JKMU
Journal of
Kerman University of Medical Sciences
https://jkmu.kmu.ac.ir
10.34172/jkmu.4017
JKMU. 2025;32:4017

Original Article

The Impact of Physical Education and Physical Skill Development on the Physical and Mental Health of Preschool Children

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Abstract

Background: Given the critical role of physical education and physical skill development in improving the physical and mental health of preschool children and the increasing international attention to preschool education and its impact on children›s holistic development, this study aimed to assess the effects of physical education programs on children›s health.

Methods: This study was conducted using a quasi-experimental approach with pre-test and post-test, with a control group. Data were collected through valid and reliable questionnaires. Preschoolers in Kerman City were sampled, and 60 children were divided into a control group (30 children) and an experimental group (30 children).

Results: This study's findings show that physical activities help improve children's physical performance potential and positively affect their mental health.

Conclusion: The study recommends incorporating "playful" physical activity into educational programs. It suggests that schools and educational centers consider physical activities essential to their curricula and integrate healthy and enjoyable physical activities into children's daily routines.

Keywords: Preschool, Physical and mental health, Physical skill development, Physical education, Holistic education

Citation: Iranmanesh A, Pourranjbar M, Pourranjbar S, Mazloomi Soveini F, Pourranjbar S, Rahimizadeh M. The impact of physical education and physical skill development on the physical and mental health of preschool children. *Journal of Kerman University of Medical Sciences*. 2025;32:4017. doi:10.34172/jkmu.4017

Received: July 23, 2024, **Accepted**: July 21, 2025, **ePublished**: September 14, 2025

Introduction

Physical education and developing physical skills are considered essential components of children's growth in the preschool period. This is a sensitive period for strengthening the foundations of physical and mental health, which can have long-lasting effects on an individual's life (1). Physical activities help strengthen muscles and bones and play an important role in developing fine motor skills, balance, and coordination (2). On the other hand, these activities help children gain more self-confidence and strengthen their social skills through play and sports. Studies have shown that appropriate physical education during this age can improve concentration and academic performance in later stages of children's lives. In addition, physical activity can effectively improve mental health, decrease stress and anxiety, and develop a sense of happiness (1).

Preschool education is a fundamental component of early childhood education and is critical to children's general development. For example, preschool education can help to enhance physical skills (3). Therefore, it is important to improve overall social education, and effective preschool education is significant in improving students' interest in learning and creating a strong base for their total growth. It is not surprising that research on preschool education has garnered global attention.

Physical activities are often practical and diverse so that students can experience different forms of play. In addition, during this exploration, students enjoy their success, and their self-awareness and self-confidence will improve (4). Tashpulatov and Shermatov believed that preschool-aged children are the motherland's future and that the body is the capital of future study and work. Physical education is vital to early childhood development

and must be given proper attention in preschool settings (5). According to Pasichnyk et al, physical education, art, and music education have increasingly been included in comprehensive quality education. Among them, physical education is directly related to and has a key role in students' physical and mental growth. By incorporating "fun exercise" into preschool physical education, the quality of education can be significantly improved (6).

The importance of this research is remarkable from several perspectives, which demonstrates the significance of investigating the development of physical skills in preschool children and the impact of physical education on their physical and mental health. First, based on the work of Mecías-Calvo et al, the study examines the impact of sports skill training on children's physical fitness, including endurance, strength, and motor skills, which are essential for healthy physical development in childhood. Second, the psychological effects of sports skill training, such as increased self-confidence, improved social skills, and reduced anxiety in preschool children, all contribute to strengthening their mental health. Moreover, considering the multifactorial effects of physical education highlights the importance of integrating physical education into preschool programs. This study aimed to provide deeper insights into how much physical education can impact various aspects of preschool children's development by reviewing existing literature and data collection through questionnaires. The study also attempts to provide evidence highlighting the importance of strengthening educational programs that offer meaningful, purposeful, and enjoyable opportunities for physical activity (7).

Third, since previous research has primarily focused on the importance of physical activity and sports during childhood and their long-term positive effects on health and well-being, this study emphasizes the importance of developing and implementing effective physical education programs in preschool environments. Enhancing education through physical activity can be considered an important tool for the comprehensive development of children, as it not only contributes to their physical growth but also reinforces their social, emotional, and cognitive skills. This study can add valuable insights to the existing literature on physical education's impact on preschool children's development. It provides a foundation for future research that could improve educational programs at a global level.

