

Impact Of Sports Participation On Life Satisfaction: Intellectual Ability As Mediators

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ABSTRACT

This study examines the impact of sports participation on life satisfaction over mediating role of intellectual ability among the college students. The sports participation is identified as potential contributor to life satisfaction, offering physical, social, and psychological benefits. However, linkages between active sports involvement and life satisfaction may be influenced by various individual attributes, notably intellectual ability that is believed to boost cognitive engagement, critical thinking, and problem-solving skills. By surveying students¹ in higher institutions, this research examines whether intellectual ability mediates relationship amid sports participation and life satisfaction providing insight into that how sports may indirectly foster sense of well-being through cognitive development. Thus, findings suggest that intellectual ability positively mediates this relationship, highlighting dual role of sports in promoting the physical health and intellectual growth. In this connection, the present study has implications for the educators and policymakers to consider integrating structured sports programs as part of holistic educational strategies aimed at enhancing the students' overall satisfaction and cognitive potential in diverse situations and settings.

Keywords: Sports Participation, Life Satisfaction, Intellectual Ability, Mediation, Students, Higher Education.

INTRODUCTION

In contemporary era, sports participation is significant phenomenon for ensuring many foremost outcomes related to individuals' contextual and situational responsiveness overwhelmed toward desired standards as required for comprehending the environments as per requirements to ensure the success [1]. The sports participation is thus important in bringing various positive changes in attitudes and behaviors on students that further lead them toward career and life satisfactions from different perspectives in different circumstances [2]. Sports participation is further vital for removing the emotional suffering and psychological distress that are important for producing the desired spiritual balance required for students to pursue different tasks in different situations [3]. The participation further ensures intellectual abilities and competencies of students to take active participations in sports to improve their health and psychological developments leading to desired success. The higher education institutions

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provide effective knowledge and training to students regarding the sports and physical education over different subjects and courses along with diverse academic credentials to improve their inspiration toward sports participation is its ultimate paybacks [4].

These students are therefore inspired and enrolled in different academic programs from sports sciences domain to increase their academic credentials along with receiving benefits from the physical exercises to improve their mental and physical wellbeing [5]. The sports participation is significant in providing opportunities for development from different perspectives leading to desired outcomes to sustain the credibility and commitment that are vital for producing desired leading outcomes [6]. Sports participation helps in providing conducive environment toward trust and commitment towards health and physical fitness overwhelmed at desired outcomes for anticipated success. The life satisfaction is leading and burning phenomenon that provide the justifications towards the different critical issues that helps in comprehending the situations towards conducive as well as leading environments for development and success in particular contexts based upon the situational and contextual outcome [7]. The sports participation helps students in removing distress and make them assure to provide them the chances for developing the positive consequences in response to various input and eventual outcome that are required for success [8].

The intellectual ability is vital for determining many critical issues that considers the individuals' responsiveness towards the desirability and commitment for attaining and realizing different tasks and related outcomes [9]. The students are required to take active participation in sports activities to determine the situations from different perspectives to ensure optimistic outcomes from various leading activities towards the desired developments. The psychological distress is important for providing the students into opportunities for that how to eliminate the sorrows and pains along with tension and depression to produce desired leading outcomes required for completing the different tasks that are vital for considering diverse eventualities [10]. Therefore, the psychological distress is important that hinders the students from diverse positive outcomes that can be cater over intellectual abilities and capabilities towards these anticipated outcomes required for completing the different tasks [11]. The psychological distress in sports denotes to negative emotional experiences that athletes may face, likewise anxiety, stress, depression, and burnout that are critical for the desired health, required physical aspects as well as anticipated outcomes [12].

