OPEN ACCESS
Advances in Health and Exercise

ORIGINAL RESEARCH

Evaluation of physical education and play facilities in state kindergartens

İskender Güler

Faculty of Education, Amasya University, Türkiye.

Received:
January 22, 2025

Accepted:
May 31, 2025

Online Published:
June 21, 2025

Keywords:
Early childhood education, indergarten, physical activity, play opportunities.

Abstract

This study was conducted to investigate and evaluate the physical activity and play opportunities in state preschools in TR83 Region (Amasya, Çorum, Samsun, Tokat). The research group consisted of 216 volunteer teachers working in state preschools in the region. Data were collected online through a pre-developed information form consisting of 22 questions. Teachers were asked to fill in this form virtually and the answers were collected back in the same way. The data were collected online through the Preschool Information Form, which was previously developed and administered to the teachers. Data were analyzed using frequency and percentage distributions, and the Chi-Square Test (X^2) was used for the two variables by combining positive and partially positive responses. In cases where the expected frequency was less than 5, Fisher's Exact Chi-Square Test was applied. The results showed that 55.6% of public kindergarten students had undergone health checks and more than 70% of schools had more than three kindergartens. However, only 35.6% of the schools had a playroom and 41.2% had a playground. While 77.8% of preschools have play materials for developing cognition, 78.7% for developing rhythm and 64.3% for developing imitation, less than 50% have a variety of physical education and play materials. Of the materials available, only 24.6% were sufficient to be used simultaneously by all students. It was reported that 30.5% of kindergartens were adequate in terms of physical education and play activities, while this rate increased to 66.7% with the individual efforts of teachers. In addition, it was found that there were significant differences between provinces in terms of the number of kindergartens, play halls, distribution of materials and health controls ($p<0.05$, $p<0.01$). As a result, it was found that physical activity and play opportunities in state preschools in TR83 provinces are limited and these opportunities vary between provinces. Teachers' devoted efforts ensure that the activities partially achieve their goals.

Introduction

Early childhood is a critical stage that affects all areas of development and forms the basis of the cognitive, emotional, social and physical structures that will emerge later in life. In this period, children's learning capacity and speed are at a high level; therefore, the educational, environmental and physical conditions offered directly affect the child's development (Altay et al., 2011; MEB, 2013; Özsoy & Güler, 2023). Especially in this period when the foundations for physical, social and psychological development areas are laid, it is of great importance to support the development of children by taking into account their individual differences.

Children's innate need to move is a natural part of their developmental process. Restricting this need can lead to behavioral problems such as emotional tension, aggression and withdrawal (Binbaşıoğlu, 1970; Gallaue, 1982; Wilde, 2006). Therefore, children's freedom of movement should be supported in early childhood and participation in physical activities should be encouraged. Physical activities and play positively affect not only children's physical development but also their social interaction, task responsibility, communication skills, and emotional expression (Dilekmen & Bozan Türün, 2018; Erşan, 2006; Güler & Özsoy, 2018).

It is reported that through physical activity and play, children can more easily express various emotional reactions such as love, understanding, happiness, respect, tolerance, sadness, pain and fear, and more easily acquire the behaviors of healthier communication with others, cooperation, duty and responsibility. In addition, within the framework of mental and language

✉ İ. Güler, e-mail: iskender.guler@amasya.edu.tr
To Cite: Güler, İ. (2025). Evaluation of physical education and play facilities in state kindergartens. *Adv Health Exerc*, 5(1), 70-78.

development, it is emphasized that play improves skills such as reasoning, decision-making, question solving, recognition-discovery, selection and memorization; accelerates mental processes such as recognizing, classifying, sorting, organizing and analyzing objects; and significantly increases imagination. Therefore, physical activity and play play play an important role in ensuring a healthy and happy life and optimal development and make significant contributions to the development of children in all aspects (Cinel, 2006; Dilekmen & Bozan Türün, 2018; Gökmen et al., 1995; Larson & Zaıchkowsky, 1995). Play is the most natural and effective way for children to understand, make sense of and experience the world in early childhood. Through play, children acquire cognitive skills such as empathy, decision-making, problem solving, exploring, sorting and categorizing, while at the same time developing imagination and preparing for adult life (Kadim, 2012; Larson & Zaıchkowsky, 1995; Ulutaş, 2011). In this context, it is clear that physical activity and play are essential tools that support multidimensional development in early childhood.

