



ISSN: 2146-1961

Taştan, Z. & Ziyagil, M.A. (2023). Testing The Relationship Between Motivation In Sports, Self-Efficacy And Attitude To Sport By Structural Equation Modeling, *International Journal of Eurasia Social Sciences (IJOESS)*, 14(51), 396-409.

DOI: <http://dx.doi.org/10.35826/ijoess.3273>

Makale Türü (Article Type): Research Article

TESTING THE RELATIONSHIP BETWEEN MOTIVATION IN SPORTS, SELF-EFFICACY AND ATTITUDE TO SPORT BY STRUCTURAL EQUATION MODELING¹

Zarife TAŞTAN

Dr. Öğr. Üyesi, İstanbul Topkapı Üniversitesi Spor Bilimleri Fakültesi Spor Yöneticiliği Bölümü, İstanbul, Türkiye, zarifearslantastan@gmail.com
ORCID: 0000-0002-7229-2706

Mehmet Akif ZİYAGİL

Prof. Dr., Mersin Üniversitesi Spor Bilimleri Fakültesi Beden Eğitimi ve Spor Öğretmenliği Bölümü, Mersin, Türkiye, mziyagil@mersin.edu.tr
ORCID: 0000-0003-0984-0607

Gönderim tarihi: 01.02.2022

Kabul tarihi: 11.02.2023

Yayım tarihi: 01.03.2023

ABSTRACT

Nowadays, as technology advances, individuals spend less time participating in sports, while the prevalence of ailments such as obesity, high blood pressure, cholesterol, and cardiovascular disease rises. Sports have been shown in studies to improve both physical and mental development. Aside from being physically adaptation, participating in sports may help you cope with stress, overcome sadness and anxiety, and live a happier and more fulfilling life. The purpose of this study was to predict the self-efficacy and motivation levels of university students from the School of Physical Education and Sports/Faculty of Sports Sciences, as well as their attitudes toward sports, and to test the relationship between them using the structural equation model. 957 students ($N_{\text{female}}=408$, $N_{\text{male}}=549$) studying at the School of Physical Education and Sports / Faculty of Sports Sciences of different universities participated in the study. The "Sport Motivation Scale II," "General Self-Efficacy Scale," and "Sport-Oriented Attitude Scale" were used to collect data. The structural equation model was used to evaluate the structural relationship between attitude toward sports, self-efficacy, and sport motivation. Path Analysis were used to uncover the theoretically accepted relationship between students' sports motivation, self-efficacy, and attitudes about sports. The structural equation model built for the entire sample group was determined to be significant as a consequence of the research. According to the study's findings, students' motivation and self-efficacy levels in sports positively and significantly predict their attitude toward sports.

Keywords: Attitude, self-efficacy, sport motivation, structural equation model (SEM)

¹ This article has been prepared by making use of the doctoral thesis titled "Modelling the Relationship Between Motivation in Sports, Self-Efficacy and Attitude towards Sports", which was accepted on 06.07.2020 in Mersin University Institute of Educational Sciences, Department of Physical Education and Sports.

INTRODUCTION

People now spend less time doing physical labor as machines eventually replace them, due to advances in technology. Obesity, high blood pressure, cholesterol, and cardiovascular disease have all become more common among humans. Sports may compensate for the inert existence we live in the era of technology. Sports have been shown in studies to improve both physical and mental development. Aside from being physically adaptation, sports may help you cope with stress, overcome depression and anxiety, and have a happier and more fulfilling life (Yeltepe, 2011). As a result, it is vital for individuals to participate in sports in order to adapt to competitive surroundings and advance technological life, to improve quality of life, and to cope with stress and despair. However, because participation in sports is voluntary, motivation is essential. A request or desire that activates and directs conduct is known as motivational behavior (Tiryaki, 2000). People's motivation influences their involvement in, maintenance of, and discontinuation of participation in sports. While sports are significant in some people's life, they have no purpose or value for others. Furthermore, some people want to participate in sports, and others prefer to be spectators (Suzić, 2011). It has been observed that people who participate in sports do not maintain their participation (Arşan and Koruç, 2009). Some individuals participate in sports to shape their bodies and seem attractive, while others participate in sports for health reasons. Sport is also a significant aspect in obtaining social experience, meeting new people, overcoming loneliness, and avoiding alienation.

