

Are dispositional hope levels in athletes a predictor of athletic mental energy?

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Abstract. *Study Objectives:* The purpose of this research was to determine whether the hope levels of individuals engaged in active sports predict athletic mental energy or not. A total of 236 participants (80 women and 156 men; $M_{age} = 21.15 \pm 1.98$ years), who study at the Faculty of Sport Sciences at Akdeniz University and continue their active sports careers included in this study. *Methods:* The relational screening method was used to examine the relationships between variables. As data collection tools, “dispositional hope scale” and “athletic mental energy scale” were used. In the statistical analysis, a stepwise regression analysis was performed to examine the relationships between two variables and to determine the correlation coefficient and the power of the dependent variable in predicting the independent variable. *Results:* As a result of the analyses, a moderate relationship was determined between athletic mental energy and alternative ways thinking. It was found that there was a moderate relationship between athletic mental energy and actuating thinking dimension, dispositional hope total score. As a result of the regression analysis, it was determined that the actuating thought sub-dimension significantly predicted athletic mental energy, and the explained common variance was 29%. As a result, actuating thinking was found to be a predictor of athletic mental energy.

Key words: Athletic Mental Energy, Dispositional Hope, Athlete

Introduction

Success has always been the most important concern in the competitive nature of sports. Athletes always dream and take action with this goal in their minds. It is hoped that the desired success will be achieved with effort. In this context, the psychological and physiological properties of athletes have been researched and tried to be developed throughout history by scientists to achieve success in sport (1-3). One of the concepts that is the subject of these studies and one of the predictors of success in sport is hope.

Hope is one of the most important concepts which supports the mental health and well-being of individuals while it means the feeling of trust and desire for a particular thing to happen. Hope

is an emotion that supports the survival of human beings since their existence, strengthens their well-being and mental health (4,5). Hope is defined as the phenomenon in which individuals having positive wishes and expectations for the future rather than negative ones. Since hope consists of positive connotations like expectations and desires, it has a feature that provides people with energy, and motivates people in achieving the desired goal, and leads them to it directly (6). Cognitively dominant hope is related to the thinking that affects behaviors to be fulfilled in the future. According to Synder (1991), it is believed that people with high levels of hope can find many different ways to achieve success in the direction of the desired goal (7). Synder's theory of hope has three components. These components are

as follows; determining the goal, developing different strategies to reach the determined goal, finding alternative ways, and having the motivation are stated as actuating thoughts (8).

One of the noteworthy concepts in sports psychology research is athletic mental energy (9-11). Mental energy contributes to the self-confidence, focus, and strong performance of the athletes (11). In this context, athletic mental energy, which stands out as a noteworthy concept for sportive performance, was defined by Lu et al as “perception of an athlete’s current energy state” and “an athlete’s energy state perceived by the intensity of the mood characterized by motivation, confidence, and concentration” (12).

Based on this information, in this study, the concepts of effective mental energy and hope, which are effective in a long-term effort, were discussed, and the relationship between them was investigated concerning their potential roles in success in sport. In this context, it has been investigated whether the concept of hope is a predictor of athletic mental energy. It is thought that determining the predictors of athletic mental energy, which is thought as effective in success in sport despite the limited research in the literature, will contribute to the relevant literature.

Material and Methods

Participants

A total of 236 students, consisting of 80 (33.9%) women and 156 (66.1%) men, studying at the Faculty of Sport Sciences of Akdeniz University and actively continuing their sports careers, participated in the study voluntarily. The mean age of the participants was determined as 21.15 ± 1.98 .

Experimental design

In this study, the relational screening model was used to determine whether there is a relationship between variables. Studies that were conducted to examine relationships are generally referred to as relational research while studies conducted for this

purpose focus on differences between variables or tests of predictive relationships (13).

Data collection tools

“Athletic Mental Energy Scale”, “Dispositional Hope Scale” and personal information form created by the researcher were used to collect data.

Athletic mental energy scale

To determine the mental energy level of the participants, the “Athletic Mental Energy Scale” developed by Lu et al. (2018) and adapted into Turkish by Yıldız et al. (2020) was used (12,9). The scale is scored between 1 “I do not agree at all” and 6 “I completely agree” as six-points Likert type. For this study, the internal consistency coefficient was tested with Cronbach alpha (α) and determined as .88.

