

Students Motivation for Participating in Sports Activity: Identifying Opportunities for Improvement in Educational Setups in India

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Abstract. Sports in an educational setting is proving to be the best way to develop a sense of comradeship and psychosocial skills among students. The present study was conducted to identify the various motives for a student's participation in sports. A self-administered scale was prepared to find out what motivates students to "play". A purposive sampling method was chosen to select the sample. To capture the factors for sports motivation among Indian students, the survey was conducted in 12 states, with a total of 406 respondents from 22 colleges/universities spread over these states. Data were also collected from various parks and stadia. An Exploratory Factor Analysis (EFA) was conducted using R software, further, the Structure Equation Model (SEM) was constructed based on the EFA with the latent variables loading on the manifests established by the EFA. We found that sports motivation consists of four latent factors that can be roughly mapped to the availability of facilities, skill development, psychological boost, and recognition.

Key words: *sports, motivation, recognition, skill development, psychological boost, facilities.*

Introduction

There is no doubt that the history of sports in India is as old as its culture, the origin of sports in India can be traced back to the Vedic periods. Sports can be found in everyday life of individuals of all ages with different functions, and nowadays besides being a recreational activity that individuals can participate actively or passively, sports may influence individuals' life as a profession(1). Educational setups are the most suitable space where actual transformation can begin and flourish, provided support, and opportunity are provided. Sports in an educational setting is proving to be the best way to develop a sense of comradeship and psychosocial skills among students. One of the most powerful rationales for promoting student participation in sports is promoting physical activity (PA). PA among students is essential for complementing sedentary behavior and for an individual's health. Earlier sports used to be a means of achieving happiness for students, but now because of the growing problem of Non-communicable diseases (NCDs), it becomes the only means to stay physically active and away from the NCDs especially obesity and diabetes. Motivation is a key factor in supporting sustained PA and participation in sports. In recent years, studies in sports psychology have focused heavily on understanding the main reasons and prepare the strategies that motivated the youth to participate in sports. It is well documented that participation in games and sports is the primary need of every student to rejuvenate themselves, though the motive may vary from one individual to another. Self-determination theory is an organismic-dialectic framework of motivation that considers humans to be actively seeking optimal challenges and new experiences to master and integrate. Considering the individual to be an intentional organism, self-determination theory (SDT) holds that individuals are motivated to achieve differing objectives(2). To this end, Deci and Ryan (1985) identified three types of motivation, namely intrinsic motivation, extrinsic motivation, and amotivation to account for the different reasons why individuals engage in activities. Specifically, SDT holds that intrinsic motivation, various types of extrinsic motivation (namely external regulation, introjected regulation, and identified regulation), and amotivation lie on a continuum of self-determination. This continuum has received empirical support in a variety of contexts including education, sport, exercise and PE (3,4). SDT supports three basic psychological needs that must be satisfied to foster well-being and health, these needs can be universally applied. SDT suggests three basic psychological needs, namely: Competence, Perceived ability to carry out a task effectively, Autonomy, Perception that behavior is self-determined, Relatedness, Perceived social connections with peers and teachers (4-6). In India mostly students are taking part in sports activities with the spirit of competition and recreation. It has often been seen in the life of the students that motives for sports participation change from

time to time, due to which it is difficult to isolate and identify the important motivators for a student's interest in sports. In India, the motivation to participate in sports has been the subject of research for years. However, research that directly analyzes the sports motivations to participate in sport is sparse, there are limited studies to date in which researchers have examined this issue this is how the present study is conceptualized to know the motives which need to be developed to make the students abandon their inactive way of life and be attracted to the playground to play. The two main aims of this paper were to identify the various factors associated with sports motivation and to understand the relative importance of identified factors for younger and older students of either gender.

Material and Method

Instrument Development. We conducted an exhaustive review of the most widely used sports motivation questionnaires. Sports Motivation Scale developed by Pelletier et al. (2013), examined the validity and reliability of scores derived from the Sports Motivation Scale-II (7).

