Mini Basketball Game Model to Improve Social Skill, Motoric Skill, and Physical Fitness of Elementary School Students

Supriyadi

Ilmu Keolahragaan-Universitas Negeri Malang

INFO ARTIKEL

Riwayat Artikel:

Diterima: 10-10-2020 Disetujui: 16-04-2021

Kata kunci:

mini basketball; social skills; motoric skill; physical fitness; bola basket kecil; keterampilan sosial; keterampilan motorik; kesehatan fisik

Alamat Korespondensi:

Supriyadi Ilmu Keolahragaan Universitas Negeri Malang Jalan Semarang 5 Malang E-mail: supriyadi.fik@um.ac.id

ABSTRAK

Abstract: The aim of the study was to obtain a valid, practical and effective basketball game model to improve social skills, motor skills and physical fitness of elementary school students. This study uses a research and development design. The results showed that the mini basketball game had a significant positive effect on social skills, motor skills and physical fitness. So it can be concluded that the Mini Basketball game is a valid, practical, and effective game to improve social skills, motor skills, and physical fitness of elementary school students.

Abstrak: Penelitian ini bertujuan untuk memperoleh model permainan bolabasket yang valid, praktis, dan efektif untuk meningkatkan keterampilan sosial, keterampilan motorik, dan kebugaran jasmani siswa SD. Penelitian ini menggunakan rancangan penelitian dan pengembangan. Hasil penelitian menunjukkan bahwa pada uji coba permainan bolabasket mini memiliki pengaruh yang signifikan positif terhadap keterampilan sosial, keterampilan motorik dan kebugaran jasmani. Dengn demikian, dapat disimpulkan permainan Bolabasket Mini merupakan permainan yang valid, praktis, dan efektif untuk meningkatkan keterampilan sosial, keterampilan motorik, dan kebugaran jasmani siswa SD.

Education is an anthropological phenomenon that has been going on for a long time in human life. Educational terminology is understood as the process of developing all human potential. The purpose of national education is to develop the potential of students to become human beings who believe and fear God Almighty, have a noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens (Pasaribu, 2017). In line with that, in the 2010-2014 period, the Ministry of National Education set a vision for implementing excellent national education services to form comprehensive intelligent Indonesian people (Lesmana, 2018). Comprehensively, intelligent Indonesian people are spiritually intelligent, emotionally intelligent, socially intelligent, intelligent and kinesthetically intelligent.

As one of the various subjects taught in schools, physical education has an important role in the student education process. Three aspects can be touched through physical education, namely: psychomotor, attitude (affection), and intelligence (cognition) (Jeong & So, 2020). The three aspects above can be merged into an activity called physical education. However, in reality the results of research conducted by the Central Curriculum Research and Development Agency show that the practice of learning physical education in schools is in the form of motoricic behavior, which emphasizes mastery of basic techniques and sports skills, does not include cognitive-reflective and affective elements in its activities. In order to give color to students, teachers should design comprehensive physical education programs. The program has been designed in such a way by the teacher so that the three aspects mentioned above can be achieved. Likewise, the link between physical education and social responsibility becomes important in the learning process.

Social activity is a necessity for human life. These needs are basic needs to feel safe, accepted, and useful for people's lives. Every human being is expected to find their own unique way to contribute to various activities and be responsible for every behavior they do. In relation to self-achievement and as social beings, it is necessary to emphasize more on social skills and the ability to adapt to the surrounding environment, usually referred to as psychosocial aspects. Although social skills must begin to be developed since childhood, by developing social skills from an early age, it will make it easier for children to fulfill subsequent developmental tasks so that they can develop normally and healthily when they are teenagers or adults.

Social skills are the ability of individuals to interact with other individuals in a social context that is beneficial both individually and in groups (Szumski, Smogorzewska, Grygiel, & Orlando, 2019). Social skills affect individual adjustment, individuals who have high social skills tend to get better social acceptance, while individuals who have low social skills tend to get less social acceptance (Kiliç & Güngör Aytar, 2017). In relation to learning outcomes, an assessment of learning outcomes and social skills was carried out, the conclusion of the research reported that there were significant differences in the acquisition of learning outcomes between groups of students who had high social skills and groups of students who had low social skills (Gökel & Dağli, 2017).

The rapid progress of science and technology is marked by the number of tools created to meet the needs of human life, such as transportation and communication tools, as well as entertainment tools such as TV, video games, and play stations. On the one hand, human life becomes more comfortable and the loss of opportunities for natural human movement is supported by a less safe and comfortable environment, parents work more, the attraction of entertainment such as video games becomes stronger for children, many children are increasingly lazy to play outside the house after school.

Several studies have shown: (1) American children spend more time watching television and playing video games than they do on anything else before bed, (2) Children watch television an average of 25 to 27 hours a week, (3) Many children spend less than 15 minutes a day engaging in physical activity (Beauchamp, Rhodes, & Nigg, 2017). These findings suggest that children are becoming less and less physically active, more worrying are the results of studies that suggest that children's physical activity continues to decrease with age, with a significant decline in physical activity, occurring between fourth and sixth grades. The loss of natural human movement opportunities will certainly have impacts such as: hypokinetic, heart disorders, obesity, and socialization (Stern, Barnoya, Elder, & Gallegos-Carrillo, 2019).

Play is an important activity for the physical, social, emotional, intellectual, and spiritual growth and development of elementary school children. By playing, children can get to know the environment, interact, and develop emotions and imagination well. Play has a very broad function, such as for children, for teachers, parents and other functions. By playing can develop physical, motoric, social, emotional, cognitive, creativity (creativity), language, behavior, sensory acuity, release tension, and therapy for physical, mental or other developmental disorders (Torkar, 2017) because the social territory began to develop and expand, elementary school age children's motoric skills development and social needs to be improved.

Physical Activity

Physical activity is body movement produced by the contraction of skeletal muscles to increase energy expenditure (Adi & Fathoni, 2020b). Physical activity is any bodily movement of any kind and may include recreational, fitness and sporting activities such as jumping rope, playing football, lifting weights, as well as everyday activities such as walking, climbing stairs or sweeping (Eckstrom, Neukam, Kalin, & Wright, 2020). Physical activity is any activity that requires a person to move or move the body in the form of exercise, sports, dancing, and other forms of recreational activities (Lazarušić, 2019).

Physical activity is a form of muscle activity that can be used to improve physical fitness. Physical activity is defined as bodily movement produced by the contraction of skeletal muscles, increasing energy expenditure above resting levels. The benefits of regular physical activity include: (a) Reducing the risk of chronic diseases of overweight, diabetes and others; (b) Assist in academic achievement; (c) Helping children feel better; (d) Reducing the risk of depression and the effects of stress; (e) Helping children prepare to become productive and healthy members of society; (f) Improving the overall quality of life (Adi & Fathoni, 2020a).

An important aspect of physical activity is to help children to socialize with individuals. A program of physical activity offers unlimited opportunities to develop a broad social understanding, initial contact between cultures of previously distant communities can be made through a shared interest in sport (Bangsbo et al., 2019).

In various countries, research has been carried out on the issue of physical fitness for children, so that they can continue to grow and develop optimally. Experts have designed various forms of formulas through in-depth research studies with the aim of increasing physical activity. These formulas are designed through various forms of intervention in schools in various ways, one of the ways of intervention is through curriculum and physical education lessons. The intervention in question is a program or set of actions designed or modified with a healthy outcome (Wouters, Evenhuis, & Hilgenkamp, 2020). Many interventions are carried out in schools through physical education lessons because physical education is a good laboratory to increase physical fitness and build brain power.

