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The Role of Self-Efficacy as a Mediator between Social Support and Physical Activity Participation of Students

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Abstract

The aim of this study was to investigate the role of self-efficacy as a mediator between social support and physical activity participation of students. Research method was correlation that was collected through field method. The population of the study was students of Islamic Azad University, Science and Research Branch of Tehran. The sample was consisted of 349 students who were randomly selected. Collection data were conducted through personal information questionnaires, participating in physical activity, social support and self-efficacy. Cronbach's alpha coefficient of physical activity, social support and self-efficacy were reported 0.83, 0.80 and 0.86, respectively. The results showed a positive and significant relationship between social support and self-efficiency with physical activity participation (r=0.65), (r=0.70). Research model was fit (P≤0.05). Self-efficacy was moderated the relation between social support with physical activity participation. Therefore, it is recommended that the University sports managers and sports officials take the necessary steps to increase the social support and self-efficacy of the students to increase their participation in physical activities.

Key words: Social support, Family support, Friends support, Self-efficacy, Physical activity participation

Introduction

Principles from Social Cognitive Theory provide (SCT) a framework for understanding social and cognitive factors related to physical activity (PA) in youth. Social cognitive theory suggests that behavior is influenced by cognitive and interpersonal factors such as self-efficacy (SE) and social support (SS), respectively. For instance, social support, defined as aid and assistance exchanged through social relationships (Heaney & Israel, 1997), is believed to be influential for promoting PA (Prochaska et al., 2002; Heitzler et al., 2006). As far as PA and exercise are considered as one of socialization factors, it can be stated that the procedures and the support of family and friends that are named as SS has positive and direct effect on participation in PA, because by showing up in PA, they learn a series of criteria and social interaction such as working for a common cause, respect for the law and rights of

others, responsibility and etc. (Kahn et al, 2002). The purpose of social protection in the exercise of their parents or friends is any behavior that would encourage them to do more physical activity in a person (He et al, 2013).

One cognitive factor, self-efficacy, an individual's judgment about his or her ability to accomplish a given task or activity, has been proposed to mediate the relationship between SS and PA in youth. The concept of self-efficacy has been derived from social-cognitive theory of Bandura (1977) that refers to the individual beliefs or judgments with respect to their ability to perform the duties and responsibilities (Bandura, 1997). This theory is based on tripartite causal model of behavior, environment and individual. Specifically, the hypothesis is that family and friends SS will have a direct effect on youth PA and an indirect effect on youth PA through SE to overcome barriers. Although it appears that many researchers are studying SS and youth PA, a major limitation is the tendency to combine providers and types of SS. Some studies used a combined family and friends SS measure (e.g. Wu & Pender, 2002); while others used a combined emotional and instrumental parent SS scale (e.g. Heitzler, Martin, Duke, & Huhman, 2006).

In this regard, the researchers said that SS from family and friends is positively and significantly associated with participation in PA (Sallis & Owen, 1999; Treiber et al, 1991) and low family support led to a decrease tendency to exercise and recreation (Dowda et al. 2007).

Participants who reported a higher SE for overcoming barriers are more likely to lead an active lifestyle than if they have fewer coping skills (Motl et al., 2007). SE has been associated positively with PA in youth (Petosa et al., 2005; Motl et al., 2007; Trost et al., 1997; Kitzman-Ulrich et al., 2010). In addition, a positive relationship has also been found in the PA literature between SS and SE (Wu & Pender, 2002; Trost et al., 2003; Motl, et al., 2007).

Literature review shows that many factors determine the level of physical activity and participation in it. Some of these factors are included as SS, that currently, there is increased research tendency to determine the role of these factors in the field of sport and PA (Tamers et al., 2011). Thus, the present study will examine how the cognitive factor of SE mediates the relationship between social factors and PA among youth.

Materials and Methods

This study was applied research based on the purpose and was correlation based on data classification and was retrospective data based on the time classification that was collected through field method. Subjects were 349 students (197 girls and 152 boys with an average age of 22.14 ± 3.25 years) from the population of Islamic Azad University, Science and Research Branch of Tehran students and researchers in the academic year of 2014 to 2015.

