Ilkogretim Online - Elementary Education Online, 2021; Vol 20 (Issue 6): pp. 546-555
http://ilkogretim-online.org
doi: 10.17051/ilkonline.2021.06.058

Role of sport in Profiling of Mood States: Self-perceived Experiences of Elite Athletes of Pakistan

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ABSTRACT
Introduction: Sports are thought to be beneficial in shaping mostly desired sociocultural attitudes and enhancing lifestyle among the various benefits attributed to sports in addition to health and fitness. Therefore, a study was conducted to evaluate the role of sport in profiling mood states and well-being among Pakistani elite athletes. **Method:** A total of (1463) questionnaires were administered, however; 1430 valid and dully filled questionnaires with (97.74%) were used in the data analysis. Three different modified questionnaires, namely Sport Participation Questionnaire, and Profile of Mood States after following the due procedure of piloting, validity and reliability was developed and used for the collection of required information. The responses were properly tabulated and analyzed with the help a computer software Statistical Package for Social Science (SPSS), version 26. A significant level of 0.05 was set to accept or reject the hypotheses. **Results:** Findings of the study indicated an important role of sport in reducing total mood disturbance ($p = .046 < 0.05$) and significant negative correlation between sport and total mood disturbance ($r = -.053$). No gender-based difference was found in POMS ($p > 0.05$). **Conclusion and Implication:** Based on the data analysis, it has been concluded that sport has played an important role in profiling mood states among elite athletes. The findings of the current research suggest that sport can contribute to the overall development of its participants. In the future, it is hoped that this research will lead to a decrease in psychological as well as physiological problems by providing the benefits of sport participation.

Key words: Profiling, Mood States, Self-perceived, Experience, Elite Athlete

I. INTRODUCTION

The relation between physical activity and positive moods is now fairly well known. There is evidence that adding cognitive-behavioral therapies, especially exercise, to a patient's recovery plan will help them achieve better results. Exercise is a therapeutic technique that has proven to be effective in treating depressive symptoms (Craft & Perna, 2004). Various types of physical exercise, especially, high aerobic intensity training (Heggelund, Kleppe, Morken, & Vedul-Kjelsås, 2014), rock-climbing activity (Gallota et al., 2015), bicycling (Götschi, Garrard, & Giles-Corti, 2016), and treadmill (Crush, Frith, & Loprinzi, 2018), have been shown to improve mood in anxious and depressed people. According to some scientific studies, the stress produced in our muscles during sports practice aids in the release of our own stresses and the reduction of our stress levels (Kraemer, & Ratamess, 2005; Tian, Nie, Tong, & Baker, 2012; Mastorakos, Pavlatou, Diamanti-Kandarakis, & Chrousos, 2005).

The word “Mood” is derived from the Old English ‘mod’ which stands for the military courage, but can also be referred to an individual’s temper, humor, or disposition at a particular time. A mood is an affective condition in psychology. Moods, unlike emotions and feelings, are less specific, less intense, and less likely to be triggered or manifested by a specific stimulus or event. Positive and negative valences are often used to characterize moods. In other words, people often discuss whether they are in a good or poor mood. According to research, a person's mood may affect how they process ads. Market information processing is influenced by mood, which interacts with gender (Martin, 2003). A mood can be described as a fleeting emotional state that can change from minutes to days. Unlike feelings, moods are more fleeting, often unrelated to external circumstances, and have varying degrees of intensity. Moods affect our overall sense of well-being, as well as our conduct habits and health perceptions (Carlsson, M., Ziegert, K., & Nissen, 2015).

In many countries of the world, there is an increase in the incidence of mental illness. The occurrence of mental illness is caused due to several factors such as violence, political turmoil, rapid change in the social fabrics (WHO, 2001;2005). As a result, psychiatric disorders such depression, anxiety, alcohol use and stress have been reported (Gadit, 2007). In our country Pakistan, the mental health problems have increased an appealing level in the last few decades (Wands et al., 2000; Gadit, 2005) Current violence, disruption in social structure, traumatic events are the key determinants of the mental health disorders (Galea et al., 2003; Khalily, 2011; Khalily, Fooley Hussain, & Bano, 2011). The continuous violence and threat of life produced negative influences upon the mental health of the people in Pakistani society (Khalily et al., 2011).