Schools and communities have the potential to improve children's health by providing instructions, programs, services to increase satisfaction with lifelong physical activities (Adi & Fathoni, 2020). For this reason, the right program to improve physical fitness, motoric skills, and value education in schools is through the provision of integrated programs that can be carried out every day so that they become good habits at school.

Based on several studies, there are areas of intervention that have been carried out including school setting intervention, family based intervention, intervention in special services (primary care intervention), community based intervention and internet based intervention (Oppewal & Hilgenkamp, 2020). This study focuses more on school setting interventions with the Daily Physical Activity (DPA) program from several intervention models.

Social Skill

Social skills reflect interpersonal understanding and the ability for a person to adapt behavior to different situational demands and be able to influence and control the responses of others effectively (Chandra, Degeng, Kuswandi, & Setyosari, 2020). Social skills are often thought of as a set of skills that enable us to communicate, relate and socialize with others (Irmansyah, Lumintuarso, Sugiyanto, & Sukoco, 2020). Social skills as cognitive functions and certain verbal and nonverbal behaviors in which a person engages in interactions with others, including verbal and nonverbal abilities (Olivares-Olivares, Ortiz-González, & Olivares, 2019). The five dimensions of social skills descriptions are: peer relational skills, self-management skills, academic abilities, obedience skills, and statement skills (Wolstencroft et al., 2018).

In essence, social skills are complex behaviors that consist of various single social behaviors. Social skills on macro elements in social relations in terms of interaction between individuals (Supianto, Kumaidi, & Suryono, 2020). The conclusion he put forward states that someone who has social skills is an individual who can communicate with other people. By fulfilling the rights, needs, satisfactions and needs for acceptable things without interfering with the rights, needs, satisfactions, and needs of others. The atmosphere of communication is expected to be free and open in dealing with other people. This definition refers to the very broad and complex concept of social skills because social skills involve various social situations and are difficult to predict by individuals.

The general principle of the formation of social skills is that social behavior appears and is responded to and followed by reinforcement, then the social response will develop. Therefore, social skills can be learned and developed through the learning process. Social skills are complex abilities of individuals to elicit positive and negative behaviors. Social skills are the result of learning and are partly determined by previous experience. Social skills are influenced by the context or situation of the individual in behaving and can be changed by using various interventions based on the behavior management approach (Wu, Mak, Hu, He, & Fan, 2019).

Social skills are a subconstruct of social intelligence (social intelligence). Based on the research conducted, it was found that social intelligence consists of four subcontracts, namely social interest, social self-efficacy, empathy skills, and social skills. Social interest relates to the willingness or interest of individuals to pay attention (concern) to others. Social self-efficacy is related to the willingness of individuals to behave socially as expected. Empathy skills are related to the individual's ability to understand the thoughts and feelings of others. Social skills refer to the ability of individuals to demonstrate their social behaviors in the form of observed behavior (Yamada et al., 2020).

Social skill is a construct consisting of a number of sub-constructs. It was found that social skills consist of two domains, namely the emotional domain and the social domain. The emotional domain consists of three categories, namely: (1) emotional expression, (2) emotional sensitivity, and (3) emotional control. The social domain consists of four categories, namely; (1) social expression, (2) social sensitivity, (3) social control, and (4) social manipulation. Thus, social skills consist of seven constructs (Salavera, Usán, & Jarie, 2020).

Refers to the importance of social skills, positive abilities that help children to interact with others in different situations (Loukatari, Matsouka, Papadimitriou, Nani, & Grammatikopoulos, 2019). It is noted that good social skills are very important to achieve success in life. These skills help a person know what to say, make good choices, and behave in various situations (Chou et al., 2017). Lack of social skills can lead to behavioral difficulties at school, inattention, delinquency, peer rejection, emotional difficulties, bullying, aggressiveness, problems in interpersonal relationships, poor self-concept, academic failure, concentration difficulties, isolation from peers, and depression.

Children's Motoric Development and Skill

The human body is a complex and amazing organ system. All of these organs are formed in the prenatal period (Mirdamadi & Block, 2020). Individual physical development includes four aspects, namely: (1) the nervous system which greatly affects the development of intelligence and emotion; (2) muscles that affect the development of strength and motoric skills; (3) endocrine glands, which cause the emergence of new behavior patterns, such as in adolescents developing feelings of pleasure to be active in an activity whose members consist of members of the opposite sex; and (4) physical/body structure which includes height, weight, and proportions (Zysset et al., 2018). The golden age in motoric development is middle childhood or childhood, during middle childhood, the body and brain experience important growth to lead to better motoric coordination, greater strength and more skill for problem solving.

Physical development is closely related to the motoric development of children. Motoric is the development of controlling body movements through coordinated activities between the nervous system, muscles, brain, and spinal cord. Motoric development includes gross and fine motoric (Sedehi, Ghasemi, Kashi, & Azimzadeh, 2021). Gross motoric skills are body movements that use large muscles or most or all of the body parts that are influenced by the child's maturity (Peyre et al., 2019). For example, the ability to sit, kick, run, go up and down stairs and so on. While fine motoric skills are movements that use fine muscles or certain parts of the body, which are influenced by opportunities to learn and practice (Buja et al., 2018). For example, the ability to move objects from hands, scribble, arrange blocks, cut, write, etc. Both of these abilities are very important so that children can develop optimally.

In relation to motoric development, a critical period theory says that, to strengthen the value of motoric skill activities through a good physical activity program. (Collett, Wallace, Kartin, & Speltz, 2019). The involvement of many children, such as play activities, supports the possession of important skill levels that can be used to develop the motoric skills needed in play activities or intergroup matches. Early experience in the movements performed should be general and should be imparted in a play environment (Maïano, Hue, & April, 2019). Games or matches that do not match the characteristics of the child when learning the initial movements should be avoided because it will result in a setback or decrease in the child's learning motivation, as a result the child will withdraw from playing activities.

Because of the close relationship between the level of growth and physical development and skills of children, the scope of physical activities offered in primary schools should be developed based on the needs of children. This cannot be made just like that, because it needs to be processed as well as possible with careful consideration. These considerations include (1) the basics of program development, (2) children's growth and development patterns, (3) children's basic encouragement, and (4) children's characteristics and interests.

Physical Fitness

The term physical fitness (fitness) comes from the English translation of physical fitness, this term has been widespread and has been accepted by the Indonesian people, however, from various experts there has been no agreement on the use of the term. In simple terms it can be interpreted that physical fitness is the body's ability to carry out activities without experiencing significant fatigue (Páez-Maldonado et al., 2020).

In general, physical fitness consists of two concepts, namely general fitness regarding the state of health and well-being and task-oriented specific fitness, namely the ability to perform specific tasks such as sports or work. Physical fitness is generally achieved through proper nutrition, exercise, and adequate rest. Physical fitness is the ability to carry out daily activities with full vitality and alertness without experiencing significant fatigue and still having enough energy to carry out activities in spare time and deal with emergencies (Rodriguez, de Camargo, Rodriguez-Añez, & Reis, 2020). From these various opinions, it can be stated that physical fitness is the body's ability to make adjustments to the given physical load without causing significant fatigue.

Based on the description above, physical fitness can be defined as the physical ability to carry out work tasks in accordance with their fields without experiencing excessive fatigue and will get a fast recovery as before doing activities. This understanding shows that physical fitness is more than not being sick and not just being immune from disease. Everyone has a different level of physical fitness that even in a person's level of fitness will vary from time to time depending on the activities and exercises he does.

