



RESEARCH ARTICLE / ARAŞTIRMA YAZISI

The Mediating Role of Anxiety in the Relationship Between Humor Coping and Secondary Traumatic Stress

İkincil Travmatik Stres ve Mizah Yoluyla Başa Çıkma Arasındaki İlişkide Kaygının Aracı Rolü

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Abstract:

This study examined the role of anxiety in mediating the relationship between humor coping and secondary traumatic stress. A predictive correlational model was employed to conduct the research. The study included 581 participants aged 18 to 65, comprising 408 females and 173 males. Data were collected using the Secondary Traumatic Stress Scale, the Humor Coping Scale, and the State-Trait Anxiety Scale. The analyses were conducted using SPSS Process Hayes Macro. The results indicated that female participants exhibited higher levels of secondary traumatic stress, state anxiety, and trait anxiety compared to male participants. However, their levels of humor coping did not differ significantly. The findings further revealed that humor coping did not have a statistically significant direct effect on secondary traumatic stress. Instead, it reduced state and trait anxiety levels, which in turn mitigated secondary traumatic stress. Additionally, trait anxiety emerged as a stronger mediating factor than state anxiety. These findings suggest that humor is an effective coping mechanism, with anxiety playing a crucial role in the process.

Keywords: Humor Coping, Secondary Traumatic Stress, State Anxiety, Trait Anxiety, Mediating Role.

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Date of Received/Geliş Tarihi: 24.06.2024, **Date of Revision/Düzeltilme Tarihi:** 19.11.2024, **Date of Acceptance/Kabul Tarihi:** 17.12.2024, **Date of Online Publication/Çevrimiçi Yayın Tarihi:** 20.03.2025

Citing/Referans Gösterimi: Saylam, A.İ., & Sapancı, A. (2025). The Mediating Role of Anxiety in the Relationship Between Humor Coping and Secondary Traumatic Stress, *Cyprus Turkish Journal of Psychiatry & Psychology* 7(1), 13-20

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Öz:

Bu çalışma, mizahla başa çıkma stratejilerinin ikincil travmatik stres üzerindeki etkisinde kaygının aracı rolünü incelemektedir. Araştırma, yordayıcı korelasyonel model kullanılarak yürütülmüştür. Çalışmaya 18-65 yaş aralığındaki 581 kişi katılmış olup, bunların 408'i kadın ve 173'ü erkektir. Veriler, İkincil Travmatik Stres Ölçeği, Mizahla Başa Çıkma Ölçeği ve Durumluk-Sürekli Kaygı Ölçeği kullanılarak toplanmıştır. Veri analizinde SPSS Process Hayes Macro kullanılmıştır. Çalışmanın sonuçları, kadınların ikincil travmatik stres, durumluk kaygı ve sürekli kaygı düzeylerinin erkeklere göre daha yüksek olduğunu, ancak mizahla başa çıkma düzeylerinde anlamlı bir cinsiyet farkı bulunmadığını göstermektedir. Araştırmanın aracılıkla ilgili bulguları, mizahla başa çıkmanın ikincil travmatik stres üzerinde doğrudan anlamlı bir etkisi olmadığını, ancak durumluk ve sürekli kaygı düzeylerini azaltarak ikincil travmatik stresi dolaylı olarak azalttığını ortaya koymaktadır. Ayrıca, sürekli kaygının, durumluk kaygıya kıyasla daha güçlü bir aracı değişken olduğu bulunmuştur.

Anahtar Kelimeler: Mizahla Başa Çıkma, İkincil Travmatik Stres, Durumluk Kaygı, Sürekli Kaygı, Aracılık Rolü.

Introduction

Traumatic life events have been extensively studied for their significant psychological consequences. Experiencing or witnessing such events often leads to intense fear and helplessness, disrupting fundamental cognitive and emotional processes and compromising an individual's overall well-being (Herman, 1997). Secondary traumatic stress (STS) refers to the psychological impact on individuals who are indirectly exposed to trauma, either through acquiring knowledge of the event or interacting directly with primary trauma victims. These individuals may manifest symptoms akin to those directly affected, including anxiety, depression, and emotional exhaustion (American Psychiatric Association [APA], 2013; Figley, 1995). The scope of STS is broad, influencing various aspects of individuals' lives, such as interpersonal relationships, physical health, work performance, and overall quality of life (Brewin & Andrews, 2020; Bride et al., 2004; Lee et al., 2023). Given its multifaceted nature, STS necessitates a comprehensive examination of its risk factors and coping mechanisms to better understand and mitigate its far-reaching effects.

