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Boosting First-year Undergraduate Student Motivation for physical fitness workouts through Quality Instruction: A Study at Bahir Dar University

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ABSTRACT: There is a relationship between quality physical fitness instruction and motivation of students for its workouts. However, the degree that quality physical fitness instruction predicts the motivation of students' for its workouts is not examined. The purpose of this study was to examine the extent that quality physical fitness instruction to predict the motivation of first-year undergraduate students for physical fitness workouts. For this, the study used a cross-sectional survey design, collecting quantitative data. The sample included 323 students from 32 sections at Bahir Dar University, Ethiopia, who volunteered to participate in the study. The study used adapted standardized questionnaire for assess the motivation of students and quality of physical fitness instruction. The analysis involves Pearson correlation and multiple linear regressions. The correlation results indicate students' motivation for attending physical fitness course workouts is strongly and directly associated with most quality physical fitness service variables ($p < .01$). In this study, the regression analysis confirmed that students' identified regulation and external motivation for physical fitness course workouts was moderately (26.7%), 16% and 10.7% predicted by quality physical fitness instructional service variables ($p < .05$). This finding suggests that providing high-quality fitness instruction is crucial for enhancing student motivation in exercise programs within higher education contexts.

Keywords/phrases: Quality Fitness Instruction, Motivation, first-year Undergraduate Student

INTRODUCTION

A physical fitness workouts has numerous and holistic functions for student who regularly exercise it; these include health and fitness related benefits, social interaction, friendship, and preventing as well as treating heart-related complications and reducing death from several chronic diseases (Warburton, Taunton, Bredin, & Isserow, 2016, WHO, 2010) Conversely, a sedentary lifestyle can expose individuals to various health complications in later life. Inactivity is a leading cause of high blood pressure, heart disease, osteoporosis, Type II diabetes, breast and many types of cancer, depression and dementia (Roh, et al., 2015; Larson, Wang, and Bowen, 2006; Garrett, Brasure, Schmitz, Schultz, & Huber, 2004). This implies that physical fitness course workouts can be considered a means to have better mental health, efficient body organs, and productive citizens.

Student will be benefited from exercise, if there is regular engagement in fitness workouts and to regularly involved optimum to high level of motivation to physical exercise is required (Jones, Karageorghis, Lane, & Bishop, 2017). So, motivation has been attracted the attention of many scholars of the field (Iker, et al., 2021; Wei-Yang & Chih-Chao 2019; Kilpatric, Jorge, Helio & Roland, 2013).

For a physical fitness course to be fruitful and achieve its aims, high-quality physical fitness instructional services are the keys to enhance the motivation of students to learning the course and ensure their regular engagement in the activity (Olusegun & Sogunro, 2017; Tsitskari, Tzetzis, and Konsoulas, 2017). Scholars such as Wiseman and Hunt (2001), and others argue that the students' motivation for learning physical fitness course is influenced by the quality physical fitness instructional services. That is why it's considered as critical factors that affect the motivation of students for learning (Olusegun & Sogunro, 2017). The implication is that understanding students' motivation for

learning physical fitness course is related to their perception of quality physical fitness instructional services.

However, the extent of their relationship is not well known. It is not clear how the quality of the physical fitness instructional service predict a student's motivation to do physical fitness course workouts. Therefore, the purpose of this study was to examine the extent that quality physical fitness instructional service predicts fresh student's motivation for learning physical fitness course.

Conceptual model of the study

This study is conducted in line with the Self Determination Theory (SDT) particularly, contextual motivation, to empirically evaluate the motivation of students to physical fitness course. This theory puts the foundation for the contextual nature of motivation in physical fitness workout service. From a psychological perspective, contextual motivation refers to one's motives for participating in a more varied set of related activities, such as physical fitness and sports, within a period of time (Ryan, &Deci, 2002). Consistent with this conceptual definition of motivation, students' motivation is defined as a student's motives for learning physical fitness course successfully within the context of sports field or gymnasiums.

