

The Examination of the Relationship Between Stress Coping and Problem-Solving Skills of Physical Education Teachers

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Abstract

This study aimed to investigate the relationship between coping with stress and problem-solving abilities among physical education teachers. The research sample comprised 64 female and 89 male physical education teachers, totaling 153 individuals, employed in schools under the Ministry of National Education in Mardin. Data collection instruments included a personal information form developed by the researcher, the Coping with Stress Scale developed by Türküm (2002), and the Problem Solving Inventory developed by Heppner and Peterson (1982) and adapted into Turkish by Şahin, Şahin, and Heppner (1993). Statistical analyses involved testing for variance and homogeneity, employing independent t-tests for pairwise comparisons, One-Way ANOVA for multiple comparisons, and conducting Correlate analysis to determine relationships. Results revealed no significant differences in mean scores for coping with stress or problem-solving skills among physical education teachers based on gender, school type, or years of service in the profession. However, a positive low-level relationship was identified between the coping with stress scores and problem-solving scores of the physical education teachers. In summary, the study revealed notably high mean scores for both coping with stress and problem-solving skills among physical education teachers, suggesting their adeptness at managing stressors and addressing challenges effectively. Additionally, it is postulated that physical education teachers who exhibit effective stress coping mechanisms are also proficient in resolving encountered problems.

Keywords: Physical education teacher, stress, problem solving.

Beden Eğitimi Öğretmenlerinin Stresle Başa Çıkma ve Problem Çözme Becerileri Arasındaki İlişkinin İncelenmesi

Özet

Bu çalışma ile beden eğitimi öğretmenlerinin stresle başa çıkma ve problem çözme becerileri arasındaki ilişkinin incelenmesi amaçlanmıştır. Araştırmanın örneklemini Mardin'de Milli Eğitim Bakanlığına bağlı okullarda görev yapan 64 kadın 89 erkek toplam 153 beden eğitimi öğretmeninden oluşmaktadır. Veri toplama araçları olarak araştırmacı tarafından oluşturulan kişisel bilgi formu, Türküm, (2002) tarafından geliştirilen Stresle Başa Çıkma Ölçeği ve Heppner ve Peterson (1982) tarafından geliştirilen, Türkçeye uyarlaması ise Şahin, Şahin ve Heppner (1993) tarafından yapılan Problem Çözme Envanteri, kullanılmıştır. Elde edilen verilerin varyans ve homojenlikleri test edilmiş, ikili karşılaştırmalarda Independent t testi, çoklu karşılaştırmalarda One Vay Anova ve ilişki tespit etmede Correlate analizi yapılmıştır. Yapılan analizler sonucunda beden eğitimi öğretmenlerinin cinsiyet, okul türü ve meslekteki görev sürelerine bağlı olarak hem stresle başa çıkma hem de problem çözme puan ortalamalarında anlamlı farklılık tespit edilmemiştir. Ancak beden eğitimi öğretmenlerinin stresle başa çıkma puanları ve problem çözme puanları arasında pozitif yönlü düşük düzeyde bir ilişki tespit edilmiştir. Sonuç olarak; beden eğitimi öğretmenlerinin hem stresle başa çıkma hem de problem çözme puan ortalamalarının çok yüksek olduğu görülmüştür. Bu da beden eğitimi öğretmenlerinin stresle baş edebildikleri ve bir problem durumunda problemin üstesinden gelebildiklerine işaret etmektedir. Ayrıca stres ile baş edebilen beden eğitimi öğretmenlerin karşılaştıkları problemleri de çözebilecekleri düşünülmektedir.

Anahtar Kelime: Beden eğitimi öğretmeni, stres, problem çözme.

INTRODUCTION

In modern times, the term "stress" has been examined under a broad and comprehensive scope. In fact, some psychologists have endeavored to answer the question "what stress is not" by exploring the definition of stress itself. Due to the diverse usage of the term "stress," it has been investigated in two separate directions. Firstly, it encompasses the state when the balance mechanism of the organism is disrupted when faced with factors and situations encountered during moments of danger. Secondly, another interpretation refers to all factors within the organism's environment that could disrupt its balance (6).

