

COMPARATIVE ANALYSIS OF INTRINSIC AND EXTRINSIC MOTIVATION ON SPORT PERFORMANCE AMONG STUDENT ATHLETES IN NIGERIA

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Abstract

Motivation is considered a crucial factor for individuals' decision-making process, and the interplay between different types of motivation and perception of constraints determine, to a large degree, performance in sport among athletes. This study provides detailed information on the difference between intrinsic and extrinsic motivation elicit in student athletes performance in sports. This study employed a descriptive design. All student athletes that competed in the maiden edition of JAMB football competition held in University of Ilorin constituted the population of the study.

Stratified and simple random sampling was used to select two hundred and seventeen (217) athletes comprising one hundred and fifty-four males (154) and sixty-three females (63). Adapted Sport Motivation Scale (SMS) consisting 28 items were used to obtain data from the athletes. Independent sample t-test and multiple regression analysis were used to test the hypotheses for significance at 0.05 alpha.

The results revealed that extrinsic motivation influenced performance more among athletes. However, based on gender, female athletes tended to be more motivated by intrinsic motivation. It was concluded that, difference exists between intrinsic and extrinsic motivation for performance among athletes and extrinsic motive had more overall influence among athletes. Therefore, it was recommended that sport coaches, school sports council and management, and sport administrators should give intervention strategies that are tailored towards each type of motivation to maximize performance of athletes in competitions.

Keywords: Intrinsic Motivation, Extrinsic Motivation, Sport Performance, Student Athlete

Introduction

The relevance of psychological concepts to attaining and sustaining performance in sports cannot be overstressed. Motivation refers to reasons that underlie behaviour which is characterized by willingness and volition. Motivation

could be regarded as the process that initiates, guides and maintains goal-oriented behaviours (Brown, 2007). Motivation could be described as stimulus which ultimately prompts certain responses in individuals. Basically, there are two types of motivation. These are intrinsic and extrinsic motivation. Specifically, the experience of sport appears to be attractive to students for such reasons as fun, enjoyment, improving skills, learning, being with friends, success, winning, and health (Waldron & Dieser, 2010). This implies that students' reasons for participation in sports vary and can be categorized as physical, social and psychological. Practically, there are two main categories of motivation namely; intrinsic and extrinsic motivation.

Intrinsic motivation is defined as the engagement in an activity for its inherent satisfactions rather than for some separable consequences. 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 intrinsically motivated, a person is moved to act for the fun or challenge entailed rather than because of external prods, pressures or rewards. The phenomenon of intrinsic motivation was first acknowledged within experimental studies of animal behavior, where it was discovered that many organisms engage in exploratory, playful and curiosity-inclined behaviours even in the absence of reinforcement or reward (White, 1959). The spontaneous behaviours, although it clearly bestows adaptive benefits on the individual, appear not to be done for any significant reason, but rather for the positive experiences associated with participation and extending one's capacities. When a person is intrinsically motivated, he will participate for the mere pleasure of the activity (Recours, Souville, & Griffe, 2004; Wilson, 2006).

The notion of intrinsic motivation is closely related to intrinsic value. Intrinsic motivation refers to motivation that is animated by personal enjoyment, interest or pleasure and is usually contrasted with extrinsic motivation, which is manipulated by reinforcement contingencies (Guay et al, 2010). Typically, manipulation of extrinsic motivation is effected by the provision of rewards, which can be either tangible (money, grades, privileges among others) or intangible (praise). Extrinsic motivation could be regarded as activities participated in for motives beyond the pleasure of the activity itself and as a means to an end and the primary objectives of participating in sport are to receive rewards or to avoid punishment (Deci & Ryan, 1985). Extrinsic motivation consists of four dimensions, namely, integrated regulation, identified regulation, introjective regulation and external regulation (Weinberg & Gould, 2003; Wilson, 2006; Kingston, Horrocks, & Hanton, 2006).

Integrated regulation occurs when athletes perform activities to benefit different aspects of life, rather than for the pleasure of participating itself (Weinberg

& Gould, 2003; Wilson, 2006). Participation is out of personal choice and individuals experience the lowest form of the controlling factor (Vallerand & Fortier, 1998). Identified regulation is internally driven, but still focuses on a result that is external (Pelletier et al, 1995) and participants normally identify with the activity, because it is perceived as having value. Weinberg & Gould (2003) Roberts, Gershon, Alex, Jackson, Mark and Gerald (2000) concluded in their study on sport motivation that boys were more extrinsically motivated for sport participation while the females tended towards intrinsic reasons for their participation in sport.