In recent years, numerous studies have been conducted on the impact of physical activity and movement on the health and development of preschool children. Beknazarovich emphasized the importance of stretching exercises in improving the health of preschool children and investigated the characteristics of organized stretching classes (8). Narzikulovich also highlighted the importance of open space in physical education by examining the qualitative development of children through mobile games (4). Yan et al investigated the consumption of sugary beverages and their relationship with obesity factors in preschool children in China. They found that high consumption of these beverages can be concerning (9). Chang and Lei also investigated the relationship between physical activity, sedentary behavior, and sleep duration in this age group, and their findings explore the different effects of these factors on children's sleep (10). In Portugal, Cordovil et al examined the effect of COVID-19 on preschool children, which revealed a decrease in physical activity and environmental quality in preschool centers during the quarantine (11). Demchenko et al also focused on developing teaching methods that could help improve physical education teachers' professional activities (12). These studies collectively emphasize the importance of physical activity and movement in developing health and growth in preschool children and provide strategies for improving these activities. These findings can help shape effective educational and health policies and programs.

This study first examines the development of sports skills and investigates basic sports concepts. Then, the features of preschool and the importance of preschool education are discussed. Finally, the all-around impact of physical education on the mind and body of preschool children is investigated. The innovation of this research lies in the fact that it studied preschool subjects and, furthermore, simultaneously employed both questionnaire and experimental approaches for data collection. Moreover, the research findings can lead to a plan for improving the physical education of preschool children and contributing to their all-around educational development.

Methods

In this study, the impact of physical education and the development of motor skills on the physical and mental health of preschool children was examined using a quasi-experimental framework. The study design includes a pre-test, post-test, and control group, which allows for comparing the effects of physical education programs in different groups. Data were collected through questionnaires about children's physical behaviors, activity participation levels, and mental states. This approach helps us study the long-term effects of physical education programs on children's health by examining changes over time. Descriptive and inferential statistical analysis methods were conducted for data analysis. Data collection in this study occurred through two primary methods: library research and field research. In the library method, literature and theoretical foundations related to the research topic were collected from reliable Persian and English sources such as articles and websites from different databases including Scopus, Web of Science (WoS) indexed databases, and Google scholar. The field research method involved designing and implementing

questionnaires using a quasi-experimental design. Before conducting the research, a consent form containing the study purpose was distributed among the subjects and their family to ensure ethical considerations. After determining the control group (30 subjects) and the experimental group (30 subjects), the participants participated in the physical activity program for four weeks; the questionnaires were distributed among the research sample to measure the research variables.

The research sample was estimated based on G*Power software. The research tool was a researcher-developed questionnaire with 35 items measuring the research variables using the Likert scale. In this research, content validity (confirmation of the quality and quantity of questions from the perspective of experts and specialists in the field of research) was used to determine validity. Reliability is an instrument used to measure the accuracy of the results obtained. The inconsistency ratio was compared to determine reliability. These data were used to test the hypotheses and answer the research questions. The study's statistical population consisted of preschoolers from the city of Kerman, and the samples for the study were selected using a stratified sampling method: 30 for the control group and 30 for the experimental group. In this research, the effect of physical education and the improvement of physical skills on preschool children's physical and mental health was investigated. In the descriptive statistics section, the variables were examined, and in the inferential statistics section, using the normal distribution of the data, univariate (e.g., ANOVA) and multivariate (MANOVA) tests were used to test the hypotheses. SPSS version 20 software was used for data analysis.

Results

The following tables present the demographic features and the descriptive and inferential statistics results, including the normal distribution of the data and univariate (e.g., ANOVA) and multivariate (MANOVA) tests.

The results of the examination of the demographic characteristics are given in Table 1.

The results of the descriptive statistics of physical health variables and their components have been given in Table 2 and Table 3.

According to Table 2, the scores in the control group did not show any significant change between the pre-test and post-test conditions. However, the scores in the experimental group were higher in the post-test than in the pre-test condition. The results of this part are graphically represented in Figure 1.