Physical Activity and Leisure Motivation Scale (PALMS) developed by Molanorouzi et al. (2014) has also played a significant role in finalizing the antecedents. "Understanding participation in sport and physical activity among children and adults: a review of qualitative studies" by Allender et al. (2006) has provided significant input to finalizing the factors associated with sports motivation (8, 9). Initially, 11 antecedents have taken into consideration for drafting the scale, these are Enjoyment, Competition, Social Recognition, Socialization, Physical Condition, Psychological Recovery, Sports Skills and techniques development, Career Opportunities, Facilities Attractiveness, Brand Endorsement, and Coach & Sports Officer Relationship. 38 questions were finalized and submitted to five experts for their advice and approval. After incorporating the suggestions of experts suitable changes were incorporated and the scale was finalized for assessment.

Primary data collection. We identified a few academic institutions with easy access where we had the assurance of the support of authorities to conduct the survey. One important consideration was to collect data with the help of trained physical education/sports personnel only from places where significant sports activities are taking place. We requested the concerned authorities to provide access for administering the survey to students. Samples were selected with a purposive sampling method. Ethical issues were discussed with the concerned authorities and all respondents provided informed consent before taking part in the study. The main focus was to select respondents who were regular in sports activities. Data for this study have been collected (n=50) from the various parks and stadia where the students were enjoying sports activities in their leisure time and also collected data (n=356) from different venues of educational institutes.

Sample Characteristics. To capture the factors for sports motivation among Indian students, the survey was conducted in 12 states, with a total of 406 respondents from 22 colleges/universities spread over these states. A large number of responses were obtained from UP, Orissa, Sikkim, and Delhi. A good number of responses were obtained from Rajasthan, Chattisgarh, Telangana, and Assam as well. This is just to emphasize the demographic diversity that has been tapped which should lend authenticity to the findings from the analysis presented in this paper. Out of 406 participants, 77% are male and 58% are above 20 years of age. 82.5% of the survey participants were into competitive sports and 86.5% were regular in their sports participation. 62% participated in non-contact sports and 38% in sports involving physical contact.

Survey Data Analysis. An Exploratory Factor Analysis (EFA) was conducted using "R: Foundation for Statistical Computing with 38 observed variables. These 38 variables which were measured using a questionnaire were intended to measure the latent constructs such as desire for recognition, psychological boost, access to infrastructure and facilities and opportunities for skill development which motivate participation in sports. Varimax rotation of the orthogonal 4-factor space captured 30% of the total variability of the 38 manifest variables. It was seen that some of the observed variables had either low or significant cross-loading with multiple variables. These manifest variables were removed and the EFA was redone with the 22 variables which had significant commonality with the common factor model.

3230

Results

The factors and the corresponding manifest variables along with their loadings are displayed in Table I.

Table I. Exploratory Factor Analysis of the 406 Survey Responses*

Item	Factor with Loading			
	Recognition	Psychological boost	Facilities	Skill development
To arouse interest/recognition of the opposite gender.	0.72			
To show how good I am in sports.	0.68			
To make my career in sports and its related fields.	0.48			
To compare my abilities with others.	0.5			
To get marks benefits /special attention from the college/institute.	0.56			
It gives me pride and honor.		0.71		
It is prestigious to be a player.		0.64		
I Love to play.		0.57		
To gain accolades and bring glory to my college/institution.		0.45		
To increase concentration.		0.45		
Illustrious Sports personalities motivate me.		0.42		
It calms me.		0.4		
To stay motivated.		0.23		
Surrounding sports facilities/infrastructures motivate me to play.			0.56	
My Coach/ Sports Officer motivate me.			0.48	
To maintain a good relationship with my friends/Support staff			0.47	
I like to win.			0.44	
The commercialization of sports motivates me.			0.39	
To learn advanced skills, training techniques, and tactics.				0.71
To improve my social skills.				0.62
To release mental pressure.				0.25
To stay active.				0.45

*The coefficients in this table are the standardized weights the four factors have on the manifest variables from the questionnaire.

