

Sources of Social Support in Physical Activity Participation: The Moderating Effect of Gender

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ARTICLE INFO

Article History:

Received 26.07.2019

Received in revised form
22.08.2019

Accepted 28.08.2019

Available online

30.09.2019

ABSTRACT

The aim of this study was to investigate the relationship between sources of social support and motivation and the moderating effect of gender on this relationship for physical activity participation in adolescents. In this study, the relational screening model, one of the quantitative research method, was used. The research was carried out in accordance with the cross-sectional survey design. The data obtained were evaluated by SPSS 21.0. The research data were obtained from a total of 670 adolescents who were selected by convenience sampling method among secondary and high school students in Ankara, Bursa and Istanbul. As a data collection tool, the Physical Activity Participation Motivation Scale (PAPMS) developed by Tekkurşun Demir and Cicioğlu (2018) and consisted of 16 items and 3 sub-dimensions, was used. In order to determine the social support perceptions in physical activities of the students in the research, Social Support Scale for Physical Activity in Adolescents (SSSPA) which was developed by Farias Junior et al. (2014) and adapted to Turkish language by Küçükbiş and Eskiler (2019) and consisted of 10 items and 2 sub-dimensions, was used. Our findings demonstrated that there was a positive relationship between physical activity participation and participants' motivation in physical activity and their perceptions of parent and peer social support. Additionally, there was no statistically significant effect of gender interaction with perception of parental social support on physical activity participation motivation ($t=1.36$, $p>.05$). However, it was identified that peer social support perception and gender interaction had statistically significant effect on physical activity motivation ($t=1.99$, $p<.05$). The results indicate that as the perception of parent and peer social support increases, female students' motivation to participate in physical activities increases more than male students. In other words, female students were more positively affected by parent and peer social support than male students. Consequently, adolescents' social support for physical activities had positive effects on their participation and motivation.

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Keywords:

Physical Activity; Motivation; Social Support; Gender

1. Introduction

Technological product systems are developed and communication is increasing in the world and people are not surrounded by one another, do not interact with each other, they are surrounded by a virtual social network which is far from understanding each other and not realize their needs. The individual with social needs is faced with the threat of loneliness instead of socializing within the field of social networking such as the internet and social media. The expression of socialization does not exactly find meaning within the framework of a definition that places a distance between human and society. Socialization is the process which a person interacts with a group or community. In this way, the individual learn the lifestyle of the group and

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<http://dx.doi.org/10.17220/ijpes.2019.03.009>

society in which he/she interacts and expresses himself/herself with his/her behaviors (Yetim, 2000; Şahan, 2008). Socialization, which has different meanings in terms of individual and society, is the most important tool of conveying culture while it is the field of developing a personality for the individual in the society (Küçük & Koç, 2004). While the individual develops his / her skills in the process of socialization, he/she becomes a member of the society in which he/she is involved and a part of a culture (Kaplan & Çetinkaya, 2015). Socialization is the product of an individual's needs (Maslow, 1970). In other words, the individual relies on social support resources to meet her/his needs, to cope with the difficulties of daily life and to realize herself/himself.

Physical activities are accepted as a sociological phenomenon with more than one person and direct interaction (Taşmektepligil & İmamoğlu, 1996). Taking part actively or passively in physical activities constitutes an appropriate environment for the individual to share and develop socially. Physical activities are defined as a set of activities enabling the individual to gain a healthy life, as well as supporting him / her physical, mental and social development. (Tekkurşun Demir & Cicioğlu, 2018). The individual involved in physical activities finds the opportunity to communicate directly with other members of the society, and achieves different gains while developing his /her skills through movement.

Physical activities are the activities that people of all ages will benefit from due to its effects. Human needs continue to differentiate from childhood to old age and some needs stand out especially in certain age periods. Adolescence, which is one of the most critical stage of human being, is considered as the period in which social needs emerge. Adolescence is the period between childhood and adulthood in addition to rapid physical growth and social development. (Şahin & Özçelik, 2016). Biological and psychological development continues in this period until the individual is socially productive and finds her / her own identity. (Derman, 2008). Social development is expressed as an important stage for the adolescent who is seeking for identity (Koç, 2004). Furthermore, gender is an important variable in adolescence. Different physiological, psychological and developmental differences are observed between male and female adolescents from brain maturation to hormonal changes (Çelik, Tahiroğlu & Avcı, 2008). However, the participation of girls in physical activities compared to boys is limited due to family, environmental factors and community pressure (Aznar-Lain & Webster, 2007). Some studies have shown that girls are less active than boys and participation of both boys and girls in physical activities decrease during their lifetime (Sallis, 1993; Trost & Pate, 1999). Similarly, physical activity rapidly decreases from childhood to adolescence and this decrease is more dramatic for girls (Sallis, 1993; 2000; Slater & Tiggemann, 2011). Oliveira et al. (2014) state that the cognitive and emotional dimensions of social support are related to the participation of girls in physical activity. For this reason, it is important to identify the role of social support resources that encourage girls and boys to participate in physical activity and the level of motivation that contributes to their socialization.