Coping with stress, also referred to as coping or adaptation, encompasses all emotional and behavioral responses exhibited with the purpose of reducing or eliminating the emotional tension evoked by constructive stressors and enduring such tension. This concept has been elucidated as the ways individuals cope with difficulties encountered in their lives (22). Scientists have examined coping with stress from various perspectives. According to Baltaş and Baltaş (2013), coping with stress involves efforts aimed at bringing oneself into a more favorable situation by controlling behaviors and momentary situations in circumstances perceived as threatening in daily life. Dressler (1980), on the other hand, defines coping with stress as the entirety of behavioral and cognitive efforts exhibited to tolerate, avoid, or change stressors and their sources. According to Lazarus (1993), coping with stress entails continuously changing behavioral or cognitive efforts aimed at reducing, controlling, or tolerating perceived stressful behaviors and conflicts with personal resources, as well as specific external and internal demands.

Problem can be defined as the difficulties and obstacles encountered by societies or individuals within them in their pursuit of goals and success (3). Problem-solving, on the other hand, is the process of developing skills to solve the problem or controlling the problem as a result of understanding it. With the help of knowledge, individuals consciously solve the problem as part of decision-making, experiencing the values of the experience and using the skills they have gained (4). However, this process has been perceived more as a coping process rather than a decision-making mechanism (19). From a different perspective, the concept of problem can be defined as a mental distress or confusion experienced by an individual in achieving their goal or encountering obstacles, perceived as a gap between the desired and existing situation. However, Problem Solving is defined as an emotional, cognitive, and behavioral process aimed at overcoming obstacles, complications, and coping with stress (34). Problem Solving is a kind of mental activity for individuals. These include decision-making and creative and critical thinking activities (11).

Coping with stress is defined as efforts by an individual to control the situation and behavioral patterns in order to improve themselves when they perceive a situation as threatening to their life. This study is designed with the intention of revealing how physical education teachers cope with stress and their level of

problem-solving ability. It is believed that this study will contribute to the literature by determining whether the coping with stress and problem-solving skills of physical education teachers vary according to age, gender, and years of experience in the profession.

METHOD

In this study, a survey model, which is a quantitative research method, has been utilized. Survey models aim to describe a past or present situation as it is, without attempting to change it. The phenomenon under investigation, whether it is an individual or an object, is defined as it is (23).

Population and Sample

The population of our study consists of physical education teachers working under the Ministry of National Education, while the sample comprises a total of 153 physical education teachers, including 64 females and 89 males, who are working in Mardin.

Data Collection Instruments

In our study, a Personal Information Form created by the researcher, the Coping with Stress Scale, and the Problem-Solving Inventory were utilized.

Coping with Stress Scale

The scale developed by Türküm (2002) consists of 23 items on a five-point Likert format. The scale comprises three sub-dimensions named social support, problem-focused coping, and avoidance. The Avoidance sub-dimension consists of 8 items (1,3,11,14,15,19,21,22), the Problem-Focused Coping sub-dimension consists of 8 items (2,5,6,7,8,9,12,16), and the Seeking Social Support sub-dimension consists of 7 items (4,10,13,17,18,20,23). Three items in the scale are reverse-scored (10,17,20). According to the reliability test results of the scale, the internal consistency coefficient is 0.78. As for the sub-dimensions, Seeking Social Support has a coefficient of 0.85, Problem-Focused Coping has a coefficient of 0.80, and Avoidance Coping has a coefficient of 0.65. In this study, the Cronbach's alpha value of the scale is found to be 0.74.