Self-determination theory of motivation provides some dimensions along with the sports field or gymnasiums context. For

students, motivation increases persistence in working with challenging physical fitness course and has been shown to influence student's performance, interest and commitment, which commonly contribute for the quality physical fitness service, on higher educational context (Catherine & Ennis, 2017; Knowles, Knowles, Holton, & Swanson, 2005; Thompson, & Clayton, 2004). Examining the relationship between motivation contextual factors and quality physical fitness service as well as between quality physical fitness service and motivation of students to physical fitness course is critically important to take measures on motivation and fitness service quality.

Considering the variety of reasons accounting for motivation, as well as its dimensionality, the author takes SDT as a base. The theory served as sources of influence to inform the selection of crucial variables for the study. The following figure 1 presents the components of the conceptual model our research model, depicted in Figure 1, dissects the key factors influencing student motivation in physical fitness courses. The model focuses on quality physical fitness service variables, such as instructor competence, program management, facility upkeep, and equipment functionality, and their connection to student motivation, specifically identified regulation and external motivation. By examining these relationships, we aim to shed light on how high-quality fitness instruction can unlock students' motivation to embrace physical activity.

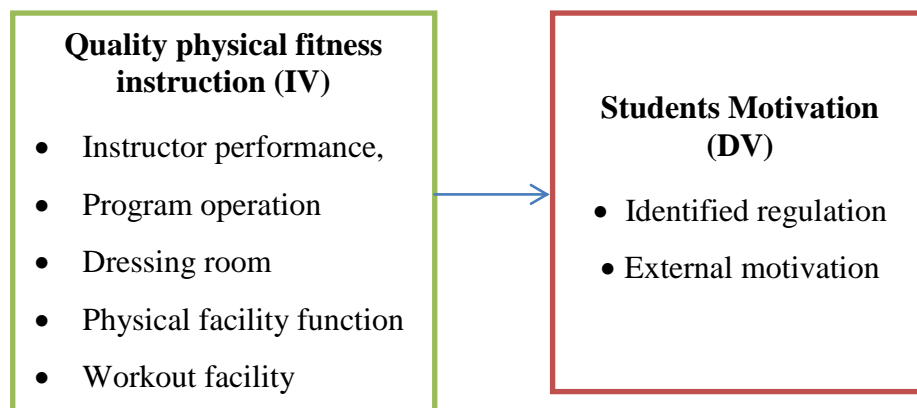


Figure 1. Conceptual model of the study

METHODS

Design

This study employed a cross-sectional survey design to investigate the influence of high-quality physical fitness instruction on the motivation of first-year students participating in physical fitness courses. This design enabled us to capture a snapshot of students' motivations and perceptions at a single point in time, allowing us to assess the potential predictive relationship between instruction quality and motivation.

Sampling

Participants were first-year students enrolled in the 2021/2022 academic year at Bahir Dar University. The total population consisted of (N=1860) students across (N=32) sections. We categorized these sections into two groups: natural sciences and social sciences. Using a stratified random sampling technique, we randomly selected 15 sections from each group, resulting in a final sample size of 323 students. This strategy ensured proportional representation from both disciplines.

Table1. Descriptive result of the students (n=323).

Contextual variables	Characteristics	frequency	Percentage
Age	18	13	4
	19	79	24.5
	20	216	66.9
Gender	Above 20	15	4.6
	Male	170	52.6
	Female	153	47.4
Stream	Natural science	174	53.9
	Social science	149	46.1
Residential area	Urban	142	44
	Semi urban	110	34
	Rural area	71	22

The study involved 323 first-year students at Bahir Dar University in Ethiopia. As shown in Table 1, the sample was diverse, with slightly more male participants (52.6%) than female (47.4%). Interestingly, over half (53%) came from natural science backgrounds, while the remaining belonged to social sciences (46.1%). Regarding their pre-university residence, a significant portion (44%) originated from big cities, followed by semi-urban areas (34%) and rural communities (22%). This diverse sample allowed for a comprehensive exploration of the research question.