The need for physical activity between groups of children and adults is different. In the group of children, the need for time to do physical activities is more than in the adult group. Children perform physical activity for approximately 60 minutes and the adult group for at least 30 minutes, depending on the age and condition of each individual and the purpose of doing physical activity. To improve and improve physical fitness, you can choose various forms of physical exercise that are safe and comfortable, such as running, swimming, cycling, including playing basketball (Cocca, Verdugo, Cuenca, & Cocca, 2020).

Various elements of physical fitness components can be increased if each individual performs physical activity regularly and regularly with a well-designed training program. The habit of walking as physical activity or sports activities such as playing basketball supports increasing the degree of physical fitness. Physical activities such as walking, running, jumping or other forms of play require adequate brain capacity so that the movements carried out produce efficient and effective performance (Xu, Mei, Wang, Yan, & He, 2020). Therefore, if children routinely carry out routine activities such as playing basketball every day, it is predicted that their physical fitness level will increase.

METHOD

The design used in this research is a developmental & research design. In this research, development is used to produce a mini basketball game model based on social skills, motoric skills, and physical fitness by modifying the development steps (Kabongo, 2019). Based on the techniques and data collection tools, the steps of the data analysis technique used are as follows:

Prototype Development Analysis of Model Validity

The process of analyzing the validity of the model data is carried out with the following steps. First, calculating the percentage of the number of respondents (experts and practitioners) who agree or disagree on each component of the validated product. Second, the results obtained from the points above are then referred to the validity value of each component. The validity level interval is determined by adapting the value interval in Table 1. Third, the criteria for determining a component, the game developed is said to be valid if the level of validity achieved is at least moderate or enough. Fourth, if there are still components that have not reached these criteria, they will be revised or discarded based on expert or practitioner input (Svoboda, 2017).

Table 1. Model Validity Interpretation

Percentage Interval	Validity Interpretation
90 - 100	High
66 - 89	Medium
33 - 65	Low
1- 32	Very low

Analysis of Model Practicality

Analysis of the practicality of the basketball game model was carried out from the results of the observer's assessment of the implementation of activities in small group and large group trials. Data analysis was carried out with the following steps: 1) Recapitulating the observation data of the mini-basketball game model for 5 game activities, namely: 1 time in the small group trial and 4 times in the large group test. The data recapitulation is entered in the appropriate table. Because the data was obtained through the observation of two observers, the recapitulation was done by calculating the average value of the observations. 2) Calculate the total average of the average scores for all aspects. 3) Refers to the value obtained in the value interval. The value interval is determined by adapting the value interval used in Table 2. Then determining the level of implementation achieved, the criteria for determining the implementation of a component used is if the minimum level of implementation achieved is moderate or sufficient. If in the determination it turns out that there are components that have not met these criteria, a revision of the related device is made based on the results of observations.

Table 2. Interpretation of Implementation Level

Interval Value	Implementation Level
=5	Very High
$4 \le s/d < 5$	High
$3 \le s/d < 4$	Medium
$2 \le s/d < 3$	Low
$1 \le s/d \le 2$	Very Low

Effectiveness Test Analysis

Judging from the problems studied and taking into account the form of the experimental design used, where there is more than one dependent variable, then to test the effectiveness of the data, it is analyzed using the Multivariate Analysis of Variance (Manova) technique in the form of Single Sample Paired Comparison with Hotelling's T2 statistics.

RESULTS

Game Development

Validity of Mini Basketball Game Model

To see the validity of the game model, a content assessment was carried out by experts and practitioners as well as to get input regarding infrastructure, game rules, and refereeing for fifth grade elementary school students. The results of the analysis can be seen in table 3.

Table 3. Experts' and Practitioners' Responses

Come Model Components	Average Respon	ses of Three Experts	Average Responses of 19 Practitioners		
Game Model Components	Agree	Disagree	Agree	Disagree	
Infrastructure	93.3	6.7	88.3	11.7	
Game Rules	87.0	13.0	86.8	13.2	
Arbitration	88.9	11.1	86.0	14.0	
Total Average	89.7	10.3	87.0	13.0	

If it is seen that the results obtained are then referred to the value of the validity of each component of the game, it has met the minimum criteria set, it can be concluded that the mini basketball game model based on social skills, motoric skills and physical fitness with components of completeness of infrastructure, game rules and refereeing has fulfilled aspects validity.

The Implementation of the Mini Basketball Game Model

The results of the practicality data analysis of the model were carried out according to the steps written in the research method, and the results were as follows:

Table 4. The level of Implementation of The Mini Basketball Game Model

Agnosta	Assessment by Two Observers				ervers	A	I amal of Immlant and off an	
Aspects	1	2	3	4	5	Average	Level of Implementation	
Value transformation	3.8	3.7	3.8	4.0	4,2	3,9	Medium	
Playing with additional games	4.2	4.2	4.2	4.3	4.2	4.2	High	
Playing mini basketball	4.2	4.3	4.5	4.3	4.5	4.4	High	
Self-assessment	4.5	4.0	4.0	4.0	5.0	4.3	High	
Action reviews and rewards	3.8	3.8	4.0	4.0	4.2	4.0	High	
Total Average					4.1	High		

From the analysis results, the total average of the average values for all aspects is 4. If it is referred to the implementation criteria, it can be concluded that the implementation of the mini basketball game model in trials 1 and 2 is in the high category. Thus, the results of observations on the implementation of the mini basketball game model components meet the minimum criteria set. Based on the practicality criteria of the model stated above, the basketball game model developed has met the practicality criteria.

The Effectiveness Testing

Table 5. The Results of The Manova Analysis of The Dependent Variables

	Effect	Value	F	Sig.
Group	Pillai's Trace	0.380	9.393ª	0.000
	Wilks' Lambda	0.620	9.393a	0.000
	Hotelling's Trace	0.613	9.393ª	0.000
	Roy's Largest Root	0.613	9.393a	0.000

The results of data analysis using the Manova technique presented in Table 5 using Hotelling's T2 statistics, obtained the calculation of F = 9.393, significance F = 0.00. Because F is smaller than = 0.05, the mini basketball game training together is effective in improving social skills, motoric skills, and physical fitness.

Table 6. The Results of The Manova Analysis of Each Dependent Variable in The Group

Tests of Between-Subjects Effects								
Source Dependent Variable Type III Sum of Squares df F Sig.								
GROUP	Social Skill	95.220	1	4.866	0.032			
	Motoric Skill	144.500	1	21.811	0.000			
	Physical Fitness	103.680	1	17.633	0.000			

The results of data analysis using the Manova technique are presented in Table 6 for each dependent variable. The following results are obtained: the social skills variable shows F = 4.866, significance F = 0.032. Due to the significance of F < = 0.05, the mini basketball game training was effective in improving social skills. For the motoric skills variable, the value of F = 21.811, and the significance of F = 0.00 because F significance F = 0.05, the mini basketball game training is effective in improving motoric skills. As for the motoric skills variable, the value of F = 17.633, and the significance of F = 0.00. because F = 0.05, the mini basketball game training is effective in improving physical fitness. Below are presented the results of data analysis with respect to the estimated 95% confidence interval.

Table 7. The Results of Data Analysis Estimated 95% Confidence Interval

Dependent Veriable	Mean	Std. Error	95% Confidence Interval		
Dependent Variable	Mean	Stu. Error	Lower Bound	Upper Bound	
Different in social skill	2.760	0.561	1.603	3.917	
Different in motoric skill	3.400	0.252	2.881	3.919	
Different in physical fitness	2.880	0.313	2.235	3.525	

The data shown in Table 7 shows that the magnitude of the resulting increase varies. The lowest is found in the social skills variable of = 1.603.

