

**Influence of Sports Activities on Community Consciousness and Peer Attachment of
Children in Regional Community Child Center**

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Abstract

Background/Objectives: The purpose of this study is to find out the influence of sports activity on community consciousness and peer attachment of children in regional community child center.

Methods/Statistical analysis: The subjects were 41 children including 23 children of three regional community child care centers who participated in sports activities for 2 hours every Saturday for 10 weeks and 18 children who did not exercise. As a survey tool, a questionnaire asking about community consciousness and peer attachment was used before and after the exercise. Independent t-test and paired t-test conducted to verify the quantities of changes pre and post.

Findings: The conclusions as follows; First, as a result of comparing changes in community consciousness before and after sports activities of children in regional child centers, it was found that the 'sense of unity and 'a sense of belonging' among the sub-variables of community consciousness improved. Second, as a result of comparing the community consciousness of children participating in sports activities and non-participating children, the sense of unity and sense of belonging of children who participated in sports were higher. Third, as a result of comparing peer attachment before and after sports activities of children in regional child centers, it was found that 'communication' increased and 'sense of alienation' decreased after participation in sports. Fourth, as a result of comparing the peer attachment of children who participated in

sports activities and non-participating children, the sense of trust and communication of children who participated in sports were high.

Improvements/Applications: It is necessary to provide a variety of group sports programs to children in order to increase the sense of intimacy, belonging, and trust with peers at the local community children's center.

Keywords: Regional community child center, Sports activity, Community consciousness, Peer attachment, Sense of unity, Sense of Belonging, Alienation, Communication

1. Introduction

As the world enters a complex 'digital age', many children are exposed to smartphones and various media. In particular, more and more children show “popcorn brain syndrome”, a phenomenon in which the brain becomes numb in everyday life through games and Internet media that children can enjoy alone since childhood. Many of these children, mostly working couples and families of one parent, are being cared for at a local community child center, as seen by the growing individualization of the group and the collapse of universal education. Therefore, many scholars argue that the method of regaining human value is to rebuild a collapsed or collapsed community and restore a 'community consciousness' in order to attain the social life of the time.

[1] described community consciousness as ‘the sense of belonging felt by members, the feeling that members are influenced and being influenced by the group and a common belief that the needs of members are satisfied through the dedication of everyone’. And it was defined as a belief or commitment that members share time, experience, history, and place, and that they will share it at the same time[2]. And the sense of community in school means that these psychological beliefs appear as a sense of belonging and bond between teachers, students, and staff members of the school. Community consciousness is necessary to acquire social life at the time of children and to unite properly in community groups in society. This is especially necessary for children who spend most of their time at local children's centers after school.

According to [3], the key components in the process of human character formation were the desire for power and community consciousness. In other words, it means that the sense of classroom community that elementary school students form in classes in schools not only influences the formation of the community consciousness that forms society in the future but also plays an important role in the formation of an individual personality. With regard to community consciousness, childhood peer attachment is very relevant in the life of a community group, and as they adapt to the group, the attachment object is gradually moving from parent to friend [4]. And as the seniors of elementary school and early adolescence, they spend more time with their

peers at local children's centers, including schools, than in childhood, which has grown around parent-child relations at home. Peer relationships become an important part of them[5].

As children reach school age, they begin to develop closer attachments with some of their peers in a relationship with their peers. As children grow up, they feel important in establishing relationships with their peers rather than their mothers, and develop affectionate bonds with their peers, which is called peer attachment[6]. In other words, peer attachment means a strong emotional bond formed with peers like parental attachment formed from the beginning of life[7]. The school-age period is a time when children begin to have relationships with new peers and adults around school, share intimacy in peer relationships, and form social relationships, so attachment with peers becomes important. The relationships children have with their peers become a context for learning and development skills, become an emotional and cognitive resource, and later provide models for various social relationships[8-9].