Physical activities with their social impact offer a variety of opportunities for both female and male adolescents to habitually adopt the physically active lifestyle. Before starting an activity, the individual should have the desire or motivation to perform activity (Akbaba, 2006). Cüceloğlu (2005) note that motivation is a general concept that includes wishes, desires, needs, impulses, and interests. Individuals can acquire different sources of motivation for physical activity and participation in the sports (Tekkurşun Demir & İlhan, 2019). As with all aspects of life, the individual's support is important for providing the motivation needed to participate in physical activity. These supports are generally social supports obtained by the immediate environment of the individual. Social support is more important for adolescents due to the prevention of various risks and the removal of constrains to their goals (Traş & Arslan, 2013). The social support of adolescents is composed of environments in which parents, friends and interact closely with other family members (Vietze et al., 2010). The individual receiving social support feels loved, respected, and cared by sources of social support (Cobb, 1976). Adolescents who receive social support for the participation of physical activities may also be motivated to participate in these activities by feeling valuable. Additionally, family environment (mother, father and siblings) and peers have considerable impact on physical activity participation (Anderssen & Wold, 1992; Cleland et al., 2005; Gustafson et al., 2006; Trost et al., 2003). Particularly, boys and girls are differentially affected by peers, thus this tendency leads to difference in physical activity participation (Anderssen & Wold, 1992; Aznar-Lain & Webster, 2007). However, further investigations are needed to evaluate the effects of sources of social support on physical activity participation motivations. In this context, the aim of the present

study is to determine the role of social support sources in physical activity participation motivations of adolescents and to reveal the effect of gender on physical activity participation motivations.

2. Method

2.1. Research model and Participants

In this study, the relational screen model, which is the one of the quantitative research method, was used. The research was conducted in accordance with the cross-sectional survey design (Creswell, 2012; Coşkun, Altunışık, & Yıldırım, 2017). The data of the study were collected from the students by the convenience sampling method among the secondary and high school students in Ankara, Bursa, and Istanbul and who volunteered to participate in this study. A total of 670 secondary school and high school students, 325 of participants were female (48.5%) and 345 were male (51.5%). The distribution of participants by physical activity, age and gender is summarized in Table 1.

Table 1. Distribution of the sample group by age, gender, and physical activity

Variables		Age				Total
		12	13	14	15	
Physical activity	Gender	f (%)	f (%)	f (%)	f (%)	f (%)
	Female	49 (27.8)	53 (30.1)	41 (23.3)	33 (18.8)	176 (100)
Physically active	Male	34 (12.7)	77 (28.8)	59 (22.1)	97 (36.3)	267 (100)
	Total	83 (18.7)	130 (29.3)	100 (22.6)	130 (29.3)	443 (100)
Physically inactive	Female	43 (28.9)	44 (29.5)	40 (26.8)	22 (14.8)	149 (100)
	Male	17 (21.8)	20 (25.6)	21 (26.9)	20 (25.6)	78 (100)
Total		60 (26.4)	64 (28.2)	61 (26.9)	42 (18.5)	227 (100)

2.2. Data Collection Tools

To collect the data, the “Physical Activity Participation Motivation Scale”, and the “Social Support Scale for Physical Activity” were used.

2.2.1. Physical Activity Participation Motivation Scale

This scale was developed by Tekkurşun Demir and Cicioğlu (2018) to determine the motivation levels of individuals in physical activities participation. The scale includes 16 items on sub-dimensions such as individual causes, environmental causes, and non-causality. This scale is a Likert-type scale with items scored between 1 and 5 from strongly disagree to strongly agree. In the develop study, according to CFA results, fit indexes were found as; $\chi^2/sd=2.36$, RMSEA=.06, AGFI=.88, NFI=.91, CFI=.95, GFI=.91, PNFI=.68, IFI=.95. The internal consistency coefficients of the scale for sub-dimensions (individual causes, environmental causes, and non-causality) were found .89, .86 and .82, respectively and Spearman Brown's two semi-reliability coefficients ranged from .76 to .89. In the current study, the internal consistency coefficient for the whole scale was .72 and sub-dimensions were .75, .68 and .83, respectively. Participants' high scores from the scale mean that their motivation to participate in physical activity is positive.