As a consequence, group sports are increasingly significant at this time. It has also been discovered that when people participate in sports in groups, they have greater fun (Gould & Hourn, 1984). From this point of view, it can be said that the effect of self-efficacy beliefs is on the basis of the individual's performance in the face of social situations. Self-efficacy is the belief in one's own ability to succeed (Lisa et al., 2005). Human motivation, well-being, and personal achievement are all based on self-efficacy beliefs. Because people are less likely to take action or persevere in the face of adversity if they do not feel that their activities will yield the desired consequences (Flammer, 2001). People act based on their views about what they are capable of. People's feelings, thoughts, motivation, and behavior are all influenced by their self-efficacy beliefs (Bandura, 1994). The capacity of an individual to effectively manage new situations, make an attempt, and persevere in the face of adversity is characterized as general self-efficacy (Luszczynska et al., 2005). While self-efficacy is restricted to a single activity, general self-efficacy is the conviction in one's ability to be self-sufficient and manage with challenges across a wide range of stressful or demanding situations (Luszczynska et al., 2005). Individuals with high proficiency are more likely to commence and maintain tasks, as well as strive for goals, especially when confronted with novel scenarios, stressful conditions, barriers, or other issues (Siu, Lu, & Spector, 2007). Many studies in the literature have found that people with high self-efficacy beliefs set greater objectives for themselves, and as a result, their motivation levels rise and they perform better (Shea & Guzzo, 1987; Bandura, 1997; Gibson, 1999). People who are confident in their talents see tough jobs as challenges to overcome rather than dangers to avoid. They established difficult goals for themselves. In the face of failure, they enhance and maintain their efforts (Bandura, 1994).

In addition to the individual's desire for sports and high self-efficacy beliefs, his attitude toward sports is significant. Attitude is defined as "a propensity assigned to a person that frequently comprises his/her thoughts, feelings, and behaviors about a psychological object" (Kağıtçıbaşı, 2010) and organizational behavior inclination" (Hogg and Vaughan 2010). Attitudes are typically stable and remain throughout time and in different contexts. Individuals who have a favorable attitude toward sports are expected to continue participating in sports.

The variety of studies on university students' views toward physical education and a health-promoting lifestyle has steadily increased in recent years (Carlson, 1995; Portman, 1995; Ennis, 1996; Koca, Aşçı & Demirhan, 2005). University students, without a doubt, make up a sizable portion of the young population that is sensitive to changes in environmental effect. When university students' physical exercise programs are organized to take use of their free time, they might develop a favorable attitude toward physical activity. This may help to promote and encourage the adoption of healthy habits (Huddleston et al., 2002). The time spent exercising and the enthusiasm demonstrated will create possibilities for the development of a favorable attitude toward sports, resulting in significant beneadaptations in improving human health and quality of life (Huddleston et al., 2002). Although many studies on motivation, self-efficacy, and attitude toward sports have been conducted separately in national and international literature, only a small number of studies have been conducted in which motivation, self-efficacy, and attitude toward sports are examined together and modeled using the structural equation model. As a conclusion, there is a need in the field of physical education to study the modeling of the relationship between sport motivation, self-efficacy, and attitude toward sports. In this respect, the objective of this research is to predict the self-efficacy and motivation levels of university students from the School of Physical Education and Sports / Faculty of Sports Sciences toward sports and to examine the relationship between them using the structural equation model. Furthermore, it is expected to contribute to the field because it is a study that reveals the relationship between students' self-efficacy and motivation levels in sports in both national and international literature in the field of physical education and sports, in estimating their attitudes toward sports.

METHOD

Research Model

A relational survey methodology was utilized in this study to examine the relationship between students' motivation, self-efficacy, and attitudes at the School of Physical Education and Sports / Faculty of Sports Sciences. Relational survey models seek to quantify the existence and degree of change between two or more variables (Creswell, 2012).

Population and Sample of the Research

The research population comprises of students enrolled in the universities' faculties of physical education, sports, and sports sciences for the 2019-2020 academic year. The study's sample consists of 957 volunteer students (549 male, 408 female) chosen by Convenience Sampling method from among students studying at

the School of Physical Education and Sports / Faculty of Sports Sciences of eight Turkish state institutions. Convenience Sampling method is sampling made on individuals who are easily accessible, readily available and willing to participate in the research (volunteer) (Erkuş, 2011). When the researcher examined the scales, it was discovered that some of the scales were not entirely filled out, and some students were unable to engage in some of the activities. These individuals' data were eliminated from the study, and data from 845 students (498 male, 347 female) were included in the analysis procedure. In addition, outliers were determined and 123 participants were excluded, and the analysis continued with a total of 722 (417 men, 305 women) data. For the study, permission was obtained from Mersin University Social and Human Sciences Ethics Committee with the date of 31/07/2019 and number 024.

Data Collection Tools

Sport Motivation Scale II (SMS-II), General Self-Efficacy Scale, Sport-Oriented Attitude Scale, and a personal information form developed by the researcher were utilized in the study. The researcher conducted a literature study when developing the personal information form and identified the independent factors that were projected to have an influence on the dependent variables.