Statement of the Problem

The challenges of psychological preparation of athletes as part of training are of great interest especially when much importance is placed on training and outcome of competition. Psychological preparation can pose a serious problem for the optimization of athletic performance. Epuran (2008) described psychological preparation as all the strategies and procedures adopted in training to enhance mental ability and personality development of the athlete corresponding to the sport in context. Over the years, several researchers had pointed to motivation as a veritable tool for attaining and maintaining sporting excellence.

Ionela and Cuicui (2014) found that motivation is a key factor for achieving better athletic performance without which athletes would not be determined to cope with sport training efforts in order to improve psychomotor capacities. Ionela and Cuicui (2014) further asserted that motivation is a prerequisite of sports practice and especially, sport performance that is determined both by external and internal motivational factors. Another study conducted by Adeyeye, Vipene and Asak (2013) indicated motivation as a contributing ingredient of competition and for performance enhancement and if given during preparation, competition and after competition, a desirable performance will be achieved. Wang and Biddle (2001) established a strong positive relationship between motivation, self-confidence and success in sport. This indicates that there is a unanimous agreement in the findings of studies cited above which signify a positive correlation between motivation and sport performance. This connotes that the higher the motivation, the better the sporting success. However, many of these studies did not specifically indicate which type of motivation (extrinsic or intrinsic) is most suitable to better performance in sports and this has called for attention which informed the need for this study.

To provide a focus for this study, the following research questions have been raised

Research Questions

1. What type of motivation is more preferred among intercollegiate athletes in Nigeria?

2. Will there be difference in the means of extrinsic and intrinsic motivation among intercollegiate athletes in Nigeria?
3. What is the overall influence of intrinsic and extrinsic motivation on sport participation?
4. Will gender influence type of motivation among intercollegiate athletes in Nigeria?

Hypotheses

1. There is no significant difference in the mean scores of extrinsic and intrinsic motivation among intercollegiate athletes in Ilorin
2. There is no significant difference between sport of interest and number of medals won on intrinsic and extrinsic motivation
3. There is no significant difference between intrinsic and extrinsic motivation based on gender

Methodology

This study adopted a descriptive design. The population for the study comprised all student athletes who participated in the first JAMB tertiary institution football competition held in University of Ilorin in 2017. The athletes were stratified into male and female athletes and simple random sampling method was used to select two hundred and seventeen (217) athletes (male=154, female =63) that formed the sample for this study. The instrument used for data collection was adapted the Sport Motivation Scale (SMS). SMS is a standardized questionnaire for sport motivation developed by Pelletier, Michelle, Vallerand, Briere, Tuson and Blais in 1995. Number of medals won was used to measure sports performance among the athletes. The demographic data of the respondents was described using frequency counts, mean and standard deviation. The formulated hypotheses were tested with the inferential statistics of independent t-test and multiple regressions for significance at 0.05 alpha.

Results

Table 1: Demographic characteristics of respondents for this study

Variable		Frequency	Percent
Gender	Male	154	71.0
	Female	63	29.0
	Total	217	100.0
Sport of Interest	Athletics	54	24.9
	Ball Games	87	40.1
	Racket Games	48	22.1
	Swimming	18	8.3
	Others	10	4.6
	Total	217	100.0

Number of Medals Won Previously (NMWP)	Nil	7	3.2
	One	66	30.4
	Two	75	34.6
	Three	18	8.3
	Four	22	10.1
	More than four	29	13.4
	Total	217	100.0

Table 1 shows that 154(71%) of the respondents were male and 63(29%) of the respondents were female. This indicates that majority of the respondents were male (71%). Based on sport of interest, ball games 87(40.1%), athletics 54(24.9%), racket games 48(22.1%), swimming 18(8.3%) and others 10(4.6%). The percentage analysis indicated that ball games were more popular among the students and followed by athletics (24.9%) and racket games (22.1%). The table also revealed that 30.4% and 34.6% of the respondents had won one and two medals respectively. However, only twenty-nine of the respondents representing 13.4% had won more than four medals previously.

