

Investigation of the Relationship between University Students' Health Belief Model Levels Regarding Sports Recreational Activities and Leisure Attitudes

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ABSTRACT

Concerns of today's health-related individuals have increased, especially in the last three years. With the changes in the field of education, it is aimed to examine the relationship between university students' health beliefs and attitudes. The population of the research consisted of students between the ages of 18-25 studying at the Faculty of Sport Sciences of Hitit University, and the sample was 461 students. Ertüzün et al. (2013) "Health Belief Model Scale Regarding Sportive Recreation Activities" and "Leisure Time Attitude Scale" which was validated and reliable by Akgül and Gürbüz (2011). In the research findings, the most effective factor on leisure attitudes, which is defined as the U1 canonical variable, was determined as affective sub-dimension, and the most effective factor in the V1 canonical variable, which was defined as the health belief variable, was determined as perceived seriousness and psychosocial sub-dimension. When the canonical correlation values are examined, the correlation value of U1 variable set and V1 variable set was .71, and the correlation value for U2 variable set and V2 variable set was .34, and it was concluded that the relationship was statistically significant. As a result, it has been determined that university students' leisure attitudes affect their beliefs about their health.

Keywords: Recreation, Health belief, Attitude, Leisure

INTRODUCTION

As a result of the increase in the rate of overweight and obesity, physical activity and recreation units have great duties. In particular, different exercise models and recovery protocols contribute to the improvement of physical activity levels of individuals¹⁻³. In addition, organizations that organize physical activity and recreation organizations and public health institutions develop strategic studies to increase physical activity levels in all segments of society⁴⁻⁸.

In recent years, there have been extensive developments about the relationship between individuals' environmental attitudes and outdoor recreation (nature-based leisure activities). Individuals want to spend more time in nature and want to be in more contact with nature⁹. Although it is predictable that recreational activities have a healing, improving and relaxing effect on individuals in physical, psychological and social terms, it is known that they also make their physical characteristics more pleasing¹⁰. Time utilisation trends, leisure economy, social and technological changes are causing the reshaping of leisure and industry¹¹.

Social inclusion and participation in recreational activities are necessary for the development of healthy children and youth and can provide many psychosocial benefits¹²⁻¹⁴. Recreational activities contribute to the social sustainability of individuals and society^{9,15}. While individuals may make different demands on using their time effectively and efficiently in education life, there are very few studies evaluating how they can meet their demands¹⁶. University students also participate in many recreational activities throughout their education and training processes in order to contribute to their social and

cultural development and to have a good time. For this reason, it was conducted to determine the relationship between university students' health beliefs and attitudes.

MATERIAL AND METHODS

Research Model: In our study, a relational screening model was used to determine the change between two or more variables in order to determine the relationship between university students' leisure attitudes and health belief levels regarding sportive recreational activities.

Relational screening model; It is a model that aims to determine the existence or degree of co-change between two or more variables¹⁷.

Study Group: 187 male students (20.73±1.79) between the ages

of 18-25 (20.43±1.79) studying at Hitit University Faculty of Sport Sciences. and a total of 461 students participated.

Data Collection Tools: In this study, the Health Belief Model Scale for Sportive Recreation Activities (HBMSSA), which was developed by Ertüzün et al. (2013) and which consists of 5 sub-dimensions (perceived seriousness, perceived barriers, physical benefit, psychosocial benefit, self-efficacy) and 21 items, was used¹⁸. Also, the Leisure Attitude Scale (LAS), which consists of 3 sub-dimensions (cognitive, affective, and behavioral) and 36 items, which was validated and reliable by Akgül and Gürbüz (2011) was used¹⁹.

Statistical Evaluation: In order to determine the relationship between university students' leisure attitude scale sub-dimensions (cognitive, affective and behavioral as U variable set) and health belief model sub-dimensions related to sportive recreational activities (perceived seriousness, perceived obstacles, physical benefit, psychosocial benefit and self-efficacy as V variable set), Canonical correlation analysis was used. Canonical Correlation Analysis is one of the multivariate statistical analyzes that helps to determine the relationships of more than one variable set²⁰. In this study, by applying two different canonical correlation analyzes, before questioning a statistically significant relationship between the independent variables U variable set and the dependent variables V variable set, the values defined as missing and extreme data were removed from the data set, and it was determined that there was no normal distribution and multicollinearity (VIF=2,058). The number of data was determined to be at least 20 times more than the number of variables, and the difference between the variances of the variables was calculated with the Levene Test and Box's statistics and it was determined that the variances were homogeneous. In the canonical correlation analysis, Bartlett Hypothesis was established and H0 hypothesis was defined as "established canonical correlations are insignificant" and H1 hypothesis was defined as "at least one of the established canonical correlations is important". Canonical correlation analysis was calculated using IBM SPSS Statistics for Windows, version 25.0 (IBM Corp., Armonk, N.Y., USA). The Bartlett test has been tested for Pillai's Trace, Roy's Largest Root, Lawley-Hotelling Trace and tests. When the literature is examined,^{21,22} the most common "Wilks' Lambda (λ)" value is included. As a result of the analysis, canonical coefficients and correlations, variances, U-V tables and figures are given for each analysis.