Problem Statement

The sports participation is considered to have positive significant impact upon life satisfaction, that provide individuals with chances to becomes socialize, by gaining physical and mental health benefits and developing imperative life skills that are vital in determining the different outcomes. Still, the mechanisms underlying this relationship are not well understood to examine the desired relationships among research variables. In this connection, this study aims to explore impacts of sports participation on life satisfaction, by considering intellectual ability as potential mediators. The problem addressed in study is to examine mediating role of intellectual ability in linking sports participation and intellectual ability thereby analyzing views of students about research variables to produce information about these existing realities to contribute existing knowledge databased of research.

Objectives & Hypotheses

1. The study aims to examine association between sports participation, intellectual ability and life satisfaction (H1).
2. To examine cause-&-effect relationship between sports participation, intellectual ability and life satisfaction (H2).

3. To examine mediating role of intellectual ability in connecting sports participation and life satisfaction (H3).

LITERATURE REVIEW

The participation in sports has certain benefits, including improving physical health, reducing stress, leadership skills, building teamwork and boosting self-esteem. Sports participation refers to engaging in the physical activities that involve competitive and leisure aspect. It can include team-based or individual sports and may be done at amateur/professional level [4]. Factors such as accessibility, social norms, cost, personal interests and cultural values, can affect the sports participation rates. Many challenges like lack of facilities, inadequate funding, time constraints, or discrimination may hinder participation by certain groups [10]. There are several factors that can contribute to the psychological distress in sports, including injury, pressure to perform, fear of failure and negative advice. Athletes practice distress from outside factors like interpersonal conflicts, financial pressures, and career uncertainties [14], contributes toward desired success over intellectual ability. The sports participation is imperative phenomenon that confirms the participation of individuals in diverse physical activities that offers credentials towards desired physical and psychological developments and outcomes required for completing diverse leading tasks to success [1].

The sports participation starts at initial ages, like in communities and schools while promoting athletic programs for students towards sports participation for health and academic outcomes required in different contexts [6]. The coaches and trainers use various methods to help athletes improve their intellectual abilities that includes encouraging self-reflection providing feedback, analysis, and exposing them to new and challenging situations in diverse situations [14]. The sports participations have positive impact upon the students' lives in various manners, including social development, physical health, and well-being required from different e perspectives. The physical activities and sports participation are positively linked and have optimistic impact on individuals' satisfaction. The physical activities release endorphins, as known to improve mood and reduce stress, leading towards life satisfaction of concerned individuals especially students [16]. Besides, being part of sports team provides individuals with sense of belonging, and social support, which contribute to individual satisfaction with life. In this regard, participating in the sports promotes discipline [17], persistence, and hard work that boost self-esteem and lead to a sense of success.

Sports participation is important in nurturing their behaviors towards desired outcomes related with anticipated developments and success in particular context [6]. The sports and physical activity role in human lives is indispensable and bring positive changes into one's lifestyle that can be consequently beneficial for students' life satisfaction. The psychological distress is state of mental or emotional pain or suffering caused by factors, like chronic illness, traumatic event, financial stress, relationship issue, other life challenges that creates confusions and anxieties in individuals lived towards undesirable outcomes [18]. The symptoms of psychological distress may include hopelessness, depression, anxiety, irritability, confusion, feelings of worthlessness or helplessness, symptoms like headaches, nausea and fatigue [5]. The psychological distress can have significant impact on individual's overall health and quality of life, may require professional treatment such as medication and therapy that are vital in determining the desired outcomes as required by students [9]. Intrusions to prevent psychological distress and enhance intellectual ability may be useful in improving life satisfaction, mainly for individuals who do not participate in sports activities.

Intellectual ability is important aspect of sports performance, alongside technical and physical abilities. It includes cognitive skills like decision-making, problem-solving, memory, attention,

reaction time and perceptual speed. Athletes with high intellectual ability can better understand the tactics, strategy, and rules in sport, anticipate opponents' movements, and adapt to changing situations [7]. The intellectual ability is positively linked with sports performance and success. Athletes who perform well in athletics, swimming, and other sports are likely to have higher cognitive abilities with poorer performance [11]. In team sports, players with higher cognitive abilities are more likely to perform well, collaborate with their teammates, and make effective decisions during the sports events [13]. Intellectual ability can contribute to psychological well-being of athletes as linked with better mental health, resilience, and self-esteem and confidence. The sports participation is important for providing the opportunities towards desired outcomes through effective involvement in co-curriculum activities that helps in improving the health and physical fitness along with emotional balance to sustain desirability and commitment vital for anticipated success [9].

