The Relationships between Motivation Type and Elective Sports Participation among Sport Science Undergraduate Students of Wolaita Sodo University

Debrework Tesfaye Diro

WolaitaSodo University, Ethiopia

Abstract

The major objective of this study was to find out the motivational difference between football, volleyball, basketball, handball and athletics sport elective students. This research followed cross sectional survey study design with purposive sampling technique. The Sport Motivation Scale was used to gather data on the motivation for sport participation. Data analysis was conducted by SPSS Version 22. One-way ANOVA was computed to analyze the differences among elective sport means with manually calculated effect size and Tukey HSD post hoc was conducted to determine which groups differ from each other. The age ranges of the students were 19 to 25 with a mean age of 22.05 ± 1.43 years old. There were 67 % female and 33 % male respondents. The majority of the students was assigned to their respective elective sport of their choice which accounts about 77 % and the rest 23 % were assigned to their second-choice elective sport. Of the students participated in the study, 16 (21%) identified as volleyball elective students, followed by 16 (21%) athletics elective students, 15 (20%) football elective students 14 (19%) basketball and 14 (19%) handball elective students. ANOVA analysis revealed that there was statistically significant difference between elective sport students ($F_{4, 70}$=51.30, P<0.001, η^2= 0.74) that football sport elective students are significantly intrinsically motivated than basketball (p<0.001), handball (p<0.001) and athletics (p<0.001) sport elective students. The extrinsic motivation was also found significant ($F_{4, 70}$=56.18, p<0.001, η^2= 0.76). The extrinsic motivation mean score of football elective sport students was significantly higher than basketball (p<0.001), handball (p<0.001) and athletics (p<0.001) elective sport students. Post hoc test showed that handball elective students amotivation mean score was significantly higher than football (p<0.001), volleyball (p<0.001), basketball (p<0.001) and athletics (p<0.001) elective students. Female students amotivation mean value was (M =16.62, SD =4.11) significantly higher than the mean score of male students (M = 13.96, SD= 4.08) at (t (73) =1.02, p =0.01).There was positive relationship between the mean score of intrinsic motivation and extrinsic motivation, (r=0. 822, p <0. 001). Negative correlation was found between intrinsic and amotivation (r=-0.764, p <0. 001) and extrinsic and amotivation (r=-0.762, p<0. 001). Generally, this study found that football elective students have higher intrinsic and extrinsic motivation followed by basketball elective students. Female students tend to be highly amotivated than male students.

Received in Jun, 2018
Revised form Sep, 2018 to Jun, 2020
Accepted: Dec, 2020
Ethiopian Journal of Sport Science (EJSS), Volume I, Issue I, Published by Ethiopian Sport Academy.

Key words: amotivation, elective sport, extrinsic motivation, intrinsic motivation, motivation type

Introduction

Self-determination and Training

Self Determination Theory (SDT) is a universal theory of human motivation and personality that has been frequently applied to the sporting world. SDT holds that three innate psychological needs must be satisfied to facilitate natural growth tendencies, self-motivation, social development

and personal well-being. These needs are: Competence (being effective in dealing with a given situation), relatedness (to be socially connected and interacting with others), and autonomy (to be in control of our own life and decisions) (Ryan &Deci, 2000). A fundamental tenet of self-determination theory is that individuals engaged in an activity by choice will experience better consequences than those whose participation is less autonomous (Darren, Pierre-Nicolas, Kendy, & Martyn, 2007).

Intrinsic motivation (IM): This inherent propensity to actively develop skills, engage challenges, and take interest in new activities, even in the absence of external prompts or rewards is what in self-determination theory is termed intrinsic motivation. It is noteworthy that virtually all investigators concur that sport is, for most participants, intrinsically motivated (Deci& Ryan, 2007).

Intrinsic motivation involves pursuing an activity out of interest and enjoyment without external contingencies (Deci& Ryan, 2000).