Table 1. Sample distribution based on demographic features

Variables	Number of students	Mean ± standard deviation
Age (y)	60	5.68 ± 0.469
Height (cm)	60	97.35 ± 5.011
Weight (kg)	60	16.90 ± 1.76

The study's findings showed that the scores in the control group did not show any significant change between the pre-test and post-test conditions. However, the scores in the experimental group were higher in the post-test than in the pre-test condition. The results of this part are graphically represented in Figure 2.

In the inferential statistics section, hypotheses about population parameters are tested and evaluated using a sample. Various analyses were used to analyze the study's data. Firstly, to examine the type of data distribution, skewness and kurtosis coefficients were applied, and then univariate and multivariate covariance analyses were applied to investigate the hypotheses.

Before testing the hypotheses of this study, it was necessary to ensure that the variables were normally distributed. The skewness and kurtosis coefficients were used to test for normality. The findings are given in Table 4.

As shown in the table above, the skewness and kurtosis values for all variables in both pre-test and post-test conditions and in both study groups are within the safe and acceptable range of + 2 and -2, indicating normal data distribution.

Reliability of the questionnaires in the research

Cronbach's alpha coefficient and the split-half method were used to assess the questionnaires' reliability (trustworthiness). The results are presented in Table 5, which indicates the measuring instruments' high reliability.

Table 5 shows that the Cronbach and split-half alpha coefficients for the variables are greater than 0.7. Based on these coefficients, the reliability of the variables in the research is confirmed.

Statistical analysis of hypotheses

After the descriptive and normality statistical tests were performed on the collected data, the proposed hypotheses and the effectiveness of physical education and physical skill development on preschoolers' physical and mental health were investigated.

The main hypothesis

Physical education and physical skill development significantly improve preschoolers' physical and mental health. In this research section, the study's central hypothesis was examined using the multivariate analysis of variance (MANOVA) or multivariate analysis of covariance (MANCOVA) test. This method requires compliance with several assumptions, which are presented in tabular form below.

Table 2. Descriptive statistics of physical health variable and its components

Variables	Statistical groups	Experimental condition	Mean	Standard deviation	Minimum score	Maximum score
Physical performance	Experiment	Pre-test	22.66	6.11	12	35
		Post-test	31.86	3.31	27	38
	Control	Pre-test	24.73	6.63	11	39
		Post-test	22.76	3.01	19	29
Motor ability	Experiment	Pre-test	12.00	3.89	4	19
		Post-test	18.53	2.45	15	23
	Control	Pre-test	13.53	4.43	3	20
		Post-test	13.13	2.89	9	19
Physical health	Experiment	Pre-test	34.66	9.73	17	54
		Post-test	50.40	5.51	42	61
	Control	Pre-test	38.26	10.51	14	59
		Post-test	35.90	5.48	28	48

Table 3. Descriptive statistics of the mental health variable and its components

Variables	Statistical groups	Experimental condition	Mean	Standard deviation	Minimum score	Maximum score
Cooperation	Experiment	Pre-test	11.53	1.99	9	16
		Post-test	18.46	1.61	16	21
	Control	Pre-test	14.86	2.75	9	19
		Post-test	14.46	3.98	6	20
Self-esteem	Experiment	Pre-test	13.20	2.55	10	18
		Post-test	19.23	1.92	15	24
	Control	Pre-test	15.26	3.05	10	22
		Post-test	15.40	2.79	10	21
Stress management	Experiment	Pre-test	11.86	2.84	6	17
		Post-test	18.76	1.79	16	23
	Control	Pre-test	14.40	2.91	10	21
		Post-test	14.93	3.97	6	21
Mental health	Experiment	Pre-test	36.60	4.42	28	44
		Post-test	56.46	3.10	50	62
	Control	Pre-test	44.53	5.89	32	53
		Post-test	44.80	5.93	34	57

Presupposition of homogeneity of variances for dependent variables using Box's M

The central hypothesis of MANOVA is that the distributions of the dependent variables follow a multivariate normal distribution and that the variance-covariance matrices are equal for cells formed based on between-subject effects. For this reason, the Box's M test is used. In this test, the following assumptions are made:

Null hypothesis: The observed covariance matrices for the dependent variables are equal across different groups.

Opposite hypothesis: The observed covariance matrices for the dependent variables are unequal across different groups.

