

Investigation Of University Students' Problem-Solving and Coping Skills Through Humor

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ABSTRACT

Background and Study Aim: University students often face various challenges, such as academic stress, cultural differences, and financial constraints, which can negatively affect their mental health and problem-solving abilities. Engaging in sports and using humor as a coping mechanism have been shown to enhance resilience and reduce stress levels. This study aims to examine the problem-solving and coping skills through humor of university students who engage in sports compared to those who do not. Additionally, it investigates the potential effects of gender, accommodation, and income level on these skills, contributing to the understanding of how sports and humor can support students' psychological well-being.

Material and Methods: The population of the study consists of university students, while the study group includes 492 students (170 female and 322 male) reached via Google Forms during the 2023-2024 academic year. Personal information was collected using a personal information form created by the researcher. To measure problem-solving skills, the "Problem Solving Inventory". For assessing coping skills through humor, the "Coping with Humor Scale" was employed. The collected data were analyzed using appropriate statistical techniques after testing for variance and homogeneity.

Results: The findings revealed that student athletes had more positive problem-solving skills compared to sedentary students. Additionally, women had statistically lower problem-solving and overall average scores compared to men. No statistically significant differences were observed based on factors such as school, accommodation, or income level. Regarding coping through humor, athletes exhibited more positive average scores compared to non-athletes, while no significant differences were found based on gender, income, or accommodation.

Conclusions: Based on these findings, it can be concluded that sports positively influence problem-solving and coping skills through humor. Women demonstrated higher problem-solving confidence than men, while other socio-demographic factors did not significantly affect problem-solving or coping skills through humor.

Keywords: University student, Athlete, Sedentary, Problem-solving, Humor.

1. INTRODUCTION

University students face various challenges, including academic issues, cultural differences, accommodation, nutrition, and orientation. It has been reported that university students experience high levels of anxiety and stress (9) and may encounter psychological problems while trying to solve these issues (15). Rickwood et al. (55) state that if students lack the ability to cope with difficulties, they may feel powerless and experience physical and psychological problems. Sports activities allow university students to take a break from their intense academic lives and relax. Such activities can help reduce stress levels and maintain mental health.

Gülşen (30) emphasizes that the problems individuals face can sometimes be solved through simple actions, sometimes through intense thinking, and sometimes through their existing skills. Additionally, the psychological state and performance of athletes are closely related to their problem-solving abilities. Literature suggests that regular exercise improves an individual's quality of life, enhances bodily functions, and reduces resistance to fatigue (43). Bauman (8) states that sports serve as a common ground for different cultures and societies. Sports provide a foundation for the development of democratic personalities and allow athletes to feel free and comfortable. Individuals with increased self-confidence can more easily cope with potential problems.

Güneş (31) notes that when individuals face the same problems, some can quickly find successful solutions, while others may struggle to find effective solutions despite prolonged efforts. This indicates that individuals' problem-solving abilities and strategies vary. Problem-solving skills are a significant factor that directly affects individuals' ability to cope with challenges. Senemoğlu (62) reports that problem-solving skills enable individuals to act effectively in complex and uncertain

situations, making their lives easier and more productive. Kalaycı (35) emphasizes that problem-solving skills encompass various activities and that teaching cognitive, affective, and psychomotor activities is essential for developing these skills. These activities help individuals improve their problem-solving processes, gain different perspectives, and enhance their ability to cope with various situations.

Freud (26) suggests that the increase in disturbing and anxiety-inducing internal stimuli can be halted through the defense mechanism of humor. Abel (1) highlights the importance of generating cognitive solutions to negative experiences and reducing the adverse effects of threats. Martin (49) states that while humor appears beneficial for mental health, its negative use can be harmful, making humor a complex phenomenon involving cognitive, emotional, behavioral, psychological, and social aspects. Rein and Rein (54) describe two types of humor: "good humor," which affirms life, avoids demeaning differences, and leaves both parties with positive feelings, and "bad humor," which aims to demean, mock differences, and use hurtful language.

Sanders (57) notes that approaching problems with laughter is a natural defense mechanism. Liu (46) reports that humor not only serves social purposes but also empowers individuals to cope with stress. Smith et al. (65) emphasize the importance of research on humor use and problem-solving through humor. Martin et al. (48) found that individuals with a high sense of humor cope more easily with stress and negative situations and are more successful in social relationships. Individuals with a strong sense of humor can quickly perceive and identify humorous aspects in their experiences (56). Additionally, students with higher humor scores exhibit fewer depressive symptoms compared to those with lower scores (40). Lefcourt and Martin (44) state that university students' use of humor allows them to reinterpret events, focusing on more amusing and lighthearted aspects. This helps students cope with stress while enabling them to approach situations from a different perspective. Affective processes influence an individual's motivation and emotional state, while cognitive processes facilitate the planning and evaluation of actions.