One the other hand, research has shown positive effect of exercise on psychological aspect of individual. A study reveals positive effect of acute exercise on profile of mood state and wellbeing among patients with depressive disorders (Bartholomew, Morrison, & Ciccolo, 2005). Another study reveals positive effects of short vs. long-bout exercise on mood, VO2max and percent body fat (Osei-Tutu & Campagna, 2005). Research reveals that regular exercise is linked with the reduction of physical as well as mental disorders. Moreover, there is a strong link of regular exercise with an increased level on mental wellbeing (Hillman, Erickson, & Kramer, 2008). However, little work has been done in the area of association between sport and profile of mood state and self-satisfaction in the homeland country Pakistan. Therefore, the current study was conducted to examine the role of sport in profiling of mood states among elite athletes of Pakistan.

Objectives

1. To determine the relationship between sports participation and total mood disturbance of elite athletes of Pakistan.
2. To determine the effect of sport in reducing total mood disturbance of elite athletes of Pakistan.
3. To examine the gender-differences on various dimensions of total mood states of elite athletes of Pakistan.

Hypotheses

H1 There is a significant strong negative relationship between sports participation and total mood disturbance of elite athletes of Pakistan.

H2 There is a significant positive effect of sport in reducing total mood disturbance of elite athletes of Pakistan.

H3 There is significant gender-differences on various dimensions of total mood states of elite athletes of Pakistan.

Delimitations of the Study

The research was delimited to the following aspects due to time constraints, limited resources, and teaching responsibilities.

1. For the collection of the necessary data, a representative sample based on the ratio of athletes from each province was used.
2. The study was further narrowed down to one independent variable, such as the position of sport, and one dependent variables, such as mood state profiling among elite athletes in Pakistan's homeland.

II. RESEARCH METHODOLOGY

Design of the Study

Descriptive research is used to obtain information concerning the current status of the phenomena and to describe "what exists" with respect to variables or conditions in a situation (Lakshmi, 2019). Keeping in view the set objectives and hypotheses of the study, descriptive research was used.

Setting of the Study

The physical state of the chosen location where the researcher collects data for a research project is referred to as the research setting. The current research was conducted in Pakistan Sports Board (PSB), Pakistan. Since the researcher is a faculty member of the department of Sports Sciences and Physical

Education, Gomal University, Dera Ismail Khan, hence; it was considered appropriate to choose the study's setting.

Subjects

All the athletes registered in Pakistan Sports Board (PSB) was considered population of the study. A complete list of the registered athletes was obtained from the Director, (PSB). The current study dealt with the elite athletes of different areas of the country Pakistan. The elite athletes in (Khyber-Pakhtunkhwa= 4990), (Punjab= 9892), (Sindh=322), (Balochistan= 512), (Azad Jamu and Kashmir=200), and (Gilgit Baltistan= 29). The population of the current study is finite in the sense that the exact number of elite athletes is known (N=15951. Finally, a sample of (n=1463) was selected and participated in the survey. For determining a sample size for the present research, a table of Kerjcie and Morgan (1970) was used. It is pertinent to mention here that a total of (1463) questionnaires were administered, however; 1430 valid and dully filled questionnaires with (97.74%) were used in the data analysis.

Table 1 The sample Size Determination

Area	Population	Sample
Khyber Pakhtunkhwa	4990	369
Punjab	9892	512
Sindh	322	178
Baluchistan	512	232
Azad Jamu & Kashmir	200	133
Gilgit Baltistan	45	39
Total	15951	1463

Design of the Questionnaire

Literature in research instrumentation describes two kinds of questions namely open-ended and closed-ended. The open-ended questions are used when the researcher is looking for more details. Contrary to open questions, the closed-ended questions are designed with several options from which the participants are requested to opt the suitable one (Saris, & Gallhofer, 2014). These options can be arranged from three, four, five, seven or more depending upon the nature of the measurement. In the present study, the researcher used 5-point Likert Scales.

Sport Participation Questionnaire

The sport participation was taken as an independent variable which was measured through adapted version of The Physical Activity Index (PAI). Researchers recently have used PAI after necessary amendments to measure the sport participation among university students (Qurban, Siddique, Wang, & Morris, 2018). The PAI was adapted to measure the important categories on 5-point Likert Scales. Cronbach alpha of 0.79 was obtained on this scale in the present study.