Sports activity is very appropriate as a program that can form this sense community consciousness and serve as an important medium for peer attachment. Sports activity can foster class community by providing emotional bonds to socialize with peers. In addition, socialization can be formed for growing children by creating peer relationships needed to coexist as a member of society. [10] reported that sports activity affects community conscious and that the peer attachment plays a mediating role. [11] also appear to affect community consciousness depending on the duration and frequency of participation in floorball school sports clubs, which can be seen as having a positive effect on community consciousness and peer attachment of children. Unfortunately, however, the study of community consciousness and peer attachment in relation to sports activity is very poor and particularly, the study of regional center's children has yet to be done. Therefore, this study provided sports activity to children at local children centers and analyzed how it affects community consciousness and peer attachment. Research issues to achieve this research objective as follows.

Research Question1. Is there any difference in the community consciousness and peer attachment of the local center children before and after the sports activity?

Research Question 2. Is there any difference in the community consciousness and peer attachment through sports activity of the local center children, between the experimental group and the control group?

2. Materials and Methods

2.1. Subject of Study

This study selected a total of 23 children who received consent from their guardians to participate in sports activities among the 60 children of 3 regional children's centers located in C city and attended sports activities without absence. The control group randomly selected 18 non-exercise children and low-income children. Sports activities were performed at 10 times from September to November, 2019, and 120 minutes per session every Saturday. The personal characteristics of the study subjects are shown in [Table 1]. The experimental design is the pre- and post-inspection design and is shown in [Table 2].

Table 1: Personal characteristics of the study subjects

	Division	Level	N	%	Division	Level	N	%	
Experimental group (n=23)	Gender	Male	13	56.5	Center service period	Under 1 year	6	26.1	
		Female	10	43.5		1-2 years	6	26.1	
	School year	1-2 grade	12	52.2		2-3 years	3	13.0	
		3-4 grade	5	21.7		Over 3 years	8	34.8	
		5-6 grade	6	26.1		Do not use	0	0	
	Who lives together	Mom and dad family	14	60.9	Brother and sister number	none	5	21.7	
		Single parent family	6	26.1		1 person	12	52.2	
		Grandparent family	1	4.3		2 persons	5	21.7	
		None	2	8.7		Over 3 persons	1	4.3	
	Control group (n=18)	Gender	Male	8	44.4	Center service period	Under 1 year	5	27.8
			Female	10	55.6		1-2 years	1	5.6
		School year	1-2 grade	5	27.8		2-3 years	1	5.6
3-4 grade			6	33.3	Over 3 years		4	22.2	
5-6 grade			7	38.9	Do not use		7	38.9	
Who lives together		Mom and dad family	15	83.3	Brother and sister	none	4	22.2	
		Single parent	2	11.1		1 person	8	44.4	

	r	family			number			
		Grandparent's family	0	0		2 persons	2	11.1
		None	1	5.6		Over 3 persons	5	22.3

Table 2: Experimental Design

Experimental group (n=23)	O1 pre-test	Exercise (10 weeks)	O2 post-test
Control group (N=18)	X	Non-exercise	O4 post-test

2.2. Research Procedure and Method

Sports activity programs consist of various programs required by growing children, such as futsal, badminton, music lope jumping & flying disk, Pilates, floorball and general athletic meet. The futsal consists of 6 times for 1 hour, badminton consists of 6 times for 1 hour, jump lope with and flying disk consist of each 2 times for 30 minutes, Pilates and floor ball consist of each 1 time for 1 hour, making a total of 20 hours program. Proceeding order of programs conducted over a total of ten weeks is shown in [Figure 1], and detailed program contents are shown in [Table 3].