Studies directly examining the triadic relationships between secondary trauma, anxiety, and humor are limited. However, some research addresses the indirect relationships among these variables, contributing to an understanding of their interaction. Specifically, these studies investigate the effects of anxiety on secondary trauma and the stress-reducing function of humor. For instance, Benuto et al. (2022) examined the effects of anxiety on secondary traumatic stress. Their findings suggest that humor, as a coping strategy, may reduce anxiety and serve as a mediating factor in alleviating the psychological impacts of traumatic events. Similarly, Shoji et al. (2021) highlighted that high levels of anxiety increase susceptibility to secondary traumatic stress. They also emphasized that coping strategies, such as humor, hold the potential for reducing this susceptibility. Kuiper and McHale (2020) further demonstrated that humor reduces anxiety, playing a protective role in coping with traumatic experiences and alleviating secondary traumatic stress symptoms. However, most existing studies focus on the relationships between pairs of these variables, rather than exploring the interaction of all three within a single theoretical model.

Previous research has extensively documented risk factors associated with secondary traumatic stress, such as

empathy overload, prolonged exposure to traumatic stories, and a lack of effective coping strategies (Bercier & Maynard, 2015; Collins & Long, 2003). However, less attention has been given to the role of pre-existing emotional conditions, such as anxiety, which may predispose individuals to a heightened risk of secondary traumatic stress. Furthermore, while the effects of coping mechanisms like humor have been studied, their interaction with individual emotional traits and the potential mediating role of anxiety remain less understood. This research seeks to address these gaps by examining how pre-existing anxiety interacts with humor as a coping strategy in the development of secondary traumatic stress.

Although anxiety is often conceptualized as an outcome of STS, an alternative hypothesis proposing anxiety as a precursor to or mediator of STS offers a more comprehensive perspective on its fundamental role in the development of STS. The Stress-Sensitivity Theory supports this hypothesis by suggesting that individuals with pre-existing anxiety exhibit heightened susceptibility to negative responses when exposed to stressors, potentially amplifying the impact of secondary trauma (Fergus & Zimmerman, 2005; Rutter, 1987). According to this framework, individuals with elevated anxiety levels are more likely to interpret trauma-related stimuli as significantly threatening, thereby increasing their sensitivity to STS. This theoretical perspective is consistent with findings that suggest anxious individuals are more prone to perceive and respond to environmental stressors with intense distress, predisposing them to stronger STS responses (Shoji et al., 2021; Uzbay, 2002).

Recent research has highlighted the importance of individual differences in emotional reactivity as a key factor in assessing vulnerability to STS. For instance, Shoji et al. (2021) demonstrated that individuals with high levels of trait anxiety reported significantly greater STS levels following indirect trauma exposure compared to those with lower anxiety levels. Similarly, earlier research by Yehuda et al. (2004) emphasized that pre-existing anxiety serves as a critical determinant in the emergence of trauma-related symptoms. These findings support the notion that anxiety functions not merely as a consequence of STS but as a dynamic factor that exacerbates the risk of developing STS symptoms in response to secondary trauma.

This study adopts a novel approach by examining the interrelations among STS, anxiety, and humor within a unified theoretical model, emphasizing the mediating role of anxiety in this relationship. By demonstrating that anxiety operates not only as an outcome but also as a dynamic and influential factor shaping STS, this study underscores its mediating role in the relationship between humor and STS. Furthermore, the application of the Stress-Sensitivity Theory provides a robust framework for exploring the interaction between anxiety, STS, and the buffering effects of humor. In doing so, the research offers a unique contribution to the literature by holistically addressing the role of humor and anxiety in coping with STS, with significant implications for clinical intervention strategies.