DISCUSSION

The Development of a Mini Basketball Game

The game facilities developed by the researchers contributed to students' interest in doing physical activities that had an impact on increasing motoric skills and physical fitness of children. In order for infrastructure facilities to increase interest in a game, the researchers developed a reflective board with specifications; the reflective board is made of transparent acrylic material, supported by a support pole that can be raised and lowered with a ring height between 2.4 m to 2.7 m. This is based on the results of measurements of height, jump height at the age of fifth grade elementary school children, and other infrastructure facilities.

Thus, from the results of the field study, the results, facilities and infrastructure for games are in accordance with the capacity for fifth grade elementary school children, in which the size of the field, the height of the ring, the size of the ball are different and smaller than the official size standard. This is in line with the statement that for games in the lead game category everything can be modified and simplified such as the size of the field, the number of players, and the size of the ball (Macnamara, Hambrick, & Oswald, 2014).

Matters related to the game rules, games in the context of education can be used as a briefing on the importance of physical activity to improve health conditions, physical fitness, social relationships, emotional control, and morals. Game or play is a social phenomenon, from children to the elderly. For children, playing becomes a major need and sometimes they lose track of time. In playing, it is done seriously, and there is no coercion. Therefore, it is necessary to determine the rules of the game so that it runs in an orderly and orderly manner.

The rules of the game have fulfilled the practicality element, namely the implementation is in the high category for game activities in the field, this can be seen from the activities in the small group test, large group test, where according to the observer students have no difficulty in understanding the game as a whole including, the rules that carried out in playing and refereeing activities. In addition to this in the context of initial understanding, students are familiar with several games included in similar games with basketball, such as football and volleyball, thus allowing for transfer of understanding.

Through the activity of playing mini basketball, there is a transfer of understanding and performance through playing as a person's ability to use the skills, skills, knowledge, and others gained through experience and practice into new situations. The tactical problems involved in attacking games such as football, field hockey and basketball are the same. They understand aspects of space that can be applied to other similar sports. This can help students to better understand and appreciate the essence of the game based on the tactical similarities in the game category (Yüce, Büyükakgül, & Katırcı, 2019).

Through exercises that are similar to real games, the interest and excitement of all students will increase. Especially for students with low technical ability, this play approach is appropriate because it does not emphasize technical skills, tactical development, or problem solving. In the activity of playing mini basketball, students in addition to implementing various types of social skills, students also apply various basic skills/basic basketball techniques that have been obtained before training to play mini basketball. This process causes the transfer of training. This is supported by several studies that say that transfer of exercise occurs when previously formed habits influence mastery of motion, appearance, or relearning of the next habit. Transfer in motoric skills does not occur automatically. Transfer occurs based on the assumption that learning outcomes of a skill can have a positive or negative influence on other motoric skills. Transfers occur in similar tasks, so that the learning outcomes of basic basketball skills/techniques can be transferred in mini basketball games, thus giving the effect of increasing the motoric skills possessed by students such as dribbling the ball quickly over obstacles, bouncing the ball against the wall (passing) and shooting skills. the ball into the basket in a given time.

The Effectiveness of the Developed Game

The results of the Manova analysis used different data from the initial test and the post-test using the Hotelling's Trace technique after finding the coefficient F = 9.393 with a significance of F = 0.000. Because of the significance of F < 0.05, it can be concluded that the activity of playing mini basketball increases social skills, motoric skills, and physical fitness together.

The increase in the variables of social skills, motoric skills, and physical fitness was due to physical activity in the form of playing mini basketball every day for eight weeks, each training meeting was carried out for 40 minutes so that physical activity had an effect on increasing social skills, motoric skills, and physical fitness. The frequency of physical activity in the form of a mini basketball game, if done repeatedly, will have an effect on improved elements such as social skills, motoric skills, and physical fitness.

Physical activity for eight weeks, students play basketball accompanied by applying various kinds of social skills such as cooperation, mutual respect between friends and referees. The various elements of social skills are applied during physical activity training activities every day except holidays and are carried out for eight weeks. Skills that are done repeatedly have an effect on increasing mastery of social skills. The increase in variables of social skills, motoric skills and physical fitness levels after physical activity playing mini-basketball is in line with the law of practice which states that repeating certain responses several times will strengthen the connection between stimulus and response (Williams, Pill, & Hewitt, 2021). This close linkage is strengthened through a sufficient number of repetitions. From this opinion, practicing activities such as physical exercise in the children's environment in the form of group games in the form of playing mini basketball will make the results of the exercise

more mastered and more perfect. Movement and or basic skills are important to learn in group game situations so that social conditions such as social skills through games are also obtained simultaneously including the level of physical fitness.

Various kinds of skills can be acquired and mastered through repetition applied in practice. Mastery of a skill or strengthening of skills is obtained through repetition where each stage of practice will combine stimulus and response. Exercises are useful to facilitate students to do a greater number of correct and correct responses. After a person does physical exercise for a few days, the motoric skills used during the exercise lead to the automation of movements and consequently the motoric skills that are carried out can be mastered.

Movement skills for school-age children have an important role, because they will have an effect on the growth and prospects of skill development in the next stages. Judging from the level of physical and mental development, the many opportunities to move through physical activity have a very important meaning. Therefore, developments that occur will spur children's opportunities to actively move to explore themselves through playing activities by applying all basic basketball skills in playing.

Physical activity in the form of playing mini basketball is related to improving motoric skills, as an implication of the theory that mastery of motoric skills such as basic techniques in mini basketball games can be developed/improved through repeated exercises in physical activities (Echevarría, Ajamil, Argilaga, & Idiakez, 2014). Several times of practice will develop an appropriate response to a set of stimuli. The improvement of motoric skills is a tangible manifestation of the transfer of skills that are limited to identical types of stimuli. This means that the increase in motoric skills occurs because of physical activity in the form of playing mini basketball, the students apply various basic basketball techniques repeatedly when playing, in other words identical elements can be transferred into improved motoric skills, including increasing the impact on increasing motoric skills. This is also in line with the theory of overlearning which states that overlearning is an exercise or extra learning, meaning that to strengthen the motoric skills that have been mastered so that they are attached, movement skills are still being trained so that they can have a retention effect in the body (attachment of the skills that have been trained). (Afrouzeh, Musa, Suppiah, & Abdullah, 2020).

In order for physical activity in the form of playing mini basketball to run smoothly, various basic basketball techniques are needed. Students who are used as subjects generally already have the basics of basketball games such as dribbling, throwing and shooting balls into baskets that have been obtained from previous learning outcomes. These basic technical skills are applied and used for ease and smooth play. To master movement skills, physical activity carried out through the practice of playing mini basketball, a combination of applying solid practice models (continuously without rest) and distributed (activity interspersed with rest periods) is appropriate. (Garzón, Lapresa, Anguera, & Arana, 2014). This means that students have mastery of motoric skills of various basic techniques in the mini basketball game, physical activity that is carried out by combining solid and distributed practice models so that motoric skills can be mastered in addition to social skills.

Physical activity in the form of playing mini basketball which is carried out for 30-40 minutes and being active on a field measuring 10 x 20 meters, encouraging students to move forward back-to-back or sideways forward and so on, if done repeatedly, will have the effect of increasing fitness physical. This is supported by the opinion that an exercise is a form of physical activity in the form of playing activity. If it is combined in the form of playing for 30 minutes, then the body expends energy and all components of physical fitness to support and help smooth physical activity. As a result, the level of physical fitness has increased (Fernández-Ozcorta, Vizcaíno, Saenz-López Buñuel, & Rebollo, 2015). Thus, physical activity training in playing mini basketball resulted in an increase in social skills, motoric skills, and physical fitness.

