THE EFFECTS OF UNDER GRADUATE STUDENTS' MENTAL (PSYCHOLOGİCAL) TOUGHNESS ON THE LEADERSHİP LEVEL

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Abstract:

The aim of this research is to determine the relationship between mental endurance and leadership levels of the candidates who are studying in Erciyes University School of Physical Education and Sports Inspection. The student's universe consists of 436 students of Physical Education and Sports. As means of data collection in the survey were used Mental (psychological) endurance scale, Leadership orientation scale and Personal information form. Statistical analyzes were performed with the SPSS 20.0 package of data obtained from Personal Information Form, Mental (Psychological) endurance and Leadership orientation scale. The personal information and inventory total scores and factor scores for the candidates were determined by determining frequency (f) and percent (%) values. Multiple regression analysis was applied to determine whether Pearson Moments Multiplication Correlation analysis (r) and their scores were predictive in order to reveal the relationship between scores obtained from the scales. (B). While there is a low level of positive relationship between self-confidence and human resources framework and negative environmental and structural environmental scores, there was no significant relationship between attention control, visualization, level of motivation, positive energy and attitude control scores, structural environment, human resources framework, political environment and symbolic environmental scores. The model presents a meaningful relationship between negative energy and leadership orientations. When the t-test results on the significance of the regression coefficient are examined, structural environment leadership orientation, mental stability and 13% of the total variance. There was no significant relationship between self-confidence, attention control, visualization, motivation level, positive energy and attitude control, and leadership orientation, and mental stability was not predictive of leadership orientations. As a result; It is thought that the individuals with high mental stability show effective leadership behaviors and the positive attitudes and

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behavioral behaviors demonstrated by the leadership strengthen the mental endurance of the individuals.

Keywords: mental endurance, leadership, physical education and sports

1. Introduction

In any negative case, human beings initially experience negative feelings besides they can adapt to the situations that could change their lives throughout the time. For providing this adaptation, the most fundamental factor is mental endurance which is a continuous process that requires some particular steps to take, effort and time (Garmezy, 1991; Luthar, 1991; Masten, 2001). Mental endurance is a personal trait that is characterized by the ability to adapt to normal life, as well as to maintain mental and physical well-being, when being exposed to some incidents that cause traumatic experiences (Kobasa, 1979). In other words, mental endurance can be defined as a power of self-restoration and a positive psychological capacity that can be improved to rehabilitate in several controversial conditions such as contrariety, failure, conflict and increased responsibilities (Luthans, 2002). Individuals with high level of mental well-being are more attached to their daily activities and jobs, keep their lives under control, and view unexpected changes as opportunities for development. People can easily determine what they want to do in their lives, believe that they can prevent emerging problems, and have power to be better than they were in the past to fix the current situation (Florian, Mikulincer, Toubman, 1995). In low-durability individuals, resistance to distancing, external control, and change has been seen (Klag, Bradley, 2004; Maddi and Khoshaba, 1994).

As social entities, people tend to live together in a society. As results of these tendencies, structures which include interactions in different level have constituted. In these situations, some individuals are more dominant than others, place on the front and they can obtain leadership thanks to the acceptance by the others. Therefore, the leadership is a role that occurs as a result of interaction between individuals who are accepted by the society and the other individuals and this role causes a difference (Nartgün and Mor, 2015). Leadership is defined as the process which aims to lead the group's behaviours towards a common goal with influencing the other members of the group. Although there are many different definitions of leadership, it has been seen that the common features of these definitions are the "influence" and "orientation" (Orhan, 2012). Akyüz, (2002), has stated that leadership has been continued to be a researched and debatable concept since the ancient times, due to its importance for the achievement. Similarly, Tengilimoğlu (2005), stated that some of the reasons of several researches on leadership concept are that unity of purpose and target cannot be easily achieved by all members and in terms of this context, the leadership is very significant and debatable concept which will motivate the organizations.

When we consider the information above as a whole, it has been seen that mental endurance and leadership can be effective in different dimensions and levels in

different areas of life. When the literature is examined, there have been studies on mental endurance and leadership are separately carried out or generally integrated in other topics (Doğan, 2016; Erdeveciler, 2016; Tekin, 2011; Yalçın, 2013). However, there has been no study which examines both levels of mental endurance and leadership.

In this respect, it has been considered that this study will bring about a different perspective on the field when this absence of physical education and sports can be fulfilled and when the students of school of physical education and sports in different areas are assessed in terms of both mental endurance and leadership dimension. In this context, the main objective of the study is to examine the correlation between mental endurance/hardiness and leadership levels of students from Department of Physical Education and Sports, Erciyes University.