The Mediating Role of Anxiety in the Relationship Between Humor and STS

To deepen the analysis of secondary STS, this study examines the mediating role of anxiety, supported by the theoretical framework of stress-sensitivity models. These models suggest that individuals' baseline levels of anxiety significantly influence how they perceive and respond to secondary traumatic stress (Benuto et al., 2022; Shoji et al., 2021). By positioning anxiety as a mediator, this study highlights the notion that heightened sensitivity to stress can disrupt coping mechanisms, such as humor, potentially diminishing their effectiveness in managing STS. Humor, as a coping strategy, enables individuals to create emotional distance from distressing stimuli, thereby reducing perceived threat and anxiety (Ford & McCreight, 2021; Kuiper & McHale, 2020;). However, when anxiety levels are elevated, this distancing effect may become less effective, weakening humor's capacity to act as a buffer against STS.

Previous research has predominantly focused on humor as an effective coping mechanism, consistently demonstrating its ability to alleviate stress and enhance psychological well-being (Lefcourt & Martin, 1986; Martin, 2001). However, limited studies have explored the interaction between humor and pre-existing psychological conditions, such as anxiety, in mitigating STS symptoms. The current study builds upon the findings of Benuto et al. (2022), who emphasized the significant impact of individual emotional states on the efficacy of humor-based coping strategies. Specifically, this study investigates whether anxiety diminishes the buffering effect of humor on STS, providing a more nuanced understanding of the interplay between these variables.

The Use of Humor as a Coping Strategy

Humor has long been recognized as a powerful tool for managing stress and psychological distress. In the context of STS, humor enables individuals to create emotional distance from distressing experiences, allowing them to view these situations from a less threatening perspective. This process, known as secondary appraisal, facilitates a more constructive response to stress (Abel, 2002; Lefcourt et al., 1995). Historically, humor has been regarded as an essential element in promoting psychological resilience, particularly in its capacity to support emotional regulation and foster social connection. Contemporary research further indicates that humor reduces anxiety by reframing traumatic situations and diminishing perceived threats (Ford & McCreight, 2021; Kuiper & McHale, 2020). For individuals experiencing STS, humor provides a means to

reinterpret traumatic memories and alleviate anxiety, ultimately enhancing their ability to cope effectively.

Recent meta-analyses have further emphasized the value of humor in trauma-related contexts. For instance, Schneider et al. (2021) conducted a meta-analysis demonstrating that humor-based interventions significantly reduced symptoms of anxiety and depression in populations exposed to trauma. Additionally, Ford and McCreight (2021) highlighted that humor not only aids in emotional regulation but also facilitates social bonding, which is crucial for trauma recovery. However, the interaction between humor and individual factors such as anxiety remains underexplored, highlighting the need for further investigation into how these variables collectively influence STS outcomes.

Psychological Effects of Secondary Traumatic Stress

The psychological consequences of indirect exposure to trauma are profound, with research indicating that symptoms may persist long-term, adversely affecting social relationships, professional life, and overall well-being (Branson & Baer, 2022; Bride et al., 2004). Individuals experiencing STS often report symptoms similar to those observed in primary trauma victims, including posttraumatic stress disorder (PTSD), chronic anxiety, depression, and burnout (Cieslak et al., 2021). Additionally, STS can disrupt interpersonal dynamics, as affected individuals may face challenges in maintaining social connections and achieving a satisfactory quality of life. Within this broader context, humor has been identified as a potential buffering mechanism. Studies suggest that humor can mitigate the negative psychological effects of STS, particularly by reducing anxiety and facilitating more adaptive emotional responses (Benuto et al., 2022; Shoji et al., 2021).

In this context, while prior research has separately examined the effects of humor and anxiety on trauma-related outcomes, this study offers a novel contribution by concurrently investigating the relationship among STS, humor, and anxiety within a unified theoretical framework. Unlike earlier studies that primarily focused on the direct effects of humor or anxiety on trauma symptoms, this research positions anxiety as a mediating factor that may significantly influence the impact of humor on STS. By examining the mediating role of anxiety, this study seeks to uncover a potentially unique pathway for managing the complex psychological effects associated with secondary traumatic experiences, thereby advancing the understanding of adaptive coping mechanisms.