As seen in Table 6, the significance level of the test is 0.258 and greater than 0.05. Therefore, the test's Null hypothesis is accepted; we observe equal covariance matrices for the observed dependent variables between different groups, and one of the presuppositions of using covariance analysis is confirmed.

Presupposition of homogeneity of error variances for dependent variables

One of the presuppositions of variance/covariance analysis is the existence of a relationship or correlation between the variables in different statistical groups. For this purpose, Levene's test is used. The results of this test are shown in Table 4-7 for preschoolers' physical and mental health variables. The hypotheses of Levene's test are as follows:

H_0 = the variance of the statistical groups is homogeneous

H_1 = the variance of the statistical groups is not homogeneous

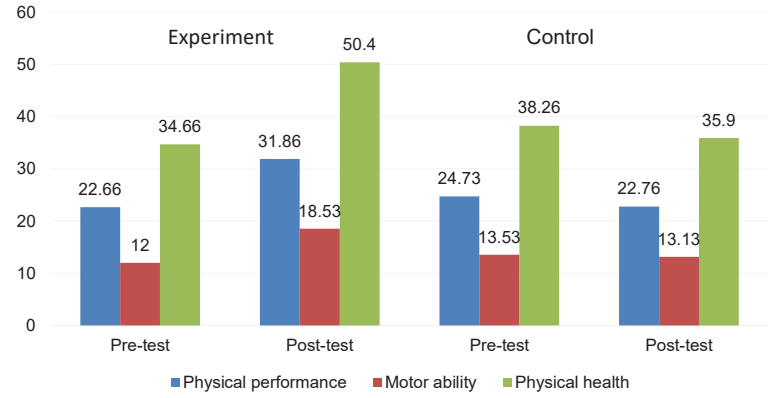

Figure 1. Descriptive statistics of the variables of physical performance, motor ability, and physical health in both statistical groups in pre-test/post-test conditions

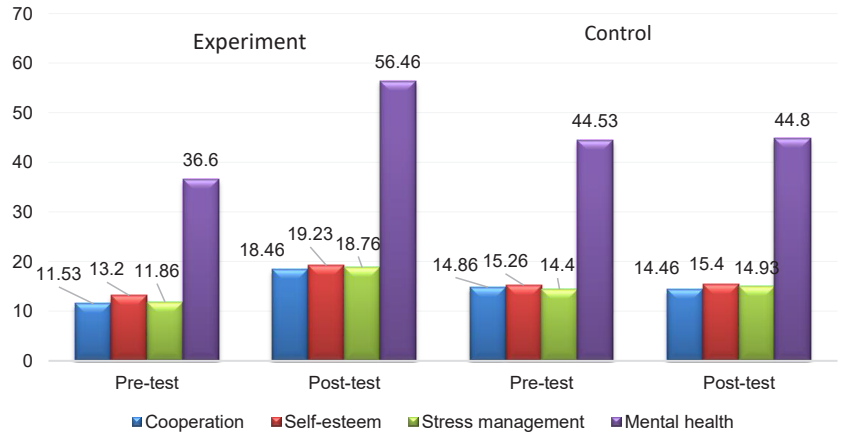

Figure 2. Descriptive statistics of the variables of cooperation, self-esteem, stress management, and mental health in both statistical groups in pre-test/post-test conditions

If the significance level of Levene's test is greater than the error level of 0.05, the null hypothesis is confirmed, and the homogeneity of the variable variances is confirmed.

Based on Table 7, the significance level for the physical and mental health variables is greater than 0.05, so it can be said that the null hypothesis of Levene's test, which is based on the homogeneity of the variances of the variables under study, is confirmed with a probability of 95%. Another presupposition of using covariance analysis is confirmed.

Testing the effect of group and time on the test

If the significance level of the tests is less than 0.05, the significance of the effects of the variables in the model is confirmed, and it can be said that the variables have a role in the model.

According to Table 8, the results of the research test show significance for the two groups in at least one of the physical health and mental health variables

The results presented in Table 9 demonstrate that there is a significant difference (F (28 & 1) = 13.409, P < 0.05)) in the physical health variable between the experimental group and the control group. This means that, after controlling for the effect of pre-test scores, the physical health score of the experimental group was significantly higher than that of the control group. The group variable explains 21.6% of the variance in physical health. There is a significant difference (F (28 & 1) = 14.218, P < 0.05)) in the mental health variable between the experimental group and the control group. This means that, after removing the effect of pre-test scores, the mental health score of the experimental group was significantly higher than that of the control group. The group variable explains 27.6% of the variance in mental health.

