

PSYCHOLOGICAL INDICES AS PREDICTIVE FACTORS OF SPORTS' PARTICIPATION AMONG STUDENTS OF STATE – OWNED TERTIARY INSTITUTIONS IN LAGOS, NIGERIA

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Abstract

This study, examined Psychological Indices - PI (self-control, self-efficacy and attribution) as predictors of SP among students of tertiary institutions in Lagos State, Nigeria. This study employed survey design of ex-post facto type. The multi-stage sampling procedure was employed to select the samples. The four State-owned tertiary institutions: Lagos State University (LASU), Lagos State Polytechnic (LASPOTEC), Michael Otedola College of Primary Education (MOCPE) and Adeniran Ogunsanya College of Education (AOCOED) were enumerated. The Proportionate to size sampling technique (50%) was used to select five faculties/departments/students in LASU (Education, Arts, Science, Engineering and Social Science), in LASPOTEC (Pure and Applied Sciences, Technology and Management and Business Studies), in MOCPE (Science, Vocational, Arts and Social Sciences) and in AOCOED (Sciences and Vocational). Three thousand, one hundred and forty-three (3143) students were used as samples. The instruments used were Sports participation ($r=0.75$), Self-Control ($r=0.77$), Self-Efficacy ($r=0.85$), Attribution ($r=0.75$) scales. Demographic information were subjected to descriptive statistics, while Multiple regression was used to test the hypotheses at 0.05 alpha level. The respondents' age was 21.60 ± 2.30 years and majority were males (53.9%). Self-control ($r=0.34$), self-efficacy ($r=0.37$) and attribution ($r=0.37$) correlated significantly with SP. There was a significant joint prediction of PI ($F_{(3,3125)} = 39.925$, Adj. $R^2 = 0.415$) on SP, accounting for 41.5% of its variance. Self-control ($\beta=0.05$), self-efficacy ($\beta=0.18$) and attribution ($\beta=0.32$) contributed to SP. Psychological indices influenced sports participation among students of Lagos State-owned tertiary institutions. Sports administrators in tertiary institutions together with their authorities should give rewards to outstanding athletes to further encourage their involvement in sports.

Keywords: Tertiary institutions, Sports motivational indices, sports participation, Intramural sports

Introduction

Understanding the psychological aspects that drive or hinder sports engagement is crucial for developing effective strategies to promote sports participation and overall well-being among the student population. Sports participation (SP) is not only essential for physical health but also contributes significantly to mental and emotional well-being. However, the extent to which psychological factors influence sports involvement in the context of state-owned tertiary institutions in Lagos, Nigeria, remains a matter of concern.

Sport psychologists and sociologists have indicated that participation in competitive sport or even in non-competitive sporting activities by students contributes to the development of positive personality traits of the participants (Broh, 2002; Curtis, McTeer and White, 2003; Feigin, 2001; Guest & Schneider, 2003; Laborde, Guillen, & Mosley (2016). Shaffer and Wittes (2006) indicated that participation in competitive sport enhances feelings of well-being among pre - college male and female athletes. Donaldson and Ronan (2006) confirmed that participation of adolescents in sport contributes to psychological wellbeing. Thus, it appears that, in general terms, there is a relationship between participation in sporting activity and positive personality traits.

Self-control is a trait that allows the individual to consciously direct and regulate behavior when attempting to achieve a particular goal (Goldfried & Merbaum, 2003). An individual characterized by self-control has increased ability to command emotions and to focus on the planning and strategy necessary for goal attainment (Thoresen & Mahoney, 2004). Meta analysis done by Kok, Komen, Capalleveen & Kamp (2020) indicated the positive relationship between self-control and superior performance. Dias, Cruz, and Fonseca (2012) confirmed the relationship between performance in many branches of sport and self-control of participants. Therefore, in the present research the relationship between participation in sport at different levels and self-control will be investigated.