Sport Motivation Scale II

The Sport Motivation Scale II (SMS-II), which consists of 6 sub-dimensions and 18 items, was developed by Pelletier and its adaptation to Turkish culture was carried out by Öcal and Sakallı (2018). The model adaptation values of the scale were assessed by applying CFA. The six-factor scale explains 66% of the total variance. Factor loads vary between 0.57 and 0.94. According to these conclusions, the reliability coefficients of the sub-dimensions were found to be 0.72, 0.61, 0.81, 0.55, 0.73 and 0.72 for intrinsic, integrated, identified, introjected, external, amotivated, respectively. In this study, the internal consistency coefficients for the sub-dimensions of intrinsic, integrated, identified, introjected, external, amotivated were respectively; 0.77, 0.74, 0.79, 0.57, 0.65 and 0.75. The internal consistency of the whole scale was calculated as 0.82.

General Self Efficacy Scale –GSE

The General Self-Efficacy Scale was established in Germany in 1979 by Schwarzer and Jerusalem, and as a consequence of investigations and changes in 1981, it was reduced from 20 questions to 10 items and became the last one we use today in 1995. The scale assesses people's confidence in their capacity to handle new and challenging jobs in a variety of settings. Positive remarks can be found in all of the scale items. It is a Likert-type scale with options ranging from absolutely false to entirely truthful. In international research, the internal consistency of the scale was determined to be $\alpha=0.86$. In the study of adaptation to Turkish culture by Aypay (2010), it was stated that the original one-dimensional scale has two dimensions: a) ability and confidence, b) effort and resistance (Aypay, 2010). The internal consistency coefficients for the sub-dimensions of ability and confidence, effort and resistance were found to be 0.71 and 0.78 in this study, respectively. The overall internal consistency of the scale was determined to be 0.85.

Sport-Oriented Attitude Scale

Şentürk (2012) created the Sport-Oriented Attitude Scale to assess individuals' attitudes toward sports. The scale comprises 25 elements; it has been found that it has three dimensions: giving importance to sport, be interested in sport, and doing physical exercises or sport. It is a five-point Likert scale (I strongly disagree, I disagree, I am undecided, I agree, I totally agree). The scale has a minimum score is 25 and a maximum score is 125. A high score denotes a positive attitude toward sports. While all items on the scale were scored favorably, no item's scoring was reversed. The sub dimensions of the scale ($\alpha=0.972$) are; "giving importance to sport" ($\alpha=0.982$), "be interested in sport" ($\alpha=0.983$), and "doing physical exercises or sport" ($\alpha=0.954$). The internal consistency coefficients for the sub-dimensions of be interested in sports, giving importance to sport, and doing physical exercises or sport were determined to be 0.80, 0.69, and 0.60, respectively, as a result of this study. The overall internal consistency of the scale was determined to be 0.88.

Analysis of the Data

The descriptive statistics of the data and the correlations between the variables were calculated using the SPSS 17.0 software. The LISREL 8.7 software was used for confirmatory factor analysis of the scales and model testing. The data was analyzed in three steps. The first stage is data preparation prior to data analysis. Missing data analysis, which is one of the assumptions of Structural Equation Modeling (SEM), was undertaken for this purpose, and the data's univariate, multivariate normality assumption, and multicollinearity assumption were checked by identifying the extreme values. In the second stage, confirmatory factor analyzes and descriptive statistics were performed and Spearman Rank Correlation Coefficient was used to calculate correlations between variables. The theoretically developed model was evaluated with Structural Equation Modeling in the third stage (SEM). A measurement model was created among the linked variables for this aim, and the model's fit indices were assessed. The data were analyzed with the Structural Equation Model in accordance with the direct effects between the last observable and latent variables, and the fit indices between the variables in the model were analyzed.

SEM is a collection of assumptions that describe how the variables in the study are formed and interrelated. As a result, the SEM technique's implementation begins with the selection of a model to be estimated (Hu and Bentler, 1999). Before beginning to collect data in SEM investigations, the researcher develops a theoretical framework (model) that describes the relationship between the variables he works with within the scope of his topic. The model then determines whether or not this connection pattern, which was defined in advance for the purpose of SEM, is supported by the model. It is attempted to determine whether the models in issue are supported by data.

In our study, sport motivation, self-efficacy and sport-oriented attitude variables will be discussed and the relationship between them will be tested with the model presented in Figure 1.