2. Material and Method

2.1 Studying Group

This research has been in the relational screening model. This screening model can be defined as *"... research models which aim at determining the presence and / or degree of exchange between two or more variables"* (Karasar, 2015).

The research has a descriptive feature, since an assessment will be carried out on correlations between leadership levels, mental endurance/hardiness and demographic features of students who are attending School of Physical Education and Sports.

2.2 Data Collection Tools

The scale of mental endurance/hardiness, scale of leadership level and socio-demographic information form as data collection tools have been applied for the research.

2.3 Creation of Voluntary Groups

A total of 436 students from 1440 students of School of Physical Education and Sport have been selected by coincidental method and have participated in the study.

Table 1: Socio-Demographic Characteristics of Participants

	Variables	N	%
Sex	Male	231	53,0
	Female	205	47,0
Age	18-21	241	55,3
	22-25	174	39,9
	26 and 26 years older	21	4,8
Department	Physical Education and Sports Teaching	107	24,5
	Coaching Education	110	25,2
	Sports Management	112	25,7
	Recreation Education	107	24,5
Grade	1	103	23,6
	2	107	24,5

	3	116	26,6
	4	110	25,2
CUMPA	1.25-1.99	35	8,0
	2.00-2.99	307	70,4
	3.00-4.00	94	21,6

2.4 Socio-Demographic Information Form
Socio- demographic information form has included 5 questions that aim at finding out information about their age, sex, department, grade, cumulative grade point average.

2.5 Mental Toughness Scale (Psychological Performance)
Psychological Performance Inventory-PPI which was developed by Loehr J.E. establishes profile of athlete's mental abilities (Loehr, 1986). The choices of inventory which was prepared with considering 5 point Likert scale closed-end question type as follows: "Always", "Frequently", "Sometimes", "Rarely" and "Never" (Loehr, 1986). Studies on adaptation of PPE to Turkish language have been carried out. The Cronbach's Alpha internal consistency coefficient for the Turkish version of the scale has been respectively found as 0.70 for self-confidence, 0.63 for negative energy, 0.43 for control of attention, 0.53 for visualization and imagination, 0.62 for level of motivation, 0.53 for positive energy, and 0.65 for control of attitude ($p < 0,01$) (The Whoqol Group, 1996)

2.6 Leadership Orientation Scale
To determine the leadership levels of the students as a means of data collection in the research, leadership orientation survey which was developed by Lee G. Bolman and Terence E. Deal (1991) and adapted to Turkish language by Dereli (2003) has been applied and estimated internal consistency coefficients (Cronbach Alpha) for the dimensions of the scale have been determined as 0,87, 0,87, 0,84 and 0,88, respectively.

2.7 Analysis of data
The data obtained from the Personal Information Form have been statistically analysed by means of SPSS 20.0 package program. The total scores of personal information and inventory factor scores of applicants have been presented by determining frequency values (f) and percentages (%) of the applicants. Multiple regression analysis (β) has been applied to determine whether The Pearson Product Moment Correlation Coefficient Analysis (r) and the scores obtained were predictor of each other to indicate the correlation between scores obtained from the scales or not.

3. Findings

Table 2: Descriptive statistics of students' responses to the survey

	N	Minimum	Maximum	X±SS
Self-confidence	436	6,00	24,00	15,83±3,68
Negative Energy	436	6,00	26,00	17,91±3,46
Attention Control	436	6,00	27,00	17,17±3,65
Visualization	436	6,00	26,00	13,01±4,07
Motivation Level	436	6,00	26,00	13,70±3,84
Positive Energy	436	6,00	28,00	14,34±3,76
Attitude Control	436	6,00	25,00	12,38±3,95
Structural Environment	436	12,00	40,00	30,78±5,05
Human Resources Framework	436	14,00	40,00	31,34±5,18
Political Environment	436	11,00	40,00	29,73±5,16
Symbolic Environment	436	14,00	40,00	30,10±5,14

As it has been shown in Table 2, it has been seen that average scores of the self-confidence as one of the sub dimension of the undergraduate students'/university students' mental toughness has been found as 15.83 for self-confidence, 17,91 for negative energy, 17.17 for control of attention, 13.01 for visualization, 13.70 for level of motivation, 14.34 for positive energy, 12.38 for control of attitude and sub dimensions of leadership levels such as structural environment mean/average score has been found as 30.78 and other subdimensions such as framework of human resources has been estimated as 31.34, political environment mean score has been calculated as 29.73, symbolic environment mean score has been found as 30.10.