Bandura in Abdul (2021) defines self-efficacy as the level of belief of an individual in his or her ability to perform a task or rise to a challenge. Self-efficacy leads the individual to be confident about the achievement of a particular goal and eventually to the successful realization of that goal. Results of research studies have indicated that self-efficacy correlates with enhanced physical performance (Annesi, Westcott, Faigenbaum & Unruh, 2005; Petitpas et al, 2004). Feltz & Magyar (2005) specifically indicated the contribution of self-efficacy to improved performance in competitive sport. Thus in the present study the relationship between self-efficacy and different levels of sporting activity will be examined.

Intentions for sport participation differ and a distinction can be made between the intrinsic (the joy of participating) and extrinsic (future rewards or punishment) motivation of men and women when engaging in sport activity (Alexandris, Tsorbatzoudis & Grouios, 2012). Someone who is intrinsically motivated is inspired to participate in sport without being driven by an external incentive. Independence and competence are some of *the* feelings of individuals when doing activities that are enforced by intrinsic motivation (Kingston, Horrocks & Hanton, 2006). When a person is intrinsically motivated, he will participate for the mere pleasure of the activity (Wilson, 2006). From previous research, it is evident that enjoyment causes men to be more intrinsically motivated than women (Kilpatrick, Hebert & Bartholomew, 2015). Studies done in terms of extrinsic motivation revealed that men seem to be more motivated by competition and playing to the limit (Recours, Souville and Griffet, 2014) than women when participating in sport (Campbell, Campbell, Van Heerden, 2008). Behaviours that resulted from extrinsic motivation do not necessarily result in habits in intrinsic motivation (Kilpatrick et al., 2015).

Weiner (1980) developed an attribution theory model which linked success or failure in the performance of a given task to internal or external attribution. According to Weiner, internal attribution is a situation whereby the individual attributes the results of his actions to himself or herself as a key variable related to successful performance. Lebedina-Manzoni (2004) indicated that successful students attributed their successes to variables controlled by them whereas students who experienced failure attributed their failures to external variables not under their control. Feigin

(2001) confirmed that competitive athletes who were successful in their particular branch of sport were significantly characterized by internal attribution of reasons for their success. Allen, Jones and Sheffield (2009) confirmed the importance of internal attribution style as a significant variable related to superior sporting achievement.

Aim & Objective of the Study

The aim of the study was to investigate the psychological indices as predictive factors of participation in sports among students of tertiary institutions in Lagos State. Specifically, the objective is to:

- i. Determine the relative and joint contributions of psychological variables (self – control, self – efficacy and attribution style) of sports participation among students of Lagos State-owned tertiary institutions.

Hypotheses

The following hypotheses were tested at 0.05 level of significance.

- i. There will be no significant joint contributions of psychological variables (self-control, self-efficacy and attribution style) to sports participation among students of state – owned tertiary institutions in Lagos State.
- ii. There will be no significant relative contributions of psychological variables (self-control, self-efficacy and attribution style) to sports participation among students of state – owned tertiary institutions in Lagos State.

Significance of the Study

The study was considered significant in the following ways;

The empirical results of the study will provide a basis to improve participation of tertiary institution students in sports in Lagos state. It will also provide empirical basis for evaluating the effect of psychological indices as predictive factors of sports participation. The result of the study will also provide empirical data on both relative and joint contributions of psychological variables to sports participation among tertiary institution students in Lagos State.

The data that obtained will be useful to other researchers who may wish to study issues relating to sports participation among tertiary institution students. The study will likely be an eye opener to students on variables that may inhibit them from participating in sports. The findings of the study will also be useful to sports administrators in tertiary institutions and the University authorities to give rewards to outstanding athletes to further encourage students' participation in school sports.

Research Design

The survey design of *ex – post facto* type was used for the study. This research design enabled the researcher to interpret the relationship that exists between the independent and the dependent variables. The design was also appropriate to collect information on people's action, knowledge, awareness, opinions, intention, attitude and values which are related to the scope of this study.