We see that the 22 manifest variables are classified under 4 broad latent factors that account for 33.6% of the total variability of the manifest variables. In naming the factors we observed some intriguing misalignment – e.g. “I like to win” is surprisingly strongly aligned to “Availability of Facilities” instead of “Psychological Boost”. The reason for this and few other such misalignments is that the factors are correlated and responses are influenced by the individual respondent’s perception of the correlated latent factor and the strength and this correlation of the 22 manifest variables: 5 variables load on factor 1 - Recognition; 8 variables load on factor 2 -Psychological Boost; 5 variables load on factor 3 - Availability of Facilities; 4 variables load on factor 4 - Skill Development.

Factor analysis with the reduced set of manifest variables helped establish the Structural Equation Model (SEM) depicted in Figure 1. The SEM was constructed based on the EFA with the latent variables loading on the manifests established by the EFA. A higher-order factor “Motivation for Sports Participation” is introduced and used to establish the relative importance of the four identified lower-order factors.

Structural Equation Models for Sports Motivation (figure 1). It is seen that Factor 3, Availability of facilities best explains its four manifests and has the strongest loading of 0.97 from overall sports motivation. This means that to increase motivation availability of facilities needs to be ramped up.

On the other hand, Recognition, has a relatively poorest loading of 0.36 from motivation. This means that through recognition is important for overall sports motivation its importance is less than the other three factors. Skill development is second in importance after the availability of facilities with a loading of 0.74 while the Psychological boost is very close with a loading of 0.63.

Figure 1. SEM with a higher-order Sports Motivation Factor

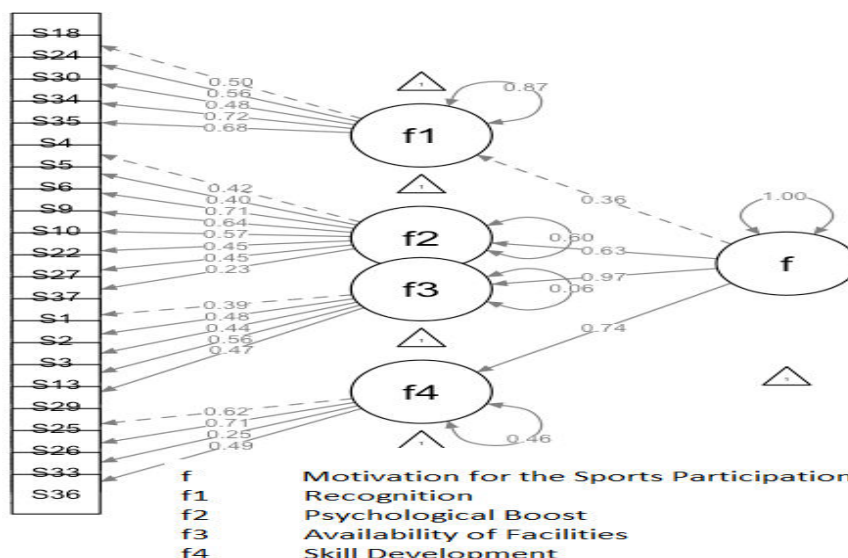


Table II summarizes these observations. We now proceed to develop two multigroup SEM models: (1) for the younger (less than 20 years) and older (more than 20 years) participants, and (2) for boys and girls. The reason for this is that the multigroup models would probably provide sharper indications of motivation related to the specific groups under our study. The omnibus model, presented in Figure 1 provides average values for the younger and older participants as well as for the two genders. A design possibility that we considered was to have 4 groups, as follows: young boys, young girls, older boys, older girls.

Table II. Sports Motivation Factors and their Importance

Rank Order	Factor	Loading
1	Factor 3- Availability of Facilities	0.97
2	Factor 4- Skill Development	0.74
3	Factor 2- Psychological Boost	0.63
4	Factor 1- Recognition	0.36

We, however, decided not to do this four group study because (a) the results would have been difficult to interpret and (b) the groups would not have adequate sample representation considering the different sports considered, most importantly the “contact” and “non-contact” sports. This last would have resulted in inadequate degrees of freedom. The results of the two multigroup SEM models are presented below, along with the common (single group model) weights (table III).