RESEARCH METHODOLOGY

The research needs comprehensive information and justification regarding the different tools that are important in designing the research and attaining the desired outcomes that are important in different situations for the diverse desired outcomes [19]. The research strategy offers inclusive guidelines about the strategic approaches along with different leading strategies to realize the leading information on particular issues in specific context [20]. Thus, based upon requirements of current research study, and based upon support from existing research, survey approach was used to conduct research. The population of study comprised students from higher education institutions, KP, hailing from sports sciences and physical education wherein sample of 357 was selected by using statistical formula $n = N/1 + Ne^2$ [23]. So, 357 questionnaires were distributed wherein 340 questionnaires were recollected. The data collection is another important phase of research that provides justifications about required data as selected through different sources likewise secondary and primary sources from different procedures [21]. In this linking, 5-point Likert scale was used to record responses of respondents. The questionnaire was adapted from previous studies. The mediation analysis is the process wherein influence of any third variable is determined to examine its impact and intermediary role in linking independent and dependent variables of research [21].

RESULTS OF STUDY

The results of study are presented in this section that are mainly the outcomes of the statistical procedures that are used to examine relationships among the research variables of study in order to extract the desired information and making the required decisions about relationships among research variables.

Table 1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Sports Participation	340	1.30	4.80	3.2462	.74011
Intellectual Ability	340	1.70	4.70	3.5018	.56999
Life Satisfaction	340	1.63	4.62	3.4285	.58494
Valid N (listwise)	340				

Table 2 Correlation Analysis (H1)

	[1]	[1]	[1]
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Sports Participation [1]	Pearson Correlation	1	.576**	.629**
	Sig. (2-tailed)		.000	.000
	N	340	340	340
Intellectual Ability [1]	Pearson Correlation	.576**	1	.633**
	Sig. (2-tailed)	.000		.000
	N	340	340	340
Life Satisfaction [1]	Pearson Correlation	.629**	.633**	1
	Sig. (2-tailed)	.000	.000	
	N	340	340	340
**. Correlation is significant at the 0.01 level (2-tailed).				

The association among research variables (sports participation, intellectual ability & life satisfaction), was hypothesized through first hypothesis that aim to examine the association with respect to strength and direction in association among research variables of study. The results from correlation confirmed the existence of association among research variables likewise sports participation and life satisfaction ($R = .629$ & $P = .000$), intellectual ability and life satisfaction ($R = .633$ & $P = .000$), and intellectual ability and sports participation ($R = .576$ & $P = .000$). Thus, from correlation analysis, hypothesis is accepted and substantiated.

Table 3 Regression Analysis (H2)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	.711a	.505	.502	.41262

Table 4 Regression Analysis (H2)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	58.615	2	29.307	172.141	.000b
	Residual	57.375	337	.170		
	Total	115.990	339			

Table 5 Regression Analysis (H2)

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.958	.141		6.778	.000
	Sports Participation	.313	.037	.397	8.463	.000
	Intellectual Ability	.415	.048	.404	8.624	.000
a. Predictors: (Constant), Intellectual Ability, Sports Participation						
b. Dependent Variable: Life Satisfaction						

The regression procedure was used to examine the hypothesized relationships among variables to investigate the cause-&-effect relationships among the research issues under considerations.

The results show that there is 50.5% change in life satisfaction is due predictor and mediating variables with significant impact like sports participation ($\beta = .313$ & P-value = .000), intellectual ability, ($\beta = .415$ & P-value = .000), which therefore confirmed prediction and thus hypothesis is partially accepted.