The aim of this study is to examine the physical activity and play opportunities offered in state preschools in TR83 Region at the spatial, material and program levels and to determine to what extent these opportunities meet the developmental needs of children. The findings of the study are expected to draw attention to the importance of physical activity and play-based practices in early childhood education and contribute to the literature by providing suggestions for improving the quality of practice in this field. In this respect, the study has the potential to guide the planning and policy development processes in the field of early childhood education.

Method

Research Group

A total of 216 state preschool teachers, 18 from Amasya, 65 from Çorum, 59 from Samsun, and 74 from Tokat, constituted the sample of this study on a voluntary basis. TR83 provinces were selected for the study because the region has a similar socioeconomic structure and offers examples suitable for the evaluation of opportunities for physical activity and playgrounds in preschool education institutions. In addition, the ease of access of the researcher to the region facilitated the fieldwork. The majority of the teachers work in provincial centers, and the socioeconomic environments of the provinces were also taken into consideration in the sample selection. By ensuring the participation of at least one teacher from each kindergarten, the sample was determined to represent a wide range.

This study was ethically approved by the Non-Interventional Clinical Research Ethics Committee with the decision dated 19.11.2024 and numbered E-30640013-108.01-227559.

Data Collection

The compliance of the research project with ethical rules was approved by the Ethics Committee Report. During the data collection process, official permission was obtained from the Ministry of National Education, National Education Directors and some primary school principals in each province were contacted and the Kindergarten Information Form was sent to teachers via e-mail and/or WhatsApp. Teachers were asked to fill out this form online in a virtual environment and the forms were collected back online. The Kindergarten Information Form was prepared by taking into account the socioeconomic levels of the schools and applied to all kindergarten teachers working in public schools in the center and who could be reached. The form is a reliable (r=0.75) information form consisting of 22 questions, previously developed and implemented by Güler and Pepe (2005), to evaluate the opportunities for physical education and game activities in schools where teachers work.

Data Analysis

The findings of the study were analyzed by taking frequency and percentage values according to provinces. Chi-Square Test X^2 was used to determine whether there was a significant difference between the provinces by combining full and partially positive responses. In cases where at least one of the observed frequencies was less than 5, Fisher's Exact Chi-Square Test was applied. All findings were analyzed taking into account socioeconomic environments and the opportunities for physical education and play activities in kindergartens were evaluated.

Results

All the results of the research are presented separately in the tables below:

Table 1
Status of kindergarten students' health checks.

Variables	f	%
Yes	120	55.6
No	96	44.4
Total	216	100.0

As seen in Table 1, only 55.6% of kindergarten students undergo health check-ups.

Table 2
Preschool students' health checks and statistical differences by province.

Provinces	Variables	f	%	X^2	p
Amasya	Yes	10	55.6	15.55	0.000
	No	8	44.4		
	Total	18	100.0		
Çorum	Yes	49	75.4		
	No	16	24.6		
	Total	65	100.0		
Samsun	Yes	26	44.1		
	No	33	55.9		
	Total	59	100.0		
Tokat	Yes	35	47.3		
	No	39	52.7		
	Total	74	100.0		

In Table 2, it is seen that there is a significant difference ($p<0.01$) between the rates of health check-ups of the students in kindergartens in the provinces, and that the students in Çorum province (75. 4%) had the highest rate of health check-ups.

As seen in Table 3, in general, the number of kindergartens in the provinces is more likely to be 7 or more, and the weekly physical activity and play hours are more likely to be between 4-6 hours.

When Table 4 is examined, a significant difference was found between the provinces in terms of the number of kindergartens ($p<0.01$), while no significant difference was found between the provinces in terms of weekly physical activity and play hours ($p>0.05$).

As seen in Table 5, 35.6% of all kindergartens had a playroom and 41.2% had a playground for physical activity and play activities.

When the playroom and playground facilities of kindergartens within the scope of physical activity and play activities were analyzed by provinces, it was found that there was a statistically significant difference ($p<0.01$) between the rates of having playrooms and playgrounds in kindergartens (Table 6).

Table 3
Number of kindergartens and weekly physical activity and play hours.