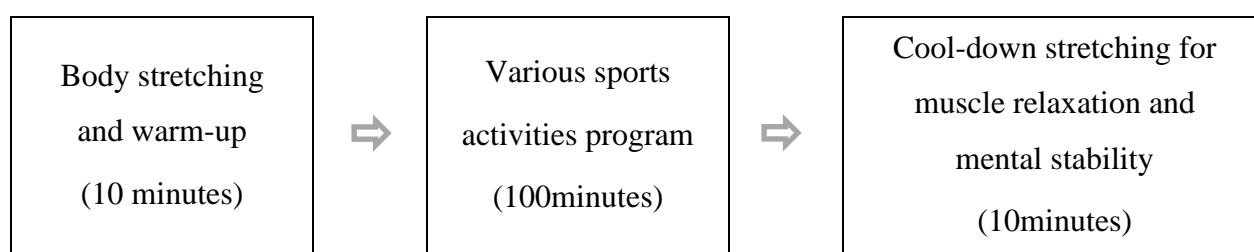


Figure 1: Sequences of program process

Table 3: Sports Program per Class

Wee k	Program contents	Wee k	Program contents
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1	Jump rope with music Flying Disc/ Futsal (pass: 2 people, 3 people)	6	Badminton(service, clear ability guidance) Futsal(mastering attack and defense skills)
2	Badminton basic exercise Futsal(pass, zigzag & free dribble)	7	Badminton(basic game) Futsal(league match)
3	Badminton basic exercise Futsal(pass, dribbling, and shooting practice)	8	Jump rope with music(group skipping) Flying Disc/ Badminton(league match)
4	Badminton(service, clear ability guidance) Futsal(position practice)	9	Badminton(rally measurement evaluation) Floor ball learn and game
5	Pilates(roll up, breast stroke preps1,2,3) Futsal(mastering attack and defense skills)	10	Various relay races, paired and tied back, group jump rope, floor ball game etc.

2.3. Investigation Tool

The tool of this study uses a questionnaire survey. The composition of the questionnaire was composed of 5 questions asking gender, grade, who lives together, center service period, brother and sister number according to personal characteristics. Community consciousness consisted of 14 questions, and peer attachment was composed of 11 questions. A questionnaire of community consciousness developed by [11], and a questionnaire of peer attachment that was developed by [12] and later revised by [13] was used. All of questionnaires were 5-point Likert-scale. A result of reliability of questionnaires used this study see [Table 4]. As shown in [Table 4], the reliability of the community was .887, the cumulative rate was 79.069%, the reliability of peer attachment was .679, and the cumulative rate was 77.081%, making the questionnaire valid.

Table 4: Composition of Questionnaires

Variables	Sub-Variables	N	Accumulative Variance(%)	Cronbach's α
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Community consciousness	Sense of unity	4	31.228	.887
	Harmony and spontaneity	4	59.298	
	Sense of belonging	3	79.069	
Peer attachment	Sense of trust	4	39.615	.679
	Communication	3	61.466	
	Sense of alienation(reverse scoring)	2	77.081	

2.4. Data Analysis

In this study, the SPSS Ver20.0 statistical program was used to analyze the research question. The exploratory factor method was used for the validity of the research variable, and the Cronbach's α value was used for verification of the reliability of the questionnaire. For data analysis, an independent t-test was conducted to verify the difference between groups, and a paired t-test was performed to verify the difference before and after exercise participation. Statistical significance level of all analyzes was set at $p < .05$.

3. Results and Discussion

3.1 Difference between Pre and Post of community consciousness

[Table 5] is a result of analyzing pre- and post-tests to find out the effect on community consciousness through sports activities of children in regional community child centers. In the change within the group, the sense of unity significantly increased to 3.80 before and 3.90 after, and the amount of pre-post change was .10 ($p < .05$), showing a significant difference. Harmony and spontaneity decreased to 4.13 before and 4.00 after, and the amount of pre-post change was -1.3, showing a negative and significant difference ($p < .05$). Intimacy and belonging were 3.94 before and 4.06 after, and the amount of pre-post change was .12, showing a significant difference ($p < .001$). In other words, the sense of unity and belonging improved through the children's sports activities, while the harmony and voluntary participation decreased.

**Table 5: Class community between groups according to participation in the sports
activity**

Variable	N	Pre-Test	Post-Test	Correl ation	Variatio n	t(P)
		M(SD)	M(SD)			

				Pre-Post		
Sense of unity	2	3.80(0.7	3.90(0.97)	.611	.10	-.602**
	3	2)				
Harmony and spontaneity	2	4.13(0.7	4.00(0.87)	.609	-.13	.875**
	3	2)				
Sense of belonging	2	3.94(0.9	4.06(0.92)	.846	.12	1.093**
	3	1)				

*p<.05, **p<.01, ***p<.001

3.2 Difference between experimental and control group on community consciousness

[Table 6] shows the results of analyzing between two groups in order to find out the effect on the experimental group and the control group on community consciousness through sports activities of children in regional child centers. In the change of community consciousness between the experimental group and the control group, the sense of unity showed that the average value of the experimental group M=3.79 was higher than that of the control group M=3.13. Harmony and voluntary participation were found in the experimental group M=4.00, and the control group M=4.25. But there was no significant difference. The average value of the sense of belonging was higher in the experimental group M=4.06 than the control group M=3.37.