Extrinsic Motivation (EM): Though it was originally thought that EM referred to non-self-determined behavior, it has been proposed that there are different types of EM that can be placed on a continuum of self-determination (Ryan &Deci, 2000). EM generally refers to engaging in an activity to an end, rather than for its own sake. The three types of Extrinsic Motivation are: a) External regulation: Behavior that is controlled by external sources, such as material rewards or constraints imposed by others. It is the least self-determined type of EM, b) Introjection: What was formerly an external source of motivation has been internalized such that the actual presence of that motivation is no longer needed to initiate behavior, and c) Identified regulation: When a behavior is judged to be of value and is therefore performed out of choice. Performed for extrinsic reasons, but is internally regulated and self-determined. It is the most self-determined type of EM (Matthews, 2011)

Amotivation: Amotivation is defined as a state in which a person lacks the intention to behave, and thus lacks motivation (Deci& Ryan 2000). Amotivated individuals experience feelings of incompetence, expectancies of uncontrollability, and perform activities without purpose (Kalaja, 2012).

Research Objectives

The major objective of this study is to find out the motivational difference between football, volleyball, basketball, handball and athletics elective sports trained by students.

Specific objectives of this study are: -

- To examine motivational differences between male and female graduate students regarding intrinsic motivation, extrinsic motivation and amotivation in elective sport participation.

To determine the relationships between the motivation type subscales in elective sport participation.

To explore whether assigning students to the elective sport has an effect on their motivation in elective sports participation.

Hypotheses of the study

The following hypotheses were formulated: -

There is no motivational difference between students from football, volleyball, basketball, handball and athletics elective sports.

There is no difference in the type of motivation for sport participation among male and female students.

There is no difference between students who were assigned and selected their elective sports.

There is no relationship between the extrinsic motivation and intrinsic motivation in sport participation.

Materials and Methods

Study design and Sampling

Cross sectional survey study design was employed by the researcher. A cross-sectionalstudy is one that takes place at a single point in time. In effect, we are taking a 'slice' or cross-section of whatever it is we're observing or measuring. It involves using a range of participants with different backgrounds, ages and genders from the overall population (Gledhil*et al*., 2007).

Non-probability purposive sampling technique was used to select the target population and total of 75 sport science department graduate class were participated in this study. Respondents included males and females from various ethnic, socioeconomic background and language groups who participate in their respective elective sport.

Data Collection Tools

A self-report questionnaire was used which was completed by all 75. No incentives were given to the students to encourage their participation. The students were given three days to return the questionnaire.

The Sport Motivation Scale (Pelletier *et al*., 1995) was utilized to gather data on the motivation for sport participation. The 28-item multiple item rating scale which measures three dimensions of motivation, namely intrinsic motivation, extrinsic motivation and amotivation. Scale values ranged from 1 (“Does not correspond at all”) to 7 (“Corresponds exactly”); the higher the mean score, the higher the level of motivation of the motivational type. The scale is comprised of 28 items with seven sub-scales. To analyze the data specific items corresponding to the motivation subscales was added together and the mean value was used for statistical analysis.

All the items that measured amotivation were reverse scored.

Data Analysis Methods

Descriptive statistics were calculated for the Sport Motivation Scales. A one-way analysis of variance (ANOVA) was computed to determine differences between elective sports. Tukey HSD post hoc test was used to find out difference between groups mean. Tukey HSD (honestly significant difference) test is one of the most conservative and commonly used tests(Gaur & Guar, 2009). Independent sample T-test was conducted to examine the difference between gender and assignment. Correlation coefficients were also computed to investigate the relationships among the five components of motivation. The statistical calculations were conducted using SPSS software, version 20, and the significance level of tests was $\alpha<0.05$.

Results

Descriptive statistics

The respondents were 75 sport science graduate class students who participated in the elective sport course, namely football, volleyball, basketball, handball and athletics. The age range of the students was 19 to 25 with a mean age of 22.05 ± 1.43 years old. There were 67 % female and 33 % male respondents. The majority of the students were assigned to their respective elective sport of their choice which accounts about 77 % and the rest 23 % were assigned to their second-choice elective sport.

Of the students participated in the study, 16 (21%) identified as volleyball elective students, followed by 16 (21%) athletics elective students, 15 (20%) football elective students 14 (19%) basketball and 14 (19%) handball elective students.