Students' ability to generate solutions to problems depends not only on their knowledge and skills but also on their determination during the problem-solving process. Finding the right solution and acting in a solution-oriented manner can be challenging in a tense and unproductive environment. This study, which examines the impact of sports on university students' problem-solving and coping skills through humor, is expected to contribute to the limited literature in this field and inspire further research in different contexts and dimensions.

2. MATERIALS AND METHODS

Participants. The study aims to examine the problem-solving skills of university students who engage in sports and those who do not. The population consists of university students, and the study group includes 492 students (170 female and 322 male) enrolled in universities during the 2023-2024 academic year.

Data Collection

Personal data were collected using a personal information form created by the researcher. To measure problem-solving skills, the "Problem Solving Inventory" (PSI-A) developed by Heppner and Peterson (32) and adapted into Turkish by Şahin et al. (68) was used. For assessing coping skills through humor, the "Coping Humor Scale" (CHS), developed by Martin (47) and adapted into Turkish by Yerlikaya (74), was employed.

Problem Solving Inventory (PSI-A)

This tool evaluates individuals' perceptions of their problem-solving behaviors and approaches. The scale consists of 35 items on a 6-point Likert scale, where "1" indicates strong agreement and "6" indicates strong disagreement. The lowest possible score is 32, and the highest is 192. The scale has three sub-dimensions: problem-solving confidence (PSC), approach-avoidance style (AAS), and personal control (PC). The Turkish adaptation, validity, and reliability studies of the scale were conducted by Taylan (69).

Coping Humor Scale (CHS)

This scale consists of 7 items and measures the use of humor as a coping strategy in stressful situations (47). It uses a 4-point Likert scale, with total scores ranging from 7 to 28. Higher scores indicate greater use of humor as a coping strategy. The Cronbach's alpha coefficients for the scale range between .60 and .70 in various studies. The internal consistency reliability of the Turkish version was found to be .67 (74).

Statistical Analysis

The data collected through the scales were classified and grouped. Analyses were conducted using SPSS 25.0 software. Descriptive statistics were performed, and homogeneity tests were conducted. Independent samples t-tests were used for pairwise comparisons, and one-way ANOVA tests were used for multiple comparisons.

Linguistic revisions were conducted in collaboration with an artificial intelligence (AI) language model. The manuscript underwent automated linguistic analysis and revisions using the AI tool to ensure linguistic appropriateness. This process involved examining various linguistic aspects, including grammar and syntax, with the assistance of ChatGPT 3.5. The

revisions were integrated into the manuscript to enhance its clarity and coherence.

3. RESULTS

Table 1. Differences in problem-solving dimensions between university students who engage in sports and those who do not.

Status	n	Problem-Solving Confidence		Approach-Avoidance		Personal Control		Overall Problem-Solving		Coping Through Humor	
		x	Sd	x	Sd	x	Sd	x	Sd	x	Sd
Athlete	266	3,22	0,43	3,45	0,46	3,38	0,49	3,33	0,25	2,95	0,33
Non-athlete	226	3,26	0,40	3,58	0,49	3,69	0,63	3,41	0,25	2,82	0,33
Total	492	3,23	0,42	3,51	0,48	3,52	0,58	3,36	0,25	2,89	0,33
t		-1,106		-2,852		-5,996		-3,439		4,54	
p		,266		,004 *		,000 *		,001 *		,000 *	

p<0.05, * Statistical differences

As can be seen in Table 1, no statistically significant difference was observed in problem-solving confidence values between athletes and sedentary students. However, significant differences were found in approach-avoidance, personal control, and overall average values (p<0.05). When examining coping skills through humor, athletes were found to have statistically higher values compared to sedentary students (p<0.05).

Table 2. Differences in problem-solving dimensions based on gender.

Gender	n	Problem-Solving Confidence		Approach-Avoidance		Personal Control		Overall Problem-Solving		Coping Through Humor	
		x	Sd	x	Sd	x	Sd	x	Sd	x	Sd
Female	170	3,15	0,39	3,49	0,47	3,58	0,58	3,33	0,24	2,86	,309
Male	322	3,28	0,43	3,52	0,49	3,49	0,58	3,38	0,26	2,91	,350
t		-3,172		-,720		1,513		-2,008		1,590	
p		,001 *		,466		,130		,040 *		,11	

p<0.05, * Statistical differences

As shown in Table 2, no statistically significant differences were observed in approach-avoidance, personal control, and coping skills through humor based on gender. However, significant differences were found in problem-solving confidence and overall problem-solving values (p<0.05).

