

Sport Participation, Problem Solving Skill and Assertiveness: Is There Any Relationship Among Them?

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Abstract: The present research was conducted in order to determine the relationship between social problem solving skill, assertiveness and sport participation. To this end, a total of 224 students (Mage=20, 91±2,09) voluntarily participated in the study. In the process of this research, as data collection tools, Problem Solving Inventory (PSI) and Rathus Assertiveness Schedule (RAS) were used to determine scores of the problem solving skill and assertiveness levels in relation to participants. As a result of the data collected, There was a significant statistically difference in assertiveness between students doing sports and those not doing sports in participants (0,001, $p<0.05$). There was not a significant statistically difference in problem solving skills between students doing sports and those not doing sports (0,001, $p<0.05$). There was a significant statistically difference in problem solving skills and assertiveness between male and female students in terms of the sport participation (0,001, $p>0.05$). There was a significant statistically relationship between problem solving skills and assertiveness. These findings were evaluated and discussed in terms of problem solving skills and assertiveness levels of the participants.

Keywords: sport participation, students, solving skill, assertiveness.

INTRODUCTION

Problem solving skill is a universal skill which all people need for figuring encountered problems out on a daily basis. Having good problem skills can makes people more versatile and succesful and so overcoming the complex problems encountered is easy for people more than those have not. All over the world, problem solving skills method must be improved and put into today's educational programs. By means of this improvement, maybe students acquire the some opportunities to have the real abilities and also they learn how to solve unexpected problems in the world. Problem solving is an important factor in adjusting, and that problem-solving training is a promising method for improving a person's adaptive functioning and, consequently, reducing and preventing psychological and behavior disorders. Previous studies have shown that social problem-solving are associated with interpersonal difficulties, behavioral problems, and mental health issues [1,2]. Moreover, some studies have shown that, social problem solving is effective in promoting social competence and mollifying emotional and behavioral difficulties [3,4]. In problem-solving, there are five steps. These include 1) identifying the problem; 2) analyzing the problem; 3) suggesting possible solutions; 4) suggesting the best possible solution, and 5) testing and implementing the solution. Two essential components of problem-solving training are taking action and reflection [5]. If the people follow

these rules step by step, presumably, positive solutions related to problems come out at the end.

Given the literature related to behaviors, assertiveness is defined as an ability to express and defend one's own needs, interests and positions [6]. Besides, assertiveness is viewed as a dimension describing people's tendency to speak up for, defend, and act in the interest of themselves and their own values, preferences, and goals [7]. It refers to the ability of an individual to identify rights and choices in various situations and act on these insights while respecting others' rights and choices [8]. Also, in general, assertive people tend to participate in three type of behaviors like acting in their own interests, standing up for themselves, and exercising personal rights [9]. People who are assertive are expected to acknowledge the problems more effectively, and result in goal achievement by increasing organizational outcomes in conflict handling. Prior research has mostly recognized the importance of assertiveness particularly on educational settings with a sample of undergraduate students or teenagers, however neglecting working employees. Moreover, the specific role of assertiveness relative to conflict handling has not been directly established in both Western and Turkish literature although an association is implied [10,11]. Researches have shown that assertiveness training improves human relations, affects personality behavior positively,

increases positive personal reactions, and reduces social anxiety [12,13]. High levels of assertiveness may bring instrumental rewards and short-term goal achievement but can be costly when relationships fray or fail to take root. In contrast, low levels of assertiveness may bring social benefits but can undermine goal achievement. Thus, increasing levels of assertiveness may often entail a trade-off between social costs and instrumental benefits-between getting along and getting one's way [7].

Physical activity is described as "any bodily movement produced by skeletal muscles that results in energy expenditure and can be categorized into occupation, sports, conditioning, household, or other activities" [14]. Stefan *et al.*, [15] showed that both "insufficient" physical activity and "lower" levels of physical fitness are associated with "high" psychological distress, even after adjusting for numerous covariates. Therefore, physical activities have an important role to protect the people from the situations like these. The positive effect of exercise intervention programme or physical activity on psychosocial adjustment is a widely held and accepted belief in the literature [16]. Physical activity and the positive effects of exercise are also associated with enhanced psychosocial adjustment [17]. As described above, sport participation is a road map to evolve people's health psychologically in many ways. With these positive impacts of sport participation, people feel better and may be more satisfied with their lives in general. Over and above, they feel confident about themselves and maybe do not have worries regarding their future because they learn how to control their lives and keep their bodies fit [18]. In line with the explanations above, the aim of the study was to investigate the relationship between problem solving skill, assertiveness and sport participation.

Methodology

Research design and participants

A relational design was used in the present research. This design was chosen because correlation and differences between three parameters were investigated in the study group. Researcher presented about the research for the participants and all participants (224) participated in the study voluntarily. The participants consisted of active and non-physically active boys and girls. Firstly, the students of both genders were randomly selected from different departments of a university.