Table 7: Motivation subscales ANOVA table of elective sports

ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
Intrinsic Motivation	Between Groups	2978.69	4	744.67	51.31	.000
	Within Groups	1015.98	70	14.51		
Extrinsic Motivation	Between Groups	5094.02	4	1273.51	56.19	.000
	Within Groups	1586.64	70	22.67		
Amotivation	Between Groups	1096.99	4	274.25	76.89	.000
	Within Groups	249.68	70	3.57		

A one-way between subjects' ANOVA was conducted to compare the difference in intrinsic motivation between elective sports. There was a significant difference between elective sport students ($F_{4, 70} = 51.30$, $P<0.001$, $\eta^2 = 0.74$) with

Tukey HSD post hoc test revealing that football sport elective students are significantly intrinsically motivated than basketball ($p<0.001$), handball ($p<0.001$) and athletics ($p<0.001$) sport elective students. Volleyball sport elective students showed statistically significant intrinsic motivation than basketball ($p<0.001$), handball ($p<0.001$) and athletics ($p<0.001$) sport elective students. However, the other groups mean, did not significantly differ from each other.

A significant difference was found between elective sport students' extrinsic motivation level after ANOVA computation which was ($F_{4, 70}$ =56.18, p<0.001, η^2 = 0.76). Post hoc comparisons using the Tukey HSD test indicated that the extrinsic motivation mean score of football elective sport students was significantly higher than basketball (p<0.001), handball (p<0.001) and athletics (p<0.001) elective sport students. Whereas, a statistically significant difference was not found between other groups.

The one-way ANOVA was also conducted to determine difference regardless of amotivation subscale of the students, which was statistically significant at ($F_{4, 70}$ =76.88, p<0.001, η^2 = 0.81). Tukey HSD post hoc test showed that handball elective students amotivation mean score was statistically significantly higher than football (p<0.001), volleyball (p<0.001), basketball (p=0.001) and athletics (p<0.001) elective students. Basketball elective sport students also reveal statistically higher mean score than football (p<0.001) and volleyball (p=0.002) elective students. Whereas, volleyball elective sport students have statistically significant mean score value that football (p<0.001) elective sport students. Athletics sport elective students also showed significantly higher amotivation subscale than football (p<0.001) and volleyball (p=0.002). Nevertheless, athletics and basketball elective sport students' amotivation mean, did not show statistically significant difference from each other (p=n.s).

Independent sample t-test was conducted to determine motivational differences between sex of students. The equality of variance was checked by Levene's test for equality of variances which was tenable with significance value of 0.211, 0.567 and 0.414 for intrinsic motivation, extrinsic motivation and amotivation respectively. However, statistically significant difference between the mean of male and female was detected only for amotivation subscale (t (73) = 1.02, p =0.01). Female students amotivation mean value was (M = 16.62, SD = 4.11) significantly higher than the mean score of male students (M = 13.96, SD = 4.08). The result of this study is not consistent with (Heerden, 2014) who reported no significant difference in the type of motivation for sport participation between male and female Sport Science students. Whereas, the intrinsic motivation (p = 0.31) and extrinsic motivation (p = 0.43) mean score for male and female students was not significantly different from each other. This finding is consistent with the result found by (Heerden, 2014).

Table 8: Independent sample t-test for assignment

	Levene's Test for Equality of Variances		T-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Intrinsic motivation			5.85	69.1	0.000	7.68	1.31	5.06	10.29
Extrinsic motivation			6.65	65.0	0.000	11.17	1.68	7.82	14.5
Amotivation	3.722	0.06	-6.20	73	0.000	-5.40	0.87	-7.13	-3.66

An independent sample t-test was also conducted to compare intrinsic motivation, extrinsic motivation and amotivation scores of students assigned to their first-choice sport and students who were assigned to their second-choice sport. Except for amotivation (sig. = 0.06) the equality of variance test was not met for others. Therefore, statistics of equal variance not assumed was considered for interpretation.

Accordingly, the intrinsic motivation mean score was significantly different between the two groups (t (69.12) = 1.02, p <0.001) that the mean score of students assigned to their first-choice sport (M = 56.28, SD = 7.27) was significantly higher than the mean score of students assigned to their second-choice sport (M = 48.60, SD = 4.03). The magnitude of the difference in the means (mean difference = 7.67, 95% CI: 5.06 – 10.29) was large (eta squared = 0.32).

Similarly, the extrinsic motivation mean score of students assigned to their first-choice sport (M = 57.96, SD = 8.88) was significantly higher than students assigned to their second-choice sport (M = 46.78, SD = 5.47) with statistics about (t (65.03) = 6.65). The degree of the difference in the means (mean difference = 11.17, 95% CI: 7.82 – 14.53) was large (eta squared = 0.38).