Mediation First Step (a)

Table 4.6 Model Summary (H3)

R	R Square	MSE	F	df1	df2	p
.5760	.3317	.2178	156.9822	1.0000	338.0000	.0000

Table 4.7 Coefficients of Regression (H3)

Model	Coefficient	se	t	p	LLCI	ULCI
Constant	2.0618	.1223	16.8554	.0000	1.8212	2.3024
Sports Participation	.4436	.0354	12.5293	.0000	.3739	.5132

Predicting Variable: Sports Participation

Criterion Variable: Intellectual Ability

Mediation Second & Third Steps (b & c)

Table 4.8 Model Summary (H3)

R	R Square	MSE	F	df1	df2	p
.7109	.5053	.1703	194.5100	2.0000	337.0000	.0000

Table 4.9 Coefficients of Regression (H3)

Model	Coefficient	se	t	p	LLCI	ULCI
Constant	.9584	.1328	7.2188	.0000	.6972	1.2196
Intellectual Ability	.4148	.0481	8.6175	.0000	.3201	.5095
Sports Participation	.3135	.0411	7.6216	.0000	.2326	.3944

Predicting Variable: Sports Participation, Intellectual Ability

Criterion Variable: Life Satisfaction

Mediation Fourth Step (c)

Table 4.10 Model Summary (H3)

R	R Square	MSE	F	df1	df2	p
.6294	.3962	.2072	220.5767	1.0000	338.0000	.0000

Table 4.11 Coefficients of Regression (H3)

Model	Coefficient	se	t	p	LLCI	ULCI
Constant	1.8136	.1170	15.4963	.0000	1.5834	2.0438
Sports Participation	.4975	.0335	14.8518	.0000	.4316	.5633

Predicting Variable: Sports Participation

Criterion Variable: Life Satisfaction

The mediation model aimed to examine the mediating role of intellectual ability in linking the sports participation and life satisfaction thereby using the Hayes Process of mediation over four paths showing direct and indirect relationships among the research variables of different nature. The first path showed that there is 33.17% change in the life satisfaction is due to the sports participation with significant impact ($\beta = .4436$ & P-value = .0000). The second and third paths revealed that there is 50.53% change in life satisfaction is due to predicting variables with the significant impact like intellectual ability ($\beta = .4148$ & P-value = .0000), and sports participation ($\beta = .3135$ & P-value = .0000), that provides the clues towards the fourth path of mediation about direct relationship.

The fourth part of mediation revealed that there is 39.62% change in life satisfaction is due to sports participation in determining the direct relationship with significant impact ($\beta = .4975$ & P-value = .0000). Therefore, from mediation analysis it has been confirmed that the intellectual ability significantly mediated the connection between sports participation and life satisfaction through partial mediation due to decrease in coefficient value from (.4975) in direct relationship to (.3135) in indirect relationship while significant values remained unchanged, and hypothesis about mediation is accepted based upon results obtained through all the four mediation paths in current research.

DISCUSSION

The intellectual ability in sports refers to the cognitive capabilities of an athlete that are relevant to performance on field towards desired outcomes. These abilities include perception, memory, attention, decision-making, reasoning, problem-solving skills that provides active opportunities for attaining the developments [13]. The athletes who possess strong intellectual abilities are habitually able to process information accurately and quickly, and antedate potential outcomes, and make real decisions in high-pressure situations [14]. The intellectual ability is significant force that inspires the students towards the desirability to ensuring the conducive environment required for considering different elements and desired for comprehending the different tasks [15]. Intellectual ability can be developed through physical training and practice, and through mental training like visualization, mindfulness techniques to reach desired leading outcomes. The participation in sports is shown to have positive impact on life satisfaction, this is as sports provide the prolonged reimbursements that can enhance the individual's sense of well-being and happiness in diverse situations by considering the various elements and by considering diverse situational responsiveness [1].