Dispositional hope scale

To determine the continuous hope level of the participants, the “Continuous Hope Scale” developed by Synder et al. (1998) and adapted into Turkish by Tarhan and Bacanlı (2015) was used (14,4). The scale consists of two sub-dimensions as follows; alternative ways of thinking and actuating thinking, and a total of 12 items. The scale, prepared in eight-point Likert type, is scored between 1 “Absolutely False” and 8 “Absolutely Right”. For this study, the internal consistency coefficient was tested with Cronbach alpha (α) and determined as .86.

Statistical analysis

In the scope of the research, first, Mahalanobis distances of the collected data were examined and as a result of the analysis, it was determined that the 12 items were not between +3 and -3 values. The data were analyzed with the remaining 236 people.

The normality distribution of the collected data was determined by considering the skewness and kurtosis values, and the values between ± 2 were accepted as normal distribution (15). In this direction, the correlation coefficient was used to test the relationships

between variables. In addition, stepwise regression analysis was used to determine the power of the independent variable in predicting the dependent variable. In the analyses, the variance inflation factor (VIF), which is the assumption criteria of the regression analysis, is below 10, and the tolerance value is below 0.2, thus there is no multicollinearity problem (16). In the analysis of the data, the significance was set at $p < 0.05$, and the statistical analyses were carried out using the SPSS 25.0 package program.

Results

Information on the research results is given below.

Table 1 shows the mean and standard deviations of the responses of the participants to the dispositional hope scale, sub-dimensions, and the athletic mental energy scale.

The correlation analysis between trait hope and its sub-dimensions and athletic mental energy is presented in Table 2. It was determined that there is a weak positive and significant relationship between athletic mental energy and alternative ways thinking sub-dimension, $r = .341$; $p < .001$. It was determined that the determination coefficient between the two variables is (R^2) .12, which means the common variance

between the two variables is 12%. It was determined that there is a moderate positive significant relationship between athletic mental energy and actuating thinking sub-dimension, $r = .534$; $p < .001$. The determination coefficient between these two variables is (R^2) .28, thus the common variance between the two variables is 28%. Finally, there is a moderately positive significant relationship between athletic mental energy and dispositional hope total score, $r = .477$; $p < .001$. The determination coefficient (R^2) between two variables is .23, so the common variance between the two variables is 23% (17).

According to the stepwise regression analysis results in Table 3, it is seen that the actuating thinking sub-dimension significantly predicted athletic mental energy and explained approximately 29% of the variance, ($R = .534$, $R^2 = .286$). The standardized regression coefficient was found to be (β) .534.

Discussion and conclusion

Within the scope of this research, it was examined whether the hope levels of the athletes, who are studying at the Faculty of Sport Sciences and continuing their active sports careers, predicted their athletic mental energy levels. In this context, determining

Table 1. Means of the responses to the scales

Sub-Dimensions	Mean	Std. D
Alternative Ways Thinking Dimension	27.42	3.79
Actuating Thinking Dimension	26.16	3.33
Dispositional Hope Scale Total Score	53.59	6.44
Athletic Mental Energy Scale Total Score	76,01	13,37

Table 2. Correlation analysis results between continuous hope and athletic mental energy levels.

Sub-Dimensions		Alternative Ways Thinking Dimension	Actuating Thinking Dimension	Athletic Mental Energy Scale
Athletic Mental Energy	r	.341**	.534**	.477**
	p	<,001	<,001	<,001

$p < 0.05^{**}$

Table 3. Regression analysis results regarding the prediction of dispositional hope scale on athletic mental energy

Variables	B	Beta	t	R	R ²	Adjusted R ²	F	p
Constant	19,990		3,423					
Actuating Thinking Dimension	2,141	,534	9,671	,534	,286	,282	93,523	,001

p<0.05*

whether the concept of dispositional hope is a predictor of athletic mental energy constitutes the main purpose of this study. The correlation coefficient was first used to determine the relationship between these two variables. As a result, it was found that there was a moderately positive significant relationship between athletic mental energy and alternative ways thinking with the total scores of weak level, actuating thinking, and dispositional hope. Moreover, according to the results of stepwise regression analysis, the actuating thinking sub-dimension of the continuous hope scale significantly predicted athletic mental energy.