Variables	Kindergarten Numbers		Physical Activity and Play Hours	
	f	%	f	%
1-3 class/hour	71	32.9	45	20.8
4-6 classes/hour	44	20.4	121	56.0
7 and more classes/hour	101	46.8	47	21.8
Total	216	100	215	100

Table 4
Number of kindergartens and weekly physical activity and play hours by province.

Provinces	Variables	Kindergarten Numbers				Physical Activity and Play Hours			
		f	%	X^2	p	f	%	X^2	p
Amasya	1-3	0	0.0	92.86	0.000	1	5.6	5.16	0.52
	4-6	1	5.6			13	72.2		
	7 and above	17	94.4			4	22.2		
	Total	18	100.0			18	100.0		
Çorum	1-3	0	0.0			16	25.4		
	4-6	14	21.5			35	55.6		
	7 and above	51	78.5			12	19.0		
	Total	65	100.0			63	100.0		
Samsun	1-3	23	39.0			15	25.9		
	4-6	15	25.4			30	51.7		
	7 and above	21	35.6			13	22.4		
	Total	59	100.0			58	100		
Tokat	1-3	48	64.9			13	17.6		
	4-6	14	18.9			43	58.1		
	7 and above	12	16.2			18	24.3		
	Total	74	100.0			74	100.0		

Table 5
Availability of physical activity and play halls and areas in kindergartens.

Variables	Physical Activity and Play Hall		Physical Activity and Play Area	
	f	%	f	%
There is	77	35.6	89	41.2
No	139	64.4	127	58.8
Total	216	100.0	215	100.0

Table 6
Status of physical activity and play halls and play areas by province.

Cities	Variables	Physical Activity and Play Hall				Physical Activity and Play Area			
		f	%	X^2	p	f	%	X^2	p
Amasya	There is	5	27.8	27.27	0.00	9	50.0	30.49	0.00
	No	13	72.2			9	50.0		
	Total	18	100.0			18	100.0		
Çorum	There is	40	61.5			44	67.7		
	No	25	38.5			21	32.3		
	Total	65	100.0			65	100.0		
Samsun	There is	14	23.7			15	25.4		
	No	45	76.3			44	74.6		
	Total	59	100.0			59	100.0		
Tokat	There is	18	24.3			21	28.4		
	No	56	75.7			53	71.6		
	Total	74	100.0			74	100.0		

Table 7
Availability of physical activity and playground equipment for developing cognition, rhythm and imitation in kindergartens.

Variables	Mental		Rhythm		Imitation	
	f	%	f	%	f	%
There is	37	17.1	44	20.4	24	11.1
Partially available	131	60.7	126	58.3	115	53.2
No	48	22.2	46	21.3	77	35.7
Total	216	100.0	216	100.0	216	100.0

Table 8
Kindergartens' physical activity and play equipment for developing cognition, rhythm and imitation by province.

Provinces	Variables	Mental				Rhythm				Imitation			
		f	%	X^2	p	f	%	X^2	p	f	%	X^2	p
Amasya	There is	17	94.4	7.41	0.06	18	100.0	8.77	0.03	16	88.9	13.91	0.00
	No	1	5.6			0	0.0			2	11.1		
	Total	18	100.0			18	100.0			18	100.0		
Çorum	There is	55	84.6			54	83.1			49	75.4		
	No	10	15.4			11	16.9			16	24.6		
	Total	65	100.0			65	100.0			65	100.0		
Samsun	There is	44	74.6			46	78.0			36	61.0		
	No	15	25.4			13	22.0			23	39.0		
	Total	59	100.0			59	100.0			59	100.0		
Tokat	There is	52	70.3			52	70.3			38	51.4		
	No	22	29.7			22	29.7			36	48.6		
	Total	74	100.0			74	100.0			74	100.0		

Table 7 shows that 77.8% of kindergartens have tools and equipment for developing cognition, 78.7% have tools and equipment for developing rhythm, and 64.3% have tools and equipment for developing imitation.

As seen in Table 8, while there was no statistically significant difference between the rates of physical education and game tools that support mental development in the preschools of the provinces ($p>0.05$), significant differences ($p<0.05$; $p<0.01$) were found in terms of tools for developing rhythm and imitation.

When Table 9 is examined, it is observed that only 22.2% of kindergartens have balance beam, 51.6% have gymnastic mat, 7.9% have gymnastic stick, 14.8% have gymnastic ball, 40.8% have gymnastic hoop, 18.1% have medicine or throwing ball, 7.4% have step board and 16.2% have satafet.

