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Effects of different sport participations on prosocial and antisocial behaviors

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Abstract

People might mythically believe sport affecting on social behavior positively, and that an intensive participation could provide better social behavior to youth and society. In addition, some people have propagandized the myth to promote the positive utilization of sport. However, the literature has not provided an agreed consensus as to sport participation increasing prosocial behaviors and reducing antisocial behaviors. Given that, the present study attempted to examine the conflicting issue between the literature. Therefore, the purpose of this study is to examine the effect of sport participation on prosocial and antisocial behavior in the comparison between the elite and the recreational. To achieve the purpose of this study, survey questionnaires were distributed, and 589 responses were analyzed using a factors analysis, a one-way MANOVA.

The results were as followed. First, compared to most of the literature not specifying factors of prosocial and antisocial behaviors, the present study identified social behavior factors using an existing questionnaire. Second, there were differences in social behaviors between the elite sport participant and the recreational sport participant. Third, the recreational sport participation and the elite sport participation differ on prosocial behavior especially in high leadership, social facilitation, and high group cohesion. Fourth, the elite sport participant and the recreational sport participant have no significant difference on antisocial behaviors.

Key words: Social behavior, Prosocial behavior, Antisocial behavior, Elite sport, Recreational sport

Introduction

In recent years, social development through sport is a highly topical issue. At the mention of sport, there is a significant amount of news and reports support that sport is an effective instrument that can help improve the quality and development of human, families and countries in general. There are also many sports organizations strongly promoted the sport as a tool for social change. The UN (2008) recognizes that sports are incredibly valuable for improving social development and economic progress. The International Olympic Committee (IOC) has a project, which uses sport as a tool for development and advances the Sustainable Development Goals (SDGs). Many academics have conducted many studies and they have come to the view that sport has

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both positive and negative effects on social development.

The impact of sport on social development has been largely debated. Sport is a context that provides participants with the opportunity to control themselves, resolve conflicts, and learn to work with others (Boardley & Kavussanu, 2011). An extensive literature records the impacts of sport and physical activity in improving character since the early 1900s. According to one point of perspectives, sport provides an effective tool through personal and social development and can have a positive influence on young people (Morris, Sallybanks, Willis & Makkai, 2003). Many coaches, sport enthusiasts, and advocates for sport firmly convinced that sport can build positive character values like honesty, responsibility, fairness, and respect, and they suppose them to be one of the ultimate objectives of physical participation (Doty, 2006).

Previous studies have provided evidences in which more intense sport participation such as elite sport increase diverse socio-psychological development. Different levels of sport participation show different social behaviors between elite sport participants and recreational sport participant (Côté & Fraser-Thomas, 2007). Spink (1992) found that both individual attractions to a group task and social integration of a group were different significantly between the elite and the recreational in volleyball, and that cohesiveness was positively related to the elite volleyball teams but not for recreational volleyball teams. Serrao, Martens, Martin and Rocha (2008) found that elite sport participants in collegiate level had higher competitiveness than recreational sport participants did. Also, Šmela, Pačesová, Kraček, and Hájovský (2017) reported that there were significant differences between elite athletes and recreational sport participants in performance motives, anxiety inhibiting performance, and anxiety supporting performance. Nonetheless, it is hard to find an evidence that different participation intensities are associated with prosocial and antisocial behaviors.

Much literature in sport have focused on the negative effect of social behaviors. Sport attracts everyone to do some illegal acts such as rule-breaking and deception (Boardley & Kavussanu, 2011). Sage (1998) revealed that sport did not build character in general, team sport athletes come out more negatively influence by the competitive experience compared to individual athletes. The social nature of sport providing positive educational opportunities, in the meantime quite often leads to the possibility of cheating, lying, bullying and hurting other participants, leading to antisocial behavior (Kavussanu, Seal, & Phillips, 2006). Kroll and Petersen (1965) presented evidence indicates that such principles were less, rather than more, commonly endorsed by regular sport participants.

Generally, social behavior includes prosocial and antisocial behaviors. Prosocial behavior required some sacrifices for the actor and should be done without any external reward (Underwood & Moore, 1982). Antisocial behaviors are the action that harms or lack consideration for the happiness of others (Horowitz, 1987). It has also been defined as any type of conduct that violates the basic rights of another person (Calkins & Keane, 2009) and any behavior that is considered to be disruptive to others in society.