Independent sample t-test was also conducted to compare amotivation mean scores. Students assigned to their second-choice sport exhibited significantly lower mean score (M = 14.07, SD = 3.73) than students assigned to their first-choice sport (M = 19.47, SD = 2.77) at (t (73) = -6.20). The magnitude of the difference in the means (mean difference = -5.40, 95% CI: -7.13 – -3.66) was large (eta squared = 0.35). Therefore, students assigned to their first choice amotivation were lower than students assigned to their second-choice elective sports.

To determine the relationship between the three subscales of sport motivation Pearson product moment correlation analysis was conducted. There was a positive correlation between the intrinsic and extrinsic motivation subscales, r = 0.82, p = < 0.001, with an $R^2 = 0.67$ (67%), N=75. There was non-significant correlation of r = -0.73 (p = n.s) between intrinsic motivation and amotivation. Similarly, the correlation between

extrinsic and amotivation was not significant, r= -0.76, (p = n.s).

Table 3: Relationship between motivation subscales

Correlations				
		Intrinsic	**Extrinsic**	**Amotivation**
Intrinsic motivation	Pearson Correlation	1	.822**	-.726**
	Sig. (2-tailed)		.000	.000
	N	75	75	75
Extrinsic motivation	Pearson Correlation	.822**	1	-.764**
	Sig. (2-tailed)	.000		.000
	N	75	75	75
Amotivation	Pearson Correlation	-.726**	-.764**	1
	Sig. (2-tailed)	.000	.000	
	N	75	75	75

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

Discussion

The first goal of this paper was to examine the motivational difference between football, volleyball, basketball, handball and athletics elective sports trained by students. This research finds out that football sport elective students has higher intrinsic motivation than basketball, handball and athletics sport elective students. Similarly, the extrinsic motivation mean score of football elective sport students was also significantly higher than basketball, handball and athletics elective sport students. When it comes to amotivation handball elective students mean score was higher than football, volleyball, basketball and athletics elective students. Therefore, students who engage in handball elective sports are highly amotivated than other elective sports.

Conclusion

Generally, this study found that football elective students has higher intrinsic and extrinsic motivation than the rest of elective sport students. Whereas, handball sport elective students are highly amotivated than the other groups. The amotivation score of female students are also higher than male students. Finally, students assigned to their first choice elective sport has higher intrinsic and extrinsic motivation than students assigned to their second-choice elective sports. The amotivation of second-choice elective sports students were higher than students assigned to their first choice elective sports.

References

Gaur, A. S., & Guar, S. S. (2009). Statistical Methods for Practice and Research; A guide to data analysis using SPSS (second ed.). New Delhi: SAGE Publications.

Darren, T., Pierre-Nicolas, L., Kendy, K. K., & Martyn, S. (2007). Motivation in elite sport: A self-determination perspective. In N. L. Martin S. Hagger, Intrinsic motivation and self-determination in exercise and sport (pp. 152-186). USA: human kinetics.

Gledhil, A., Chris, M., Graham, S., Louise, S. and Richard, T. (2007). Sport and Exercise Science UK. Scotprint ltd.

Heerden, C. V. (2014). The relationships between motivation type and sport participation among students in a South African context. Journal of Physical Education and Sport Management, 5(6), 66-71.

Kalaja, S. (2012). Fundamental movement skills, physical activity, and motivation toward Finnish school physical education: A fundamental movement skills intervention. Jyväskylä: University of Jyväskylä.

Pelletier, L. G., Fortier, M. S., Vallerand, R. J., Tuson, K. M., Briere, N. M., Blais, M. R. (1995). Toward a new measure of intrinsic motivation, extrinsic motivation, and amotivation in sports: The sport motivation scale (SMS). Journal of Sport and Exercise, 17, 35-53.

Ryan, R. M., &Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist, 55, 68-72.

Ryan R. M. & Deci E. L. (2007). Self-Determination Theory and the Promotion and Maintenance of Sport, Exercise, and Health. In .. Martin S Hagger, & Nikos L.D. Chatzisarantis, Intrinsic motivation and self-determination in exercise and sport (pp. 1-20). USA: human kinetics.

Darren, T., Pierre-Nicolas, L., Kendy, K. K., & Martyn, S. (2007). Motivation in elite sport: A self-determination perspective. In N. L. Martin S. Hagger, Intrinsic motivation and self-determination in exercise and sport (pp. 152-186). USA: human kinetics.