Table III. Multigroup (Age) SEM

Latent Level 0	Item Level 1	<20yrs	>20 yrs	Common
Motivation	Availability of Facilities	0.97	0.97	0.93
	Surrounding sports facilities/infrastructures motivate me to play.	0.54	0.56	0.54
	My Coach/Sports Officer motivate me.	0.54	0.48	0.52
	I like to win.	0.56	0.44	0.5
	The commercialization of sports motivates me.	0.45	0.39	0.41
	To maintain a good relationship with my friend's/Support staff.	0.3	0.47	0.38
	Skill Development	0.84	0.74	0.75
	To improve my social skills.	0.62	0.67	0.63
	To learn advanced skills, training techniques, and tactics.	0.49	0.71	0.62
	To stay active.	0.38	0.49	0.47
	To release mental pressure.	0.28	0.25	0.28
	Psychological Boost	0.70	0.63	0.68
	It gives me pride and honor.	0.68	0.71	0.68
	It is prestigious to be a player.	0.65	0.57	0.63
	To gain accolades and bring glory to my college/institution.	0.57	0.45	0.5
	Illustrious Sports personalities motivate me.	0.59	0.42	0.5
	I Love to play.	0.4	0.64	0.48
	It calms me.	0.55	0.4	0.45
	To increase concentration.	0.42	0.45	0.43
	To stay motivated.	0.26	0.23	0.24
	Recognition	0.60	0.36	0.46
	To show how good I am in sports.	0.74	0.68	0.71
	To arouse interest/recognition of the opposite gender.	0.62	0.72	0.67
	To get marks benefits /special attention from the college/institute.	0.65	0.56	0.59
	To make my career in sports and its related fields.	0.567	0.48	0.51
	To compare my abilities with others.	0.49	0.5	0.48

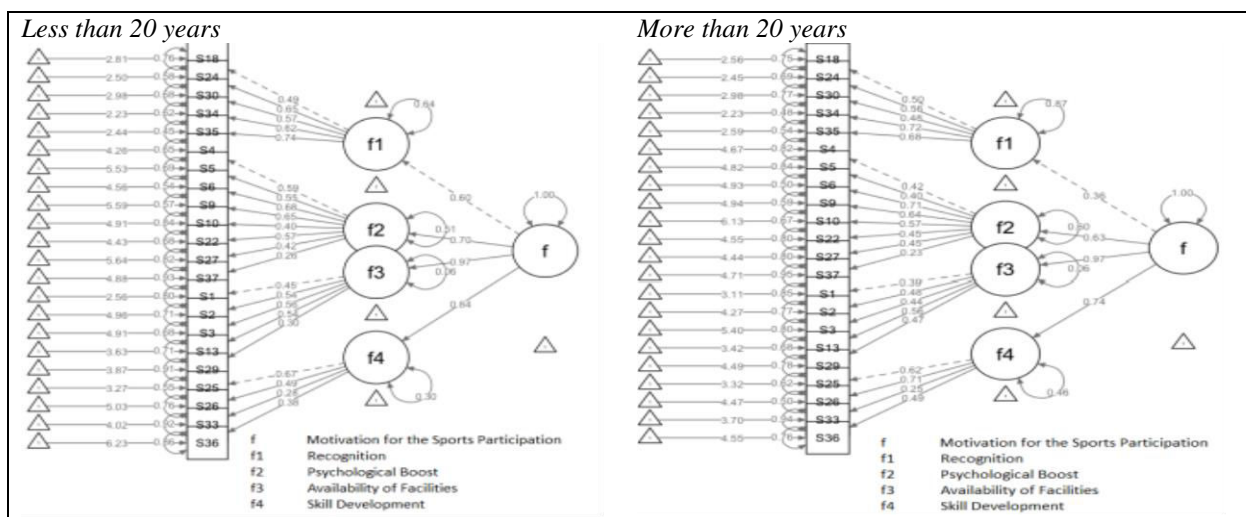


Figure 2. Multigroup (Age) SEM Model

It is seen that Factor 3, Facilities, best explains its four manifests and has the strongest loading of 0.97 respectively for both the groups (fig. 2). This means that to enhance motivation for the availability of facilities needs to create or revamp as per the quantum of the student's ratio.