Instruments measurement were questionnaire of personal information, participation in physical activity at leisure-time with six questions, social support (Sallis et al., 1987) in both family and friends dimensions with 20 questions and self-efficacy (Sherer et al., 1982) with 17 questions. The validity of these questionnaires has been confirmed in numerous studies. Cronbach's alpha coefficient of physical activity, social support and self-efficacy were reported 0.83, 0.80 and 0.86, respectively.

The descriptive statistics, Kolmogorov-Smirnov test were used to describe data and to study normality of data, respectively. Also, Pearson's correlation was used to test the hypothesis of research. Data analysis was performed using SPSS software. For structural equation modeling was used Lisrel software. Also in this study, a significant level was selected as $\alpha = 0.05$ for statistical hypothesis test.

Results

General findings of present research showed that 56.4% of participants were girls and the rest were boys with an average age of 22.14±3.25 years. 90.5% and 9.5% were single and married, respectively.

Table 1: Results of Kolmogorov-Smirnov test for normal distribution of data

Index	Mean	Standard deviation	Z	P
Physical activity (PA)	2.04	0.44	0.03	0.10
Social support (SS)	2.63	0.78	0.04	0.10
Self-Efficacy (SE)	3.90	0.55	1.002	0.27

Results of Table 1 showed that the distribution of physical activity variable (P=0.10), social support (P=0.10) and efficacy (P=0.27) were normal.

Table 2: The results of correlation coefficient for the relationship between social support and self-efficacy with physical activity

Variables	R correlation coefficient	Determination coefficient R^2	Sig.
Self-efficacy with physical activity	0.73	0.53	0.001
Social support with physical activity	0.65	0.42	0.001
Family social support with physical activity	0.57	0.32	0.001
Friends social support with physical activity	0.50	0.25	0.001
Self-efficacy with Social support	0.59	0.34	0.001

According to Table 2, there was significant relationship between self-efficacy with physical activity, as well (P≤ 0.05, r=0.73). The variance subscription rate of two mentioned variables was equal to 53%. There was significant relationship between social support and physical activity (P ≤ 0.01, r=0.65), the variance subscription rate of two variables were 42%. There was significant relationship between family social support and physical activity (P ≤ 0.01, r=0.57) and between friends social support and physical activity (P ≤ 0.01, r=0.50). There was significant relationship between self-efficacy with social support, as well (P≤ 0.05, r=0.59). The variance subscription rate of two mentioned variables was equal to 34%.

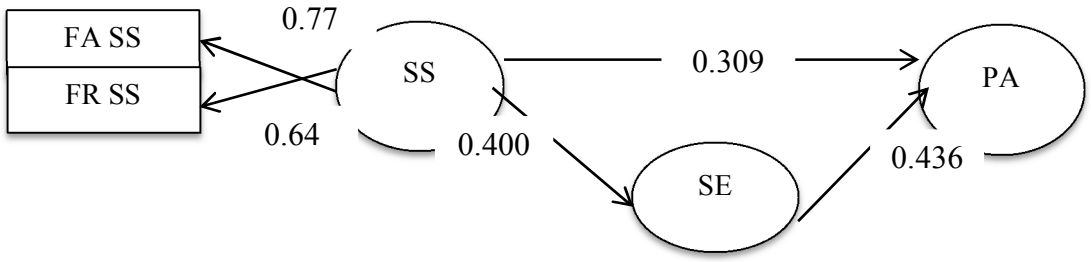

Figure 1: the model in standard mode

Figure 1. Final model (standardized solution) for the analysis of the association between social support (SS) and self-efficacy (SE) perception and physical activity (PA) level in youth, (X2= 400.58; df = 450; p < 0.001; RMSEA = 0.042; SRMR = 0.048, GFI = 0.91, AGFI = 0.89, CFI = 0.97, NFI = 0.93; NNFI = 0.97). AGFI, adjusted goodness-of-fit index; CFI, comparative fit index; GFI, Goodness-of-fit statistic; RMSEA, rootmean square error of approximation; SRMR, standardised root mean square residual.