Population

The population for this study comprised all students of tertiary institutions owned by Lagos State, Nigeria.

Sample and Sampling Technique

The sample size for this study was three thousand one hundred and forty - three (3,143) respondents. The multi-stage sampling procedure was employed. In stage one, purposive sampling technique was used to select the four (4) State-owned tertiary institutions in Lagos State namely; Lagos State University (LASU); Lagos State Polytechnic (LASPOTECH); AdeniranOgunsanya College of Education (AOCOED) and Michael Otedola College of Primary Education (MOCPED) as these institutions are homogeneous in characteristic. This was also to ensure that only State-owned tertiary institutions in Lagos State are included in the study. In stage two, the simple random sampling technique of fish bowl without replacement was used to select 50% of schools and faculties from the selected tertiary institutions in Lagos State, Nigeria. This was to give the selected institutions equal opportunity to be represented in the study. In stage three, the proportionate random sampling technique was used to select 50% of the departments from the selected schools and faculties. This was to give the selected schools and departments equal opportunity to be represented in the study. In stage four, proportionate sampling technique was used to select 50% of the students from the selected departments in the State-owned College of Education, Polytechnic and University. This was to give the selected students equal opportunity to be represented in the study. The respondents were motivated to volunteer and registered to take part in the study. The first 50% that cut across the levels in each department were selected.

Research Instrument

The instrument used for the study was questionnaire. Standardized questionnaire was used. The standardized scales that were used included;

General Perceived Self-Efficacy Scale (GSES) developed by Zeidner, Schwarzer and Jerusalem, 1993). This scale consisted ten items graded on a four-point scale. The scale had been used in numerous research projects, where it has typically yielded internal consistencies ranging between $\alpha = .75$ - $\alpha = .91$. Shachaf (2009) adapted the scale for use on an Israeli population and indicated reliability coefficients that ranged between $\alpha = .80$ - $\alpha = .91$

Self-Control Scale (SCS) was used to measure self-control and it was developed by Rosenbaum, 1980. It included 10 items graded on a five -point scale ranging from -2 to +3 with test - retest reliability that ranged between $\alpha = .78$ - $\alpha = .84$. The scale was adapted for use in the present study and tapped a general factor of self-control with a Cronbach alpha coefficient of $\alpha = .77$ (Shachaf, 2009).

Attribution Style Questionnaire (ASQ) developed by Peterson et al, 1982 was adapted for use in the present study. Responses to the questionnaire were graded on a scale of 0 (external) - 7 (internal). The Cronbach alpha reliability of the questionnaire was $\alpha = 0.75$. Validity of the **Instrument** - Construct and content validity of the instrument was done by making a draft of the questionnaire available for critiquing to experts in intramurals and psychometrics which facilitated objective critiquing that led to modification of the research instrument. All comments, suggestions and modifications were studied carefully and made use of to improve the quality of the instrument in relation to the questions and hypotheses. Cronbach Alpha was used to establish the reliability of the instrument using a sample of twenty (20) students from University, Polytechnic and College of Education respectively in Oyo State who were not part of the sample for the study. General Perceived Self-Efficacy Scale (GSES)= 0.85, Self-Control Scale (SCS)=0.77 and Attribution Style Questionnaire (ASQ)=0.75

Procedure for Data Collection

The researcher obtained permission from the Head of institutions involved in the study for the purpose of identification and to enable the researcher have access to the institutions and the respondents. The researcher with the help of eight (8) research assistants administered the instruments to the participants and retrieved most of them immediately while some others were collected later. The purpose of the study was explained to the respondents. The self-administration was to ensure a high rate of return and also enabled the respondents to ask questions and obtain clarifications on issues that were not clear to them.

Procedure for Data Analysis

The completed copies of the questionnaires were collected, coded and analysed using both descriptive and inferential statistics. The descriptive statistics of frequency counts and percentages (%) were used to analyse section A (Demographic Information) while multiple regression analysis were used to test the hypotheses at 0.05 level of significance.