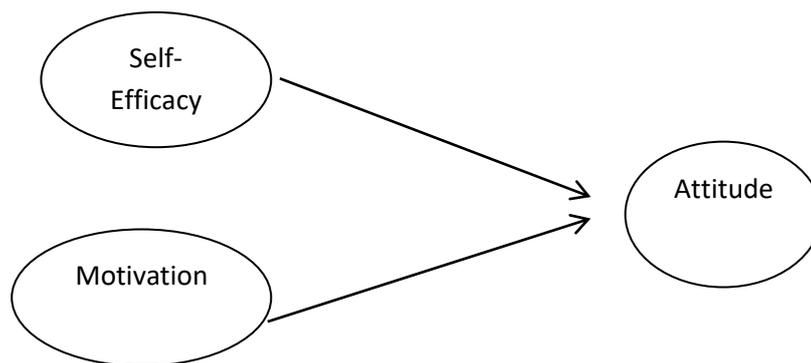


Figure 1. Suggested Structural Equation Model

A two-stage approach will be used to test the study's model. A two-stage approach is used to describe the relationship between measurement and structural models. The two-stage approach stresses measurement and structural models as conceptually distinct models. The two-stage approach is justified by the desire to test the theory (structural model) to see if the measurement model initially given is correct.

Confirmatory Factor Analysis of the Measurement Tools Used in the Study

The theoretical models suggested with a two-stage approach were evaluated in this work. Before evaluating the structural model, it is advised in the study of structural equation models to evaluate if the measurement model gives appropriate adaptation values using "Confirmatory Factor Analysis" (Anderson & Gerbing, 1988). In other words, a measurement model should be used to examine the relationship between the variables. General Self-Efficacy, Sport-Oriented Attitude Scale, and Sport Motivation Scale II must be valid and dependable in order to maintain the model's overall coherence. For this aim, each scale underwent first level confirmatory factor analysis. CFA of Sport-Oriented Attitude, General Self-efficacy, and Sport Motivation scales were done and compliance requirements were supplied before to validating the measurement model regarding the observed variables as a prerequisite of the two-stage approach.

First-level confirmatory factor analysis of the General Self-Efficacy Scale was performed and the fit index values obtained for the first-level confirmatory factor analysis showed that the model adaptationed well ($\chi^2 = 119.47$, $\chi^2/sd=3.51$, RMSEA =0.048, NFI = 0.97, S-RMR = 0.03). The fit index values obtained as a result of the first level confirmatory factor analysis of the Sport motivation scale show that the model adaptations well ($\chi^2 = 161.97$, $\chi^2/sd=2.922$, RMSEA =0.04, NFI = 0.97, S-RMR =0.05). The fit index values obtained as a result of the first level confirmatory factor analysis of the attitude scale towards sports show that the model adaptations well ($\chi^2 = 826.50$, $\chi^2/sd= 3.31$, RMSEA =0.05, NFI = 0.94, S-RMR= 0.05).

Measurement Model

As it is obviously monitored in the theoretical part, first of all, the measurement model for the latent variables that will be included in the structural model should be tested, and after reaching a suitable measurement

model, the structural model should be tested. Here, the measurement model refers to the part where the relationships between the observed variables and latent variables are defined. As a result of the analysis, standardized loads (λ), t and R^2 values were revealed.

When the suitability of each latent factor is assessed separately, the factor loads of the observed variables defined under the latent variables should be statistically significant (Çelik & Yılmaz, 2013). If the t value is less than 1.96 at the $\alpha = 0.05$ significance level in the LISREL program, the t value is considered insignificant (Jöreskog & Sörbom, 1993). In the analysis of the measurement model, since the t values of the external and amotivated sub-dimensions were less than 1.96, they were removed from the model and the measurement model was retested. Besides, it was observed that the load value standardized to the T1 item in the measurement model was 0.27.

The highest value that the standardized coefficients can reach is 1. Values close to 0 indicate low impact, and values close to 1 indicate high impact (Hair et al., 1998). Kline standardized coefficients according to effect size; Values of 0.10 and below are classified as small effect, around 0.30 as average effect, and values above 0.50 as large effect (Kline, 2005). T2's standardized load value was discovered to have a little influence (0.26), thus the T2 item was deleted from the analysis and the measurement model test was rerun. When the additional t values obtained from the study's first level factor analysis were analyzed, it was shown to be significant ($t > 1.96$). The sub-dimensions of external and amotivated, as well as T1 and T2 items, were not included in the subsequent analyses. Table 1 shows the model fit indices for the whole group measurement model.