Based on the above tables and the study's descriptive section, physical fitness, and physical skill development significantly improve preschool children's physical and mental health.

The results of the research hypotheses:

Hypothesis 1: Regular and goal-oriented physical fitness programs improve preschool children's physical performance, directly affecting their physical health.

Hypothesis 2: Regular and goal-oriented physical fitness programs increase the motor abilities of preschool children.

The results obtained from the research regarding

Table 4. Normality test for the variables in the study

Research variables	Groups	Condition	Normality indicators		Test result
			Skewness	Kurtosis	
Cooperation	Experiment	Pre-test	0.533	-0.213	Normal
		Post-test	0.117	-1.200	Normal
	Control	Pre-test	-0.575	-0.013	Normal
		Post-test	-0.631	-0.324	Normal
Self-esteem	Experiment	Pre-test	0.508	-1.022	Normal
		Post-test	-0.075	1.055	Normal
	Control	Pre-test	0.385	-0.029	Normal
		Post-test	0.245	0.127	Normal
Stress management	Experiment	Pre-test	-0.507	-0.222	Normal
		Post-test	0.913	0.222	Normal
	Control	Pre-test	0.679	-0.029	Normal
		Post-test	-0.463	0.064	Normal
Physical performance	Experiment	Pre-test	0.057	-0.450	Normal
		Post-test	0.052	-0.996	Normal
	Control	Pre-test	-0.246	0.960	Normal
		Post-test	0.556	-0.709	Normal
Motor ability	Experiment	Pre-test	0.668	0.127	Normal
		Post-test	0.106	-1.132	Normal
	Control	Pre-test	-0.858	0.477	Normal
		Post-test	0.751	-0.404	Normal
Physical health	Experiment	Pre-test	-0.192	-0.269	Normal
		Post-test	0.183	-0.884	Normal
	Control	Pre-test	-0.684	0.924	Normal
		Post-test	0.664	-0.669	Normal
Mental health	Experiment	Pre-test	-0.324	-0.422	Normal
		Post-test	-0.410	-0.504	Normal
	Control	Pre-test	-0.317	-0.577	Normal
		Post-test	0.292	-0.376	Normal

Table 5. Reliability test results for questionnaires

Variable	Number of items	Split-half	Cronbach's alpha
Physical health	36	0.862	0.918
Mental health	15	0.802	0.823

Table 6. Box's M test results

Box's M statistic value	F-statistic value	Significance level
24.184	1.219	0.258

Table 7. Results of Levene's test for homogeneity of variance of variables

Variable	*F*-statistic value	Significance level	Conclusion
Physical health	1.424	0.248	Homogeneous
Mental health	3.964	0.056	Homogeneous

Table 8. Results of the multivariate tests

Effects		Statistic value	*F*	Significance level	Effect size
Statistical group test conditions	Pillai's trace	0.122	8.010	0.001	0.122
	Wilks' lambda	0.878	8.010	0.001	0.122
	Hotelling's trace	0.139	8.010	0.001	0.122
	Roy's largest root	0.139	8.010	0.001	0.122

hypotheses 1 and 2 are presented below.

Based on the significance levels in Table 10, the null hypothesis of homogeneity of variances between the control and experimental groups is not rejected at the 5% level. In conclusion, the equality of variances is confirmed.

Table 11 shows that in the post-test, the physical performance scores of the experimental group (the group that received regular and goal-oriented physical fitness programs) are significantly different from the physical performance scores in the control group (the significance level is less than 0.05). Additionally, in the post-test, the motor ability scores of the experimental group (the group that received regular and goal-oriented physical fitness programs) are significantly different

Table 9. Results of the multivariate analysis of variance effect groups

Source of changes	Dependent variables	Sum of squares	Degree of freedom	Mean squares	*F*-statistic	Significance level	Effect size
Group effect	Physical health	891.075	1	891.075	13.409	0.000	0.216
	Mental health	904.533	1	904.533	14.218	0.000	0.276
Error	Physical health	7708.433	26	66.452			
	Mental health	1100.935	26	24.784			