The previous research of prosocial and antisocial behavior have not been sufficient. In the late twentieth century, researchers focus on Rest's four-component model of social behavior action: awareness, judgment, commitment and action (Rest, 1984), but neglected social behavior reasoning, athlete's attitudes and orientations, and the judgment of the legality of harmful activities, and so on (Vallerand, Brière, Blanchard, & Provencher, 1997). Bandura (1999) proposed that social behavior had two aspects: proactive and inhibitive. According to the different stages of human growth, Haan (1978) divided the social behavior theories into five levels: assimilative phase (level 1 and 2), accommodative phase (level 3 and 4), equilibration phase (level 5).

The term prosocial behavior has always been associated with developmental characteristics in children

(Eisenberg & Mussen, 1989), the literature on the topic has occurred to include adult behaviors since recently as well. As the part of sport studies have primarily considered the inhibitive morality by a survey that has anti-sociality effects on others (Kavussanu, 2008). Studies of the effects of sport competition have revealed that it reduces prosocial tendencies, such as helping and sharing (Barnett & Bryan, 1974; McGuire & Thomas, 1975) and increases antisocial tendencies (Berkowitz, 1972) and all these effects are exacerbated by losing (Kleiber & Roberts, 1981). Al-Yaaribi and Kavussanu (2018) found that prosocial behavior was positively related to effort, commitment and perceived performance in a team sport.

In the studies of sport, researchers have explored different social behaviors. Most sport researches have focused on the related concepts of prosocial and antisocial behavior (Graupensperger, Jensen, & Evans, 2018; Shields, Funk, & Bredemeier, 2018). Sage, Kavussanu, and Duda (2006) utilized prosocial and antisocial behaviors and the dimensions of social behavior. At the same time, Sage and Dual (2006) also addressed some problems of social behavior in sport by using the Prosocial and Antisocial Behavior in Sport Scale (PABSS) which is developed by Kavussanu and Boardley (2009). The PABSS is 20 items and includes 4 factors: individual prosocial and antisocial behavior, directed at either teammates or opponents (Kavussanu & Boardley, 2009). However, most of the participants in the studies were team sport players, and there was a lack of individual sports cases (Funk, 2017). Moreover, scant literature identified the factors constructing prosocial and antisocial behaviors.

Therefore, the purpose of the present study was to find prosocial and antisocial behaviors using an existing social behavior questionnaire and to examine the effect of sport on prosocial and antisocial behaviors. To fulfill the purpose of the study, a research question was set for this study if there were mean differences on social behavior factors between elite sport participation group and recreational sport participation group.

Method

Participants

The present study collected the sample of 700 from 10/02/2017 to 10/25/2017 using the convenience sampling method in Connecticut, Massachusetts, USA. Prior to the survey, the purpose and the procedure of the study were fully explained to the survey participants who granted their permissions to the study. Out of the 700 samples, 107 did not properly answer, did not complete their answers, or refused to answer. Given that, 589 answers were utilized for this study. According to Comrey and Lee (1992), sample sizes of 200, 300, 500, and 1,000 are considered as enough, good, very good, and excellent, respectively. So, 589 should be sufficient enough for this study. Given the total population over 100,000, the sampling error for the sample of 589 was calculated to ±4% within 95% of confidence level.

The majority participating in soccer (18.5%) followed by basketball (13.9%). 392 (66.6%) experienced elite level sports, and 197 (33.4%) did recreational sports. Especially, the majority responded their best competent participation level was intercollegiate varsity (33.3%). The demographic information of the survey participants is as followed (Table 1).

Instrument and Analysis

The survey questionnaire was developed by Yiannakis and Kane (2004) to verify different social behaviors of sport participants in either recreational or elite level. The survey originally consists of 31 items in 5-point scale format; 1 is ‘most like me’ and 5 is ‘least like me.’ This study adapted the survey questionnaire with minimal modification.