Table 1. Fit Indices of the Whole Group Measurement Model

Fit Criteria	Criteria	Findings	Result
χ^2		2271.92	
χ^2/sd	≤ 3	2.41	Perfect
GFI	$0.90 \leq GFI \leq 0.95$	0.90	Good
AGFI	$0.85 \leq AGFI \leq 0.90$	0.88	Acceptable
RMSEA	≤ 0.05	0.04	Perfect
S-RMR	≤ 0.05	0.04	Perfect
NFI	≥ 0.95	0.95	Perfect
NNFI	≥ 0.95	0.97	Perfect
CFI	≥ 0.95	0.97	Perfect

These fit index values show that the measurement model adaptations well. According to the results, the results obtained from the measurement model prove that the observed variables defined in the research are reliable indicators of the latent variables. In other words, the sufficient level of relations between the goodness-of-fit measures obtained in the measurement model and the latent and observed variables indicates that the next stage, the structural model, can be tested. According to the two-stage approach, the results of the first stage indicate that structural model testing can be done. In the second stage, the structural equation model was analyzed.

FINDINGS

Indicators representing the variables of this research, or in other words, the observed variables were determined and the measurement model was tested first, followed by the structural model. The latent variables of the research are; Sport-Oriented Attitude, General Self-Efficacy, Sport Motivation. The observed variables are the related items of the scales. There are 53 observed variables in this study. The mean of these observed variables ranged from 3 to 6.1, and the standard deviations ranged from 0.7 to 2.1. The relations between the latent variables in the structural model and the mean and standard deviation values of each variable are given in Table 2.

Table 2. Latent Variables, \bar{X} , SD and Their Relationships

Variance	\bar{X}	SD	Self-Efficacy	Motivation	Attitude
Self-Efficacy	32.18	5.1	—		
Motivation	86.04	16.3	0.203**	—	
Attitude	100.89	13.3	0.378**	0.419**	-

Not: \bar{X} : Mean, SD: Standard Deviation, ** $p < 0.01$, N=722

When the relationships between the model's latent variables and the observed variables were examined, it was discovered that there was a moderate positive correlation between attitude and self-efficacy, a moderate correlation between motivation and a positive level, and a low level positive correlation between motivation and self-efficacy ($p < 0.01$). These data suggest that as self-efficacy and motivation improve, so does attitude; conversely, as these factors drop, so does attitude.

How is the model showing the relationship between the motivation levels, self-efficacy and attitude towards sports of the students of the School of Physical Education and Sports / Faculty of Sports Sciences? question will be answered. The structural model of the relationship between sport motivation, self-efficacy, and attitude toward sports was investigated using a two-stage approach. Figure 2 shows the standardized path coefficients of the tested structural model as well as the t-values indicating whether the standardized path coefficients are significant or not.

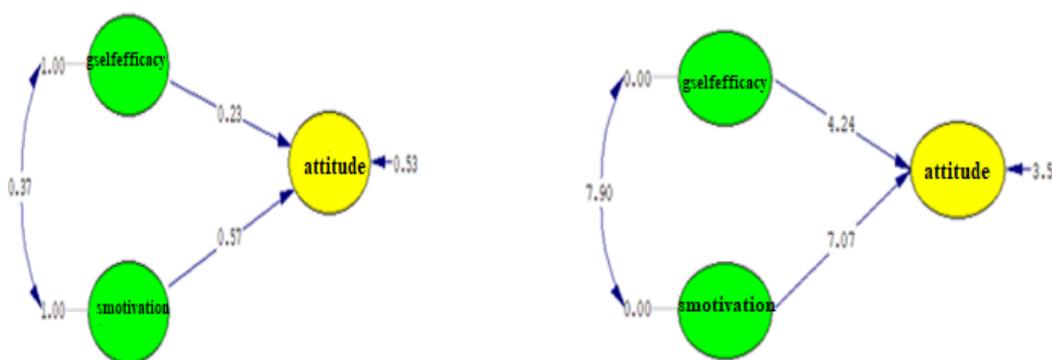


Figure 2. Structural Model of the Relationship between Motivation, Self-Efficacy and Sport-Oriented Attitude, Standardized Path Coefficients and t-values

Extrinsic latent variables are depicted in green in the above model, whereas endogenous latent variables are indicated in yellow. The standardized route coefficient for the association between self-efficacy and attitude in the model is 0.23, whereas the standardized path coefficient for the relationship between motivation and attitude is 0.57. The t-value should also be checked to see if the route coefficient between the variables in the path diagram is significant. In Figure 2, the t value of extrinsic latent variables explaining the endogenous latent variable is shown on the arrow. Accordingly, the t-value of the path from self-efficacy to attitude in the structural model is 4.24 and the t-value of the path from motivation to attitude is 7.07. Since these values are greater than the critical value of 1.96, the standardized path coefficients from self-efficacy and motivation to attitude are significant. The fit indices for the structural model are given in Table 3.