On the other hand, Recognition has a relatively poorest loading of 0.60 and 0.36 from overall motivation. This means that though recognition is important for sports motivation but here it is less than the other three factors. Skill development is second in importance after facilities with the loading of .84 and .74 while the Psychological boost is very close with the loading of .70 and .63. The table IV summarizes these observations.

Table IV. Motivation Factors and their importance for the younger and older age groups

Rank Order	Factor	Factor	Loading (<20 years)	Loading (>20 years)
1	Factor 3	Availability of Facilities	0.97	0.97
2	Factor 4	Skill Development	0.84	0.74
3	Factor 2	Psychological Boost	0.70	0.63
4	Factor 1	Recognition	0.60	0.36

Table V. Multigroup (Gender) SEM

Latent Item	Level 1	Male	Female	Common	
Motivation	Availability of Facilities		0.88	1.0	0.93
	Surrounding sports facilities/infrastructures motivate me to play		0.54	0.57	0.54
	My Coach / PE Teacher / Sports Officer motivate me		0.54	0.57	0.51
	I like to win		0.44	0.72	0.5
	Commercialisation of sports motivates me		0.38	0.57	0.41
	To maintain good relationship with my friend's / Support staff		0.31	0.54	0.38
	Skill Development		0.76	0.77	0.75
	To improve my social skills		0.59	0.75	0.63
	To learn advanced skills, training techniques, and tactics		0.62	0.7	0.62
	To stay active		0.52	0.35	0.47
	To release mental pressure		0.29	0.24	0.28
	Psychological Boost		0.67	0.72	0.68
	It gives me pride and honour		0.67	0.76	0.68
	It is prestigious to be a player		0.58	0.8	0.63
	To gain accolades and bring glory to my college/institution		0.48	0.64	0.5
	Illustrious Sports personalities motivate me		0.44	0.69	0.5
	I love to play		0.52	0.35	0.48
	It calms me		0.51	0.33	0.45
	To increase concentration		0.44	0.41	0.43
	To stay motivated		0.22	0.35	0.24
	Recognition		0.38	0.59	0.46
	To show how good I am in sports		0.67	0.85	0.71
	To arouse interest/recognition of the opposite gender		0.64	0.81	0.67
	To get marks benefits /special attention from the college/institute		0.55	0.73	0.59
	To make my career in sports and its related fields		0.51	0.51	0.51
	To compare my abilities with others		0.45	0.58	0.48