Data Collection

In this study, the quality of physical fitness instructional services, on a multidimensional scale, is advantageous, enabling researchers to select those dimensions that are most applicable to the domain of functioning in their own contexts (Lam, Zhang, and Jensen, 2005). The quality measure scale

proposed is applicable to measure both the quality of physical fitness services and goods (Mavridou, Tsalikioti, and Alexandris, 2013). The other most recent one is not compatible with the intent of this study. It is created for the purpose of standardizing training centers (Karen, et al., 2021). The Service Quality Assessment Scale (SQAS) has been widely adopted in various research investigations into quality physical fitness services (Lam, Zhang, & Jensen, 2005). It includes a multidimensional scale measuring six components of quality instructional and training service. One of those six components, including "presence of waiting room for kids and relatives," did not comply with essential issue expectations, at least in the Ethiopian higher education context, so it is not represented in the questionnaire.

In this study, students' motivation for learning physical fitness course was measured by adapting the standard tool called Exercise Self-regulation questionnaires (SRQ-E) developed by Ryan and Connell (1989). The

instrument includes individual student scores on composite measures in 4 dimensions: intrinsic motivation (3 items), identified regulation (6 items), introjection motivation (3), and external regulation (1item). The motivation question items begin with the statement “Please circle the number that best describes the reason why you are engaged in physical fitness workout during a physical fitness course?” Student respondents were given scales ranging from 1 (not at all) to 5 (exactly). An example of the intrinsic motivation item reads as follows - ‘because I feel good when doing this workout’.

Before data collection, a verbal consent was obtained from the students in their respective sections. After this, the questionnaire survey was distributed to the 323 participant students. All of the distributed questionnaires were collected with responses properly filled in. With the purpose of understanding the reliability of the survey instruments, pilot studies were conducted on 106 first-year students who were not part of the main study. Since a language expert was involved, there were no major corrections of phrases or phrases of the sentences. However, the expected time and the time required to fill out the questionnaire were different. Hence, it helped to know the time required for the actual data collection in advance. Based on the results yielded, the observed values of quality and motivation instruments were equal to 0.65 and

0.89 or the Sig value. $< \alpha = 0.05$, while the reliability values of the quality and motivation instruments were found to be .75and .89. Based on these data, it can be concluded that the instruments were found valid and reliable. So that it can be concluded that the first and second tests of both instruments have a high level of consistency in administration of the tests given.

Data Analysis

SPSS version 25 software was used. Pearson’s correlation analyzed the direction and strength of relationships between variables. Regression analysis assessed the specific influence of quality instruction variables variable motivation in first-year students.

RESULTS

Results of correlation analysis between quality fitness instruction and student motivation

This section delves into the core findings of our study, examining the connection between quality physical fitness instruction and student motivation. We employed Pearson correlation analysis to assess the extent and direction of these relationships across the entire participant group. Table 2, presented below, summarizes the key results of this analysis.

Table 2. Summary Pearson correlation between quality instructional service and motivation variables (n= 323)

Variables	IR	EM	IP	PO	DR	PFF	WF
IRM	1	.406**	.391**	.261**	.267**	.123*	.140*
EM		1	.235**	.122	.078	.269**	-.107*
IP			1	.360**	.098	.211**	-.143*
PO				1	.300**	.355**	.271**
DR					1	.326**	.445**
PFF						1	.367**
WF							1

Note: IRM = Identified regulation, EM =External motivation, IP= instructor performances, PO= Program operation, DR= dressing rooms, PFF= Physical facility function, WF= workout facilities, Correlation is significant levels: * $p < 0.05$, and ** $p < 0.01$ (2-tailed).