Table 3. Fit Indices of the Structural Model of the Relationship between Sport Motivation, Self-Efficacy and Sport-Oriented Attitude

Fit Criteria	Criteria	Findings	Result
χ^2		2271.92	
χ^2/sd	≤ 3	2.41	Perfect
GFI	$0.90 \leq GFI \leq 0.95$	0.90	Good
AGFI	$0.85 \leq AGFI \leq 0.90$	0.88	Acceptable
RMSEA	≤ 0.05	0.04	Perfect
S-RMR	≤ 0.05	0.04	Perfect
NFI	≥ 0.95	0.95	Perfect
NNFI	≥ 0.95	0.97	Perfect
CFI	≥ 0.95	0.97	Perfect

When the fit criteria in Table 3 were examined, [χ^2 (942, N = 722) = 2271.92, $p < 0.01$; GFI = 0.90; CFI = 0.97; SRMR = 0.04; RMSEA = 0.04] fit index values show that the structural model adaptations well. χ^2/sd ratio below 3 corresponds to a perfect adaptation (Kline, 2005). RMSEA less than or equal to 0.05 indicates a perfect adaptation (Jöreskog & Sörbom, 1993). The goodness-of-fit criteria given, point out that this model as a whole is supported by the data at an acceptable level. Therefore, the constructed structural model was validated. The entire relationship specified by the model is significant. The structural equations acquired as a result of SEM and the determination coefficient R^2 are presented in Table 4.

Table 4. Structural Relationships between Sport motivation, Self-Efficacy and Sport-Oriented Attitude

Structural Relationships	Standardized Loads	t- Value
General Self Efficacy \longrightarrow Attitude	0.23	4.98
Motivation \longrightarrow Attitude	0.57	8.60
Structural Equations	R^2	
Attitude = 0.23*Gself-efficacy + 0.57*S motivation	0.47	

A statistically significant positive connection was discovered between general self-efficacy independent latent variable and attitude dependent latent variable (0.23). This figure shows that a one-point gain in general self-efficacy will result in an increase in attitude (0.23), whereas a one-point reduction in general self-efficacy would result in a decrease in attitude (0.23). The motivation independent latent variable and the attitude dependent latent variable had a statistically significant positive connection (0.57). At a significant threshold of 0.05, the

independent latent variable was determined, and general self-efficacy and motivation explained 47% of the latent variable attitude.

DISCUSSION and CONCLUSION

The purpose of this study was to develop a model of the relationship between sport motivation, self-efficacy, and attitude toward sports. The relationship between the motivation and self-efficacy levels of students from the School of Physical Education and Sports / Faculty of Sports Sciences and their attitudes toward sports was attempted to be determined within the scope of the study's problem. To expose the relationships and corroborate the assumptions, the measurement model was initially examined using CFA. It was seen that the fit criteria of the measurement model were at an acceptable level. The structural model was examined with Path Analysis once the measurement model had been validated. The significance of the structural equation model constructed for the entire sample group was discovered. According to the findings of the study, students' motivation and self-efficacy levels in sports positively and significantly affect their attitude toward sports. The study shows that students' motivation levels in sports influence their attitude toward sports at a greater degree than their self-efficacy. The reason for this situation may be that individuals have a low level of belief that they can be successful in sports and that they can continue sports, but they exhibit positive attitudes towards sports by being externally motivated. The rewards to be obtained by individuals in extrinsic motivation can positively affect the individual's attitude towards sports. When looking through the literature, there are several researches that deal with the relationship between self-efficacy, motivation, and attitude. When an online learning web course is utilized in an online learning environment, Roberts and Dyer (2005) explored the correlation between self-efficacy, motivation, and attitude. As a consequence, they found that motivation influences attitudes, and students with higher levels of motivation tend to achieve more and have more positive views. Wade (2012) attempted to investigate the variables of self-efficacy, motivation, reading attitude, and gender as predictors of reading success in 5th grade male students using a relational research design. Self-efficacy, motivation, reading attitude, and gender were not statistically significant determinants of reading performance, according to the findings. Chiu (2009) discovered favorable relationships between attitude, motivation, self-efficacy, and leisure physical activity involvement among undergraduate students in his study on students' leisure physical activity participation in local public universities. Motivation and self-efficacy were found to be the greatest predictors of leisure physical exercise participation. Furthermore, according to this study, programs should be created and arranged to promote positive attitudes among students by raising their self-efficacy and motivation levels in order to encourage students to engage in physical exercise in their leisure time. Reid (2007) discovered a relationship between instructors' interpersonal conduct and student motivation, self-efficacy, and attitude toward science. As a result of his research on the relationships between pre-school teacher candidates' academic motivation, academic self-efficacy, and attitudes toward teaching, Bedel (2016) discovered that academic motivation is highly related to academic self-efficacy. She also said that, while the participants had favorable opinions toward teaching, these sentiments were unrelated to either academic motivation or academic self-efficacy. According to Yılmaz (2011), students'

motivation and mathematics self-efficacy beliefs are major indicators of attitudes toward mathematics classes. Çoklar, et. al (2018), revealed a moderately favorable and somewhat negative relationship between attitudes toward educational research and academic motivation and self-efficacy.