Procedure for Data Analysis

The completed copies of the questionnaires were collected, coded and analysed using both descriptive and inferential statistics. The descriptive statistics of frequency counts and percentages (%) were used to analyse section A (Demographic Information) and research questions while multiple regression analysis was used to test the hypotheses at 0.05 level of significance.

Results

Although 3143 respondents were sampled out of which 3129 (99.6%) filled the instrument properly, hence they were used for data analysis.

Section A: Demographic Information of the Respondents

Table 1: Distribution of respondents by age

<i>Age</i>	<i>Frequency</i>	<i>Percent</i>
16-18 Years	574	18.3
19-21 years	1310	41.9
22-24 years	795	25.4
25--27 years	219	7.0
28 years and above	231	7.4
Total	3129	100.0

Table 1 shows the distribution of respondents by age. The table revealed that 574 (18.3%) were between the ages of 16 and 18years, 1310 (41.9%) were between the ages of 19 and 21years, 795 (25.4%) were between the ages of 22 and 24years, 219(7.0%) were between the ages of 25 and 27 years while 231 (7.4%) were 28years and above showing that majority of the respondents were between the ages of 19 and 21years which is appropriate age to take part in sports for health benefits and skill acquisition needed as budding athletes in tertiary institutions.

Table 2: Distribution of respondents by gender

<i>Gender</i>	<i>Frequency</i>	<i>Percent</i>
Male	1685	53.9
Female	1444	46.1
Total	3129	100.0

Table 2 shows the distribution of respondents according to gender. Out of the 3129 respondents, 1685 (53.9%) were males while 1444 (46.1%) were females. This shows that majority of the respondents are males. This presupposes that male participates in sports more than their females' counterparts.

Table 3: Distribution of respondents by religion

<i>Religion</i>	<i>Frequency</i>	<i>Percent</i>
Christianity	1934	61.8
Islam	1043	33.3
Traditional	152	4.9
Total	3129	100.0

Table 3 shows the distribution of respondents by religion. Out of the 3129 respondents, 1934 (61.8%) were Christians, 1043 (33.3%) were Muslims while 152 (4.9%) were traditional worshippers, showing that majority of the respondents were Christians.

Section B

Hypotheses testing

The following hypotheses were tested at 0.05 alpha level

Hypothesis 1: There will be no significant joint contribution of psychological variables (self-control, self-efficacy and attribution style) to sports participation among students of state – owned tertiary institutions in Lagos State.

Table 4: Regression table showing the joint contributions of all psychological variables (self-control, self-efficacy, and attribution style) on sports participation among tertiary institution students in Lagos State.

R	=	.415			
Multiple R	=	.173			
Multiple R ² adjustment	=	.166			
Standard Error Estimate	=	4.37161			
Analysis of Variance					
Model	Sum of square	Df	Mean square	F	P
Regression	2515.151	3	838.384	39.925	.000 ^a
Residual	65624.182	3125	20.999		
Total	68139.333	3128			

Table 4 revealed that the joint contributions of all the independent variables on sports participation were significant ($F_{(3,3125)} = 39.925$, $p < .05$). The independent variable also yielded a coefficient of multiple regression (R) of .415, meaning that about 41.5% of the variation was accounted for by the independent variables. Therefore, the null hypothesis was rejected.