Table 6: Difference between experimental and control group on community consciousness

Variables	Sub-variables	Groups	N	M	SD
Community consciousness	Sense of unity	Experimental group	23	3.79	0.89
		Control group	18	3.13	0.96
	Harmony and autonomy	Experimental group	23	4.00	0.87
		Control group	18	4.25	2.56
	Sense of belonging	Experimental group	23	4.06	0.92
		Control group	18	3.37	0.88

Sports activities of children in regional child centers have been shown to raise community consciousness such as 'a sense of unity' and 'a sense of belonging'. These results show that physical

education classes can be effectively used to develop positive partnerships and community consciousness because the goal can be pursued through active interaction and cooperation through participation in physical education[14], and sports activities have a positive impact on students' community awareness and formation of social relationships[15]. In addition, as shown in [14] research, students who actually spend a lot of exercise time in physical education class increase their sense of community, dynamic activities such as sports can be seen as fostering a sense of community. To unite individuals with multiple personalities through sports activity. The community consciousness is that individuals feel a sense of belonging as members of society and recognize mutual dependence and mutual commitment[16]. Community consciousness is essentially unborn and can be said to be a consciousness formed through continuous interaction and learning in a common living environment[17]. Therefore, it can be seen that the sport participation activities of children before they become adults broaden the relationship with others and increase the sense of unity among members, giving the group an identity and cultivating consciousness.

3.3 Difference between Pre and Post of peer attachment

[Table 7] shows the results of pre-and post-test analysis to find out the effect on peer attachment through sports activities of children in regional child centers. In the change within the group, sense of trust increased to 3.63 before and 3.95 after, and the amount of pre-post change was .32, not showing a significant difference. The amount of change before and after communication was 3.41 and 3.96, and the amount of pre-post change increased to .55, showing a significant difference ($p < .05$). The sense of alienation was a reverse scoring question, it was 4.02 before and 2.46 after, and the amount of pre-post change was -1.56, showing a significant difference ($p < .001$). In other words, communication improved through the children's sports activities, while the sense of alienation decreased.

Table 7: Peer attachment between groups according to participation in the sports activity

Variable	N	Pre-Test	Post-Test	Correlation	Variation	t(P)
		M(SD)	M(SD)		Pre-Post	
Sense of trust	23	3.63(.83)	3.95(.87)	.470	.32	-1.725
Communication	23	3.41(1.01)	3.96(.81)	.208	.55	-2.282*

Sense of alienation	23	4.02(.85)	2.46(1.3 9)	.156	-1.56	4.972** *
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*p<.05, **p<.01, ***p<.001

3.4 Difference between experimental and control group on peer attachment

[Table 8], [Figure 2] shows the results of analyzing between two groups in order to find out the effect on the experimental group and the control group on peer attachment through sports activities of children in regional child centers. In the change between the experimental group and the control group of peer attachment, the average value of the experimental group M=3.95 was higher than that of the control group M=3.40. In terms of communication, the experimental group M=3.96 showed a higher average value than the control group M=3.33. The sense of alienation was reverse-scored, and there was no significant difference between the experimental group M=2.46 and the control group M=2.44. Overall, the average value was higher in the experimental group than in the control group.

Children's sports activities resulted in meaningful results for peer attachment such as trust, communication, and alienation. These results are consistent with the research results [14] that the exercise time of elementary school students raises the sense of community and this makes companionship positive. In addition, sports activities have an effect on community consciousness, and peer attachment is consistent with the study [10], which has been reported to play a mediating role. In places where sports activities take place, interactions between participants take place and various peer relationships are formed. Sports activities are effective in enhancing companionship[18] because sports activities are mutually dependent with friends, resolve conflict situations that arise together, and strive and cooperate toward the same goal[19]. This can be thought of as the formation of teamwork and frequent interactions between schoolmates through sports activities that played a positive role in peer attachment.