Instruments

RESULTS

Problem Solving Inventory (PSI)

Problem Solving Inventory (PSI) was developed by Heppner and Petersen (1982). The purpose of the PSI is to assess individuals' perceptions of their problem-solving behaviors and attitudes. The PSI consists of 32 statements to which participants respond on a 6-point Likert scale ranging from 'strongly agree' (1) to 'strongly disagree' (6). The total scores can range from 32 to 192. Lower scores on all scales and for the total PSI score represent positive appraisals of problem-solving abilities. Concurrent validity of the PSI has been estimated for normal high school students. Concurrent validity have been demonstrated through significant correlation of scores with outcomes of student's rating of their level of problem-solving skills and their perceived level of satisfaction with their skills, all correlations were statistically significant ($p < 0.001$). Comparing the PSI to other instruments such as Rotter Internal-External (I-E) Locus of Control Scale (Rotter, 1978; $n=33$) has showed construct validity. Correlations of PSI scores with the Rotter (I-E) Locus of Control Scale were statistically significant ($r=0.61$). Estimates of test-retest reliability were established by administering the inventory to 31 undergraduate students on two occasions approximately 2 weeks apart, revealing high reliability ($r=0.89$). Internal consistencies were computed for the total scale score based on a sample of 150 of undergraduate students, alpha coefficients were found to be 0.90 [19,20].

Rathus Assertiveness Schedule

The RAS, created by Dr. Steven A. Rathus in 1973, is the most widely used instrument applied across many disciplines and with several different cultures [21]. The RAS is a 30-item questionnaire that has been in use since 1973 in multiple assertiveness studies [22,23,24]. Assertiveness responses are graded with a 6-point scale (+3, very characteristic of me, extremely descriptive; +2, rather characteristic of me, quite descriptive; +1, somewhat characteristic of me, slightly descriptive; -1, somewhat uncharacteristic of me, slightly non-descriptive; -2, rather uncharacteristic of me, quite non-descriptive; and -3, very uncharacteristic of me, extremely non-descriptive). A score of +90 represents a very assertive person, wherein a -90 reflects a person with the least assertiveness [24,25].

STATISTICAL ANALYSIS

In this study, data analysis of the research was performed using the Statistical Package for Social Sciences (SPSS) version 21. Descriptive statistics and frequency analysis (M, SD) were calculated. Participants were compared by means of t test analysis. Statistical significance was set at $p \leq 0.05$.

Table-1: Frequencies and Descriptive Analysis

	N	Min	Max	Mean	SD
Age	224	18	26	20,91	2,09
Problem Solving Skill	224	44	118	81,33	13,01
Assertiveness	224	56	116	79,63	15,96

According to Table 1, average of age was found to be (Mage=20,91±2,09), average of the problem solving skill scores was found to be

81,33±13,01, and also average of the assertiveness was found to be 79,63±15,96.

Table-2: Descriptive analysis of participants doing sport and not doing sport

		N	Mean	SD	Sig.	P
Problem Solving Skill	Doing sport	86	88,48	10,81	,000	p<0,05
	Not doing sport	138	76,88	12,29		
Assertiveness	Doing sport	86	16,62	16,62	,001	p<0,05
	Not doing sport	138	14,97	14,97		

As can be seen in Tabel 2, there was a significant different between studens doing sport and not doing sport in terms of problem solving skill scores

(p<0,05). There was a significant different between studens doing sport and not doing sport in terms of assertiveness scores (p<0,05).

Table-3: differences between male and female

	Gender	N	Mean	SD	Sig.	P
Problem Solving Skill	Male	140	81,1571	13,76	,788	p>0,05
	Female	84	81,6429	11,73		
Assertiveness	Male	140	80,6429	16,55	,223	p>0,05
	Female	84	77,9524	14,87		

As can be seen in Tabel 3, there was not a significant different between female and male students in terms of problem solving skill scores (p>0,05). There

was not a significant different between female and male students in terms of assertiveness scores (p>0,05).

Table-4: Correlation of the variables

	N		Sports Participation	Assertiveness	Age	Gender
Problem Solving Skill	224	P. Correlation	-,435**	-,002	-,072	,018
		Sig. (2-tailed)	,000	,971	,286	,788
Assertiveness	224	P. Correlation	-,214**	1	,116	-,082
		Sig. (2-tailed)	,001	224	,083	,223
p			p<0,05	p>0,05	p>0,05	p>0,05

** . Correlation is significant at the 0.01 level (2-tailed).

As can be seen in Tabel 4, there was a significant relationship between problem solving skills and sport participation (p<0,05). There was a significant relationship between problem solving skills and assertiveness (p>0,05). There was not a significant relationship between problem solving skills and age (p>0,05). There was not a significant relationship between problem solving skills and gender (p>0,05). Results showed in terms of the assertiveness that there was a significant relationship between assertiveness and sport participation (p<0,05). There was not a significant relationship between assertiveness and age (p>0,05). There was not a significant relationship between assertiveness and gender (p>0,05).