Hypothesis 2: There will be no significant relative contribution of psychological variables (self-control, self-efficacy and attribution style) to sports participation among students of state – owned tertiary institutions in Lagos State

Table 5: Regression table showing the relative contributions of psychological variables (self-control, self-efficacy and attribution style) on sports participation among tertiary institution students in Lagos State

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26.806	1.981		13.534	.000
	Self-control	.041	.039	.051	1.052	.093
	Self-efficacy	.137	.037	.182	3.688	.000
	Attribution style	.313	.047	.322	6.737	.000

Table 5 shows for each psychological variables, the unstandardised regression weight (β), the standardised error of estimate ($SE\beta$), the standardised coefficient, the t-ratio and the level at which the t-ratio is significant. Table 5 revealed that attribution style had the highest contribution of 32.2% ($\beta = .322$, $t = 6.737$, $p < 0.05$) followed by self-efficacy with 18.2% ($\beta = .182$, $t = 3.688$, $p < 0.05$) while self-control had the least contribution with 5.1% ($\beta = .052$, $t = 1.052$, $p > 0.05$) Therefore, the null hypothesis was rejected.

Discussion of Findings

The result of hypothesis one revealed that there was a significant joint contribution of the psychological variables (self-control, self-efficacy and attribution style) on sports participation among students of state – owned tertiary institutions in Lagos State. This implies that when the three psychological factors were pulled together, they contributed significantly to sports participation among students of state – owned tertiary institutions in Lagos State. In other words, when the three variables are good, that is, when self-control is positive, self-efficacy is high and attribution style is internal, the students will be more interested to participate in sporting activities and will indeed participate in sporting activities. The finding of hypothesis one is in line with Feltz & Magyar (2005) who specifically indicated the contribution of self-efficacy to improved performance in competitive sport. Kok, Komen, Capalleveen & Kamp, A. (2020) and Mouloua, & Shaw (2023) also indicated positive relationship between self-control and superior performance. Dias, Cruz, and Fonseca (2012) confirmed the relationship between performance in many branches of sport and self-control of participants. Lebedina-Manzoni (2004) indicated that successful students attributed their successes to variables controlled by them whereas students who experienced failure attributed their failures to external variables not under their control. Fejgin (2001) confirmed that competitive athletes who were successful in their particular branch of sport were significantly characterized by internal attribution of reasons for their success. Allen, Jones & Sheffield (2009) also confirmed the importance of internal attribution style as a significant variable related to superior sporting achievement

The result of hypothesis two revealed that two (self-efficacy and attribution style) of the psychological variable had significant relative contribution to students sport participation, while self-control had no significant relative contribution to students sport participation in state-owned institutions in Lagos State. This implies that each of self-efficacy and attribution style has the potential of influencing students' sport participation while the self-control may not be so important to students' sport participation. However, the result further shows that attribution style had the highest contribution followed by self-efficacy while self-control had the least contribution. This implies that attribution style is the psychological variable that could be isolated in predicting

students' sport participation. This finding is in line with the study of Mshelia (2002) who expressed that absence of utilitarian games strategy influences the advancement of sports in the colleges and subsequently influences the presentation of the understudies. Ojeme (2008) likewise stated that there is no thoroughly examined and reported arrangement for college sports. Therefore, he inferred that sports improvement isn't viewed as a legal obligation of the colleges. Past encounters with school sports and actual training have likewise been found to assume a persuasive part in current and future choices to participate in sport exercises (White and Coakley, 2006). Weiss and Petlichkoff (2009) detailed that the school strategy on sport decided the degree of serious accentuation, pressing factor, cooperation and assumption. Papaioannou and Goudas (2009) have exhibited that training environment and style additionally affect sport fitness and game accomplishment objective direction.

Conclusion

Findings from this study revealed that psychological variables (self-efficacy, self-control, and attribution style) had significant relative contributions on sports participation among students of tertiary institutions in Lagos state, Nigeria. The study concluded that psychological variables of self-control, self-efficacy, and attribution style had significant joint contributions to sports participation among tertiary institution students in Lagos state, Nigeria. It was also concluded that the separate contribution of each of these variables also had immense influence on sport participation among students of Lags State - owned tertiary institutions.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. Seminars, workshop and conferences should be organised for students on the benefits of participating in sports.
2. Athletes should encourage themselves in positive self – talk as a motivational strategy when faced with sports competition.
3. Institutions should give rewards to outstanding athletes in order to further encourage their involvement in sports.

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