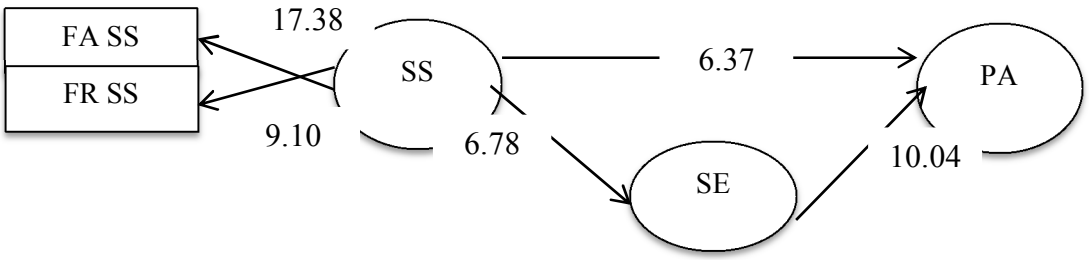

Figure 2: the model in T-values mode

Figure 2. Final model (T-values) for the analysis of the association between social support (SS) and self-efficacy (SE) perception and physical activity (PA) level in youth, (X2= 400.58; df = 450; p < 0.001; RMSEA = 0.042; SRMR = 0.048, GFI = 0.91, AGFI = 0.89, CFI = 0.97, NFI = 0.93; NNFI = 0.97). AGFI, adjusted goodness-of-fit index; CFI, comparative fit index; GFI, Goodness-of-fit statistic; RMSEA, rootmean square error of approximation; SRMR, standardised root mean square residual.

All values obtained are outside the range ±1.96, they have been significant.

Discussion and Conclusion

Correlation analyses (see Tables 2) indicated that PA was significantly correlated (p< 0.01) with SE (r= 0.73) and SS (r= 0.65), which indicates that by increasing SE and SS, PA increased and vice versa. Also SS was related to the proposed mediator, SE. SE was significantly correlated with SS (r= 0.59). These findings were in line with the research results of Treiber and colleagues (1991), Sallis and Owen (1999), Prochaska et al. (2002) and Heitzler et al. (2006) and Dowda et al. (2007). Based on these results, it is expected that family and friends try to attract people to participate more in physical activity to be able to take advantage of this feature to increase participation.

The model showed that the effect of SS on the dependent (PA), the effect SS on dependent and mediator (SE) and also the effect SE on dependent (PA) is positive and significant. The presented model showed that SE is as a mediator between SS and PA. The results of this study demonstrated that family and friends had social influence on the level of physical activity of students, both through modeling behavior and by providing social support. Social support was directly associated with physical activity in students and indirectly mediated by self-efficacy. These findings of the research results are aligned with Wu & Pender (2002), Trost et al., (2003), Motl et al. (2007) as their researches have respected to the role of SE, in relation between SS and PA. Also they showed direct and indirect relationship between SS and PA mediated by SE.

These finding were not consistent with He et al., (2013). This difference can be attributed to PA measures, statistical analyses, and differences in participants' ages.

Family and friends have a social influence on students' level of physical activity through the mechanism of behavior modeling or through SS, mediated by SE. These variables were factors that have the potential to positively alter the PA behavior of youth.

These variables were factors that have the potential to positively increase the participation physical activity behavior of students. Therefore, it is recommended that the University sports managers and sports officials take the necessary steps to increase the social support and self-efficacy of the students to increase their participation in physical activities. In order to increase participation in physical activity is recommended that students take the following actions:

- Getting help professors to increase support and create higher self-efficacy in students. For example; physical education teachers can provide field support and encouragement to students.
- According to the findings, it is proposed that be provided a comprehensive plan concerning the benefits of participation in physical activity, sports and how to use of facilities and programs related to new students and their families on referrals.

- As well as getting help from their families to support their children to participate in physical activity.
- In order to take advantage of support and modeling to increase the self-efficacy, It is suggested that professors and faculty members with students at a time to engage in physical activity and ask them to encourage students to participate in physical activity.

Conflict of interest

The authors declare no conflict of interest

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