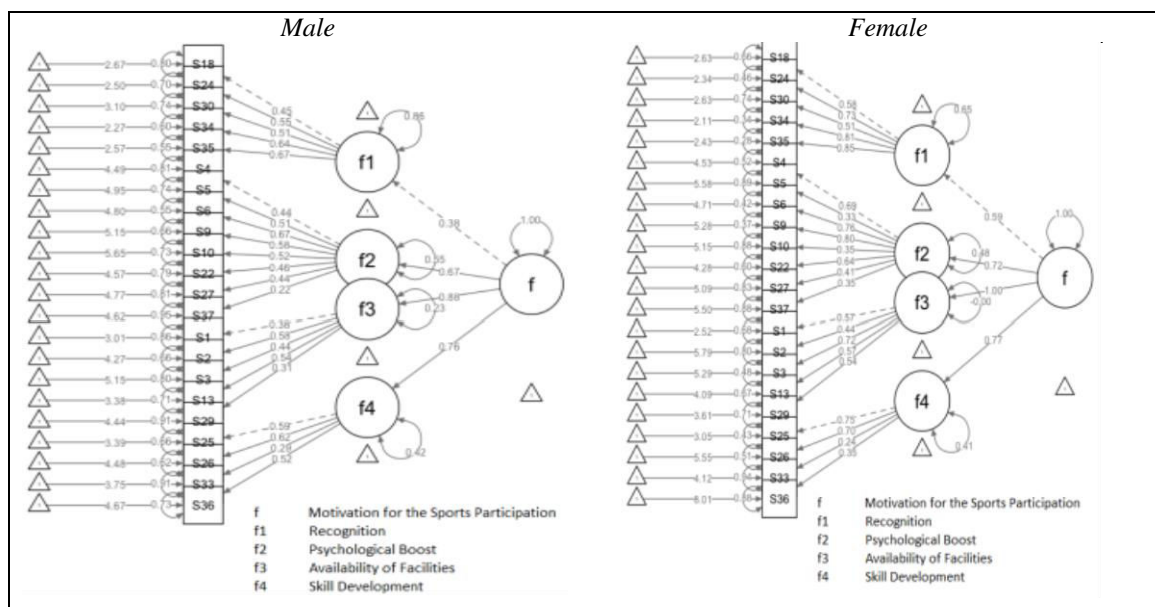


Figure 3. Multigroup (Gender) SEM Model

Table VI. Motivation Factors and their importance for male and female

Rank Order	Factor	Factor	Male	Female
1	Factor 3	Availability of Facilities	0.88	1.00
2	Factor 4	Skill Development	0.76	0.77
3	Factor 2	Psychological Boost	0.67	0.72
4	Factor 1	Recognition	0.38	0.59

Discussion

Before concluding, it would be pertinent to examine the four emergent factors behind sports motivation and the responses to the questions on the Likert scale. The questions that have been classified under one of the four latent factors represent different 22 manifest variables (table VII). It is interesting to examine the grouping for the questions.

Some of the questions seem to be in an inappropriate Latent group. E.g. for Availability of facilities, the questions A3, A4, A5 indeed appear to be out of place. Though this grouping has resulted from Factor Analysis with 4 factors, the naming of the factors was done by us.

This has been done based on the question with the strongest loading on each respective factor. For the latent factor, “Availability of facilities”, the strongest loading of 0.54 is from A1, “Surrounding sports facilities/infrastructures motivate me to play”. Accordingly, the factor has been named “Availability of facilities”. The questions have been answered by various respondents. The difference in how individuals perceived the question would have influenced the correlation structure among the manifests, and, as a consequence the groupings.

For example, the question (A3) “I like to win”, may indicate that the availability and access to sports facilities motivate and inspire participants thereby creating in them the urge to win. Likewise, (A4) “The Commercialization of sports motivates me”, seem to indicate to many respondents that facilities provide opportunities for awards and rewards, and (A5) “To maintain a good relationship with my friend’s / Support staff”, seem to indicate that facilities provide the platform for sports enthusiasts to interact regularly in a healthy, competitive environment.

According to the results of this study, the most important motive for playing sport is the availability of facilities (infrastructural support) followed by skill development, psychological boost, and recognition.

In the qualitative study, further information about these four factors and the reasons behind the answers regarding motivations for physical activity has been addressed.

Table VII Questions grouped by motivation factors

Latent Factor	Sl.	Question
A. Availability of Facilities	A1	Surrounding sports facilities/infrastructures motivate me to play
	A2	My Coach/Sports Officer motivate me
	A3	I like to win
	A4	Commercialization of sports motivates me
	A5	To maintain a good relationship with my friend's / Support staff
B. Skill Development	B1	To improve my social skills
	B2	To learn advanced skills, training techniques, and tactics
	B3	To stay active
	B4	To release mental pressure
C. Psychological Boost	C1	It gives me pride and honor
	C2	It is prestigious to be a player
	C3	To gain accolades and bring glory to my college/institution
	C4	Illustrious Sports personalities motivate me
	C5	I love to play
	C6	It calms me
	C7	To increase concentration
	C8	To stay motivated
D. Recognition	D1	To show how good I am in sports
	D2	To arouse interest/recognition of the opposite gender
	D3	To get marks benefits /special attention from the college/institute
	D4	To make my career in sports and its related fields
	D5	To compare my abilities with others