2.2.2. Social Support Scale for Physical Activity

To determine the level of social support that the perception of individuals in physical activities participation, Social Support Scale for Physical Activity was developed by Farias Júnior et al. (2014) and revised by Mendonça and Farias Júnior (2015) is a questionnaire assessing parents and peers provided some form of social support for physical activity. In the develop study, the internal consistency coefficients of the scale for sub-dimensions were found for parents $\alpha = .81$ and peers $\alpha = .90$ and the scale showed satisfactory levels of test-retest reliability (parents=.91, peers=.89). Turkish adaptation of this scale was performed by Küçükbiş and

Eskiler (2019). In the adaptation study, according to CFA results, fit indexes were found as; $\chi^2/sd=1.82$, RMSEA=.50, GFI=.96, AGFI=.94, NFI=.94; CFI=.97; TLI=.96. The internal consistency coefficients of the scale for sub-dimensions were .78 and .82, respectively. In the current study, the internal consistency coefficient for the whole scale .84 and sub-dimensions is .79 and .83, respectively. The scale consists of 10 items which are 4-point grading is used in the scale: “(0) never”, “(1) seldom”, “(2) often” and “(3) always”.

2.3. Statistical analysis

Statistical analysis was performed by the SPSS 21.0. The results of all variables in this study were determined by Cronbach’s alpha reliability test, descriptive statistics and correlations test. In addition, moderation analyses with Hayes process version 3.3 were conducted using Gaskin's Stats Tools Package (Gaskin, 2016ab).

3. Results

The relationship between the physical activity participation and motivation and social support perceptions of adolescent was examined by correlation analysis. Descriptive statistics and correlation values of variables were shown in Table 2.

Table 2. Correlation Analysis Results

Variables		Physical activity	Parents social support	Peers social support	Motivation
Physical activity	r	1			
	P				
Parents social support	r	.356**	1		
	p	.000			
Peers social support	r	.280**	.440**	1	
	p	.000	.000		
Motivation	r	.227**	.257**	.327**	1
	p	.000	.000	.000	
$\bar{X}\pm Sd$		-	6.86±3.86	7.49±4.20	54.04±8.12

**p<.01

In Table 2, there was statistically significant relationship among all variables. When the relationship between physical activity participation and motivation was examined, it was found that the relationship between these two variables was low and positive (r=.227; p<.01). Similarly, there was a low positive correlation between peer social support and participation in physical activity (r = .280, p <.01), and a moderate positive correlation between parental social support and participation in physical activity (r = .356, p <.01). Additionally, there was a moderate/low positive correlation between sources of social support and motivation.

Table 3. Results of Moderator Effect

Antecedents	Coeff.	SE	T	R	Adj.R2
Constant	54.011	.304	177.350		
Parents SS	.547***	.0788	6.937	.264***	.07
Gender	-.476	.609	-.780		
Parents SS X Gender	.214	.158	1.357		
Constant	53.980	.298	181.129		
Peers SS	.648***	.0710	9.122	.338***	.12
Gender	-.727	.596	-1.219		
Peers SS X Gender	.283*	.142	1.994		

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

The Hayes process version 3.3 (Model 1) analysis was conducted to determine the moderating effect of gender on the relationship between social support perception (parents and peers) and physical activity participation motivation. According to Table 3, the effect of the perception of parental and peer social support on participation in physical activity was found to be significant (t=6.94; t=9.12, p<.001). There was no statistically significant effect of gender on physical activity participation (t=-.78; t=-1.22, p>.05). Although the interaction

of perception of parent social support with gender did not have a statistically significant effect on physical activity participation motivation ($t = 1.36, p > .05$), the interaction of peer social support perception with gender was a statistically significant impact on physical activity motivation ($t = 1.99, p < .05$). Gaskin's Stats Tools Package Excel software was used to graphically visualize the obtained results in Figure 1.