Table 2 reveals a significant interconnectedness between most quality physical fitness instruction variables and student motivation ($p < 0.01$). This suggests that various

aspects of quality instruction positively influence student motivation for physical fitness courses.

Interestingly, the strongest correlation ($r = .406$) exists between two motivational factors:

identified regulation motivation and external motivation. This implies that students who find good awareness in physical activity are also more likely to be motivated by external rewards that align with their personal values.

Among the instruction variables, the strongest correlation ($r = .445$) is observed between dressing room and workout facility conditions. This highlights the potential importance of a well-maintained and inviting environment in fostering student motivation. However, the correlation between dressing room behavior and external motivation is considerably weaker ($r = .078$), suggesting that specific behaviors in the dressing room may not significantly impact externally driven motivation.

Overall, the findings offer strong evidence for the positive influence of high-quality physical fitness instruction on student motivation, highlighting the importance of investing in various aspects of instructional service to enhance student engagement and enjoyment in physical activity.

Regression models and summary results of analyses

In this study, the author used linear regression and both the quality and the motivation variables entered the model to predict the dependent variable, motivation, in the model. Table 3 presents the summary of the regression analysis for the five qualities independent variables.

Table 3. Summary of Regression Models Predicting the identified regulation for the Total Sample (n = 323).

Dependent variable	Independent variable	B	SE	t-value	P	B	F value	R ²
Identified regulation	Cons.	1.617	.276	5.867	.001		12.299	.16
	Iper ¹	.359	.067	5.354	.001	.319***		
	Poper ²	.115	.075	1.541	.124	.095		
	Droo ³	.100	.064	1.573	.117	.195		
	Pfun ⁴	-.016	.078	-.203	.839	-.012		
	Wfac ⁵	.062	.079	.794	.428	.049		

Note: ¹ instructor performance, ² program operations, ³ dressing rooms, ⁴ Physical Facility function, ⁵ Workout facility, Correlation is significant levels: *** $p < 0.001$ (2-tailed)

The regression analysis, summarized in Table 3, reveals that the combined quality variables significantly predict students' identified regulation motivation for physical fitness courses ($R^2 = .16$, $p = .05$). This implies that various aspects of quality instruction collectively explain 16% of the observed variance in internal motivation.

Among the individual predictors, instructor performance emerges as the strongest influence, with a moderate standardized coefficient of .319. This indicates that a one-unit increase in instructor performance (e.g., better teaching skills, clearer explanations) is associated with an average increase of 0.35 units in identified regulation motivation. Interestingly, even holding dressing room and workout facility conditions constant, an improvement in instructor performance is linked to a significant boost in student motivation.

Overall, these findings highlight the critical role of high-quality instruction, particularly instructor performance, in fostering students' identified regulation and passion for physical activity. Investing in enhancing instructor skills and expertise has the potential to significantly impact student engagement and enjoyment in physical fitness courses.

As shown in Table 3, Quality variables normally predicted the dependent variable, identified regulation motivation (16% explained variance). The instructor performance (.35), program operations (.11) and dressing rooms (.10) were found to be the better predictor of students' identified regulation motivation for physical fitness course workouts using the beta scores for the predictors. It was discovered that the instructor performance was a better predictor of students' introduction motivation for physical fitness course (.35).

Table 4. Summary of Regression Models Predicting the External Motivation for the Total Sample (n = 323).

Dependent variable	Independent variable	B	SE	t-value	P	B	F value	R ²
External motivation	Cons.	1.579	.393	4.015	.001		7.583	.107
	Iper ¹	.080	.096	.836	.404	.051		
	Poper ²	-.051	.107	-.478	.633	-.030		
	Droo ³	.064	.091	.702	.483	.044		
	Pfun ⁴	.546	.111	4.911	.001	.305**		
	Wfac ⁵	.414	.111	-3.737	.001	-.241**		

Note: ¹ Instructor performance, ² Program operation, ³ Dressing Room, ⁴ Physical Facility function, ⁵ Workout Facility, ⁶ Correlation is significant levels: * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$ (2-tailed).