The Analysis of Social Skill Improvement

The results of the analysis using the Test of Between-Subjects Effects to see different data on the social skills variable in the group portrayed F = 4.866 with a significance of F = 0.032, because F < = 0.05, it means that mini basketball game activities are effective in improving social skills. The magnitude of the increase is based on the difference between the results of the final test and the initial test using simultaneous confidence interval analysis with a 95% confidence level, the coefficient on the social skills variable has a minimum increase of 1.603.

Mini basketball that was developed is a physical activity that is carried out in groups, in addition to the occurrence of effective direct interaction when playing, the form of social interaction in this game can occur simultaneously. In this study, the game developed also included elements of social skills such as; playing by the rules, respecting referees, cooperative behavior, being responsible, playing an active role, respecting the rights of others to learn and taking roles, being a supporter of teammates, and expressing appreciation to opponents, giving positive comments to other teams. This happens are important elements of social interaction.

Many studies state the social benefits of physical activity for child development. One of the social benefits is that children develop interpersonal skills and learn to interact positively with each other and adults. Children also learn how to conform to social settings and norms properly. Social interaction with peers is a must for children. Physical group activities help children make healthy decisions and allow them the opportunity to help their peers. Building healthy attitudes, morals, and values in children can profoundly affect their friends (Masadis, Filippou, Derri, Mavridis, & Rokka, 2019). Children are greatly influenced by the actions of their peers. Interacting with each other allows children to see what other children are doing and helps them to make the right decisions for themselves.

New research shows physical activity can help teens develop important skills such as leadership and empathy. In turn, these skills can influence healthy behavior (Trigueros et al., 2020). While team sports and physical activity have been associated with increased self-esteem, better nutrition, and reduced tobacco and drug abuse among children, this study suggests that fostering leadership skills and empathy in children can strengthen healthy lifestyle behaviors.

Another study found that middle school children who scored the highest on leadership skills were more physically active (\geq 20 minutes/day). These children also tend to score high in empathy. Moderate exercise (\geq 30 minutes/day) and participation in team sports are also correlated with leadership and empathy values (Deming, 2017). Here it appears that physical activity through team sports or exercise classes has benefits beyond physical fitness. These findings suggest that children who develop leadership and empathy for others care more about their own health.

Vigorous physical activity has a positive effect on mental health in both clinical and nonclinical populations (Castañeda-Babarro, Coca, Arbillaga-Etxarri, & Gutiérrez-Santamaría, 2020). The strongest evidence suggests that physical activity and exercise may reduce some of the symptoms associated with mild to moderate depression. Evidence also shows that physical activity and exercise can provide benefits for improving self-image, social skills and reducing symptoms of anxiety and other cognitive functions.

It is widely recognized that physical activity is very important for the growth and development of children. Regular physical activity can have a positive impact on students' physical, mental, and social well-being. In particular, physical activity tends to have an impact on achievement, readiness to learn, behavior, and self-esteem. Positive experiences with physical activity at a young age also help lay a solid foundation for a healthy and productive life. Another study showed a positive effect of daily physical activity. Students who carried out daily physical activity with group games had good academic performance and achievement. This was related to the disclosure of memory, observation, problem-solving and decision-making, and significant improvements in attitudes, such as discipline. This creativity is stated by Keays and Allison quoted in (Christofaro et al., 2018).

In sports psychology, a lot of research on how a group of sports proceeds has been done. Research on group dynamics in sport psychology is considered important with the assumption that sport is a healthy medium of social interaction and because group dynamics in sport also affect group performance. For example, in team sports such as basketball, football, volleyball, etc., cohesiveness (cohesiveness), leadership, communication and interaction between group members contribute to the success of the team. A group is basically a collection of two or more individuals (Dasso, 2019). The presence of a person in performing motoric tasks affects cognition, behavior and appearance. A conceptual framework for a group's performance in sport has been formulated. Membership in a group will generate a specific set of social cognitions or beliefs among group members, which is brought about through the interaction between members, common goals, specific structure within the group, and the presence of important group process elements such as cohesiveness and communication (Vaquero-Solís, Amado Alonso, Sánchez-Oliva, Sánchez-Miguel, & Iglesias-Gallego, 2020).

A framework has been developed to build mutual understanding between individuals in the group. There are three conceptual phases in building interpersonal understanding in groups: 1) The first phase: understanding oneself (understanding self). The individual must reflect on his own behavior and personality, understand his weaknesses and strengths, and the effects on his own behavior in the team. 2) The second phase: understanding others (understanding others); students/athletes and trainers/teachers facilitate communication, monitor interactions between individuals in groups, and identify collective strengths and weaknesses. 3) The third phase: adapting and connecting; stimulate individuals to communicate with each other, identify communication barriers, and design rules to facilitate effective communication (Passos, Milho, & Button, 2018). Social adjustment by understanding social norms is very important for children so that they can grow up to be good adults. Participating in group activities allows children to learn to get along with other children and to respect or value their differences (race, gender, body type, and culture).

The Analysis of Motoric Skill Improvement

The results of the analysis using the Test of Between-Subjects Effects to see different data on the motoric skill variable in the group found F = 21.811 with a significance of F = 0.000, because F is smaller than = 0.05, it can be concluded that the mini basketball game activity is effective improve motoric skills. The magnitude of the increase is based on the difference between the final test results and the initial test using simultaneous confidence interval analysis with a 95% confidence level. The coefficient on the motoric skills variable has a minimum increase of 2.881.

In the implementation of this study, the subjects did exercises in the form of games for two months with a frequency of 5 times a week with a duration of 30-40 minutes. With simplified rules, it is hoped that not much game time is wasted due to the number of violations, so that the frequency of children holding the ball to make passes, dribbling, and shooting is maximized. In addition, in the implementation of this study, the subject was given the task of moving by playing basketball, from the results of interviews between researchers with basketball game teachers who had once given it to the subject of previous research. Thus, in addition to this simplified regulation of the movement task for relatively new subjects, the perceived new movement task is likely to attract their attention. In addition, there is no assessment of failure or success in this game, which usually causes people to feel reluctant to do it.

By playing basketball every day, the subject is given a continuous experience of motion. Continuous motion experience certainly has an impact on changes in motoric skills. Skills or skills can change due to the effects of learning or experience (Figueroa, Barnett, Estevan, & Wiley, 2019). And it was emphasized that the increase in motoric skills was caused by practice or gained from experience (Figueroa & An, 2017). From the results of this study by playing basketball every day there was an increase in motoric skills playing basketball. The results of the observations of researchers, research subjects from day to day, seem so active to move during the game or when not playing. The results of another study showed that skilled children were more active than less-skilled children. In addition, skills are associated with a variety of other health benefits, including increased participation in sports, fitness levels, reduced risk of being overweight or obese and competence (Yoshida, Lima, Barreira, Appenzeller, & Fernandes, 2019). Another thing that cannot be avoided in the implementation of this research activity, the suggestion to the subject not to try the intended movement task outside the experiment is often ignored. Like doing dribbles, passes and shots to the basket, outside of playing activities. When they arrive early, this is done while waiting for their turn to play during lesson breaks.

Discussion of Manova Analysis of Changes in Physical Fitness Variables

The results of the analysis using the Test of Between-Subjects Effects to see different data on the physical fitness variable in the group found F = 17.633 with a significance of F = 0.000, because F is smaller than = 0.05, it can be concluded that the mini basketball game activity is effective improve physical fitness. The magnitude of the increase is based on the difference between the results of the final test and the initial test using simultaneous confidence interval analysis with a 95% confidence level, the coefficient on the physical fitness variable has a minimum increase of 2.216.