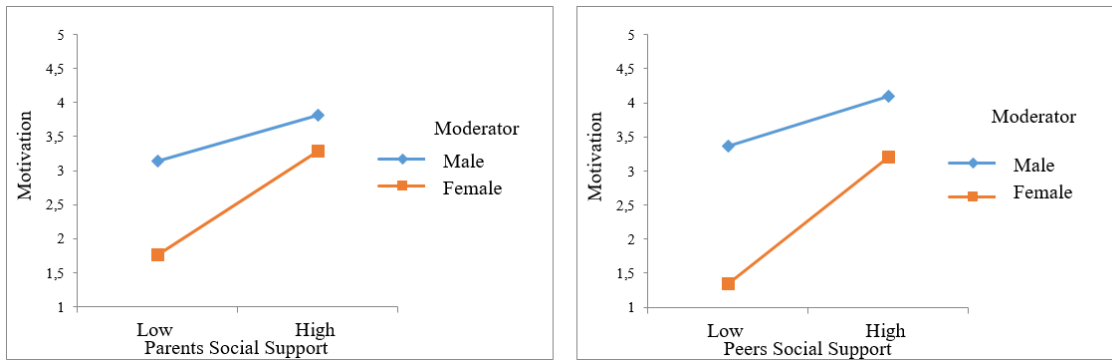


Figure 1: Relationship between social support sources and physical activity participation motivation based on gender.

According to the results of the analysis, the relationship between parental and peer social support perceptions and physical activity participation motivation continues in the same direction. However, it is possible to state that female students' perception of social support caused greater physical activity participation motivation than male students. It can be stated that the perception of peer social support provides a higher level of physical activity motivation for female students than the perception of parental social support.

4. Discussion and Conclusion

In the current study, social support provided by parents and peers had a positive effect on the motivation of adolescents to participate in physical activity. Furthermore, it was found that adolescents were more positively affected by their peers' social support compared to their parents. Additionally, peer social support perception had a more positive effect on physical activity participation motivation, especially in female students. Therefore, the perception of social support of parents and peers could be an important motivator for the physical activity participation of female students.

Our findings were supported by the findings of previous research indicating the impact of social support of parents and peers on adolescents' physical activity behaviors. For example, Cırık et al. (2014) show that primary school five, six, seven and eighth-grade students are affected by different types of social support (parents, teachers, classmates, close friends and other people in school) according to their emotional relationship, attitude, role, and status. On the other hand, Tulunay Ateş (2016) states that teachers are the best indicators of social support perceived by a total of 561 eighth-grade students in Bartın and there is a significant relationship between perceived social support and internal and external motivation. In addition, Sallis et al. (2002) and Salvy et al. (2009) state that peers can increase the motivation of adolescents to participate in physical activities. As a result, increasing social support level perceived by students has a positive effect on motivation levels in the literature. In the current study, peers are a more important source of social support than parents on motivation for participation in physical activity. These findings could result from the development of autonomy and adaptation to the social environment of individuals in adolescence.

Gender is a feature that affects all of us in our daily lives. Our gender has an impact on the type of work we are likely to do, our career plans, and even our interests. Different studies demonstrate that women are more motivated to participate in sports through intrinsic motivations than extrinsic motivations (Colly, Berman, & Van Milligen, 2006). Ryan, et al. (1997) state that other factors that play a role in participation of individuals in the types of sport as well as the individuals are influenced by intrinsic motivations (participating in the sport for satisfaction) and external motivations (participating in the sport for rewards). Therefore, different studies have integrated the findings of Ryan et al. (1997) of intrinsic and extrinsic motivation and gender-related motivational differences (Rintaugu & Ngetich, 2012; Colly et al., 2006).

In the literature, the value given by children to sports activities varies according to gender and these differences occur at a relatively early age in schools (Daigle, 2003; Eccles et al., 1993; Xiang et al., 2001). Eccles

et al. (1993) show that boys in the first, second and fourth-grade boys are more interested in sport activities than girls. Xiang, et al. (2001) state that gender differences affect physical activity participation in primary school children. Boys are more willing to participate in physical education classes/activities than girls in the second and fourth grade. These studies indicate that children will continue physical activity as they getting older, when they give high value to their physical education classes or are motivated. Additionally, boys and girls do not show the same interest in physical activity participation. For example, Bailey et al. (2005) and Wilkinson and Bretzing (2011) show that participation of girls in physical activity decreases while getting older. In summary, participation of girls in physical activity decreases from primary school to university and is affected by family, friends, teachers, social perceptions, and other factors (Wellard, 2011).