Table 3: Correlation Coefficients between Students' Mental (Psychological) Toughness and Leadership Orientations (n = 436)

		1	2	3	4	5	6	7	8	9	10	11
1.Self-confidence	r	1										
	p											
	N	436										
2.Negative Energy	r	.034	1									
	p	.479										
	N	436	436									
3.Attention Control	R	-.049	.444**	1								
	p	.311	.000									
	N	436	436	436								
4.Visualization	r	.148**	-.059*	-.029	1							
	p	.002	.219	.552								
	N	436	436	436	436							
5.Motivation Level	r	.209**	.086	.165**	.590**	1						

		1	2	3	4	5	6	7	8	9	10	11
	p	.000	.073	.001	.000							
	N	436	436	436	436	436						
6.Positive Energy	r	.144**	.088	.079	.541**	.616**	1					
	p	.003	.067	.101	.000	.000						
	N	436	436	436	436	436	436					
7. Attitude Control	r	.256**	.151**	.149**	.578**	.576**	.639**	1				
	p	.000	.002	.002	.000	.000	.000					
	N	436	436	436	436	436	436	436				
8.Structural Environment	r	.091	.118*	.056	-.027	-.017	.014	-.011	1			
	p	.057	.014	.241	.579	.718	.772	.820				
	N	436	436	436	436	436	436	436	436			
9. Human Resources Framework	r	.111*	.046	.029	.003	-.004	.039	.036	.812**	1		
	p	.020	.338	.544	.945	.927	.415	.451	.000			
	N	436	436	436	436	436	436	436	436	436		
10.Political Environment	r	.069	.098*	.056	-.011	-.024	.028	.029	.729**	.728**	1	
	p	.149	.041	.244	.821	.619	.556	.549	.000	.000		
	N	436	436	436	436	436	436	436	436	436	436	
11.Symbolic Environment	r	.089	.051	.015	-.022	-.030	-.016	-.004	.723**	.771**	.781**	1
	p	.062	.286	.749	.652	.537	.733	.931	.000	.000	000	
	N	436	436	436	436	436	436	436	436	436	436	436

When Table 3 is examined, it has been found that there has been a low level of positive correlation between self-confidence and framework of human resources as sub dimensions of mental endurance/hardiness/strengthen and self-confidence and human resources framework score (r = 111, p = .020) while structural environment (r = .091, p = .057) = .069, p = .149) and symbolic environment (r = .089, p = .062) scores have not had significant correlation. While there has been a low level of positive correlation between negative energy score and structural environment (r = .118, p = .014) and political environment (r = .098, p = .041), there has been no significant correlation between human resources framework (r = .046, P = .338) and symbolic environment (r = .051, p = .286). There has been no significant correlation between scores of attention control, visualization, motivation level, positive energy and attitude control scores and structural environment, human resources framework, political environment and symbolic environmental scores.

Table 4: Regression Table of Students' Mental (Psychological) Toughness on
Prediction of Students' Leadership Orientations

		β	t	p	R	R^2	F	p
Self-confidence	**Leadership Orientation**				.114	.013	1.422	.226
	Structural Environment	-.011	.121	.904				
	Human Resources Framework	.111	1.198	.232				
	Political Environment	-.042	-.502	.616				
	Symbolic Environment	.029	.327	.744				
Negative Energy	**Leadership Orientation**				.158	.025	2.763	.027
	Structural Environment	.212	2.429	.016				
	Human Resources Framework	-.151	-1.630	.104				
	Political Environment	.108	1.295	.196				
	Symbolic Environment	-.070	-.806	.421				
Attention Control	**Leadership Orientation**				.086	.007	.794	.530
	Structural Environment	.084	.953	.341				
	Human Resources Framework	-.038	-.405	.685				
	Political Environment	.089	1.068	.286				
	Symbolic Environment	-.086	-.981	327				
Visualization	**Leadership Orientation**				.058	.003	.359	.838
	Structural Environment	-.079	-.898	.370				
	Human Resources Framework	.093	1.000	.318				
	Political Environment	.019	.225	.822				
	Symbolic Environment	.051	-.581	.562				
Motivation Level	**Leadership Orientations**				.044	.002	.211	.932
	Structural Environment	-.020	-.226	.821				
	Human Resources Framework	.062	.666	.506				
	Political Environment	-.014	-.161	.872				
	Symbolic Environment	-.053	-.598	.550				
Positive Energy	**Leadership Orientations**				.096	.009	1.002	.406
	Structural Environment	-.043	-.492	.623				
	Human Resources Framework	.130	1.392	.165				
	Political Environment	.082	.976	.329				
	Symbolic Environment	-.149	-1.699	.090				
Attitude Control	**Leadership Orientations**				.098	.010	1.055	.379
	Structural Environment	-.126	-1.435	.152				
	Human Resources Framework	.149	1.606	.109				
	Political Environment	.087	1.043	.298				
	Symbolic Environment	-.096	-1.098	273				