As shown in Table 4, the quality variables, predicted the dependent variable, introjection motivation ($R^2=.107$ which means 10.7 % of external motivation determined by Physical Facility function, Workout Facility. external motivation was found to have a positive relationship with the predictors (twoquality variables): $R^2 = .10$, $F(1, 5) = 7.58$, $p = .05$

In this case, if Physical Facility function held constant, then external motivation level increased by 0.414 units for one-unit increase in Workout Facility. Whereas, if the Workout Facility held constant, then external motivation level of students increased by 0.546 units for one-unit increment in physical facility function.

As revealed in the regression model (Table.3& 4) totally accounts for 26.7 % of the variance in motivation. This means the predictors (quality physical fitness instruction variables) explain variance in motivations.

DISCUSSION

This study sheds light on the strong connection between high-quality physical fitness instruction and student motivation in first-year university courses. Both correlation and regression analyses revealed a significantly positive association between various aspects of instruction quality and students' motivation for physical activity. These findings align with previous research (Justen, 2018; Olusegun, 2017; Perez et al., 2017; Darren & Kamal, 2011; Frederick et al., 1996), suggesting a potentially universal link between quality instruction and increased motivation across diverse contexts.

However, it's worth noting that the regression analysis indicated a moderate influence of instruction quality on motivation, totally explaining 26.7 % of the variance in motivation. This highlights the potential role of other factors beyond instruction in shaping student motivation.

Furthermore, this study is the first to investigate this relationship within the specific context of Ethiopian universities. While our findings support existing research, further studies across diverse contexts are crucial to fully understand the combined influence of instruction quality, contextual factors, and other individual characteristics on student motivation for physical fitness.

CONCLUSIONS AND RECOMMENDATIONS

Quality physical fitness instructional service is the major factor for the influence of student's motivation for physical fitness course. In line with this, recognize the extent that quality physical fitness service predicts students' motivation for physical fitness course is important to design well specific interventions to influence the motivation of students as well as instructor and to keep the quality of instruction in higher education. Hence, the aim of this study was examines the extent of quality physical fitness instructional service to predictstudents' motivation for physical fitness course.

Based on the results of the present study, the following conclusions are drawn. Students' motivation for physical fitness course is strongly and directly associated with most quality physical fitness variables. In this study,

the regression analysis results confirmed that students' motivation for physical fitness course was moderately predicted by quality physical fitness services. It accounted for up to 26.7 % of the variance in the given motivations for learning physical fitness course. For instance, a one-unit increase in an instructor's performance corresponds to an average increase of 0.35 units of identified regulation motivation for physical fitness course.

The results of the present study have important implications. This study is an important step toward understanding how quality physical fitness exercise is related to students' motivation for physical fitness course. The author believes that the existing motivation of students for physical fitness course and quality physical fitness service is an important concern for higher education. As a result, this research required an intervention on quality physical fitness service variables to influence student motivation for physical fitness course. This study was conducted at a specific university with 232 students. Hence, to generalize and confirm the findings, it is essential to conduct similar studies and expand the range of generalizations. Furthermore, motivating students for physical fitness course is not an end in itself; thus, investigating student motivation from the instructors' perspective requires special attention.

In this article, the author focused on the quality physical fitness service to predict the motivation level of students for physical fitness course. The author believes that the results of the study might be different had it been applied to some other university in the country with well-established or poor sports infrastructure. Hence, the author proposes to conduct a similar study at other universities as well as inclusion of some contextual factors in future studies.

Study Limitation

One of the limitations of this study was the inclusion of students in a single university. Hence, the motivation of the students may not capture those found in another university of the country. Another limitation of the study is the focus on broad conceptualizations of quality physical fitness course, considering the physical fitness workouts. This fails to capture theoretical

part of physical fitness course. Future research may wish to examine other indices of quality physical fitness course in the higher education setting.

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