Table 2: t-test Analysis of difference in intrinsic and extrinsic motivation among the athletes based on gender

Variable	N = 217	Mean $\pm$ SD	SEM	MD	df	t	Sig	H ²	95% CI	
									Lower	Upper
Intrinsic Motive										
Gender	Male	154	10.08 $\pm$ 1.34	.11	215	5.858	.000	.14	-1.08	-.40
	Female	63	10.83 $\pm$ 0.52	.07						
Extrinsic Motive										
Gender	Male	154	13.48 $\pm$ 2.33	.19	215	11.08	.000	.36	1.86	2.66
	Female	63	11.22 $\pm$.63	.08						

$P \leq 0.05$

Table 2 shows the result of t-test analysis that was conducted to determine the influence of gender on intrinsic and extrinsic motives of participation in sports. It was discovered the female were more intrinsically motivated to participate in sports than male, Mean $\pm$ SD male = 10.08 $\pm$ 1.34, SEM = .07; female = 10.83 $\pm$ 0.52, SEM = .11; the Mean Difference (MD) = .75. This difference was significant $t(215) = 5.858$, $p < 0.000$. The amount of difference was large $H^2 = 14\%$ (.14) and consistent among the entire respondents 95% Confidence Interval (CI) = -1.80 to -.40. Extrinsic motive for sports participation was higher in male than female, Mean

$\pm$ SD male = 13.48 ± 2.33 , SEM = .19; female = $11.22 \pm .63$, SEM = .08; MD = 2.26. The difference was significant $t(215) = 11.081$, $p < .000$ and large $H^2 = 36\%$ (.36) the actual difference 95% CI = 1.86 to 2.66.

Table 3: One-way analysis of variance on the difference between medals one and sport of Influence among students athletes

Variable	N	Sum of Squares	df	Mean Square	F	Sig.	H ²
Intrinsic Motive							
Sport of Interest	217	11.40	4	2.850	1.987	.098	-
Total		304.13	212	1.435			
		315.53	216				
NMWP	217	78.26	5	15.653	13.920	.000	.23
Total		237.27	211	1.124			
		315.53	216				
Extrinsic Motive							
Sport of Interest	217	55.47	4	13.867	2.866	.024	.05
Total		1025.88	212	4.839			
		1081.35	216				
NMWP	217	78.26	5	15.653	13.920	.000	.33
Total		237.27	211	1.124			
		315.53	216				

$P \leq 0.05$

In table 3 one-way ANOVA was conducted to examine whether sport of interest and number of medals the respondents had won previously (NMWP) influenced intrinsic and extrinsic motives of sport participation. As regards sport of interest, there was no significant difference in the intrinsic motive $F(4, 212) = 1.087$, $p < .098$. NMWP had influence as a significant difference was discovered $F(5, 211) = 13.920$, $p < .000$; the difference was large $H^2 = 23\%$ (.23) which indicated that winning of prizes induces strong intrinsic drive for sport participation. Turkey post-hoc analysis revealed that intrinsic drive of athletes who had not won any medal in their career was highest and different from others who had won medals. Those who won one and four medals were next and different from others and those who had won one; two, three and more than four were similar. Sport of interest influenced extrinsic motive of the respondents as significant difference was discovered among them $F(4, 212) = 2.886$, $p < .024$; the effect was small $H^2 = 5\%$ (.05), only those who played ball and racket games were different from each other. There was significant difference based on NMWP $F(5, 211) = 13.920$, $p < .000$ which suggest NMWP had significant influence on extrinsic motive for sport participation. The influence was large $H^2 = 33\%$ (.33). athletes who had not won any medal and those who had won three were similar while those who had won one,

two, four and more than four were similar, had the highest level of extrinsic drives and different from the other groups.

Table 4: Regression analysis of overall influence of intrinsic and extrinsic motivation on sport performance

N	R	R ²	SEM	df	F	Sig
217	.90	.81	1.388	2	445.68	.000
				214		

$P \leq 0.05$

Multiple regression analysis was conducted to determine the overall influence of both intrinsic and extrinsic motives on sport participation. Model summary of the regression in table 4 show a strong positive relationship among extrinsic and intrinsic drives and interest in sport participation, $R = .90$, $R^2 = .81$, $SEM = 1.388$. In addition, the model formulated to describe this relationship was appropriate $F(2,214) = 445.68$, $p < .000$. This suggests that the motive for which an athlete participates in sport will influence their performance to a large extent and this answers research question three.

Table 5: Analysis of t-test and Beta Coefficients of Intrinsic and Extrinsic Motivation among Athletes.