The toughest barrier to sports participation is the prohibitive cost and difficulty of access to facilities. For both genders and age groups, it appears to be the most important for motivation. Facilities are seen as a very important motive and include reasons such as sports infrastructure, sports personnel (Coaches/trainer), financial support to the extramural tournaments and equipment as per the quantum of the strength, etc. The motivation for playing comes automatically if the person is getting all-around support. The importance of sports facilities in improving student outcomes of physical and mental development is well established. Facilities play a pivotal role in building a sporting nation. It also helps to develop motivation among students. Basic facilities are required to engage students in sports activities in any educational setup. When a young person passes by a good playground, the thought of participating in sporting activity is automatically triggered. Educational setups have a significant contribution to make in effecting improvement in students' physical health as well as mental wellness and this can be done to a large extent by improvement of facilities and infrastructure and extending the facilities for large availability which can pave to the mass participation. Good playfields, modern equipment along with good tournaments motivates and encourages sports participation and thereby leads to enhanced management skills of the participants.

After facilities, we find skill development as an important motive for sports participation. The development of skills does not only confine to sports skills alone. Most of the research outcomes reveal that sports teach various social and health skills for day to day life. Participation in sports also teaches other important skills such as comradeship, quick decision-making, leadership, team building, discipline, etc. Sport is an efficient way for children to develop social skills that can benefit them throughout their lives. Sports plays a pivotal role in shaping psychosocial skills and learning. Learning motive is a psychological process that increases learning interest, maintains learning activities, and guides the learning activity to the goal set by the teacher

Psychological boost as a third motive is the most important factor affecting the willingness of students to participate in sports activities. Motivational processes can be defined by the psychological constructs that energize, directs, and regulates achievement behavior. Sports activities play a very important role to release the pressure of studies. This is why to get relief from academic pressure, students sometimes seek to find time to play. Students get involved in sports to combat anger, stress, anxiety, and frustration, etc. which can occur due to the pressure of academics. Studies around the world have shown that students are not as physically active as they need to be to enjoy the health benefits of sports. Organized sport provides favorable conditions for young people to engage in positive psychosocial development. Indeed, research suggests sport participation is associated with academic achievement (12).

For the genders and age groups, recognition appears the least important from the perspective of motivation. It is quite evident that maintaining social status is a common requirement for many students. Sport is a medium through which respect can be earned easily. Sports can serve as a decisive academic motivator for students who would otherwise underperform in academics. It has been seen that students who are not good at studies earn recognition and enhanced self-esteem by their performance in sports. Students who get involved in sports are often popular among other students; sports provide instant recognition.

Conclusion

The importance of sports in educational setups is significant and cannot be overlooked. It has a profound impact on individuals, the educational setups as a whole, as well as the community. A common goal of sport in educational settings is to promote feelings of achievement and enjoyment among the students and it must be considered as a national priority. This line of research may provide a more complete perspective on sports motivation, we suggest to replicating the same across India, this work can be used for a larger statistical study covering a full cross-section of students in India. The present study was conducted in identifying the motives for students participating in sports. In our research, we found the latent structure of sports students' types of motives as consisting of four factors, which are comprehensive and provide a reliable measure of participation motivation. The scale can be used to extract valuable information that will inform researchers about the wide range of motives students have for participating in different games and sports. This will hopefully encourage people to take a greater interest and participate in sports, leading to better physical and mental health. If more students can be motivated to participate in sports, the society would stand to benefit, and India, with its significant young population, would be better poised to reap the maximum advantages of its much-touted demographic dividend.

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