Problem-Solving Inventory

The Problem Solving Inventory, developed by Heppner and Peterson (1982) and adapted into Turkish by Şahin, Şahin, and Heppner (1993), consists of 35 items on a 6-point Likert scale. The response options for the 6-point Likert scale are: "I always behave this way", "I mostly behave this way", "I often behave this way", "I sometimes behave this way", "I rarely behave this way", and "I never behave this way". Responses are scored between 1 and 6. Items 9, 22, and 29 are excluded from scoring. Items 1, 2, 3, 4, 11, 13, 14, 15, 17, 21, 25, 26, 30, and 34 are reverse-scored. The score range that can be obtained from the inventory is between 32 and 192. The Cronbach's Alpha reliability coefficient of the scale was found to be .88. In our study, the Cronbach's Alpha was found to be 0.86.

Data Analysis

The data obtained were first uploaded to Microsoft Excel and then imported into the IBM SPSS 25.0 software package. Variance and homogeneity tests were conducted to ensure homogeneity, and it was determined that they were homogenous. In pairwise comparisons, independent t-tests were used, while in multiple comparisons, the One-Way ANOVA test was employed. Correlational analysis was conducted to determine relationships. A significance level of $p < 0.05$ was considered in the statistical analysis and interpretation of the data.

Additionally, permission has been obtained from the Selçuk University Faculty of Sports Sciences Research Ethics Committee (05.02.2024-E.692924).

FINDINGS

Table 1. The mean scores of coping with stress and problem-solving skills according to the gender variable

Coping with Stress						
Gender	N	%	X	Sd	T	P
Female	64	41.8	3.648	.463	-0.16	.987
Male	89	58.2	3.649	.427		
Total	153	100	3.649	.445		
Problem Solving						
Gender	N	%	X	Sd	T	P
Female	64	41.8	4.403	.764	.957	.329
Male	89	58.2	4.289	.666		
Total	153	100	4.346	.715		

As seen in Table 1, no significant difference was found in the mean scores of coping with stress based on the gender variable. Similarly, it was observed that there is no significant difference in the mean scores of problem-solving skills.

Table 2. The mean scores of coping with stress and problem-solving skills according to the type of school variable

Coping with Stress						
School	N	%	X	Sd	T	P
Middle school	64	41.8	3.593	.491	-1.267	.192
High school	89	58.2	3.688	.399		
Total	153	100	3.640	.445		
Problem Solving						
School	N	%	X	Sd	T	P
Middle school	64	41.8	4.372	.729	.519	.612
High school	89	58.2	4.311	.696		
Total	153	100	4.341	.712		

As seen in Table 2, no significant difference was found in the mean scores of coping with stress based on the type of school where the participants work. Similarly, it is observed that there is no significant difference in the mean scores of problem-solving skills.

Table 3. The mean scores of coping with stress and problem-solving skills according to the variable of years of experience in the profession

Coping with Stress						
Years of experience	N	%	X	Sd	F	p
0-5	73	47.7	3.63	.491	.624	.646
6-10	45	29.4	3.65	.392		
11-15	15	9.8	3.54	.439		
16-20	8	5.2	3.70	.278		
20 and above	12	7.8	3.80	.397		
Problem solving						
Years of experience	N	%	X	Sd	F	p
0-5	73	47.7	4.21	.671	2.197	.072
6-10	45	29.4	4.30	.702		
11-15	15	9.8	4.60	.785		
16-20	8	5.2	4.62	.832		
20 and above	12	7.8	4.67	.637		

Table 3 indicates that there is no statistically significant difference in the mean scores of coping with stress based on participants' years of service in the profession, although the mean scores were higher for those with 20 years or more of service. Similarly, no statistically significant difference was found in the mean scores of problem-solving skills, despite the higher mean scores for those with 20 years or more of service.

Table 4. The correlation between the variables of coping with stress and problem-solving

Variables	Coping with Stress	Problem Solving
Coping with Stress	-	.275**
Problem Solving	.275**	-

** Correlation is significant at the 0.01 level (2-tailed).

Table 4 illustrates a positive, albeit low, relationship between the coping with stress scores and problem-solving scores of physical education teachers ($r = 0.275$, $p = 0.01$).