Table 10. Homogeneity of variances

Variable	*F*	Degree of freedom 1	Degree of freedom 2	Significance level
Physical performance	1.087	1	28	0.358
Motor abilities	2.555	1	28	0.059

Table 11. Analysis of between-subjects effects

Source of changes	Dependent variables	Sum of squares	Degree of freedom	Mean squares	*F*	Significance level	Effect size
Corrected model	Physical performance	1698.625	3	566.208	22.315	0.000	0.566
	Motor abilities	745.800	3	251.600	20.404	0.000	0.545
Constant value	Physical performance	78081.008	1	78081.008	3077.223	0.000	0.964
	Motor abilities	24538.800	1	24538.800	1990.003	0.000	0.945
Group effects	Physical performance	371.008	1	371.008	14.622	0.000	0.312
	Motor abilities	112.133	1	112.133	9.094	0.000	0.273
Error	Physical performance	294.367	26	15.374			
	Motor abilities	143.400	26	6.331			
Total	Physical performance	83094.008	30				
	Motor abilities	25540.133	30				
Corrected total	Physical performance	4641.992	29				
	Motor abilities	2185.200	29				

from the motor ability scores in the control group (the significance level is less than 0.05). In conclusion, based on the descriptive tables and the tables above, it can be concluded that individuals who received regular and goal-oriented physical fitness programs showed significantly increased physical performance and motor ability scores compared to individuals who did not receive these programs, compared to their pre-test scores. Overall, the observations suggest that regular and goal-oriented physical fitness programs improve physical performance and increase preschool children's motor abilities, directly affecting their physical health. Regular and goal-oriented physical fitness programs improve the physical performance and increase the motor abilities of preschool children with effect sizes of 0.312 and 0.273, respectively.

Hypothesis 3: Consistent and regular participation in physical and sports activities helps children develop cooperation (as a social skill dimension), positively impacting their mental health.

Hypothesis 4: Consistent and regular participation in physical and sports activities helps children develop self-confidence (as a social skill dimension), positively impacting their mental health.

Hypothesis 5: Consistent and regular participation in physical and sports activities helps children develop stress management (as a social skill dimension), positively impacting their mental health.

The results obtained from the research regarding hypotheses 3, 4, and 5 are presented below.

Based on the significance levels in Table 12, the null hypothesis of homogeneity of variances between the control and experimental groups is not rejected at the 5% level. In conclusion, the equality of variances is confirmed.

In Table 13, it is observed that in the post-test, the cooperation, self-confidence, and stress management scores of the experimental group (the group that participated in physical and sports activities regularly and consistently) are significantly different from the cooperation, self-confidence, and stress management scores in the control group (The significance level is less than 0.05). In conclusion, based on the descriptive tables and the tables above, it can be concluded that individuals who participated in physical and sports activities regularly and consistently showed significantly increased scores for cooperation, self-confidence, and stress management compared to individuals who did not participate. Overall, the observations suggest that consistent and regular participation in physical and sports activities helps children develop social skills such as cooperation, self-confidence, and stress management, positively impacting

Table 12. Homogeneity of variances

Variable	*F*	Degree of freedom 1	Degree of freedom 2	Significance level
Cooperation	2.401	1	28	0.071
Self-confidence	2.029	1	28	0/114
Stress management	2.317	1	28	0.079

Table 13. Analysis of between-subjects effects

Source of changes	Dependent variables	Sum of squares	Degree of freedom	Mean squares	*F*	Significance level	Effect size
Corrected model	Cooperation	726.800	3	242.262	32.307	0.000	0.455
	Self-confidence	569.692	3	189.897	27.770	0.000	0.418
	Stress management	731.092	3	243.697	27.342	0.000	0.414
Constant value	Cooperation	26403.333	1	26403.333	3520.984	0.000	0.968
	Self-confidence	29862.075	1	29862.075	4366.938	0.000	0.974
	Stress management	26970.008	1	26970.008	3025.942	0.000	0.963
Group effects	Cooperation	320.133	1	320.133	42.691	0.000	0.369
	Self-confidence	285.208	1	385.208	41.708	0.000	0.364
	Stress management	414.408	1	414.408	46.495	0.000	0.386
Error	Cooperation	86.867	26				
	Self-confidence	79.233	26				
	Stress management	103.900	26				
Total	Cooperation	27537.133	30				
	Self-confidence	30796.208	30				
	Stress management	28219.408	30				
Corrected total	Cooperation	1596.667	29				
	Self-confidence	1362.925	29				
	Stress management	1764.992	29				

their mental health. Regular and consistent participation in physical and sports activities improves cooperation, self-confidence, and stress management in preschool children with effect sizes of 0.369, 0.364, and 0.386, respectively.