There is a limited study evaluating gender-related changes in physical activity participation motivation for adolescents. Hunuk et al. (2013) found significant difference between perceived social support providers (mother, father and friends) and different school types (private-state) and gender according to their physical activity levels among 266 secondary school students in six, seven, and eight-grades. They indicate that individuals in this age group are received more support from their peers than their families, but perceived social support from family, especially from mother, plays a decisive role in physical activity participation. Thus, perceived social support in physical activity participation has identified significant differences in terms of school type and gender dimension. On the other hand, gender differences are found to be effective in the motivation of university students to participate in physical activity in other studies (Egli et al., 2011; Gao & Xiang 2008; Lauderdale et al., 2015). According to Lauderdale et al. (2015), gender differences have a significant impact on physical activity and motivation in 96 university students (33 males, 63 females 18-24 years) and males respond more positively to intrinsic motivation. On the other hand, Rintaugu and Ngetich (2012) determine that the factors that motivate participation in sports and exercise depending on gender in a total of 50 students (30 male and 20 female) from faculties of sports science. In the present study, when the relationships between physical activity participation motivation and social support resources were examined, it was noteworthy that there was a significant difference between male and female with low social support perceptions (both parents and peers). In other words, physical activity participation motivation of females with low social support perception was found to be much lower than males. In addition, when the participants with high social support perceptions were investigated, although the motivation of females to participate in physical activity was less than males, the difference was not as high as in adolescents with low social support perceptions. On the other hand, the results showed that both parents and peer social support perceptions had a much more important effect on females in terms of physical activity participation motivation than males.

Furthermore, there was no interaction between gender and parental social support when the results of the analysis of the moderating effect of gender on the relationship between the study variables were examined. However, as the social support of parents increases, it is possible to state that there is a significant increase in physical activity participation motivation for both males and females. Moreover, it was found that the perception of parental social support of females had a more significant effect on their motivation than males in physical activity participation. According to the results of the analysis, parental social support explained the motivation of participation in physical activity by 26%. Another finding of the study was that the interaction between peer social support perception and gender was statistically significant. A combination of these two variables explained the motivation for physical activity participation by about 34%. Our findings demonstrated that female adolescents generally have more respect for the peer social support they receive than males. In other words, peer social support could be a much more important motivational factor for females than males. According to the results of moderating effect analysis, it can be state that perceptions of peer social support were relatively more motivated to participate in physical activity than their perceptions of parental social support for females. The high perception of social support of peers for female adolescents can be interpreted as being directed towards their peers and friends in an autonomous way rather than family. On the other hand, physical activity participation motivation was not very much influenced by parental and peer social support for males, and motivation sources may be interpreted as being influenced by more personal or different external factors. Indeed, Molloy et al. (2010) state that males (42%) were more likely to continue physical activity compared to females (33%) in terms of perceptions of social support due to gender-related differences.

As a result, it can be stated that parental and peer social support play an important role in developing positive attitudes towards physical activities and adopting a physically active lifestyle. In the dissemination of a physically active lifestyle, individuals in childhood and adolescence represent an important audience. The knowledge, skills, and attitudes learned/acquired during these periods can directly influence participation behaviors / social motivations of physical activity in adulthood and later period. In this context, the acquisition of physical activity habits of adolescents is a process that starts first from the family, and peer ideas begin to gain importance in the later period. Therefore, social support is an important structure to investigate the level of social support that adolescents receive from individuals in their social network is associated with physical activity participation.

When the positive effects of adolescent individuals receiving social support for physical activities on motivation and participation in physical activity are evaluated, it is necessary to increase the social support provided to individuals in this period and to conduct studies in this direction. However, it should not be ignored that male adolescent's motivational sources should be revealed more clearly and new studies should be carried out in order to increase the participation of male adolescents in physical activity. Additionally, understanding the gender differences in physical activity motivation and determining the relationship between motivation and physical activity can lead to the creation of programs where health and exercise professionals can provide more external motivation in individuals for exercise. In particular, since females have less motivation for physical activity and are less involved in sports (Anderssen & Wold, 1992; Aznar-Lain & Webster, 2007), it is necessary to determine the factors that provide motivation for participation and improve participation of females in physical activity. Further studies are needed to assess the impact of other sources of social support sources (e.g. teachers, athletes, and idea leaders) on physical activity participation and the multiple dimensions of social support. Finally, the relationship between physical activity and other potential mediators of social support (e.g. age, and social class) needs further investigation.

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