Profile of Mood State

The profile of mood state was considered as dependent variable which was measured through adapted version of the questionnaire used by (McNair, Lorr, & Doppleman, 1971). Recently, several researchers used the same questionnaire in their respective cultures (Andrade et al., 2016; Brandt, Bevilacqua, & Andrade, 2017; Brandt et al., 2018; Vancini et al., 2019). The researcher, in the current study, also used the same questionnaire after necessary modifications following the cultural requirements. The profile of mood state of the athletes was determined on different dimensions including tension, depression, anger, vigor, fatigue and confusion. For this purpose, 5-point Likert scale ranging from Not at all=0 to Extremely=4 was used.

Piloting the Research Instruments

Before using a survey questionnaire to collect data, it is important to test it. Researchers may use pretesting and piloting to find questions that participants don't understand or issues with the questionnaire that could lead to skewed results (Van Teijlingen, & Hundley, 2010). Therefore, the questionnaires were administered among 30 athletes from a target group having different sociocultural and sport background for pretesting. They were asked to complete the survey one at a time.

The Reliability Questionnaire

The Cronbach's Alpha method was used to check the reliability evidence of the questionnaires. The values of Cronbach's Alpha were calculated against three (03) variables. The Cronbach's Alpha value on 93 items was found as (.965) which denotes that the constructs have good reliability. As a result, the administered instrument (questionnaire) for primary data collection was found to be adequate for measuring the variables under investigation.

Data Analysis

Statistical analysis concerns the collection, organization, analysis, interpretation, and presentation of data. The collected data were properly tabulated and analyzed with the help of appropriate descriptive and inferential statistics. Descriptive statistics such as frequency and percentage were used to describe the demographic features (personal information) of the participants. Likewise, mean and standard deviation were used to examine the profile of mood state and self-satisfaction. On the other hand, inferential statistics such as multiple correlation, linear regression, independent sample t-Test and One-way ANOVA were applied to test the hypotheses. For this purpose, Statistical Package for Social Science (SPSS), version 26 was used. The test of significance to support or reject claims based on sample data was set as .05.

III. RESULTS

Table 2 Reliability Statistics

SN	Questions/ Instrument	N of Items	Cronbach's Alpha
1	POMS	58	.799
2	Sports Participation	10	.96
3	Total	93	.965

In table 2 showed the Cronbach's alpha was used to measure the reliability of the instrument. The acceptable range of Cronbach Alpha is 0.6 however, in present case, the reliability statistics for all the three variables was greater than 0.6 which shows that constructs have good reliability.

Factor Analysis

Table. 3 KMO and Bartlett's Test for Sports Participation

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.898
Bartlett's Test of Sphericity	Approx. Chi-Square	2241.479
	df	1653
	Sig.	.000
	Required	Computed
KMO test	= > 0.7	.898
Bartlett's test	= < 0.05	.000
Factor Loadings	= > 0.4	> 0.4

The table 3 discloses that KMO value for Sports Participation is .898 which is greater than (0.6). Thus, Sports Participation has appropriate validity about sample adequacy. For correlation matrix about structure detection displays significance (.000) for Sports Participation from results of Bartlett tests.

Table. 4 Component matrix for Sports Participation

Items	Score	Items	Score	Items	Score	Items	Score
SP1	.843	SP4	.436	SP7	.760	SP10	.785
SP2	.812	SP5	.673	SP8	.543		
SP3	.648	SP6	.469	SP9	.499		

Table 4 showed the Factor loading requisite value of items in instrument is (.4) and in current case, for Sports Participation, the item factor loadings are above (.4) which means that the items have suitable link between each other. Thus, the results give adequate confirmation about instrument validity.

Table. 5 KMO and Bartlett's Test for POMS

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.892
Bartlett's Test of Sphericity	Approx. Chi-Square	59020.450

	df	1653
	Sig.	.000
	Required	Computed
KMO test	= > 0.6	.892
Bartlett's test	= < 0.05	.000
Factor Loadings	= > 0.4	>0.4

The table 5 discloses that KMO value for POMS is .892 which is greater than (0.6). Thus, POMS has appropriate validity about sample adequacy. For correlation matrix about structure detection displays significance (.000) for POMS from results of Bartlett tests.