Discussion

Based on the analysis of the results presented in the previous section related to the effect of physical training on the physical development of preschool children, a few key points can be stated. Firstly, the research findings indicate that physical activities not only affect the improvement of children's physical abilities but also significantly impact their self-confidence and social skills. This is achieved through the development of social interactions and positive experiences in various sports fields. The findings are very insightful. It is encouraging to see that physical activity improves physical fitness and significantly impacts social skills and self-confidence. Physical activity is an excellent opportunity for preschool children to develop positive interactions, which can lead to better overall development. Consistent with the research findings, Pieh et al found that physical activity significantly affected mental health during the COVID-19 pandemic (13). Maugeri et al demonstrated a positive relationship between physical activity and mental well-being. They stated that the decrease in general physical activity had an adverse effect on psychological health and well-being (14). Marconcin et al revealed that increasing the level of physical activity has a close relationship with the level of well-being, quality of life, and the rates of depression, anxiety, and stress symptoms (15). Moreover, according to Pascoe et al. (2020), evidence shows that physical activity and exercise interventions play critical roles in mental health outcomes (16). In addition, Hong et al found a significant association between physical fitness and mental health in Chinese college students (17). Engaging in physical activity significantly decreases stress and anxiety by releasing endorphins, which can improve the overall mood and reduce the sense of pain. Physical activity has been shown to improve cognitive function, including memory, learning, and concentration, which can help enhance overall mental health. Physical activity can improve mood, reduce stress and anxiety, and improve cognitive function, leading to better mental health. Engaging in physical activities, including team sports or fitness classes, can provide opportunities for social interaction and connection, enhancing overall well-

being.

Secondly, the research findings have emphasized the importance of the preschool period in shaping healthy habits and positive attitudes toward physical activity. Well-designed physical training programs can be a foundation for children's healthy physical and mental development. The findings in this section further highlight the importance of early physical education. Developing healthy habits and a positive attitude towards physical activity in children during the preschool years lays the foundation for healthy physical and mental development. The potential impact that these programs can have on a child's overall development is significant, making it an important consideration for educators and parents alike.

According to the research findings, physical training programs in preschools should be designed to offer a variety of activities for children while helping strengthen their physical and mental abilities. Activities requiring teamwork and communication with others can effectively improve children's social and physical skills. In addition, physical training programs should be designed flexibly so that they can accommodate the different needs and interests of the children.

It is also recommended that further studies be conducted to evaluate the impact of varied physical education programs and develop more effective methods for teaching and implementing these programs. These studies can include long-term studies that examine the long-term effects of regular participation in physical activities on the health and well-being of the children being studied.

Conclusion

The study highlights the multifaceted benefits of physical activities for children, particularly emphasizing how such activities promote physical fitness and enhance self-esteem and social skills. This positive influence on children's personal development is attributed to the opportunities provided by physical activities to engage in social interactions and cultivate positive experiences within a range of sporting contexts. The study has also underscored the crucial role that early-age education plays in instilling healthy habits and fostering positive attitudes toward physical activity in children. According to the findings, carefully planned physical education programs in preschool settings can be the cornerstone of a child's physical and mental well-being. This portion of the study underscores the significance of early physical education, emphasizing that by promoting healthy habits and positive attitudes towards physical activity in children during the preschool years, a solid foundation is established for their overall physical and mental development.

Acknowledgments

The authors are grateful to all participants who participated in conducting this study and their families.

Authors' Contribution

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Competing Interests

The authors declare no conflict of interest.

Ethical Approval

This study was approved by Kerman University of Medical Sciences (IR.KMU.REC.1403.643).

Funding

This research received no grant from public, commercial, or not-for-profit funding agencies.

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