Validity and reliability of the measurement were assessed (Table 2). Face validity was established from a committee panel of 3 professors for the topic area. Using factor analysis, construct validity was verified. The *KMO* was .851 which was considered adequate, and

Table 1. *Demographic information of the sample*

	f	%
Gender		
Female	264	44.8
Male	325	55.2
Sport Participation		
Soccer	109	18.5
Basketball	82	13.9
Track and Field	55	9.3
Lacrosse	43	7.3
Softball	40	6.8
Volleyball	35	5.9
Baseball	35	5.9
Football	28	4.8
Icehockey	25	4.2
Tennis	21	3.6
Swimming	10	1.7
Others	106	18.0
Competent Participation Level		
Elite	392	66.6
National or Professional	25	4.2
Intercollegiate Varsity	196	33.3
Highschool Varsity	171	29.0
Recreational	197	33.4
City / Community League	47	8.0
Intramural League	80	13.6
School Recreation	47	8.0
Others	23	3.9
	M	*SD*
Age	24.2	1.66

the Barlett's test indicated also adequate enough, $\chi^2(351) = 4574.56$, $p < .001$. Given that, 27 items constructing 7 factors were utilized for the survey includeing 5 prosocial behavior factors (emotional support, leadership, social facilitation, arbitration, and group cohesiveness), and 2 antisocial behavior factors (aggressiveness and inner group conflict). These factors seem properly structured based upon the followings; the eigenvalue greater than 1 using the Kaiser's rule, each factor constructed with at least 3 items (Tabachnick & Fidell, 2007; Zwick & Velicer, 1986); and accumulated percentage approximately ranged between 50 to 60 (Hair, Anderson, Tatham, & Black, 1995). The internal consistency α coefficients of the factors ranged from .553 to .786, which seem leniently acceptable.

To analyze the collected data, the present study employed descriptive analyses, a factor analysis, and a one-way MANOVA to verify group differences with the statistical significance of .05 ($\alpha = .05$) using the SPSS 23.0.

Results

Table 3 shows the mean difference between the elite sport participant and the recreational sport participant on each dependent variable. On most of the social behavior factors, the mean scores of the recreational sport participant group were higher than those of the elite sport participant group, except for the arbitration and aggressiveness.

The present study conducted a one-way MANOVA as followed. Prior to the main test, the multivariate test for homogeneity of dispersion matrices, Box's Test was examined, and it was significant, which rejected the homogeneity assumption, Box's $M = 65.47$, $F(28, 569673.63) = 2.304$, $p < .001$. Given that, Levene's Test for the homogeneity of variance was also examined, and the results were also significant except for social facilitation and innergroup conflict (Table 4). However, if the sample size is bigger than 30, MANOVA is robust against the violation of homogeneity of variance-covariance matrices assumption, Box's Test, and a stricter α level than .05 should also be considered for univariate F test such as .001 to compensate a significant Levene's Test result (Allen & Bennett, 2008).

The MANOVA result shows a significant difference across the two groups on the set of dependent variables (Table 5). Hotelling's T-Square indicated a statistical significance between the elite sport participation group and the recreational sport participation group, Hotelling's $T^2 = .094$, $F(7, 581) = 7.833$, $p < .001$. 8.6% of the generalized variance for the set of DVs was explained by

Table 2. *Validity and reliability result*

Factor	Item NO.	Factor						
		1	2	3	4	5	6	7
Emotional support	Q29	.787	.142	-.111	-.033	.009	.008	-.009
	Q9	.710	.212	.005	.019	.204	-.012	.022
	Q28	.611	.216	-.236	.052	.161	.113	.089
	Q16	.575	.092	-.203	.138	.253	.041	.319
	Q3	.525	.017	-.391	.138	.139	-.042	.244
Leadership	Q30	.370	.635	-.128	.118	-.017	.112	.082
	Q17	.091	.629	-.077	.290	.104	.192	.194
	Q14	.266	.601	.098	.208	.285	-.034	.165
	Q20	.278	.596	-.032	.169	.280	.113	.086
	Q21	-.076	.507	.032	.070	.162	.498	.151
Aggressiveness	Q19	-.087	-.139	.752	-.008	.000	.144	.146
	Q11	-.203	.078	.738	.021	.150	.087	-.113
	Q12	-.026	-.038	.655	.383	-.060	.087	-.048
	Q6	-.089	.177	.403	.059	-.014	.369	.375
Social Facilitation	Q15	.039	.297	.073	.733	.030	.112	.190
	Q24	-.044	-.093	.191	.700	.151	.071	.151
	Q7	.103	.236	-.101	.659	.025	.236	.121
Arbitration	Q18	.055	-.113	-.146	-.069	.735	.101	.066
	Q8	-.072	.270	.233	.296	.572	.138	-.101
	Q2	.355	.209	-.038	.237	.507	.037	-.150
	Q10	.261	.227	.162	.023	.483	-.128	.166
Innergroup Conflict	Q13	.048	.007	-.039	.168	.137	.732	.016
	Q31	.073	-.009	.286	.078	-.135	.682	-.058
	Q1	-.052	.386	.261	.115	.352	.400	.148
Group Cohesiveness	Q26	-.020	.230	-.232	.016	.046	.195	.632
	Q27	-.016	.129	.159	.224	-.085	-.086	.578
	Q5	.348	-.246	.018	.176	.127	-.045	.544
Coefficient		.786	.772	.683	.681	.556	.553	.574
Eigenvalue		5.71	3.47	1.531	1.41	1.121	1.033	1.001
% Dispersion		21.15	12.852	5.671	5.221	4.15	3.826	3.708
% Accumulate		21.15	34.002	39.673	44.894	49.044	52.871	56.579
KMO = .851		χ^2 (351) = 4574.56					p <.001	

