physical activity located in parks with playgrounds in New Zealand children”. *Preventive Medicine*, 50(5-6), 235e240.