DISCUSSION AND CONCLUSION

This study aimed to examine the relationship between coping with stress and problem-solving skills among physical education teachers. The statistical analyses revealed that there was no significant difference in coping with stress mean scores based on the gender variable of physical education teachers (Table 1). Additionally, it was observed that the mean scores of both female and male participants are similar and high. In the study conducted with students of physical education and sports teaching departments, it was found that coping with stress scores did not vary depending on the gender variable (30). However, the study conducted with students enrolled in departments admitting students through special talent exams reported that the coping with stress scores of females were higher than males (13). In another study, it was observed that male participants had higher scores than female participants in some sub-dimensions (15).

Another finding of our study is that there was no significant difference in problem-solving mean scores among physical education teachers based on the gender variable (Table 1). The study conducted with physical education teachers revealed that there was no significant difference in problem-solving mean scores based on the gender variable (27), which is consistent with our study. In the study involving students who engage and do not engage in sports, researchers reported no variation in problem-solving scores based on the gender variable (26). Furthermore, several studies indicated no notable discrepancy in problem-solving mean scores based on gender (31, 29, 20, 18). However, a study conducted with basketball players revealed that males exhibited higher mean scores than females (21).

Our study found that there was no significant change in coping with stress mean scores among physical education teachers based on the type of school where they work (Table 2). It is observed that coping with stress among physical education teachers working in high schools or middle schools is similar. A study conducted with physical education teachers indicated that there was no difference in coping with stress mean scores based on the type of school (17). Similarly, another study involving school counselors revealed no difference in coping with stress mean scores based on the type of school, aligning with our study (5).

Our study revealed that there was no significant change in problem-solving mean scores among physical education teachers based on the type of school where they work (Table 2). It is observed that problem-solving skills among physical education teachers working in high schools or middle schools are similar. A study conducted with teachers working in preschool education institutions found no significant difference in problem-solving skills based on the type of school (10). Similarly, another study involving preschool education teachers showed no significant difference in problem-solving skills based on the type of school, which is in line with our findings (24).

In the present study, no significant difference was found in coping with stress mean scores among physical education teachers based on their years of service in the profession (Table 3). However, it was observed that the mean scores of those with 20 years or more of service were higher than those in other groups. Literature also supports these findings, indicating no change in coping with stress mean scores of teachers

based on years of service in the profession (12). Nevertheless, some studies have suggested an increase in problem-solving skills as years of service in the profession increase (9, 8, 17).

Our study showed no significant difference in problem-solving mean scores among physical education teachers based on their years of service in the profession (Table 3). However, it is observed that the mean scores of those with 20 years or more of service are higher than those in other groups. One study conducted with teachers working in preschool education institutions reported no significant change in problem-solving mean scores based on years of service in the profession (10). Similarly, Serin (2006) obtained similar results in a study conducted with classroom teachers (28). However, Demirtaş and Dönmez (14) reported in their study that teachers with fewer years of service exhibited higher problem-solving skills.

In the current study, a positive but low-level correlation was observed between coping with stress and problem-solving skills among physical education teachers ($r = 0.275$, $p = 0.01$, Table 4). It is suggested that physical education teachers adept at managing stress may find it easier to navigate problem-solving scenarios. Conversely, a study involving taekwondo coaches (7) and another focusing on bocce athletes (1) found no significant relationship between coping with stress and problem-solving skills. Similarly, research with students in physical education teaching programs found no correlation between coping with stress sub-dimensions and problem-solving sub-dimensions (2).

In conclusion, it is evident that physical education teachers exhibit exceptionally high mean scores in both coping with stress and problem-solving. This underscores their capacity to effectively manage stress and surmount challenges encountered in their profession. Furthermore, it is hypothesized that physical education teachers who demonstrate proficiency in coping with stress are also skilled in addressing the challenges they encounter.

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