the group difference.

ANOVAs on dependent variables were conducted as follow-up tests to the MANOVA (Table 5). Because of the significant result of the Levene's Test as explained the above, each ANOVA was tested at .001 level. ANOVAs were significant on the leadership, $F(1, 587) = 28.591$, $p < .001$, $\eta^2 = .046$; the social facilitation, $F(1, 587) = 19.086$, $p < .001$, $\eta^2 = .031$; and, the group cohesiveness, $F(1, 587) = 12.403$, $p < .001$, $\eta^2 = .021$. However, other ANOVAs were nonsignificant on the emotional support, $F(1, 587) = 9.732$, $p = .002$, $\eta^2 = .016$; the arbitration, $F(1, 587) = .121$, $p = .728$, $\eta^2 < .001$; the aggressiveness, $F(1, 587) = .068$, $p = .794$, $\eta^2 < .001$; and the innergroup conflict, $F(1, 587) = 11.314$, $p = .001$, $\eta^2 = .019$.

In sum, the social behavior of the elite sport par-

Table 3. *Descriptive analysis result*

	DV	Group	*n*	*M*	*SD*
Prosocial Behavior	Leadership	Elite Sport	392	2.26	.710
		Recreational Sport	197	2.62	.901
	Social Facilitation	Elite Sport	392	2.50	.888
		Recreational Sport	197	2.85	.943
	Group Cohesiveness	Elite Sport	392	2.41	.777
		Recreational Sport	197	2.66	.911
	Emotional Support	Elite Sport	392	2.25	.717
		Recreational Sport	197	2.46	.857
	Arbitration	Elite Sport	392	2.67	.745
		Recreational Sport	197	2.65	.848
Antisocial Behavior	Aggressive-ness	Elite Sport	392	3.69	.836
		Recreational Sport	197	3.67	.958
	Innergroup Conflict	Elite Sport	392	2.52	.794
		Recreational Sport	197	2.77	.894

Table 4. *Univariate tests of homogeneity*

DV	*F*(1, 587)	*p*
Leadership	14.667	< .001
Social Facilitation	.765	.382*
Group Cohesiveness	5.443	.020
Emotional Support	12.750	< .001
Arbitration	7.383	.007
Aggressiveness	10.338	.001
Innergroup Conflict	2.821	.094*

* indicates the homogeneity of variance assumption met at α = .05.

Table 5. *MANOVA result between the elite sport group and the recreational sport group*

	DV	*F*	*p*	η^2
MANOVA				
	DV set	7.833	<. 001*	.086
ANOVAs (Follow-ups)				
Prosocial Behavior	Leadership	28.591	<.001**	.046
	Social Facilitation	19.086	<.001**	.031
	Group Cohesiveness	12.403	<.001**	.021
	Emotional Support	9.732	.002	.016
	Arbitration	.121	.728	<.001
Antisocial Behavior	Aggressiveness	.068	.794	<.001
	Innergroup Conflict	11.314	.001	.019

* indicates the mean difference statistically significant at α = .05.

** indicates the mean difference statistically significant at α = .001, using a corrected α due to the violation of the homogeneity of variance.

ticipant group and that of the recreational sport participant group was statistically different. Especially, the recreational group scored higher than the elite group on 3 of the prosocial behavior factors including the leadership, the social facilitation, and the group cohesiveness. However, there was no difference on the antisocial behaviors.