Furthermore, this study differentiates itself from previous research by integrating the Stress-Sensitivity Theory with humor-based coping strategies. This comprehensive approach highlights how individual differences in anxiety levels influence vulnerability to STS. Building upon foundational work by Fergus and Zimmerman (2005) and expanding on the empirical findings of Shoji et al. (2021) and Benuto et al. (2022), the study aims to elucidate the complex interplay between anxiety, humor, and STS. The findings are expected to provide actionable insights for developing mental health interventions targeted at individuals exposed to secondary trauma. Based on this theoretical framework, the following hypotheses have been formulated to guide the study:

H1: As the use of humor increases, the level of anxiety decreases.

H2: As the level of anxiety decreases, the level of secondary traumatic stress decreases.

H3: As the use of humor increases, the level of secondary traumatic stress decreases.

H4: The effect of humor use on the level of secondary traumatic stress occurs through reducing anxiety.

These hypotheses aim to explore the potential pathways through which humor and anxiety interact to influence secondary traumatic stress, thereby providing a deeper understanding of the mechanisms that may buffer against its psychological impact.

Method

This study examined the mediating role of anxiety in the relationship between secondary traumatic stress and humor coping using the predictive correlational model, a quantitative research method. The purpose of this model is to identify the relationships among variables and to predict the effect of one variable on another (Creswell, 2014).

Participants

A convenience sampling method was employed to select the participants of the study. Among the 581 individuals in the sample, 408 (70.22%) were female and 173 (29.78%) were male. Eighty-three (14.1%) of the participants had completed high school or lower education, 330 (56%) had associate's or bachelor's degrees, and 176 (29.9%) had master's degrees.

Data Collection Tools

Demographic Information Form

This form, developed by the researchers, was used to gather general information about participants, such as their age, gender, and education levels. The form did not include any questions related to identity information.

Secondary Traumatic Stress Scale

The STSS, developed by Bride et al. (2004), is a 17-item scale that uses a five-point Likert format to assess symptoms associated with secondary traumatic stress (STS). Participants rate each item on a scale from 1 (never) to 5 (very often), reflecting the frequency of experiences related to secondary trauma. This scale evaluates three core components: intrusion, avoidance, and arousal, which parallel primary PTSD symptoms and assess the impact of indirect exposure to trauma. The Turkish adaptation of the STSS was conducted by Kahil (2016), who reported a high internal consistency coefficient (Cronbach's alpha) of .94 for the total scale, indicating excellent reliability. In the present study, reliability was recalculated, with the Cronbach's alpha coefficient also found to be .94, confirming the consistency of responses across items.

Humor Coping Scale

The Humor Coping Scale was developed to assess the extent to which individuals use humor as a coping mechanism in response to stress (Martin, 1996; Martin & Lefcourt, 1983). Comprising 7 items, this scale uses a four-point Likert format, where responses range from 1 (almost never) to 4 (almost always), indicating the frequency with which individuals employ humor in stressful situations. The scale measures humor's role as a psychological tool to create emotional distance, reframe stressful events, and alleviate emotional distress. Yerlikaya (2009) conducted the Turkish adaptation of the scale, establishing a

reliability coefficient (Cronbach's alpha) of .67, which suggests acceptable internal consistency. In this study, reliability was recalculated, yielding a Cronbach's alpha of .77, reflecting an improved level of consistency in assessing humor as a coping strategy among Turkish participants.

State-Trait Anxiety Inventory [STAI]:

The STAI, developed by Spielberger et al. (1970), consists of two subscales: state anxiety and trait anxiety, each containing 20 items. The scale is graded on a four-point Likert scale. The Turkish adaptation was conducted by Öner and Le Comte (1983). State anxiety measures the transient feelings of anxiety and worry that an individual experiences in a specific moment or situation. This subscale focuses on how an individual feels in a particular situation and provides an assessment of how situational variables affect anxiety levels. Trait anxiety, on the other hand, measures the individual's general tendency toward anxiety, reflecting a long-term, enduring predisposition to experience anxiety. This subscale assesses how an individual generally responds to stress in daily life and how prone they are to anxiety. Internal consistency coefficients for the English version of the State Anxiety Scale range between .83 and .92, while those for the Turkish version range between .90 and .96. Internal consistency coefficients for the English version of the Trait Anxiety Scale range between .83 and .92, while those for the Turkish version range between .81 and .90. In this study, reliability was recalculated, with Cronbach's alpha coefficients found to be .94 for state anxiety and .91 for trait anxiety.