The purpose of this study was conducted to establish the relationship between social phobia, assertiveness and sport participation. Social phobia and assertiveness levels of the people can be impacted by a variety of factors, particularly huge events in daily basis lives or extended stressful circumstances. The finding of the study revealed that there was a significant statistically difference in assertiveness between students doing sports and those not doing sports in both countries (0,001, p<0.05). There was not a significant statistically difference in problem solving skills between students doing sports and those not doing sports(0,001, p<0.05). There was a significant statistically difference in problem solving skills and assertiveness between male and female students in terms of the sport participation (0,001, p>0.05). There

DISCUSSION

was a significant statistically relationship between problem solving skills and assertiveness.

Problem solving skill is associated with the sport participation, physical activity or recreational activities and also, participating in physical activities can improve the level of problem solving skill [26]. Doğan [27] stated that recreational activities reduce the physical and mental tension, therefore, these activities can help develop problem-solving skill by affecting the physical and mental tension. The students who did sports regularly were more self-confident than those who did not do sports regularly and were of the same age when they encountered a problem, and student-athletes evaluated the phase of solving the problem and results that they obtained more carefully than those who did not do sport regularly and were of the same age. Student-athletes believed that they would solve the problem that they encountered. Further, student athletes preferred using a systematic method while solving a problem and making a decision more often than those who were not athletes and were of the same age [28].

In a study, Tavakoli *et al.*, [29] stated that group assertiveness training was rated positively by students and led to lower negative affect, whereas expressive writing was less well received and led to higher homesickness and fear, but also higher positive affect. The combined intervention had no effects, perhaps because the two components negated each other. It is concluded that group assertiveness training improves emotional adjustment of international students, but expressive writing has mixed effects and needs further development and study. Mohebi *et al.*, [30] attempted to determine the effect of assertiveness training on reducing anxiety levels in pre-college academic students in Gonabad city in 2008. It was revealed in their study that due to a significant decrease in anxiety and increased decisiveness in the experimental group, it can be claimed that assertiveness training is an effective non-pharmacological method for reducing academic anxiety and it can improve academic performance. Fuspita *et al.*, [31] identified the influence of assertiveness training against teenage depression in high scholars. In a conclusion, the study recommends schools to cooperate with health services to increase mental health programs such as building peer groups, delivering assertiveness training, and teaching stress management to prevent depression in teenagers. What should people do to increase assertiveness levels? Face-to-face and multimethod programs, support from leaders, teamwork skills training and communication techniques adapted from the aviation industry were identified as appropriate approaches for optimising the effectiveness of assertiveness communication training programs. Behavioural change as the result of assertiveness interventions was evaluated by observer-based rating scales during simulation, whilst self-perceived knowledge and attitudes were evaluated using validated scales [32].

Some studies suggested and supported that sport participation, physical activities or exercises are very important in order to increase assertiveness and problem solving skill and decrease hopelessness, depression, anxiety, social phobia etc. For example, Asztalos *et al.* [33] stated that sport-type related variations in the physical activity-mental health relationship were analyzed, based on the theory of mindful movement and the complexity paradigm identifying 3 coordinates on which the physical activity - mental health complexity unravels, based on: activity domains, mental health dimensions, and individual characteristics. The mindful movement theory proposes an underlying mechanism that could explain the positive physical activity - mental health relationship, and the complexity paradigm provides basis for creating a workable definition for their concept of mindful physical activity [33]. Yigiter, [25] conducted a study named effect of recreational physical activities on nursing students' assertiveness in Turkey. 63 university students volunteered to participate in his study. In a conclusion, results of the study pointed out that recreational physical activities was very effective on the assertiveness levels. The findings of the study can provide evidence and contribute to future studies on regular sports activities. Also, physical activities improve athletic skills, behavioral self-control, and social skills also enhance self-esteem and counter depressive features. Yigiter, [34] complimented in his study established knowledge regarding the positive effects of regular exercise programs on psychological parameters. In a population of female university students, regular tennis training program had a positive effect on elevating self-esteem and reducing depression levels. Moreover, Stefan *et al.* [15] showed in his study results that both "insufficient" physical activity and "lower" levels of physical fitness are associated with "high" psychological distress, even after adjusting for numerous covariates. Yigiter, [26] stated in his study that participants in the experimental group improved their problem solving skills and self-esteem to a greater extent than those in the control group. In addition, there was a significant decrease in problem-solving skill and increase in self-esteem scores of participants in the experimental group in comparison to the ones in control group. The recreational physical activities positively affected the problem-solving skill and self-esteem of university students.

CONCLUSION

Taken collectively all things above, participation in regular exercise is a determinant of a number of psychological variables such as positive affect and well-being [35]. In this study results, it can be concluded that if a person participate in the sports activities, he/she can improve some skills such as problem solving skills, assertiveness etc.

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