In this way, the psychosocial relationship experienced through participation in sports in elementary school students plays a large role in the overall life of adolescence in the future and becomes very important in relation to living an active life in the future[20]. Elementary school students' participation in physical activities should be encouraged continuously and diversely. By synthesizing the results examined above, it would like to provide some implications for further research. This study is difficult to generalize to children of all regional children's centers because the sample was limited to a few places due to the characteristics of children in regional children's centers. In order to secure statistical significance, it is necessary to secure more samples. In

addition, the duration of exercise participation was limited to 10 weeks, but it is necessary to observe the effect of exercise in the long term by extending the exercise period.

Table 8: Difference between experimental and control group on peer attachment

Variables	Sub-variables	Groups	N	M	SD
Peer attachment	Sense of trust	Experimental group	23	3.95	0.87
		Control group	18	3.40	0.86
	Communication	Experimental group	23	3.96	0.81
		Control group	18	3.33	0.93
	Sense of alienation	Experimental group	23	2.46	1.39
		Control group	18	2.44	1.00

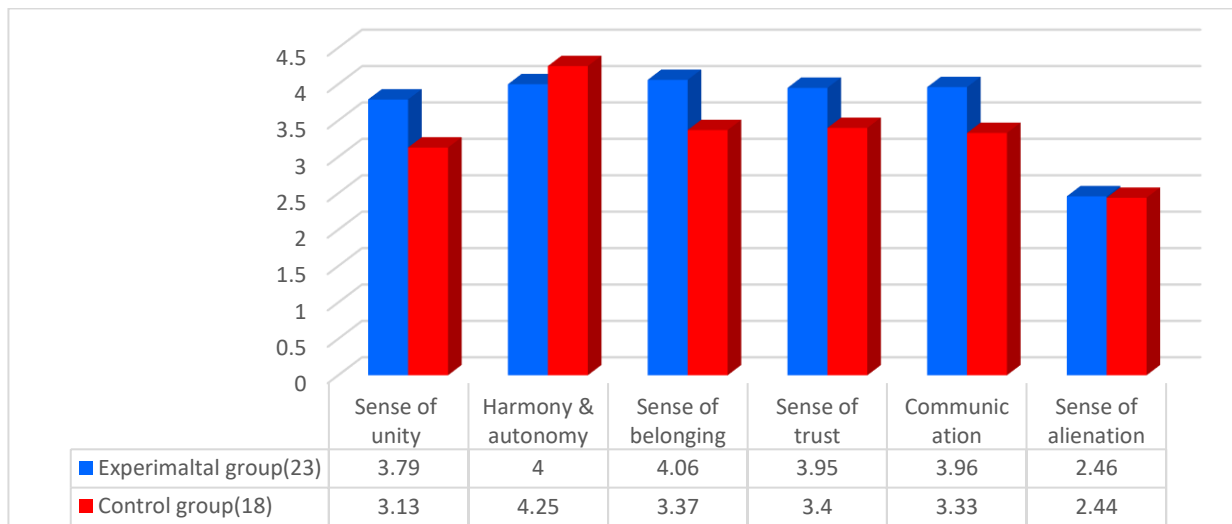


Figure 2. Difference between experimental and control group on peer attachment

4. Conclusion

The aim of this study is to identify the impact of sports activity on community consciousness and peer attachment of children in the regional child centers. This study selected a total of 23 children who received consent from their guardians to participate in sports activities among the 60 children of 3 regional children's centers located in C city and attended sports activities without absence. The control group randomly selected 18 non-exercise children and low-income children. Sports activities were performed at 10 times from September to November, 2019, and 120 minutes per session every Saturday. To solve the research problem, a response test and an independent t-test were performed using the SPSS Ver 20.0 statistical program. In consideration of previous studies, the results were discussed as follows.

First, as a result of comparing changes in community consciousness before and after sports activities of children in regional child centers, it was found that the 'sense of unity and 'a sense of belonging' among the sub-variables of community consciousness improved.

Second, as a result of comparing the community consciousness of children participating in sports activities and non-participating children, the sense of unity and sense of belonging of children who participated in sports were higher.

Third, as a result of comparing peer attachment before and after sports activities of children in regional child centers, it was found that 'communication' increased and 'sense of alienation' decreased after participation in sports.

Fourth, as a result of comparing the peer attachment of children who participated in sports activities and non-participating children, the sense of trust and communication of children who participated in sports were high.

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