As a consequence, the improvement in self-efficacy and motivation levels of students at the School of Physical Education and Sports / Faculty of Sports Sciences will also boost the individual's favorable attitude toward sports.

RECOMMENDATIONS

The purpose of this study is to assess the self-efficacy and motivation levels of university students in the School of Physical Education and Sports / Faculty of Sports Sciences, as well as their views toward sports and their relationship with SEM.

Although this study adds to the field's knowledge, it has limitations such as sampling from certain institutions and using just the Sport Motivation Scale II, the General Self-Efficacy Scale, and the Sport-Oriented Attitude Scale. More research is needed to account for these limitations in future studies. It would be beneficial to provide some ideas in this regard.

1. Different schools, grade levels, and departments can study the theoretically recognized relationship between students' sport motivation, self-efficacy, and attitudes regarding sports.
2. Different factors can be used to assess the theoretically recognized relationship between students' sport motivation, self-efficacy, and attitudes toward sports (academic success, sports history, sports branch).
3. The purpose of the study was to measure the self-efficacy and motivation levels of university students in the School of Physical Education and Sports / Faculty of Sports Sciences, as well as their levels of measuring their attitudes toward sports. The experiment may be repeated using latent factors like self-regulation and self-motivation.

ETHICAL TEXT

In this article, journal writing rules, publication principles, research and publication ethics rules, journal ethics rules were followed. Responsibility for any violations that may arise regarding the article belongs to the authors. The ethics committee approval of the article was obtained by Mersin University Social and Human Sciences Ethics Committee with the decision number 024 dated 31/07/2019.

Authors' Contribution Rate: In this study, the contribution rate of the first author was 60%, and the contribution rate of the second author was 40%.

REFERENCES

- Anderson, J. C., and Gerbing, D. W. (1988). Structural Equation Modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Arsan, N.ve Koruç, Z. (2009). Sporcuların stresle başa çıkma stratejilerinin belirlenmesi (determining athletes strategies of coping with stress). *Spor Hekimliği Dergisi*, 44, 119-126.
- Aypay, A. (2010). Genel Öz yeterlik Ölçeği'nin (GÖYÖ) Türkçe'ye uyarlama çalışması. *İnönü Üniversitesi Eğitim Fakültesi Dergisi*, 11(2), 118.
- Bandura, A. (1994). *Self-efficacy In v.s. Ramachaudran* (Ed.), *Encyclopedia of Human Behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of Mental Health*. San Diego: Academic Press, 1998).
- Bandura, A. (1997). *Self Efficacy: Toward a unifying theory of behavioral change*. *Psychological Review*, 84, 191-215.
- Bedel, E. F. (2016). Exploring academic motivation, academic self-efficacy and attitude toward teaching in pre-service early childhood education teachers. *Journal of Education and Training Studies* Vol. 4, No:1.
- Carlson, T. B. (1995). We hate gym: Student alienation from physical education. *Journal of Teaching in Physical Education*, 14, 467-477.
- Chiu, L. K (2009). University students' attitude, self-efficacy and motivation regarding leisure time physical participation. *Jurnal Pendidik Dan Pendidikan, Jil. 24*, 1–15.
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). MA: Pearson.
- Çelik, H.E. and Yılmaz, V. (2013). *Lisrel 9.1 ile yapısal eşitlik modellemesi: temel kavramlar-uygulamalar-programlama* (yenilenmiş 3.baskı). Anı Yayıncılık.
- Çoklar, A. N. ve Gündüz, Ş. Makhabbat, A. (2018). Eğitim araştırmasına yönelik tutum ile akademik güdülenme ve akademik özyeterlik arasındaki ilişki. *KEFAD (Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi)*. Cilt 19, Sayı 1, 786-801.
- Ennis, C. D. (1996). Students' experiences in sport-based physical education: (More than) apologies are necessary. *Quest*, 48, 453-456. Doi: 10.1080/00336297.1996.10484211
- Erkuş, A. (2011). *Davranış bilimleri için bilimsel araştırma süreci*(3. Baskı). Seçkin Yayıncılık.
- Flammer, A. (2001). Self-efficacy. *International Encyclopedia of the Social and Behavioral Sciences*, Pages 13812-13815.
- Gibson, C. B. (1999). Do they do what they believe they can? Group efficacy and group effectiveness across tasks and cultures. *Academy of Management Journal*, 42, 138-152.
- Gould, D. and Hourn, T. (1984). *Participation motives in young athletes*. In J. M. Silva and R. S. Weinberg (Eds.), *Physiological Foundation in Sport* (p. 359-370). Champaign, IL: Human Kinetics.
- Hair, J. F., Anderson, R. E., Tatham, R. L., and Black, W. C. (1998). *Multivariate data analysis* (4th ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Hogg M. A., Vaughan G. M. (2010). *Essentials of social psychology*. Pearson Education Limited Edinburgh.