In Table 10, the availability of sports and gymnastics equipment in kindergartens according to provinces is analyzed. While there was no statistically significant difference ($p>0.05$) between the rates of gymnastic stick and stepping board in kindergartens of the provinces, significant differences ($p<0.05$; $p<0.01$) were found between the rates of balance beam, gymnastic mat, gymnastic ball, gymnastic hoop, medicine or throwing ball and satafet materials.

According to teachers' opinions, it was determined that 30.5% of kindergartens were adequate in terms of physical activity and play facilities, 24.6% of kindergartens had materials for each student, and 66.7% of kindergartens achieved their goals in terms of physical activity and play activities (Table 11).

Table 9

Kindergartens' possession of some physical activity and play materials.

Variables	There is		Partially available		No		Total	
	f	%	f	%	f	%	f	%
Balance instrument	25	11.6	23	10.6	168	77.8	216	100.0
Gymnastics mat	88	40.9	23	10.7	104	48.4	215	100.0
Gymnastics stick	9	4.2	8	3.7	199	92.1	216	100.0
Gymnastic ball	19	8.8	13	6.0	184	85.2	216	100.0
Gymnastics circle	52	24.1	36	16.7	128	59.3	216	100.0
Health-throwing ball	12	5.6	27	12.5	177	81.9	216	100.0
Step board	11	5.1	5	2.3	200	92.6	216	100.0
Stafet material	7	3.2	28	13.0	181	83.8	216	100.0

Table 10

Kindergartens' availability of some physical activity and play materials by province.

Provinces	Variables	Balance instrument (X^2=19.2; p=.00)		Gymnastics mat (X^2=17.5; p=.00)		Gymnastics stick (X^2=8.8; p=.23)		Gymnastic ball (X^2=14.0; p=.00)		Gymnastics circle (X^2=14.5; p=.00)		Health-throwing ball (X^2=9.6; p=.02)		Step board (X^2=5.9; p=.10)		Stafet material (X^2=8.3; p=.04)	
		f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Amasya	There is	6	33.3	14	77.8	4	22.2	5	27.8	11	61.1	5	27.8	2	11.1	5	27.8
	No	12	66.7	4	22.2	14	77.8	13	72.32	7	38.9	13	72.2	16	89.9	13	72.2
	Total	18	100	18	100	18	100	18	100	18	100	18	100	18	100	18	100
Çorum	There is	25	38.5	43	66.2	4	6.2	15	23.1	36	55.4	15	23.1	1	1.5	12	18.5
	No	40	61.5	22	33.8	61	93.8	50	76.9	29	44.6	50	76.9	64	98.5	53	81.5
	Total	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100
Samsun	There is	5	8.5	27	45.8	1	1.7	1	1.7	17	28.8	3	5.1	5	8.5	3	5.1
	No	54	91.5	32	54.2	58	98.3	58	98.3	42	71.2	56	94.9	54	91.5	56	94.9
	Total	59	100	59	100	59	100	59	100	59	100	59	100	59	100	59	100
Tokat	There is	12	16.2	27	37.0	8	10.8	11	14.9	24	32.4	16	21.6	8	10.8	15	20.3
	No	62	83.8	46	63.0	66	89.2	63	85.1	50	67.6	58	78.4	66	89.2	59	79.7
	Total	74	100	73	100	74	100	74	100	74	100	74	100	74	100	74	100

Table 11
Adequacy of kindergarten facilities in terms of physical activity and play, availability of physical education and play materials for each student, and achievement of the purpose of physical education and play activities

Variables	Facility Adequacy		Material Drop		Achieving the Goal	
	f	%	f	%	f	%
Yes	13	6.0	12	5.6	36	16.7
Partially	53	24.5	41	19.0	108	50.0
No.	150	69.4	163	75.5	72	33.3
Total	216	100.0	216	100.0	216	100.0

Table 12
Adequacy of kindergarten facilities in terms of physical activity and play, availability of physical education and play materials for each student and achievement of the purpose of physical education and play activities by provinces.