RESULTS

In the study in which 461 university students participated in total, the relationship between leisure attitude (U variable set) and health belief model related to sportive recreational activities (V variable set) was examined gradually with canonical correlation analysis (Figure 1). In the study, 3 canonical correlation numbers were calculated since the attitude variable set consisted of 3 variables and the health belief variable set consisted of 5 variables. After testing and interpreting the canonical correlation coefficients, only significant results were considered.

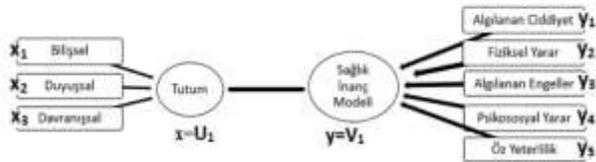


Figure-1: U1-V1 Canonical Correlation Analysis model

In the U1 canonical variable, the sub-dimensions of the leisure attitude scale, x1 cognitive sub-dimension, x2 affective sub-dimension and x3 behavioral sub-dimension; V1 represents y1 perceived seriousness sub-dimension, y2 physical benefit sub-dimension, y3 perceived barriers

sub-dimension, y4 psychosocial benefit sub-dimension and y5 self-efficacy sub-dimension, which are sub-dimensions of the health belief model scale of the canonical variable V1 regarding sportive recreational activities.

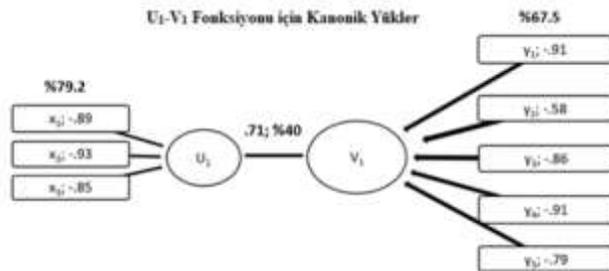


Figure-2: Canonical Load, Canonical Correlation and Variance for Leisure Attitude and Health Belief Model Regarding Sport Recreational Activities

In the Canonical correlation analysis, for Function 1, the most effective factor in attitude variable loadings is followed by affective sub-dimension (attribution: -.93), cognitive (attribution: -.89) and behavioral (attribution: -.85) sub-dimensions, respectively. The most influential factor in belief variable burdens was determined in the sub-dimensions of perceived seriousness and psychosocial benefit (attribution: -.91), followed by perceived barriers (attribution: -.86), self-efficacy (attribution: -.79), and physical benefit (attribution: -.58) sub-dimensions (Figure 2).

Table 1: Eigenvalues and canonical correlation values for the model

	Kanonik Korelasyon	df	F	p	λ
U1-V1	.71	15	27.99	<.001	.436
U2-V2	.34	8	6.850	<.001	.885
U3-V3	.04	3	.243	.87	.998

"There is no statistically significant relationship between the U and V variable sets." The hypothesis was rejected as a result of the canonical correlation analysis, and the alternative hypothesis, "There is a statistical relationship between the U and V variables." hypothesis was accepted. The canonical relationship between U1-V1 (F=27.99; p<.001) and U2-V2 (F=6.850; p<.001) was found to be statistically significant, U3-V3 (F=.243; p>.05) The canonical relationship between them was not statistically significant (Table 1). Looking at the correlation coefficients given in Table 1, it can be

said that there is a high level relationship between U1-V1, while for the U2-V2 function, the relationship was moderate.

In this case, for the standardized canonical correlation coefficients given in Table 2, while the canonical coefficient of the affective sub-dimension is high for the U1-V1 function, when the affective sub-dimension is removed when the affective sub-dimension is taken out of the U2-V2 function, although the cognitive sub-dimension coefficient is very high, the relationship between them is moderate.

The standardized canonical correlation coefficients showing the effect of canonical functions between the sub-dimensions of the "Leisure Attitude Scale" and the "Health Belief Scale Regarding Sportive Recreational Activities" on the relationship between the U and V variable clusters are presented in Table 2.

Table 2: Canonical correlation results between leisure time attitude and health belief model sub-dimensions related to sportive recreational activities

		Standardized canonical correlation coefficients	
		U1-V1	U2-V2
LAS	x1	-.38	.87
	x2	-.39	.29
	x3	-.36	-1.23
HBMSSA	y1	-.41	.91
	y2	-.08	.10
	y3	-.15	.37
	y4	-.28	-.26
	y5	-.25	-1.07

For the first canonical function, the relationships in the U1 variable set varied between -.36 and -.39, and the factor with the highest canonical correlation coefficient was the "affective" sub-dimension. When the V1 variable set was examined, it was determined that it ranged from -.08 to -.41, and the "perceived seriousness" sub-dimension was the highest factor with -.41. Statistically, it can be said that there is a canonical relationship between them. When the second canonical function values are examined, the coefficients in the U2 variable set vary between .29 and .87, and the relationship between the "behavioral" sub-dimension has the highest value. When the V2 variable set is examined, it changes between .10 and .91 and the "self-efficacy" sub-dimension has the highest value. The data of canonical load and cross-loads are given in Table 3.