Data Collection and Analysis Procedure

The research was approved on ethical grounds by the Istanbul Arel University Scientific Research and Publication Ethics Committee on 17.02.2020, with decision number 2020/06 and protocol number E-69396709-050.01.04-160169. The study data were collected from volunteer participants online via Google Forms. Written informed consent was obtained from participants prior to data collection.

The skewness and kurtosis coefficients were used for determining the distribution of scores on the Secondary Traumatic Stress, Coping with Humor, and State-Trait Anxiety Scales. Skewness and kurtosis coefficients within the ± 1 range indicate a normal distribution of scores (Tabachnick & Fidell, 2013). In this study, the skewness values changed between 0.13 and 0.59, while the kurtosis values changed between 0.32 and 0.51, respectively. In order to investigate the mediating role of state and trait anxiety, regression analyses were conducted following confirmation that the collected data were within the normal distribution range. SPSS Process Hayes Macro (version 3.5.3) was used for regression analysis. Analyses are conducted using the bootstrap method in this macro. A confidence interval is used to determine the significance of direct and indirect effects (Shrout & Bolger, 2002). The confidence interval for the analyses was set at 95%, with $p < 0.05$ values considered significant. The analyses were conducted using the IBM SPSS 26.0 statistical software package.

Findings

A first investigation of gender differences in variables within the mediation model was conducted in this section. The findings are presented in Table 1.

Table 1. Independent Samples *t*-Test Results for Differences in the study variables by Gender

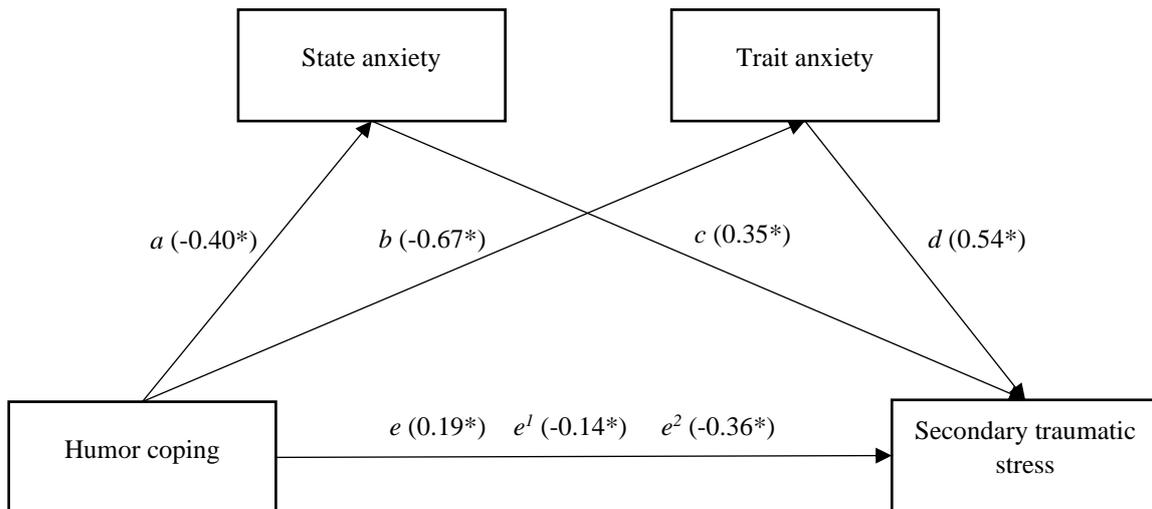
Variable	Groups	<i>n</i>	\bar{x}	<i>sd</i>	<i>df</i>	<i>t</i>	<i>p</i>	Cohen's <i>d</i>
Secondary traumatic stress	Female	408	40.44	14.98	579	2.30	.021	0.21
	Male	173	37.28	15.23				
Humor coping	Female	408	18.92	4.03	579	-0.56	.576	0.05
	Male	173	19.12	3.91				
State anxiety	Female	408	38.90	12.86	579	3.44	.000	0.31
	Male	173	34.99	11.64				
Trait anxiety	Female	408	46.41	11.42	579	5.49	.000	0.50
	Male	173	40.79	10.88				

According to the findings presented in Table 1, there is a statistically significant difference in the level of secondary traumatic stress by gender ($t_{(579)} = 2.30; p = .021$). This result means that females are more affected by secondary traumatic stress than males. The difference between the groups corresponds to a small effect size. There is no statistically significant difference in the level of humor coping between the groups ($t_{(579)} = -0.56; p = .576$). However, there is a statistically significant difference in the level of state anxiety between the groups ($t_{(579)} = 3.44; p = .000$), with females experiencing higher levels of state

anxiety than males. This difference also corresponds to a small effect size. Furthermore, there is a statistically significant difference in the level of trait anxiety between the groups ($t_{(579)} = 5.49; p = .000$), with females having higher levels of trait anxiety than males. This difference corresponds to a medium effect size.