Basketball is a sport that is included in the combination of bioenergetic aerobic and anaerobic sport, with a dominance of bioenergy or anaerobic energy. In general, the activities contained in sports activities consist of a combination of two types of activities, namely aerobic and anaerobic activities (Cocca, Baca, Cruz, & Cocca, 2020). However, in various sports, there will be types of sports or also training activities with one component of the activity being more dominant or there will also be sports that use a combination of aerobic and anaerobic activities.

Aerobic activity is an activity that depends on the availability of oxygen to help the process of burning energy sources so that it will also depend on the optimal work of body organs such as the heart, lungs and blood vessels to be able to transport oxygen so that the process of burning energy sources can run perfectly. This activity is usually a low-moderate intensity sports activity that can be done continuously for a long time.

Anaerobic activity is a high-intensity activity that requires energy quickly in a short time but cannot be carried out continuously for a long duration of time. This activity will usually also require rest intervals so that ATP can be regenerated so that the activity can be resumed (Mancha-Triguero, Martín-Encinas, & Ibáñez, 2020). In some types of team or individual sports, there will also be movements/activities such as jumping, passing, throwing, kicking the ball, hitting the ball, or chasing the ball quickly, anaerobic. Therefore, some sports such as football, basketball or also tennis are mentioned as sports activities with a combination of aerobic and anaerobic activities. Research shows that there is a significant positive correlation between physical activity and physical fitness in children aged 8-10 years (Orland et al., 2021). Physical activity in schools through the physical education curriculum affects the level of physical fitness related to cardiovascular and motoric (Zhang et al., 2019).

Another study that looked at the relationship between physical activity, fitness and obesity in fifth and sixth graders in Mexico. Concluded that fitness was a strong predictor that correlated with total abdominal adiposity due to physical activity in school children in Mexico. However, the importance of physical activity in preventing obesity and promoting increased fitness, should not be summed up as the sole determinant of fitness (Cai et al., 2020). Children who engage in 40 minutes of vigorous-intensity physical activity are better at reducing body fat than children who engage in 10-18 minutes of vigorous-intensity physical activity. Periodic vigorous, to moderate activity, was positively correlated with cardiorespiratory fitness. This is reinforced by the results of research that the kinesthetic approach program can improve physical fitness in class IV and class V . students (Mathisen et al., 2018).

CONCLUSION

Based on the objectives and results of the analysis, the conclusions of the results of this study are as follows. The mini basketball game based on social skills, motoric skills and physical fitness developed is a valid and practical game with components: infrastructure, game rules and refereeing, along with the following activity phases: 1) Value transformation, 2) Playing with game models addition, 3) Mini basketball game, 4) Self-assessment, 5) Review of actions and rewards. The mini basketball game was effective in improving the social skills of elementary school students. The mini basketball game was effective in improving the motoric skills of elementary school students. The mini basketball game was effective in improving the physical fitness of elementary school students. This study suggests that teachers apply the mini basketball game to improve social skills, motoric skills, and physical fitness of students. Similar research with the same method and approach can be carried out by researchers to (1) further test the validity and wider possibilities of the application of the Mini Basketball game; or (2) developing game models for other sports to improve social skills, motoric skills, and physical fitness of students. Tabel

REFERENCES

- Adi, S., & Fathoni, A. F. (2020). Blended Learning Analysis for Sports Schools in Indonesia. *International Journal of Interactive Mobile Technologies (iJIM)*, 14(12), 149–164.
- Adi, S., & Fathoni, A. F. (2020). Mobile Learning sebagai Fasilitas Belajar Mandiri Pembelajaran Senam Lantai pada Mahasiswa Jurusan Ilmu Keolahragaan. *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan, 5*(8), 1158–1166.
- Adi, S., & Fathoni, A. F. (2020). The Effectiveness and Efficiency of Blended Learning at Sport Schools in Indonesia. *International Journal of Psychosocial Rehabilitation*, 24(6), 3448-3456.
- Afrouzeh, M., Musa, R. M., Suppiah, P. K., & Abdullah, M. R. (2020). Effect of Modified Equipment on The Acquisition of Motoric Task Performance Among Children of Low and High Working Memory Capacity: A Basketball-Based Experimental Study. *Journal of Physical Education and Sport*, 20(5), 2519–2525. https://doi.org/10.7752/jpes.2020.05344
- Bangsbo, J., Blackwell, J., Boraxbekk, C. J., Caserotti, P., Dela, F., Evans, A. B., ... Viña, J. (2019). Copenhagen Consensus Statement 2019: Physical Activity and Ageing. *British Journal of Sports Medicine*, 53(14), 856–858. https://doi.org/10.1136/bjsports-2018-10045
- Beauchamp, M. R., Rhodes, R. E., & Nigg, C. R. (2017). Physical Activity for Children in Elementary Schools: Time for a Rethink? *Translational Behavioral Medicine*, 7(1), 64–68. https://doi.org/10.1007/s13142-016-0443-3
- Buja, A., Volfovsky, N., Krieger, A. M., Lord, C., Lash, A. E., Wigler, M., & Iossifov, I. (2018). Damaging De Novo Mutations Diminish Motoric Skills in Children on The Autism Spectrum. *Proceedings of the National Academy of Sciences of the United States of America*, 115(8), E1859–E1866. https://doi.org/10.1073/pnas.1715427115
- Cai, K. L., Wang, J. G., Liu, Z. M., Zhu, L. N., Xiong, X., Klich, S., ... Chen, A. G. (2020). Mini-Basketball Training Program Improves Physical Fitness and Social Communication in Preschool Children with Autism Spectrum Disorders. *Journal of Human Kinetics*, 73(1), 267–278. https://doi.org/10.2478/hukin-2020-0007
- Castañeda-Babarro, A., Coca, A., Arbillaga-Etxarri, A., & Gutiérrez-Santamaría, B. (2020). Physical Activity Change during COVID-19 Confinement. *International Journal of Environmental Research and Public Health*, *17*(18), 1–10. https://doi.org/10.3390/ijerph17186878
- Chandra, K., Degeng, I. N. S., Kuswandi, D., & Setyosari, P. (2020). Effect of Guided Inquiry Learning Model and Social Skills to the Improving of Students' Analysis Skills in Social Studies Learning. *Journal for the Education of Gifted Young Scientists*, 8(1), 603–622. https://doi.org/10.17478/JEGYS.654975
- Chou, W. J., Huang, M. F., Chang, Y. P., Chen, Y. M., Hu, H. F., & Yen, C. F. (2017). Social Skills Deficits and Their Association with Internet Addiction and Activities in Adolescents with Attention-Deficit/Hyperactivity Disorder. *Journal of Behavioral Addictions*, 6(1), 42–50. https://doi.org/10.1556/2006.6.2017.005
- Christofaro, D. G. D., Andersen, L. B., Andrade, S. M. de, Barros, M. V. G. de, Saraiva, B. T. C., Fernandes, R. A., & Ritti-Dias, R. M. (2018). Adolescents' Physical Activity is Associated with Previous and Current Physical Activity Practice by Their Parents. *Jornal de Pediatria*, 94(1), 48–55. https://doi.org/10.1016/j.jped.2017.01.007
- Cocca, A., Baca, J. E. C., Cruz, G. H., & Cocca, M. (2020). Does A Multiple-Sport Intervention Based on the TGFU Pedagogical Model for Physical Education Increase Physical Fitness in Primary School Children? *International Journal of Environmental Research and Public Health*, 17(15), 1–11. https://doi.org/10.3390/ijerph17155532
- Cocca, A., Verdugo, F. E., Cuenca, L. T. R., & Cocca, M. (2020). Effect of A Game-Based Physical Education Program on Physical Fitness and Mental Health in Elementary School Children. *International Journal of Environmental Research and Public Health*, *17*(13), 1–13. https://doi.org/10.3390/ijerph17134883
- Collett, B. R., Wallace, E. R., Kartin, D., & Speltz, M. L. (2019). Infant/Toddler Motoric Skills as Predictors of Cognition and Language in Children with and Without Positional Skull Deformation. *Child's Nervous System*, 35(1), 157–163. https://doi.org/10.1007/s00381-018-3986-4
- Dasso, N. A. (2019). How is Exercise Different from Physical Activity? A Concept Analysis. *Nursing Forum*, 54(1), 45–52. https://doi.org/10.1111/nuf.12296
- Deming, D. J. (2017). The Growing Importance of Social Skills in The Labor Market. *Quarterly Journal of Economics*, 132(4), 1593–1640. https://doi.org/10.1093/qje/qjx022
- Echevarría, B. G., Ajamil, D. L., Argilaga, M. T. A., & Idiakez, J. A. (2014). Del minibasket al baloncesto: Efectos de la actual configuración reglamentaria en el patrón técnico de lanzamiento de tiro libre. *Revista de Psicologia Del Deporte, 23*(1), 77–85.
- Eckstrom, E., Neukam, S., Kalin, L., & Wright, J. (2020). Physical Activity and Healthy Aging. *Clinics in Geriatric Medicine*, 36, 671–683. https://doi.org/10.1016/j.cger.2020.06.009
- Fernández-Ozcorta, E. J., Vizcaíno, C., Saenz-López Buñuel, P., & Rebollo, J. A. (2015). How Infractions to the rules are influenced by the teaching of minibasket from teaching its rules. *Cuadernos de Psicologia Del Deporte, 15*(3), 157–162. https://doi.org/10.4321/s1578-84232015000300015
- Figueroa, R., & An, R. (2017). Motoric Skill Competence and Physical Activity in Preschoolers: A Review. *Maternal and Child Health Journal*, 21(1), 136–146. https://doi.org/10.1007/s10995-016-2102-1
- Figueroa, R., Barnett, L., Estevan, I., & Wiley, A. R. (2019). How Well Can Family Childcare Providers Report on Preschoolers' Motoric Skill Competence? *Child and Youth Care Forum*, 48(1), 19–28. https://doi.org/10.1007/s10566-018-9470-1