Table 3. Differences in problem-solving dimensions based on accommodation and income level factors.

	n	Problem-Solving Confidence		Approach-Avoidance		Personal Control		Overall Problem-Solving		Coping Through Humor	
		x	Sd	x	Sd	x	Sd	x	Sd	x	Sd
Family/Relative	155	3,19	0,40	3,47	0,47	3,55	0,55	3,34	0,26	2,88	,35
Dorm	138	3,22	0,42	3,50	0,51	3,51	0,58	3,36	0,26	2,89	,33

House	199	3,29	0,43	3,54	0,47	3,51	0,60	3,38	0,24	2,89	,32
F		2,681		,838		,194		1,601		,050	
p		,070		,433		,824		,203		,951	
Low	98	3,26	0,35	3,52	0,49	3,42	0,57	3,34	0,23	2,92	,35
Moderate	215	3,23	0,44	3,53	0,49	3,56	0,57	3,38	0,26	2,88	,33
High	179	3,23	0,43	3,48	0,46	3,54	0,59	3,37	0,25	2,88	,32
F		,293		,648		1,976		,855		,512	
p		,746		,524		,140		,426		,600	

As seen in Table 3, no statistically significant differences were observed in problem-solving or coping skills through humor based on accommodation place or income level.

4. DISCUSSION

In the study aimed at examining the problem-solving and coping skills through humor of university students who engage in sports and those who do not, no statistically significant difference was observed in problem-solving confidence values between athletes and sedentary students. However, significant differences were found in approach-avoidance, personal control, and overall average values (Table 1; $p < 0.05$). Additionally, athletes were found to have statistically higher values in coping skills through humor compared to sedentary students (Table 1; $p < 0.05$).

Mirzeoğlu et al. (51) reported that students who engage in licensed sports have higher problem-solving skills compared to non-athletes. Yılmaz (76) found that students who engage in sports and have more years of athletic experience exhibit more positive problem-solving skills. Numerous studies in the literature support the positive impact of sports on problem-solving skills (5, 6, 10, 13, 41, 42). The positive values observed in athletes' problem-solving dimensions compared to sedentary students align with the literature. Fletcher and Dowell (25) found that individuals who engage in sports are more aggressive, dominant, confident, and emotionally balanced compared to non-athletes. Selçuk and Aydos (61) reported that endurance exercises shape personality, contributing to the development of resilient, determined, and ambitious individuals. Sports have been shown to enhance self-esteem (20), provide social support and socialization (66), improve academic performance (60), and promote adaptability (52).

Hester (33) stated that the use of humor increases individual and team productivity. Berk (11) noted that humor reduces anxiety, stress, tension, and depression in athletes, enhancing self-esteem and renewing emotional energy. Burke (12) reported that athletes' sense of humor promotes positive emotions and behaviors, while Sullivan (67) emphasized that humor improves communication, harmony, and is an effective way to cope with problems. The findings of our study, which show that athletes have more positive problem-solving and coping skills through humor compared to sedentary students, are consistent with the literature.

When examining the values for males and females in this study, no statistically significant difference was observed in coping skills through humor. However, significant differences were found in problem-solving confidence and overall problem-solving dimension values (Table 2; $p < 0.05$). Some studies align with our findings (16, 24, 28, 37, 42, 53, 64, 73), while others report that males have more positive values (39, 72, 29, 38). Some studies found no gender differences (23, 18, 27, 19, 34), indicating a heterogeneous structure in the literature. These variations may be due to differences in the timing, scope, and dimensions of the studies. There are limited studies on gender differences in coping through humor. Studies reporting no gender differences in humor styles (3, 77) align with our findings. In a study on university students' humor styles, males were found to use humor more in communication and exhibit more aggressive attitudes compared to females (2). Sayar (59) reported gender differences in humor, hopelessness, and submissive behaviors among university students. The lack of gender differences in our study may be explained by the fact that coping through humor is more of a personal variable rather than being influenced by a single factor. Additionally, the high and similar values for coping through humor in both genders may be attributed to cultural factors and the convergence of roles and status assigned to men and women.

No statistically significant differences were observed in problem-solving dimensions or coping skills through humor based on the school attended, accommodation, or income level (Table 3). The literature includes studies reporting no changes in problem-solving skills based on sociocultural factors (76, 71, 36, 22, 4, 75, 7, 70, 73). These findings highlight the importance of social dynamics and cultural diversity in university environments.

Research on the effects of sociodemographic factors on coping skills through humor is limited. Studies reporting no differences in coping through humor based on sociodemographic factors (77; 17) align with our findings. While sociodemographic factors define our living spaces and boundaries, they did not create any significant changes in problem-solving or coping skills through humor in this study. What matters is creating an environment and atmosphere where university students can effectively and logically solve the problems they encounter. According to Dozois et al. (21), aggression can manifest as physical actions, verbal activities, or humor. Through sports and humorous approaches, individuals who can generate different and valid solutions to problems can develop positive emotions and behaviors. May (50) emphasizes that the role of humor in coping helps individuals gain perspective on their problems by distancing themselves from them. Using humor to escape stressful or difficult situations (45), develop more positive, resilient, and social relationships (14), and find solutions through jokes and humor (74) is possible.

5. CONCLUSION

Based on the findings of this study, it can be concluded that sports positively influence problem-solving and coping skills through humor, women have higher problem-solving confidence than men, and other sociodemographic factors do not significantly affect problem-solving or coping skills through humor.

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