$F_{4,435}$

When Table 4 is examined, the model presents a significant correlation between
negative energy and leadership orientations (R = .158, R2 = .025, p <.05). When the t-test

results on the significance of the regression coefficient are examined, it has been seen that structural environment (t = -2.429, p = .016), leadership orientations predicted mental endurance/hardiness/strengthen and explained 13% of the total variance. (F (4.435) = 2.763, p <.05).

When Table 4 is examined, it has seen that there has been no significant correlation between self-confidence, attention control, visualization, motivation level, positive energy and attitude control, and these sub dimensions of mental endurance/hardiness could not predict leadership orientations.

5. Conclusion

Khobasa has dealt with psychological (mental) toughness as not only survival, but also as combination of cognitive, emotional attitudes and behaviours necessary for the enrichment of life during development process. Human beings should have the qualities to be able to make decisions, to take initiative, and to make life meaningful in the existing and continuing possibilities in human life (1979). While Hanton, Evans and Neil (2003), has stated that individuals who have high pyschological (mental) toughness have potential to influence on other people around them and willingness and power to take advantage under negative circumstances; Just has defined (1999) individuals with high psychological (mental) toughness as those who do not easily give up and continue their tasks under all circumstances, and work with the aim achievement. Leadership is also a process in which one person influences and directs the activities of others to achieve specific personal or group goals. The leader has an excellent team, strategy and tactical plans and s/he able to make exact decisions in the right condition and on the right time with his/her courage, knowledge and experience (Akat and Budak, 1997).

In line with the impressions of these two concepts that are related, it has been tried to reveal correlation between mental toughness and leadership levels and we tried to enrich the literature by means of this study.

6-19 points in each field means that it requires special attention, 20-25 points means that it requires improvement, 26-30 points means that it is a very good skill level (Loehr, 1986).

In this study, it has been found that the scores of self-confidence, negative energy, attention control, visualization, motivation level, positive energy and attitude control scores of the students are lower according to average of the scale scores, and the structural environment, human resources framework, political environment and symbolic environment scores are also lower than average of the scale scores. (Table 2) Within this result, it has been seen that the students who attend School of Physical Education and Sports have low mental toughness and mental toughness is not very effective on leadership levels.

In this research, it has been found that there is no correlation between the self-confidence and structural environment, political environment and symbolic environment, while the human resources framework has significant positive correlations with self-confidence. The study has revealed that there is no correlation

between negative energy and human resources framework and symbolic environment, there is a positive correlation between structural environment and political environment. And also, there is no significant correlation between scores of attention control, visualization, motivation level, positive energy and attitude control scores and structural environment, human resources framework, political environment and symbolic environment scores (Table 3).

When the leadership levels of mental toughness's sub-dimensions are examined, it has been found out that self-confidence, attention control, visualization, motivation level, positive energy and attitude control do not predict leadership levels; however, it has been determined that when a decrease is seen in negative energy, structural environment leadership level increases (Table 4). Leadership requires some facilities such as detecting the problem, showing solution choices to the members of the group, taking advantage from the power of the group for the solution implementations. These are the common characteristics of the leaders: being able to comply with situations, awareness to the social environment, intelligent, insistent, collaborative, determined, organized, knowledgeable, persuasive, reliable, impressive, energetic, persistent, self-confident (Sungur, 1997). Taking into consideration these characteristics of the leadership, it has been thought that the characteristics of leadership have come to the forefront when the negative energy exists. It has been also considered that the decrease in negative energy as one of the mental toughness sub dimensions, will affect the characteristics leadership such as being energetic, resistant, decision-maker, ambitious and successful, self-confident, voluntary to undertake responsibility and having strong influence.

As a result; it has been determined that individuals with high mental toughness show effective leadership behaviours and that they strengthen the mental toughness of individuals with positive attitudes and behavioural roles which are exhibited by the leadership.

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