Provinces	Variables	Facility Adequacy				Material Drop				Achieving the Goal			
		f	%	X^2	p	f	%	X^2	p	f	%	X^2	p
Amasya	Yes	6	33.3	4.89	0.18	8	44.4	9.80	0.02	15	83.3	4.92	1.18
	No	12	66.7			10	55.6			3	16.7		
	Total	18	100.0			18	100.0			18	100.0		
Çorum	Yes	26	40.0			19	29.2			46	70.8		
	No	39	60.0			46	70.8			19	29.2		
	Total	65	100.0			65	100.0			65	100.0		
Samsun	Yes	17	28.8			7	11.9			34	57.6		
	No	42	71.2			52	88.1			25	42.4		
	Total	59	100.0			59	100.0			59	100.0		
Tokat	Yes	17	23.0			19	25.7			49	66.2		
	No	57	77.0			55	74.3			25	33.8		
	Total	74	100.0			74	100.0			74	100.0		

Table 13
Kindergarten teachers' utilization of physical education teachers in physical activity and play activities.

Variables	f	%
Benefiting	14	6.5
Partially Benefiting	27	12.5
Not benefiting	175	81.0
Total	216	100.0

Table 14
Kindergarten teachers' utilization of physical education teachers in physical activity and play activities by province.

Provinces	Variables	f	%	X^2	p
Amasya	Benefiting	12	66.7	39.21	0.00
	Not benefiting	6	33.3		
	Total	18	100.0		
Çorum	Benefiting	2	3.1		
	Not benefiting	63	96.9		
	Total	65	100.0		
Samsun	Benefiting	9	15.3		
	Not benefiting	50	84.7		
	Total	59	100.0		
Tokat	Benefiting	18	24.3		
	Not benefiting	56	75.7		
	Total	74	100.0		

According to teachers' opinions, there was no statistically significant difference ($p>0.05$) between the adequacy of kindergarten facilities in the provinces and the rate of achievement of the objectives of physical activity and play activities, but a significant difference ($p<0.05$) was observed in terms of the rate of materials for each student (Table 12).

As seen in Table 13, only 19.0% of kindergarten teachers, including those who partially benefit from physical education teachers, make use of physical education teachers in physical activity and play activities.

In Table 14, the rates of kindergartens' utilization of physical education teachers in physical activity and play activities are analyzed. It was found that there was a statistically significant difference ($p<0.01$) between the rates of utilization of physical education teachers in physical education and play activities in preschools.

Discussion

This study evaluates the physical activity and play opportunities in public preschools in TR83 Region at the spatial, material and program levels, reveals the extent to which these opportunities meet the developmental needs of children, and offers suggestions for improving the quality of early childhood education. The findings show that there are serious deficiencies and imbalances in physical education and play in public kindergartens in the region. The lack of infrastructure and equipment for activities that support physical development, such as basic movement, coordination and balance, is a major problem in preschools in these provinces. In particular, inadequate physical education and playgrounds, low weekly class hours, and insufficient health check-ups may have negative consequences for children's optimal development. These deficiencies reveal that children have limited access to physical activity and play activities, which are critical for supporting their physical development.

According to the results of the research, it is seen that the conditions required to support children's healthy physical and motor development are not provided. It is noteworthy that only less than 45% of kindergartens have physical activity and play areas (Tables 5 and 6) and weekly physical activity class hours are mostly below the expected level (Tables 3 and 4). This may negatively affect the learning and practicing of locomotor, manipulative and balance movements. In order to support children's physical development as well as their cognitive and social skills, it is important to carry out games and physical education activities in adequate equipment and space (Güler & Pepe, 2005; Özyürek et al., 2015). It is also known that physical activity in early childhood has positive effects on children's general health and development. For example, in a study by Torkar and Rejc (2017), it is stated that natural playgrounds increase children's physical activity levels and offer various play opportunities. The study reveals that children perform more physical activity in natural environments and that such areas enrich children's play experiences. This shows the necessity of increasing natural playgrounds and physical activity opportunities in public kindergartens.

In addition, the low rate of teachers' utilization of physical education branch teachers in physical activity and play activities reduces the effectiveness of the education process. Teachers' utilization of physical education teachers in physical activity and play activities varied significantly across provinces. While 66.7% of the teachers in Amasya utilized physical education teachers, this rate was only 3.1% in Çorum (Tables 13 and 14). While this situation emphasizes the importance of providing expert support in the field of physical education (Kanbay Ak et al., 2016), it reveals that kindergarten teachers are insufficient to cooperate with physical education teachers and this cooperation should be supported. These results draw attention to the lack of expert support in children's physical development. Research shows that physical education teachers play an important role in the development of children's motor skills and their participation in physical activities (Bailey, 2006; Kirk, 2011). Therefore, making more use of physical education teachers can increase the efficiency of physical activities in preschools.