Discussion and Conclusion

Factors of social behavior in sport

Social behavior in sports has gained increased attention in recent years. Social behavior is largely divided into prosocial behavior dimension and antisocial behavior dimension (Kavussanu & Boardley, 2009). However, both behavior dimensions have not been specifically defined by more detail factors or forming a multidimensional hierarchical construct in literature. Given that, the present study attempted to identify specific factors constructing prosocial and antisocial behaviors using a previously developed questionnaire. An exploratory factor analysis could determine the factorial structure of prosocial behavior and antisocial behavior. The analysis found 5 factors of prosocial behaviors (*emotional support*, *leadership*, *social facilitation*, *arbitration*, and *group cohesiveness*) and 2 factors of antisocial behaviors (*aggressiveness*, and *innergroup conflict*) in sport settings.

Those seven factors found from the exploratory factor analysis were supported by the literature. In this study, emotional support is linked to items such as encouragement and comforting. Emotional support is an important motivating factor for prosocial behavior (Lockwood, Seara-Cardoso, & Viding, 2014), and it consists of a specific communicative behavior developed

by one party with the intention to help others cope effectively with emotional distress (Greene & Burleson, 2003). Labile (2007) demonstrated that the emotional skills that teenagers learn play an important role in fostering prosocial behavior in the context of close attachment relationships.

Leadership consists of items such as reliability and responsibility. Leadership is led to prosocial behaviors (George & Bettenhausen, 1990), and is to draw the best ideas and management democratically and collegially (Summerfield, 2014).

Social facilitation is understood as outstanding performance in the present of others in this study. Social facilitation is for people to perform better on some tasks in the presence of others (Wu, Huang, Shadiev, & Ho, 2015). Baldassarri and Grossman (2013) pointed out that the social facilitation as a function of formal roles could add prosocial behavior.

In this study, arbitration refers not to humiliate the opposition, to point out what members do wrong, and to help them by demonstrating the correct skills. Arbitration, another prosocial behavior, is a useful way of resolving arguments between people by helping them to agree to a solution (Pedersen, 2000). Stevenson (1991) explained that arbitration is a skill to improve prosocial behavior.

Group cohesiveness means to involve actively in team activities. Group cohesiveness, an increasing prosocial behavior (Hogg & Turner, 1987), is often accompanied by feelings of solidarity, harmony, and commitment in its members (Dion, 2000). Consequently, those factors of the prosocial behavior are consistent with the literature.

Aggression is restricted to the type of behavioral aggression described. The aggressiveness is one of the most special characters of antisocial behavior and is originated from Children's Social Behavior Scale (Crick, 1996).

Innergroup conflict occurs in the context of tasks and relationships and includes cognitive, emotional, and behavioral components (Paradis, Carron, & Martin, 2014). Studying innergroup conflict is important in terms of antisocial behavior because a number of previous research indicates innergroup conflict associated with identity problems, self-harm behavior, lower interpersonal functioning, and other antisocial behaviors (Doran, 2014). Thus, the above two factors are useful to measure antisocial behavior.

Sport participants and social behavior

The result indicated that there were differences in social behaviors between the elite sport participant and the recreational sport participant. This finding was compared with the previous literature. Jamieson and Ross (2007) found that sports greatly promoted socialization, and reduced the rate of aggression. Chen, Snyder, and Magner (2010) indicated that sports participation strengthened social behaviors and relations. Nonetheless, Butt, Mansoor, Akhar, Saeed, and Adnan (2016) revealed different social behaviors between athletes and regular students, and the regular students were more social than the athletes were.

Diametrically opposed to the above, Sage (1998) stated that sports did not build character or social behavior in general. Bredemeier, Shields, and Shields (1986) found that participation in sports did not provide a markedly positive effect, but had a negative influence. Shields and Bredemeier (2001) insisted that sports building characters were just a cultural adage, but actually, sports did not act such a thing. Given the above previous studies, the literature has not been consistent with the finding of the present study, which there were differences on social behaviors between the elite sport participant and the recreational sport participant.

Sport participation and prosocial behavior

The present study found that prosocial behavior of the elite sport participant and that of recreational sport participant have marked differences. Especially, leadership, social facilitation, and group cohesion were identified as 3 specific prosocial behaviors on which the

recreational sport participants were higher than the elite sport participants. That was supported by the existing literature in detail as followed.