A regression analysis was conducted to determine the mediating role of state and trait anxiety in the effect of humor coping on secondary traumatic stress. The results are shown in Figure 1.

Figure 1. The Mediating Role of Anxiety in the Relationship Between Secondary Traumatic Stress and Humor Coping



Note: Unstandardized beta values are reported.

Figure 1 presents that the direct effect of humor coping on state anxiety is negative and significant (path $a = -0.40; p = .002$, LLCI = -0.65, ULCI = -0.14). According to this finding, as the level of humor coping increases, the level of state anxiety decreases. The direct effect of humor coping on trait anxiety is also negative and significant (path $b = -0.67; p = .000$, LLCI = -0.90, ULCI = -0.44). This finding means that as the level of humor coping increases, the level of trait anxiety decreases. The direct effect of state anxiety on secondary traumatic stress is positive and significant (path $c = 0.35; p = .000$, LLCI = 0.24, ULCI = 0.46). This finding indicates that as the level of state anxiety increases, the level of secondary traumatic stress also increases. The direct effect of trait anxiety on secondary traumatic stress is positive and significant (path

$d = 0.54; p = .000$, LLCI = 0.42, ULCI = 0.66). According to this finding, as the level of trait anxiety increases, the level of secondary traumatic stress also increases. The direct effect of humor coping on secondary traumatic stress is not statistically significant (path $e = 0.19; p = .123$, LLCI = -0.05, ULCI = 0.43).

When examining the findings related to indirect effects presented in Figure 1, it is found that the indirect effect of humor coping on secondary traumatic stress through state anxiety is negative and significant (path $e1 = -0.14$; BootLLCI = -0.26, BootULCI = -0.03). This finding suggests that as the level of humor coping increases, the level of state anxiety decreases, leading to a subsequent decrease in the level of secondary traumatic stress. In other words, state anxiety plays a mediating role in the

relationship between humor coping and secondary traumatic stress. The indirect effect of humor coping on secondary traumatic stress through trait anxiety is also negative and significant (path $e_2 = -0.36$; BootLLCI = -0.53, BootULCI = -0.22). This finding indicates that as the level of humor coping increases, the level of trait anxiety decreases, resulting in a subsequent decrease in the level of secondary traumatic stress.

In light of all this information, the study's first hypothesis (H1: as the use of humor increases, the level of anxiety decreases), second hypothesis (H2: as the level of anxiety decreases, the level of secondary traumatic stress decreases), and fourth hypothesis (H4: the effect of humor use on the level of secondary traumatic stress occurs through its reduction of anxiety) are confirmed. However, the third hypothesis (H3: as the use of humor increases, the level of secondary traumatic stress decreases) is not confirmed.

Discussion

The findings of this study suggest that women are more susceptible to secondary traumatic stress, state anxiety, and trait anxiety compared to men. This observation is consistent with previous research. For instance, a systematic review by Baum (2016) indicated that women exhibit higher sensitivity to PTSD symptoms, experiencing PTSD at rates approximately 1.5 to 5 times higher than men, with an average risk nearly twice as high. Similar patterns were highlighted in studies by Farhood et al. (2016), Heir et al. (2019), and Silove et al. (2017). McLean et al. (2011) further validated these gender disparities through a comprehensive analysis of anxiety disorders among US adults. The analysis revealed significantly higher prevalence rates of various anxiety disorders in women, except for social anxiety disorder, which showed no gender differences.