Actuating thinking is the motivating element of the theory of permanent hope. It is explained as the perception of people to act and continue working in order to reach the desired goal. Furthermore, mental energy is defined as the ability to think long-term and prevent distractions (18). Based on these definitions taken into consideration, it is thought that hope and athletic mental energy have common points, and the hypothesis "Hope is a predictor of athletic mental energy" is put forward. Theoretically, the fact that both concepts are explained by the effects of continuing, activating, and maintaining the movement has been a factor in the formation of the research hypothesis. The findings obtained also supported this hypothesis.

Several studies have been conducted on hope from different perspectives in the relevant literature. Miller (2007) studied motivation levels and found that hope increases motivation levels (19). Moreover, regarding well-being, Tsukasa and Snyder (2005) determined that hope increases well-being (20). Similarly, Kocaman (2019) examined the relationship between hope and psychological well-being and reported that there is a positive relationship between the two concepts (21). Gallagher and Lopez (2007) argued in their research that the existence of well-being depends on the existence of hope (22). Furthermore, Bailey and Snyder (2007) examined life satisfaction and hope level, and

hope was found to increase life satisfaction (23). Similarly, Cole (2008) found a relationship between hope and life satisfaction and well-being in the research on university students (24). Frankl (2000) found that hope has effects on mental and physical health (25). Atik (2017) reported in his research that hope predicts academic self-efficacy (26). Akçay (2011) stated that individuals with a high level of hope can be motivated and motivated to achieve their goals (27). Findıklı (2013) stated that individuals with high hope levels are more successful in working life than individuals with low hope levels (28).

The effect of hope in sports has also been examined in several studies from different perspectives (e.g., age, class, gender) (29,30). Ulukan (2020) examined the continuous hope level differences between students who do sports and those who do not and reported that individuals who do sports have higher levels of continuous hope than those who do not (30). Bahadır et al. (2020) examined the effect of personality traits of students of the department of recreation on their hope levels and found that personality traits significantly predicted their hope levels (31).

Apart from hope, evidence has also been provided for the effect of athletic mental energy on success in sport (10-12). However, this research was conducted with the evaluation that there is a need for further studies to understand athletic mental energy in depth (32), and it was determined in our research findings that hope is a predictor of athletic mental energy. These results, encountered in the literature, formed the basis for our prediction. In this context, considering the effects of hope on motivation, it was thought that there would be a parallel relationship between athletic mental energy, which includes the motivation dimension, and hope. Our research results also supported this idea. In addition, athletic mental energy has a negative relationship with life stress and burnout (33). It has also been reported that athletic mental energy can be used to regulate the

relationship between stress and burnout (33). On the other hand, there are studies conducted by Yıldız et al. (2020) and İlhan (2020) showing that athletic mental energy is related to eating habits too (32,34).

As a result, it was determined that the concepts of athletic mental energy and hope, which are thought to affect on achieving success in sport, are interrelated. One of the predictors of athletic mental energy was found to be actuating thinking, one of the continuous hope sub-dimensions. It is thought that both athletic mental energy and hope levels have a direct effect on the performance of athletes because they are the driving force for activating and continuing the movement. It was examined and stated that individuals with a high level of hope are more successful in many fields. In addition, in the research, it has been stated that while hope is a source of motivation in achieving goals, a physically and mentally healthy life is an important aspect of health that contributes to overcoming negative events associated with life (8,35,36). In this context, hope levels are important for athletes to be more successful in their competition, training, and daily life.

Recommendations for future research are as follows.

- Other predictors of athletic mental energy are better to be determined in further research.
- It is considered important to examine the factors that affect the hope levels of athletes.
- It is thought to be important to examine the relationships between other psychological factors and hope and athletic mental energy.
- Different participants with different characteristics could be another focus of interest for further research.

Conflicts of interest: The authors declare that there is no conflict of interest about this manuscript.

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