Table 6. Component matrix for POMS

Items	Score	Items	Score	Items	Score	Items	Score
POMS1	.754	POMS16	.798	POMS31	.532	POMS46	.377
POMS2	.743	POMS17	.517	POMS32	.679	POMS47	.478
POMS3	.812	POMS18	.766	POMS33	.489	POMS48	.353
POMS4	.752	POMS19	.642	POMS34	.543	POMS49	.680
POMS5	.679	POMS20	.758	POMS35	.734	POMS50	.475
POMS6	.701	POMS21	.900	POMS36	.691	POMS51	.467
POMS7	.763	POMS22	.744	POMS37	.812	POMS52	.888
POMS8	.637	POMS23	.644	POMS38	.931	POMS53	.531
POMS9	.576	POMS24	.701	POMS39	.732	POMS54	.664
POMS10	.665	POMS25	.698	POMS40	.744	POMS55	.589
POMS11	.598	POMS26	.850	POMS41	.831	POMS56	.655
POMS12	.498	POMS27	.815	POMS42	.666	POMS57	.885
POMS13	.866	POMS28	.630	POMS43	.654	POMS58	.433
POMS14	.903	POMS29	.698	POMS44	.751		
POMS15	.752	POMS30	.590	POMS45	.477		

Table 6 showed that the factor loading requisite value of items in instrument is (.4) and in current case, for POMS, the item factor loadings are above (.4) which means that the items have suitable link between each other. Thus, the results give adequate confirmation about instrument validity.

Demographic Information of the Participants

Table. 7 Demographics information of the participants (n=1430)

Demographic	Category	Frequency	Percent
Gender	Male	875	61.2%
	Female	555	38.8%
Formats of Sport	Individual	654	45.7%
	Team	776	54.3%
Sports Experience	10 years and below	676	47.3%
	11 to 15 years	398	27.8%
	16 years and above	356	24.9%
Level of Sports Participation	National	860	60.1%
	International	570	39.9%
Ethnic Group	Pakhtoon	367	25.7%
	Punjabi	499	34.9%
	Sindhi	175	12.2%
	Baloochi	230	16.1%
	Kashmiri	130	9.1%
	Baltistani	29	2.0%

	Supportive Coach	885	61.9%
Coaching Style	Controlling coach	545	38.1%
	Hot Environment	867	60.6%
Playing Environment	Cold Environment	562	39.3%
	Table Tennis	70	4.9%
	Badminton	86	6.0%
	Athletics	276	19.3%
	Taekwondo	222	15.5%
Playing Games	Cricket	180	12.6%
	Hockey	180	12.6%
	Volleyball	220	15.4%
	Football	196	13.7%

Table7 showing that there were total 8 different demographic variables were entertained in the study in hand, which were gender (Male= 61.2%, Female= 38.8%), formats of sports (Individual= 45.7%, Team= 54.3%), sports experience (10 years and below= 47.3%, 1 to 15 years= 27.8%, 16 years and above= 24.9%), level of sports participation (National= 60.1%, International= 39.9%), ethnic group (Pakhtoon= 25.7%, Punjabi= 34.9%, Sindhi= 12.2%, Baloochi= 16.1%, Kashmiri= 9.1%, Baltistani= 2.0%), coaching style (Supportive coach= 61.9%, Controlling coach= 38.1%), playing environment (Hot environment= 60.6%, Cold Environment= 39.3%), and playing games (Table tennis= 4.9%, Badminton= 6%, Athletics= 19.3%, Taekwando= 15.5%, Cricket= 12.6%, Hockey= 12.6%, Volleyball= 15.4%, Football= 13.7%). The total sample elite athletes were 1430.

Profile of Mood States

Table. 8 Profile of Mood States (Descriptive)

Profile of Mood States	N	Mean	Std. Deviation
Tension	1430	2.2086	.42610
Depression	1430	2.4504	.36379
Anger	1430	3.1701	1.02557
Vigor	1430	3.7984	.50890
Fatigue	1430	3.1004	.93196
Confusion	1430	3.1154	1.04996
Total Mood Disturbance	1430	10.2465	2.58608

The table 8 showing the responses of participants pertaining to profile of mood states were analyzed through various statements and the results have been presented in Table 4.3 and figure 4.1. There was total 6 sub variables were in the profile of mood states questionnaire. The mean of tension was 2.20±.426, depression was 2.45±.363, Anger was 3.17±1.02, Vigor was 3.79±.508, fatigue was 3.10±.931 and confusion was 3.11±1.04. The mean of total mood disturbance was 10.24±2.58 which was calculated by the sum of tension, depression, anger, fatigue and confusion - the mean score of vigor. The statistics of profile of mood states with all its sub variables indicates that sports play positive role in profiling mood states because the mean score of vigor was greater than the mean score of tension, depression, anger, fatigue and confusion. Hence, the researcher concluded that sports play positive role in profiling mood states of athletes of Pakistan at elite level.