- Hu, L. and Bentler, P. M. (1999): Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6:1, 1-55.
- Huddleston, S., Mertesdorf, J. and Araki, K. (2002). Physical activity behavior and attitudes toward involvement among physical education, health, and leisure services pre-professionals. *College student journal*, 36(4), 555-573.
- Jöreskog, K.G. and Sörbom, D. (1993). *Lisrel 8: structural equation modelling with the SIMPLIS command language*. Chicago: Scientific Software International.
- Kağıtçıbaşı, Ç. (2010). *Günümüzde insan ve insanlar*. Evrim Yayın.
- Kline, R.B. (2005). *Principles and practice of structural equation modeling (2nd ed.)*. Guilford Press.
- Koca, C., Aşçı, F. H. ve Demirhan G. (2005). *Attitudes toward physical education and class preferences of Turkish adolescents in terms of school gender composition*. *Adolescence*, 40(158),365-75.
- Lisa, J. B., Malouff, J. Schutte, M., Nicola S., (2005). The Effectiveness of a Self-Efficacy Intervention for Helping Adolescents Cope with Sport-Competition Loss *Journal of Sport Behavior*, June 2005 28(2), 136-150.
- Luszczynska, A., Gutierrez-Dona, B. and Schwarzer, R. (2005). General self-efficacy in various domains of human functioning: Evidence from five countries. *International Journal Of Psychology*, 2005, 40 (2), 80–89.
- Öcal, K., Sakallı, D.(2018). Sporda güdülenme ölçeği-II'nin türkçe uyarlaması: Geçerlik ve güvenilirlik çalışması. *International Journal Of Sports Exercise and Training Sciences*, Vol 4, Issue 1, 39–48.
- Portman, P. A. (1995). Who is having fun in physical education classes? Experiences of sixth grade students in elementary and middle schools. *Journal of Teaching in Physical Education*, 14, 445-453.
- Reid, C. A. (2007). *Science and mathematics education centre teacher interpersonal behaviour: its influence on student motivation, self-efficacy and attitude towards science*. (This thesis is presented for the Degree of Doctor of Science) Education of Curtin University of Technology.
- Roberts, T. G. and Dyer, J. E. (2005). The relationship of self-efficacy, motivation and critical thinking disposition to achievement and attitudes when an illustrated web lecture is used in an online Learning environment. *Journal of Agricultural Education*, vol:46 no:2.
- Schwarzer, R. ve Jerusalem, M. (1995). *Generalized self-efficacy scale*. In j. Weinman, s. Wright, and m. Johnston, *measures in health psychology: a user's portfolio*. Causal and Control Beliefs (pp. 35–37). Windsor, Uk: Nfer-Nelson.
- Shea, G.P. ve Guzzo, R.A. (1987). Group effectiveness: What really matters? *Management Review*, 28, 25-31.
- Siu, O., Lu, C., Spector, P. (2007). Employees' well-being in greater china: the direct and moderating effects of general self-efficacy. *Applied Psychology: An International Review*, 56 (2), 288–301.
- Suzić, N. (2011). Students motivation for sports and their evaluation of school. *Sport Logia*, 7(1), 35–44.
- Şentürk, H. E.(2012). Spora yönelik tutum ölçeği: Geliştirilmesi, geçerliliği ve güvenilirliği. *Celal Bayar Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi*, 7(2).
- Tiryaki S. (2000). *Spor psikolojisi, kavramlar kuramlar ve uygulama*. Eylül Kitap ve Yayınevi.

Wade, Q. D. (2012). *The relationship between reading attitude, self-efficacy, motivation, and the reading achievement of fifth grade african-american males*. Howard University, Proquest Dissertations Publishing.

Yeltepe, H. (2011). *Egzersiz psikolojisi ve zihinsel sađlık*. Nobel Yayınları.

Yılmaz, Ç. (2011). *6, 7 ve 8. sınıf öğrencilerinin matematik güdüsü, kaygısı, öz yeterlik inancı ve öz kavramı ile matematik dersine yönelik tutumları arasındaki ilişkiler (Şereflikoçhisar örneđi)*. (Yüksek lisans tezi). Ankara Üniversitesi, Eğitim Bilimleri Enstitüsü.