Significant differences were also found between provinces in terms of the adequacy of physical activity and play opportunities. In Amasya, 33.3% found these facilities to be adequate; while in Tokat this rate was 23.0% (Tables 11 and 12). Since physical activities contribute to children's healthy growth and development, it is clear that these opportunities should be increased in preschools (Tremblay et al., 2011). In particular, supporting physical development and motor

skills is an important part of early childhood education (Gabbard, 2021). In this context, eliminating the lack of space and equipment for physical activity and play activities in preschools will positively affect children's development. In a systematic review by Meyer et al. (2019), temporary spaces such as "Play Streets" allow children to play safely and increase physical activity levels in communities. The study emphasizes that such practices have the potential to increase children's opportunities for play and physical activity, especially in low-income areas. Implementing similar practices in public kindergartens could be an important step towards creating safe spaces for children to play.

Although the research findings reveal that most preschools have equipment to support cognitive, rhythm and imitation development (Tables 7 and 8), the lack of basic physical development materials such as balance beam, gymnastic stick and medicine ball (Tables 9 and 10) stands out as an important problem. The findings also show that preschools have serious deficiencies in terms of sports equipment. For example, basic equipment such as balance beams and gymnastics equipment were found to be either non-existent or limited in number in many schools (Tables 9 and 10). Lack of equipment can negatively affect children's motor skill development and reduce their level of participation in physical activities (Pangrazi & Beigle, 2019). Therefore, providing preschools with a sufficient number and variety of physical activity and play materials will contribute to children's more active participation in physical activities. In addition, environmental factors should also be taken into account in the evaluation of physical activity and play opportunities. In a study by Nobre et al. (2022), it was shown that children's physical activity levels were associated with the quality of playgrounds and environmental opportunities. The study reveals that physical environmental opportunities positively affect children's active play experiences. In this context, improving the quality of physical activity areas and play opportunities in public kindergartens can be considered as a critical element to increase children's physical activity levels.

The study was conducted regionally as TR83 provinces and although the findings are limited to a specific socio-economic structure, evaluations and interpretations are processed with an emphasis on the general.

Conclusion

In conclusion, this study emphasizes the need to improve the physical activity and play opportunities of preschools in TR83 region. However, evaluating physical activity and play opportunities in public kindergartens is of critical importance in meeting children's developmental needs and encouraging healthy lifestyle habits. In this context, in order to effectively implement physical activity and play activities that will support children's physical, mental, social and spiritual development, it is important to eliminate material and space deficiencies in public kindergartens and to increase the opportunities for teachers to benefit from experts to support educational activities. Thus, children's physical, mental and social development can be better supported. In future studies, it may be useful to examine whether intervention programs are effective in solving these problems.

Authors' Contribution

Study Design: İG; Data Collection: İG; Statistical Analysis: İG; Manuscript Preparation: İG.

Ethical Approval

This study was ethically approved by the Non-Interventional Clinical Research Ethics Committee with the decision dated 19.11.2024 and numbered E-30640013-108.01-227559.

Funding

The authors declare that the study received no funding.

Conflict of Interest

The authors hereby declare that there was no conflict of interest in conducting this research.

Data Availability Statement

Data supporting the findings of this study are available from the corresponding author [İ.G.] upon reasonable request.

References

Altay, S., İra, N., Bozcan, E. Ü., Yenal, H. (2011). Preschool education in national education councils from the establishment of the republic to the present and its current status. *NWSA Education Sciences*, 6(1), 660-672.

Bailey, R. (2006). Physical education and sport in schools: A review of benefits and outcomes. *J Sch Health*, 76(8), 397-401.

Binbaşıoğlu, C. (1970). *Educational psychology and its field, child development and education*. Ankara: Binbaşıoğlu Publishing House.

Cinel, N. (2006). *An investigation of the opinions of parents with 3-6 year old children at different socio economic levels on toys and play materials and the toys and play*

materials owned by children in this age group [Master's Thesis, Gazi University, Institute of Educational Sciences]. CoHE Thesis Center. https://tez.yok.gov.tr/UlusalTezMerkezi/

Dilekmen, M., Bozan Türün, N. (2018). *Evaluation of play in preschool education according to teacher opinions. Atatürk University Kazım Karabekir Education Faculty Journal*, 37, 43-56.