H_1: There is a significant strong negative relationship between sports participation and total mood disturbance of elite athletes of Pakistan.

Table. 9

Correlational Analysis

Variables	Statistics	Total Disturbance	MoodSports Participation
Total Mood Disturbance	Pearson Correlation	1	-.053*
	Sig. (2-tailed)		.046

	N	1430	1430

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Table 9 showing the relationship between predictor (Sports participation) and criterion variables (Total mood disturbance). The Pearson Correlation between total mood disturbance and sports participation was *r(1430)* = -.053 which was strong (Large) negative correlation and significant at alpha level .05. Hence the researcher concluded that the relationship between sports participation and total mood disturbance is strong negative. Hence, the hypothesis there is a significant strong negative relationship between sports participation and total mood disturbance of elite athletes of Pakistan is hereby accepted.

Regression Analysis (Sports participation and POMS)

H_2: There is a significant positive role of sport in reducing total mood disturbance of elite athletes of Pakistan.

To determine the role of sport in profiling the mood state of elite athletes, a linear regression was used and the results have been presented in table 10. The first column in the table 'R' is representing relationship between sport and profile of mood state, which is .053. The second column is showing the results of "R Square" (.003) is showing the variance in dependent variable (profile of mood state) caused by independent variable (sport). The R^2 recorded as .003, which means that .03% variation occurred in Criterion variable (total mood disturbance) due to predictor (sports participation). The adjusted R^2 is the modified version of R^2 which was .002 explaining adjusted variation in the dependent variable of the population. The standard error of the estimates was recorded as 2.58.

Table 10

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.053[a]	.003	.002	2.58340

a. Predictors: (Constant), Sports Participation

Table 11 showing the second output of ANOVA is determining whether the estimation is statistically significant? The *F (1, 1428)* = 3.972, Sig.= .046 is lesser than the alpha level of .05, which indicates that the null hypothesis is rejected and alternate is accepted. Hence, it can be concluded from the ANOVA table 10 that there is a significant positive role of sport in reducing total mood disturbance of elite athletes of Pakistan.

Table. 11 **ANOVA[a]**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.509	1	26.509	3.972	.046[b]
	Residual	9530.381	1428	6.674		
	Total	9556.890	1429			

a. Dependent Variable: Total Mood Disturbance
b. Predictors: (Constant), Sports Participation

According to the table 12, the constant value was appearing as 11.336 with standard error .551. as highlighted in the table presents the value of unstandardized beta which was -.340, which indicates if one-unit increase in existing value of sports participation (predictor) there was -.340 units predicts to decreases in dependent variable total mood disturbance (Criterion). The next of column of coefficient table is showing the value of standardized beta which was -.053 indicating if one standard deviation change in predictor (sports participation) how many standard divisions change Criterion variable (total mood disturbance). The t-value (-1.993) and p-value ($p < .05$) indicated that the predictor variable of sport's participation is statistically significant. The Coefficient table also supports the claim of ANOVA table that there is a significant positive role of sports in reducing total mood disturbance.

Table. 12 **Coefficients[a]**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	**11.336**	**.551**		20.581	.000

Sports Participation	-.340	.171	**-.053**	-1.993	.046

a. Dependent Variable: Total Mood Disturbance

H_3: The groups of male and female elite athletes are reporting insignificant statistical differences on POMS (Total Mood Disturbance).