N	Model	B	t	Sig
	Intrinsic	.316	10.43	.000
217	Extrinsic	.808	26.72	.000

$P \leq 0.05$

The coefficients of regression in table 5 further explains that extrinsic motive $B = .808$, $t = 26.72$, $p = .000$ was more important to sport participation among the respondents than intrinsic motive $B = .316$, $t = 10.43$, $p = .000$. Furthermore, findings indicate that if this factor is well stimulated, more students will participate in sports and their performance can as well be improved if the coaches can motivate them appropriately. This explanation provided answer to research question one.

Discussion of Findings

This study provides detailed information on the difference between intrinsic and extrinsic motivation and sport performance. Several studies had positively correlated motivation and sport performance, however, this study confirms the overall influence of the intrinsic and extrinsic motivation on performance in sport among athletes in tertiary institutions in Nigeria. Hypothesis 1 was rejected because table 5 revealed that the t-value for intrinsic motive is 10.43 and 26.72 for extrinsic

motive. This means that difference exist between the two motives regarding their influence on sport performance. The beta coefficient of the multiple regression analysis also indicated the strength of the influence with 0.316 for intrinsic and 0.808 for extrinsic motive. The implication of this result is that extrinsic motive had more influence on sport performance among student- athlete in Nigerian tertiary institutions. This could be as a result of the reward (both tangible and intangible) honours, scholarship among others that are usually attached to winning. This finding is in line with the assertions of Robert, Gershon, Alex, Jackson, Mark and Gerald (2000) who established that fun/fitness, team work, status, completion and reward were more important to sport performance. This finding is also in alignment with the study of Miran, Sindik and Schiefer (2013) who also found a significant difference between intrinsic and extrinsic motive for participation in physical activity among male and female collegiate athletes. Therefore, extrinsic motive was more important to performance in sport.

Hypothesis 2 was also rejected as revealed in table 3, this means that significant difference exist based on number of medals won $F(5,211)=13.90$, $p<0.00$ the effect size(H^2) was found to be large $H^2=23\%(0.23)$. This implies that winning of medals induce strong intrinsic drive for better performance. Tukey post hoc analysis also showed that intrinsic drive of athletes who had not won any medal previously was higher than athletes who had previously won some medals. Similarly, sport of interest influenced extrinsic motive of athletes as significant different was observed among them $F(4,212)=2.886$, $p<0.00$ with effect size $H^2=5\%(0.5)$. However, only those who played ball and racket games were different from each other. The observed difference based on number of medals won previously could be linked to the fact that some of the athletes who had won medals in the past may get complacent and this could lead to low drive for more success. On the other hand, athletes who are yet to experience winning will have higher drive and hunger for success, hence, their strong intrinsic drive for excellence. Hypothesis three stated that there is no significant difference between intrinsic and extrinsic motivation for performance based on gender. This hypothesis was rejected and this means that significant difference exists between the two motives based on gender. Table 2 indicated that mean and standard deviation of intrinsic motive for male (10.08 ± 1.34) and female (10.83 ± 0.52) with mean difference (MD) of 0.75 and 95% confidence interval.

The difference was significant $t(215)=5.858$, $p<0.00$ and the effect size was $14\%(0.14)$. Extrinsic motive for performance was higher male than female; male $=13.48\pm2.33$, female $=11.22\pm0.63$ and MD $=2.26$. The difference was significant $t(215)=11.081$, $p<0.00$ and effect size $H^2=36\%(0.36)$. The implication of these figures and analysis is that male athletes were had higher tendency for extrinsic motivation than their female counterparts. The female were intrinsically inclined for performance. The observed difference based on gender in this study is

in conformity with the assertions of Longhurst and Spink (1996) who discovered that boys tended to be more motivated by ego oriented goals(competition, status) whereas, girls were more motivated by task oriented goals(team work, health and learning skills).

Conclusion

Consequent upon the findings of this study, it was concluded that; significant difference exists between intrinsic and extrinsic motivation for sport performance among student-athletes in Nigerian tertiary institutions with extrinsic motive having higher influence, athletes were intrinsically motivated by number of medals won previously and male athletes had higher tendency for extrinsic motivation than female.

Recommendations

Based on the findings of this study, it was recommended that; sport coaches, school sports council, management and sport administrators should give intervention strategies that are tailored towards each type of motivation to maximize performance of athletes in competition, attention should be placed on external rewards (money, honours, scholarship and son) to motivate athletes for sporting excellence, however, intrinsic drive should be reinforced more among female athletes for better performance.

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