The sports participation ensures regular exercises through sports that can improve the physical health, promote vitality, reduce chronic disease risks that ultimately may results in the increased energies, reduced illnesses and pain, healthier physical appearance, and positive self-image and self-confidence among students [6]. Thus, sports participating can offers a long-term advantage that can expand individuals' sense towards life satisfaction that include mental health, physical health, personal growth and social connections in diverse situations [8]. The sports participation has thus significant impact upon life satisfaction of the students in different situations. The sports participation plays significant role in producing happiness and satisfaction over physical fitness and emotional balance that are required to students in different situations from different perspectives to ensure desirability and intellectual capability to confirm the desired outcomes [14]. In this linking, the sports participation can offer the assistance to individuals to develop personal skills including self-discipline, goal-setting, and persistence and time management as these skills can help individuals realize success from diverse perspectives towards the desired outcomes [3].

Thus, these perspectives include life, including academics, career, and personal relationships to provide opportunities for the individuals to interact with others, support networks, build social connections and increase social skills [2]. In this linking, this study aims to examine relations among research variables under consideration in higher educational context to produce desired information to reach the desired leading conclusion. The research indicates that students who participate in sports tend to have higher levels of life satisfaction as sports participation helps them in sustaining opportunities for refining health and physical appearances and psychological wellbeing required for students to improve their desired standards [10]. Sports participation brings certain positive changes in human lives and behaviors like exercises' mental and physical benefits, sense of accomplishment, improved self-esteem that are vital determinants for students to attain desired outcomes [14]. Thus, sports participation is significant in for reducing the emotional distress and increasing the intellectual abilities to promote diverse desirability and motivational approaches towards desired success along with inspirational techniques towards success [17].

The students through psychological abilities are required to overwhelm situations by producing desired outcomes through different skills and strategic approaches. The effective participation is necessary for effective satisfaction that is important for nurturing intellectual capabilities and commitments toward desired leading outcome required in certain circumstances [12]. Effective participation helps in eliminating the psychological distress that inspires the students to face the various challenges related with anxieties, depression and apprehensions while chasing the different tasks in situations and circumstances [16]. The symptoms of psychological distress may include hopelessness, depression, anxiety, irritability, confusion, feelings of the worthlessness or helplessness, symptoms like headaches, nausea and fatigue [5]. Sports participation is further vital for removing the emotional suffering and psychological distress that are important for producing desired spiritual balance required for students to pursue different tasks in different situations [3]. The present study followed theoretical support from the different models and theories regarding the research variables along with main theory that is operative behind the theoretical framework.

CONCLUSION

This study concludes that the sports participation significantly enhances life satisfaction amid students, with intellectual ability serving as a key mediating factor. The findings suggest that the active involvement in sports does more than contribute to physical health; it also positively influences cognitive functions and intellectual engagement, both of which play a crucial role in shaping students' overall sense of satisfaction with life. By fostering intellectual abilities through sports, students are likely to experience enhanced critical thinking, problem-solving skills, and resilience, all of which support personal growth and well-being. This research highlights the need for educational institutions to incorporate sports as a valuable component of curriculum, not only for its physical benefits but also for its potential to foster cognitive development and overall life satisfaction. These insights suggest that programs combining academic and physical activities can provide the balanced and enriching experience, benefiting students academically, emotionally, and socially.

Recommendations

1. Educational institutions should incorporate structured sports programs within their curriculum to enhance not only physical well-being but cognitive abilities that contribute to life satisfaction.
2. Programs designed to link sports with intellectual skill-building, such as strategy-based games, cognitive exercises, enhance students' problem-solving abilities, critical thinking, and intellectual growth.

3. Institutions should provide support tailored to students with varying intellectual abilities and interests, ensuring that the sports participation remains inclusive and brings benefits for all students.
4. Coaching staff and educators should be trained to recognize and support the intellectual benefits of sports participation, helping students draw connections amid physical activity and cognitive development.

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