Table 13

Independent sample t-test comparing the mean score of Male and female in Profile of Mood States

Testing Variables	Gender	N	Mean	Std. Deviation	T	Sig.
Tension	Male	875	2.2230	.41882	1.601	.110
	Female	555	2.1860	.43676		
Depression	Male	875	2.4729	.35368	2.941	.003
	Female	555	2.4150	.37679		
Anger	Male	875	3.2215	1.02077	2.384	.017
	Female	555	3.0890	1.02879		
Vigor	Male	875	3.9040	.29844	10.199	.000
	Female	555	3.6320	.69437		
Fatigue	Male	875	3.1135	.88904	.666	.506
	Female	555	3.0798	.99636		
Confusion	Male	875	3.1598	1.00419	2.012	.044
	Female	555	3.0453	1.11565		
Total Mood Disturbance	Male	875	10.2867	2.50539	.738	.461
	Female	555	10.1832	2.70951		

Table 13 showing the elite athletes were classified into two strata like males and females. According to the data analysis, males reported higher mean scores for different dimensions on profile of Mood Scale (POMS) as compared with female athletes. The results indicated that participants have shown significant results on two dimensions namely tension and fatigue were found insignificant based on the p-values .110 and .506 respectively, which is greater than the significant level of 0.05. Contrary to the above results, statistical inferences produced significant results on various dimensions like depression, anger, vigor and confusion based on p-values .003, .017, .000 and .044 respectively which is lesser then the significant value of 0.05. However, the overall result for Total Mood Disturbance is found .461 which is greater than the standard value of 0.05. Therefore, H_3 is hereby accepted.

IV. DISCUSSION

The study at hand revealed that that sport has played an important role in reducing total mood disturbance and significant negative correlation between sport and total mood disturbance. Based on the data analysis, it has been concluded that sport has played an important role in profiling mood states among elite athletes. The findings of the current research suggest that sport can contribute to the overall development of its participants. In the future, it is hoped that this research will lead to a decrease in psychological as well as physiological problems by providing the benefits of sport participation. One the other hand, research has shown positive effect of exercise on psychological aspect of individual. A study reveals positive effect of acute exercise on profile of mood state and wellbeing among patients with depressive disorders (Bartholomew, Morrison, & Ciccolo, 2005). Another study reveals positive effects of short vs. long-bout exercise on mood, VO2max and percent body fat (Osei-Tutu & Campagna, 2005). Research reveals that regular exercise is linked with the reduction of physical as well as mental disorders. Moreover, there is a strong link of regular exercise with an increased level on mental wellbeing (Hillman, Erickson, & Kramer, 2008).

Healthy and successful life needs proper and sound state of physical and mental health. The increase in sedentary life has contributed to the development of various physiological and psychological disorders. On the other hand, participation in sport is imperative for enhancing lifestyle and protecting the public's health from various health hazardous. With the increase in technological advancements, more and more health problems are entering to the public's health. Sport psychologists, physical educationists and other sport professionals are working to develop sport model and polices and researchers are continuing to find ways to develop and maintain the public's health from physical and mental health issues. If we cannot motivate the people towards sport participation, our health standard of the public's health will surely be diminishing. The findings of the current research suggest that sport can contribute to

the overall development of its participants. In the future, it is hoped that this research will lead to a decrease in psychological as well as physiological by providing the benefits of sport participation. More research and innovation are required to maintain our health while still supporting the health needs of the people of the country in general and particular among the youth.

V. CONCLUSION

The present study was conducted to determine the role that sport has played in profiling Mood States based on the athletes' sport-experiences in the homeland country Pakistan. The athletes consisted of those who participated at national as well as international sport events such as Volleyball Table Tennis, Badminton, Athletic, Taekwondo, Cricket, Hockey, Volleyball, and Football. A difference of opinion, if exists, seeing Gender, Formats of Sport, Level of Sport's Participation, Coaching Styles of their Coaches, Playing Environment, Sport's Experience, Racial Group and Game participated in was also measured. The analyzed data indicated a strong negative correlation between sport participation and total mood disturbance. The negative correlation means that an increase in sport participation can decrease the total mood disturbance of its participants. Based on the analyzed data, it has been interpreted that sport has paramount significant in profiling of mood states. No gender differences pertaining to POMS developed through sport have been found.

Implications for Future Research

The following future implications of the present study have been listed for future research and researchers in the field of sports science and physical education:

1. The findings obtained through study successfully provided evidence to the hypothetical assumptions made by the researcher, however; this study has several limitations which can further be explored by future researchers in the field.
2. In addition to the one independent variable (sport) and two dependent variables (profile of mood states and self-satisfaction) used in the current study, one can conduct mediator to examine its role in the relationship between sport and profile of mood states and self-satisfaction.

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