Table 3: The results of canonical loads and cross-loads of variable sets of health belief model sub-dimensions related to leisure time attitude and sportive recreational activities

		Function 1		Function 1	
		Loads	Cross	Loads	Cross
BZTÖ	x1	-.89	-.63	.37	.13
	x2	-.93	-.66	.12	.04
	x3	-.85	-.60	-.52	-.18
SRASİÖ	y1	-.91	-.65	.34	.11
	y2	-.58	-.41	-.19	-.07
	y3	-.86	-.61	.17	.06
	y4	-.92	-.65	-.04	-.01
	y5	-.79	-.57	-.56	-.19

According to Table 2, a significant difference was found between the recorded times of the groups in the core test [X2(2) =92,158, p<.05]. This finding shows that the core strength between the groups is different according to the branch. Looking at the mean rows of the groups, it was determined that the branch with the highest core success was judo, followed by taekwondo, football, sedentary, and basketball, respectively (p<0.001). It was determined that the training age also showed parallelism except for the ranking of the basketball and sedentary groups, and this parallelism was significant (p<0.001). When the canonical load and cross-loads are examined, the most weighted sub-dimension for the U canonical variable in Function 1 is x2 affective, followed by x1 cognitive and x3 behavioral sub-dimensions; In the V canonical variable, the most weighting sub-dimension was y4 psychosocial benefit sub-dimension, and y1 perceived seriousness, y3

perceived barriers, y5 self-efficacy and y2 physical benefit sub-dimensions, respectively. However, when the second function is considered, it was determined as behavioral dimension for U canonical variable and y5 self-efficacy for V variable.

DISCUSSION AND CONCLUSION

The relationship between university students' leisure attitudes and health belief levels regarding sportive recreational activities was examined using canonical correlation analysis. As a result of the canonical correlation analysis, 3 canonical correlation numbers were obtained for the relationship between leisure attitude levels and health belief levels related to sportive recreational activities.

According to the results obtained, for Function 1, the most effective factor in attitude variable loadings is affective sub-dimension; The most effective factor in belief variable burdens was determined in the sub-dimensions of perceived seriousness and psychosocial benefit. When the literature is carefully examined, there are similar studies with the result of the attitude variable in our study²³. There are also studies in which different sub-dimensions are effective^{19,24}. Considering the variable levels of belief, research results showing parallelism with our study are seen in the literature^{25,26}.

When the standardized coefficients are examined; greatest contribution to canonical correlation coefficient: First canonical function affective sub-dimension in the variable set U1; It was determined that there is a perceived severity sub-dimension in the V1 variable set. In this case, it can be said that there is a canonical relationship between the two variables. Tektaş et al. (2017) concluded that the affective sub-dimension made the greatest contribution in their research. When the second canonical function values are examined, it has been determined that the behavioral sub-dimension in the U2 variable set has the highest contribution to the canonical correlation coefficient, and the self-efficacy sub-dimension in the V2 variable set has the highest value²⁷. In a study, conducted by Akdeniz et al. (2021) it is understood that the behavioral sub-dimension of students studying in sports sciences is significantly higher than students studying in education faculties²⁸. In another study, it is seen that the self-efficacy sub-dimension has a high value²⁷.

When the canonical loads were examined, it was determined that the affective sub-dimension was more dominant in university students in the first set variable in function 1, while the psychosocial benefit sub-dimension weight was found to be higher in the second set variable. In the research conducted by Karakullukçu (2020) to determine the leisure time attitudes of prospective teachers, it was concluded that the affective sub-dimension is at the forefront of the other sub-dimensions²⁹. Looking at the results of another research, it is understood that the psychosocial benefit sub-dimension is the one with the highest score¹⁸. When looking at Function 2, the behavioral sub-dimension for the first set variable and the self-efficacy sub-dimension for the second set variable were determined as the sub-dimension that brought the most weight.

Considering the canonical correlation values, the correlation value for the U1 variable set and V1 variable set was .71, and the correlation value for the U2 variable set and V2 variable set was .34. Therefore, it was concluded that the canonical relationship between the 2 variables was statistically significant.

In line with these results, it can be said that there is a significant relationship between the students' leisure attitudes and their health belief levels regarding sportive recreational activities, and that sportive activities in leisure time stimulate different emotional states in people. While these emotional states can make individuals happy from their current situation, they can also make them unhappy. Because the problems and inconveniences that may arise from the inefficient and misuse of time can affect the society and the person. Leisure activities should be directed correctly, and they should be trained and informed at this point. Recreation activities are a very valuable phenomenon that should be in our lives in terms of supporting economic and cultural

development, giving importance to education, increasing work efficiency, and also in terms of restoring and protecting mental and physical health, and preventing harmful behavior patterns from forming in the society. That's why it can be said that filling the spare time with reasonable activities and activities, progressing in accordance with one's own structure and in a way that can be enjoyed will benefit the person in all respects.

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