- Garzón, B., Lapresa, D., Anguera, Mt., & Arana, J. (2014). Del minibasket al baloncesto: Efectos de la actual configuración reglamentaria en el patrón técnico de lanzamiento de tiro libre. *Revista de Psicologia Del Deporte*, 23(1), 77–85.
- Gökel, Ö., & Dağli, G. (2017). Effects of Social Skill Training Program on Social Skills of Young People. *Eurasia Journal of Mathematics, Science and Technology Education*, 13(11), 7365–7373. https://doi.org/10.12973/ejmste/79615
- Irmansyah, J., Lumintuarso, R., Sugiyanto, F. X., & Sukoco, P. (2020). Children's Social Skills Through Traditional Sport Games in Primary Schools. *Cakrawala Pendidikan*, 39(1), 39–53. https://doi.org/10.21831/cp.v39i1.28210
- Jeong, H. C., & So, W. Y. (2020). Difficulties of Online Physical Education Classes in Middle and High School and an Efficient Operation Plan to Address them. *International Journal of Environmental Research and Public Health*, *17*(19), 1–13. https://doi.org/10.3390/ijerph17197279
- Kabongo, J. D. (2019). Sustainable Development And Research And Development Intensity In U.S. Manufacturing firms. *Business Strategy and the Environment*, 28(4), 556–566. https://doi.org/10.1002/bse.2264
- Kiliç, K. M., & Güngör Aytar, F. A. (2017). The Effect of Social Skills Training on Social Skills in Early Childhood, the Relationship Between Social Skills and Temperament. *Egitim ve Bilim*, 42(191), 185–204. https://doi.org/10.15390/EB.2017.7162
- Lesmana, D. (2018). Kandungan Nilai Dalam Tujuan Pendidikan Nasional (Core Ethical Values). *Kordinat: Jurnal Komunikasi Antar Perguruan Tinggi Agama Islam, 17*(1), 211–126. https://doi.org/10.15408/kordinat.v17i1.8103
- Liu, C., Zhou, Q., Li, Y., Garner, L. V., Watkins, S. P., Carter, L. J., ... Albaiu, D. (2020). Research and Development on Therapeutic Agents and Vaccines for COVID-19 and Related Human Coronavirus Diseases. *ACS Central Science*, 6(3), 315–331. https://doi.org/10.1021/acscentsci.0c00272
- Loukatari, P., Matsouka, O., Papadimitriou, K., Nani, S., & Grammatikopoulos, V. (2019). The Effect of a Structured Playfulness Program on social skills in kindergarten children. *International Journal of Instruction*, 12(3), 237–252. https://doi.org/10.29333/iji.2019.12315a
- Macnamara, B. N., Hambrick, D. Z., & Oswald, F. L. (2014). Deliberate Practice and Performance in Music, Games, Sports, Education, and Professions: A Meta-Analysis. *Psychological Science*, 25(8), 1608–1618. https://doi.org/10.1177/0956797614535810
- Maïano, C., Hue, O., & April, J. (2019). Effects of motoric skill interventions on fundamental movement skills in children and adolescents with intellectual disabilities: a systematic review. *Journal of Intellectual Disability Research*, 63, 1163–1179. https://doi.org/10.1111/jir.12618
- Mancha-Triguero, D., Martín-Encinas, N., & Ibáñez, S. J. (2020). Evolution of Physical Fitness in Formative Female Basketball Players: A Case Study. *Sports*, 8(7), 1–16. https://doi.org/10.3390/sports8070097
- Masadis, G., Filippou, F., Derri, V., Mavridis, G., & Rokka, S. (2019). Traditional dances as a means of teaching social skills to elementary school students. *International Journal of Instruction*, 12(1), 511–520. https://doi.org/10.29333/iji.2019.12133a
- Mathisen, T. F., Rosenvinge, J. H., Friborg, O., Pettersen, G., Stensrud, T., Hansen, B. H., ... Sundgot-Borgen, J. (2018). Body composition and physical fitness in women with bulimia nervosa or binge-eating disorder. *International Journal of Eating Disorders*, 51(4), 331–342. https://doi.org/10.1002/eat.22841
- Mirdamadi, J. L., & Block, H. J. (2020). Somatosensory changes associated with motoric skill learning. *Journal of Neurophysiology*, *123*(3), 1052–1062. https://doi.org/10.1152/jn.00497.2019
- Olivares-Olivares, P. J., Ortiz-González, P. F., & Olivares, J. (2019). Role of social skills training in adolescents with social anxiety disorder. *International Journal of Clinical and Health Psychology*, 19(1), 41–48. https://doi.org/10.1016/j.ijchp.2018.11.002
- Oppewal, A., & Hilgenkamp, T. I. M. (2020). Adding meaning to physical fitness test results in individuals with intellectual disabilities. *Disability and Rehabilitation*, 42(10), 1406–1413. https://doi.org/10.1080/09638288.2018.1527399
- Orland, Y., Beeri, M. S., Levy, S., Israel, A., Ravona-Springer, R., Segev, S., & Elkana, O. (2021). Physical fitness mediates the association between age and cognition in healthy adults. *Aging Clinical and Experimental Research*, *33*(5), 1359–1366. https://doi.org/10.1007/s40520-020-01621-0
- Páez-Maldonado, J. A., Reigal, R. E., Morillo-Baro, J. P., Carrasco-Beltrán, H., Hernández-Mendo, A., & Morales-Sánchez, V. (2020). Physical fitness, selective attention and academic performance in a pre-adolescent sample. *International Journal of Environmental Research and Public Health*, 17(17), 1–11. https://doi.org/10.3390/ijerph17176216
- Pasaribu, A. (2017). Implementasi Manajemen Berbasis Sekolah Dalam Pencapaian Tujuan Pendidikan Nasional Di Madrasah. EduTech: *Jurnal Ilmu Pendidikan dan Ilmu Sosial, 3*(1), 12–34.
- Passos, P., Milho, J., & Button, C. (2018). Quantifying synergies in two-versus-one situations in team sports: An example from Rugby Union. *Behavior Research Methods*, 50(2), 620–629. https://doi.org/10.3758/s13428-017-0889-3
- Peyre, H., Albaret, J. M., Bernard, J. Y., Hoertel, N., Melchior, M., Forhan, A., ... Thiebaugeorges, O. (2019). Developmental trajectories of motoric skills during the preschool period. *European Child and Adolescent Psychiatry*, 28(11), 1461–1474. https://doi.org/10.1007/s00787-019-01311-x