Erşan, Ş. (2006). *Investigation of the perceptions of 6-year-old children attending preschool education institutions about play and work* [Unpublished Master's Thesis, Gazi University, Institute of Educational Sciences]. CoHE Thesis Center. https://tez.yok.gov.tr/UlusalTezMerkezi/

Gabbard, C (2021). *Lifelong motor development*. 8th Edition, USA: Wolters Kluwer

Gallaue, D.L. (1982a). *Understanding motor development in children. New York: John Wiley and Sons*.

Gökmen, H., Karagül, T., & Aşçı, F.H. (1995). *Psychomotor development*, Ankara: GSGM Publication No: 139.

Güler, İ., Pepe, K. (2005). *Evaluation of the facilities for physical education and play activities of kindergartens in Burdur and Isparta State Primary Schools*. 1st Burdur Symposium (November 16-19, 2005). Türkiye: Burdur.

Güler, İ., Özsoy, O. (2018). The preschool and primary school educational games: A teachers' perspective. *European Journal of Education Studies*, 4(5), 26-34.

Kadim, M. (2012). *Investigation of preschool teachers' self-efficacy towards game teaching* [*Master's Thesis*. Abant Izzet Baysal University Institute of Educational Sciences], CoHE Thesis Center. https://tez.yok.gov.tr/UlusalTezMerkezi/

Kanbay Ak, G., Yıldırım, B., & Kadıoğlu Ateş, H. (2016). An examination of preschool teachers' perceptions of professional competence (example from the Başakşehir district). *Academic Perspective Journal*, 55, 89-108.

Kirk, D. (2011). *Physical education futures*. Routledge.

Larson, G. A. & Zaichkowsky, L. D. (1995). Physical, motor and fitness development in children and adolescents. *Journal of Education*, 177(2), 25-55.

MEB (General Directorate of Basic Education) (2013). *Preschool education program*. https://tegm.meb.gov.tr/dosya/okuloncesi/ooproram.pdf, Access Date: 25.07.2022.

Meyer, M. R. U., Bridges, C.N., Schmid, T.L., Hecht, A. A., & Porter, K. M. P. (2019). Systematic review of how play streets impact opportunities for active play, physical activity, neighborhoods, and communities. *BMC Public Health*, 19, 335.

Nobre, J. N. P., De Souza Morais, R. L., Prat, B. V., Fernandes, A. C., Viegas, Â. A., Figueiredo, P. H. S., Costa, H. S., Camargos, A. C. R., de Alcantara, M. A., Mendonça, V. A., & Lacerda, A. C. R. (2022). Physical environmental opportunities for active play and physical activity level in preschoolers: A multicriteria analysis. *BMC Public Health*, 22, 340.

Özsoy, O., & Güler, İ. (2023). Examining classroom teachers' attitudes towards physical education and play classes (Amasya example). *Trakya Journal of Education*, 13(2), 1008-1023.

Özyürek, A., Özkan, İ., Begde, Z., & Yavuz, N. F. (2015). Physical education and sports in the preschool period. *International Journal of Science Culture and Sport*, 3 (Special Issue 1), 479 - 488.

Pangrazi, RP., Beigle, A. (2019). *Dynamic physical education for elementary school children*. 19. Edition, Human Kinetics

Tremblay, M. S., LeBlanc, A. G., Kho, M. E., Saunders, T. J., Larouche, R., Colley, R. C., Goldfield, G., & Connor Gorber, S. (2011). Systematic review of sedentary behaviour and health indicators in school-aged children and youth. *Int J Behav Nutr Phys Act*, 8, 98.

Torkar, G., & Rejc, A. (2017). Children's play and physical activity in traditional and forest (natural) playgrounds. *International Journal of Educational Methodology*, 3(1), 25-30.

Ulutaş, A. (2011). The importance of drama and play in the preschool period. *Journal of the Institute of Social Sciences of Adıyaman University*, 4 (6), 233-242.

Wilde, J. (Translate: Özmen, A.). (2006). Practices for Children Experiencing Anger Issues. *Ankara University Journal of Educational Sciences*, 39 (1), 135-144.