Firstly, a significant difference in leadership was found between the elite sport participant and the recreational sport participant, and the recreational sport participant showed higher in leadership than the elite sport participant. This finding drew disparity with the previous literature regarding the athlete demonstrating greater leadership ability than non-athletes (Dobosz & Beaty, 1999). Also, Extejt and Smith (2009) found no association between the number of sport participation and the level of any particular leadership skill. Yukelson, Weinberg, Richardson, and Jackson (1983) examined the collegiate athletes not having higher leadership compared to other college students. Consequently, intensive or serious sport participation does not guarantee any meaningful association with high leadership.

Secondly, the recreational sport participant was higher on social facilitation than the elite sport participant that was similar to Cottrell (1968). However, this result indicated oppositely to the result of no difference on social facilitation between expert and novice player (Forgas, Brennan, Howe, Kane, & Sweet, 1980). Uziel (2007) pointed out that participation and mastery levels could differentiate the social facilitation. Nonetheless, along with Cottrell (1968), the present study confirmed that serious participation in sport did not promote social facilitation.

Thirdly, the recreational sport participant showed higher group cohesion level than the elite sport participant. This result is backed up by previous findings such as Lowther and Lane (2002). Their study demonstrated that cohesion did not reliably differentiate between high-level athletes and others. In consequence, serious sport participation did not guarantee high group cohesion, and even recreational participation could increase group cohesion greater than elite sport participation.

According to the result of the present study, the recreational sport participants marked higher scores on prosocial behaviors than the elite sport participants did. It might be caused by pursuits to different value orientations between the groups. The elite sport is always to pursue outstanding performance with competitive spirit. The participants are strictly requested to win. They devote themselves intensely in practice and sacrifice something in the process for win in the competition (Chelladurai, 2007). For another, recreational sport participants are to pursue pleasure mostly. Chatzisarantis and Hagger (2007) have noted that recreational sport participants showed a preference for intrinsic life aspirations compared with elite sport participant and showed up higher psychological well-being. The above orientation might cause the difference in some prosocial difference factors between the groups of the present study.

Sport participation and antisocial behavior

The present study also found that the elite sport participant and the recreational sport participant have no significant difference on antisocial behaviors including aggressiveness and innergroup conflict. The result stood in contrast to Tenenbaum, Singer, Stewart, and Duda (1997) in their International Social Survey Programme Position Statement on Violence inside sport in which elite athletes tended to show reduced violence. Laker (2000), Estes (2003), Clarke (2012), and Collinson, Judege, Stanley, and Wilson (2015) all found similar results to Tenenbaum, et al. (1997).

On the contrary, Lemieux, McKelvie and Stout (2002), Rhea and Lantz (2004), and Bruner, Boardley, and Côté (2014) similarly found that athletes did not show antisocial behaviors differently compared to non-athletes. It thus should be noted that antisocial behavior of different level of sport participants is no different.

Conclusion

In sum, the present study founds as the followings. First, utilizing an existing questionnaire, this study identified diverse facets of prosocial and antisocial behav-

iors in sport, which could be comparable to the previous studies. There were 5 prosocial behaviors (*emotional support*, *leadership*, *social facilitation*, *arbitration*, and *group cohesiveness*) and 2 antisocial behaviors (*aggressiveness*, and *innergroup conflict*) in sport settings. Second, an elite sport participation that was more intensive and serious participation in sport did not increase social behavior; furthermore, less intensive participation forms could provide better social behavior. Third, the recreational sport participation and the elite sport participation differ on prosocial behavior. Especially in leadership, social facilitation, and group cohesion, the recreational sport showed higher than the elite sport. Fourth, the elite sport participant and the recreational sport participant have no significant difference on antisocial behaviors including aggressiveness and innergroup conflict.

Given the above, overly serious participations do not guarantee social behaviors positively. According to this, those organizations that want to promote social development through sports, then they should pay more attention to the promotion of the recreational sport. Those who claim that sport brings social instability also should be noted that antisocial behavior of different level of sport participants is no different. Generally, however, this research should be regarded as preliminary. Consideration of other team sports or individual sports, various age or gender, and different regions, and more sophisticated longitudinal research designs will all be needed to adequately determine the role of sport in social development. It would be interesting for future research to find out these possibilities.

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