- Rodriguez, C. C., de Camargo, E. M., Rodriguez-Añez, C. R., & Reis, R. S. (2020). Physical activity, physical fitness and academic achievement in adolescents: A systematic review. *Revista Brasileira de Medicina Do Esporte*, 26(5), 441–448. https://doi.org/10.1590/1517-8692202026052019_0048
- Salavera, C., Usán, P., & Jarie, L. (2020). Styles of humor and social skills in students. Gender differences. *Current Psychology*, 39(2), 571–580. https://doi.org/10.1007/s12144-017-9770-x
- Sedehi, A. A. B., Ghasemi, A., Kashi, A., & Azimzadeh, E. (2021). The relationship between the motoric skills level and the severity of autism disorder in children with autism. *Pedagogy of Physical Culture and Sports*, 25(1), 58–65. https://doi.org/10.15561/26649837.2021.0108
- Stern, M. C., Barnoya, J., Elder, J. P., & Gallegos-Carrillo, K. (2019). Diet, physical activity, obesity and related cancer risk: Strategies to reduce cancer burden in the Americas. *Salud Publica de Mexico*, *61*(4), 448–455. https://doi.org/10.21149/9753
- Supianto, Kumaidi, & Suryono, Y. (2020). Social studies teachers' difficulties in assessing social skills. *Universal Journal of Educational Research*, 8(5), 2175–2183. https://doi.org/10.13189/ujer.2020.080557
- Svoboda, P. (2017). The impact of tax incentives on research and development. Acta Universitatis Agriculturae et Silviculturae *Mendelianae Brunensis*, 65(2), 737–743. https://doi.org/10.11118/actaun201765020737
- Szumski, G., Smogorzewska, J., Grygiel, P., & Orlando, A. M. (2019). Examining the Effectiveness of Naturalistic Social Skills Training in Developing Social Skills and Theory of Mind in Preschoolers with ASD. *Journal of Autism and Developmental Disorders*, 49(7), 2822–2837. https://doi.org/10.1007/s10803-017-3377-9
- Torkar, G. (2017). Children's Play and Physical Activity in Traditional and Forest (Natural) Playgrounds. *International Journal of Educational Methodology*, *3*(1), 31–40. https://doi.org/10.12973/ijem.3.1.31
- Trigueros, R., Sanchez-Sanchez, E., Mercader, I., Aguilar-Parra, J. M., López-Liria, R., Morales-Gázquez, M. J., ... Rocamora, P. (2020). Relationship between emotional intelligence, social skills and peer harassment. A study with high school students. *International Journal of Environmental Research and Public Health*, *17*(12), 1–10. https://doi.org/10.3390/ijerph17124208
- Vaquero-Solís, M., Amado Alonso, D., Sánchez-Oliva, D., Sánchez-Miguel, P. A., & Iglesias-Gallego, D. (2020). Emotional intelligence in adolescence: Motivation and physical activity. *Revista Internacional de Medicina Y Ciencias de La Actividad Fisica Y Del Deporte*, 20(77), 119–131. https://doi.org/10.15366/rimcafd2020.77.008
- Williams, J., Pill, S., & Hewitt, M. (2021). "I think everyone is on board with changing how we do things, but we are yet to find a best fit model": A figurational study of assessing games and sport in physical education. *Sport, Education, and Society*, 26(3), 253–266. https://doi.org/10.1080/13573322.2020.1716212
- Wolstencroft, J., Robinson, L., Srinivasan, R., Kerry, E., Mandy, W., & Skuse, D. (2018). A Systematic Review of Group Social Skills Interventions, and Meta-analysis of Outcomes, for Children with High Functioning ASD. *Journal of Autism and Developmental Disorders*, 48(7), 2293–2307. https://doi.org/10.1007/s10803-018-3485-1
- Wouters, M., Evenhuis, H. M., & Hilgenkamp, T. I. M. (2020). Physical fitness of children and adolescents with moderate to severe intellectual disabilities. *Disability and Rehabilitation*, 42(18), 2542–2552. https://doi.org/10.1080/09638288.2019.1573932
- Wu, Z., Mak, M. C. K., Hu, B. Y., He, J., & Fan, X. (2019). A validation of the Social Skills domain of the Social Skills Improvement System-Rating Scales with Chinese preschoolers. *Psychology in the Schools*, 56(1), 126–147. https://doi.org/10.1002/pits.22193
- Xu, Y., Mei, M., Wang, H., Yan, Q., & He, G. (2020). Association between weight status and physical fitness in chinese mainland children and adolescents: A cross-sectional study. *International Journal of Environmental Research and Public Health*, *17*(7). https://doi.org/10.3390/ijerph17072468
- Yamada, T., Miura, Y., Oi, M., Akatsuka, N., Tanaka, K., Tsukidate, N., ... Laugeson, E. A. (2020). Examining the Treatment Efficacy of PEERS in Japan: Improving Social Skills Among Adolescents with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, 50(3), 976–997. https://doi.org/10.1007/s10803-019-04325-1
- Yoshida, H. M., Lima, F. O., Barreira, J., Appenzeller, S., & Fernandes, P. T. (2019). Is there a correlation between depressive symptoms and motoric skills in post-stroke patients? *Arquivos de Neuro-Psiquiatria*, 77(3), 155–160. https://doi.org/10.1590/0004-282x20190012
- Yüce, A., Büyükakgül, Ü. C., & Katırcı, H. (2019). Game in the Game: Examining In-App Advertising in Mobile Sports Games. *PODIUM Sport, Leisure and Tourism Review*, 8(1), 34–44. https://doi.org/10.5585/podium.v8i1.319
- Zhang, Q., Cao, Y., Chen, J., Shen, J., Ke, D., Wang, X., ... Lu, D. (2019). ACTN3 is associated with children's physical fitness in Han Chinese. *Molecular Genetics and Genomics*, 294(1), 47–56. https://doi.org/10.1007/s00438-018-1485-7
- Zysset, A. E., Kakebeeke, T. H., Messerli-Bürgy, N., Meyer, A. H., Stülb, K., Leeger-Aschmann, C. S., ... Jenni, O. G. (2018). The validity of parental reports on motoric skills performance level in preschool children: a comparison with a standardized motoric test. *European Journal of Pediatrics*, 177(5), 715–722. https://doi.org/10.1007/s00431-017-3078-6