The heightened levels of anxiety and traumatic stress in women may be attributed to societal expectations and gender roles. Women are often expected to display greater emotional sensitivity and empathy, which may render them more vulnerable to traumatic experiences. Additionally, caregiving and familial responsibilities, commonly assigned to women, contribute to increased stress and anxiety due to the emotional workload involved. Paradoxically, while women generally excel at seeking emotional support and forming social connections, these strengths may also lead them to shoulder others' emotional burdens, thereby exacerbating their anxiety and secondary traumatic stress.

The study found no significant gender difference in the use of humor as a coping mechanism. Literature indicates that humor is an effective coping strategy for both men and women (Abel, 2002).

Regarding the role of anxiety in humor's indirect effect on secondary traumatic stress, the findings underscore the importance of both trait and state anxiety. State anxiety, a temporary response to specific stressful situations, was found to decrease with the use of humor. Coping with humor thus mitigates immediate feelings of anxiety in stressful scenarios. In contrast, trait anxiety reflects a general predisposition to anxiety. The study suggests that humor exerts a greater effect on trait anxiety, contributing to long-term reductions in anxiety levels. This finding highlights humor's potential as a mechanism for alleviating persistent anxiety.

Although humor did not have a statistically significant direct effect on secondary traumatic stress, its indirect effect, mediated by reduced anxiety levels, was notable. The reduction of both state and trait anxiety emphasizes humor's potential to alleviate secondary traumatic stress. These findings underscore the utility of humor as an effective coping strategy, with anxiety serving as a critical mediating variable.

Humor is a sophisticated defense mechanism that helps regulate anxiety through cognitive processes (Freud, 1926). It operates through mechanisms akin to approach-based coping strategies, reframing stressors in a positive light (Stanisławski, 2019). Studies have shown that humor often coexists with other adaptive coping strategies, such as problem-solving, acceptance, and positive reframing (Gutiérrez et al., 2007; Litman, 2006; Wang et al., 2018).

Clinical research consistently demonstrates a bidirectional relationship between anxiety and traumatic stress. Following trauma, individuals frequently experience heightened anxiety levels, which intensify trauma symptoms such as hypervigilance, startle reactions, and avoidance behaviors (Turk & Rudy, 2001). This cyclical relationship emphasizes the necessity of addressing anxiety therapeutically, as reducing anxiety can correspondingly lower traumatic stress levels (Figley, 1995; Herman, 1992). The findings of this study reinforce the mediating role of anxiety and highlight the therapeutic benefits of interventions targeting anxiety.

Conclusion

This study provides critical insights into the relationship between humor, anxiety, and secondary traumatic stress. Women were found to be more vulnerable to secondary traumatic stress and anxiety, consistent with existing literature. While humor did not directly influence secondary traumatic stress, its ability to reduce both state and trait anxiety underscores its potential as an effective coping strategy. These findings emphasize the importance of addressing anxiety in therapeutic settings to mitigate trauma symptoms.

The study contributes to the understanding of humor as a multifaceted coping mechanism, emphasizing its role in anxiety regulation and its indirect effect on secondary traumatic stress. These results suggest that humor, alongside other adaptive coping strategies, can be integrated into interventions to promote psychological resilience and reduce anxiety-related trauma symptoms. Future research should explore gender-specific coping mechanisms and further investigate the nuanced effects of humor on various types of anxiety and stress.

Recommendations

Based on the findings of the research, the following recommendations can be made for practitioners and researchers:

Psychology and therapy processes can benefit from humor, especially as a coping mechanism for anxiety and stress. The use of humor in therapy sessions may help reduce individuals' anxiety levels, thereby improving their overall emotional well-being.

Future research could investigate the effects of different types of humor (e.g., self-directed humor, social humor) on anxiety and stress. Furthermore, investigating the effectiveness of humor across different demographic

groups could help determine who is most likely to benefit from this strategy.

As well as evaluating humor's effects socially and culturally, new research should be conducted on how these vary across contexts. Understanding how individuals from different cultural backgrounds perceive and use humor could be important in determining the effectiveness of this strategy.

Declarations

Ethics Committee Approval

Ethical approval was obtained from the Istanbul Arel University Scientific Research and Publication Ethics Committee, Istanbul, Türkiye (2020/06 and protocol number E-69396709-050.01.04-160169). Prior to their participation, all participants were provided with and approved informed consent forms.

Consent for Publication

Not applicable

Availability for Data and Materials

Not applicable

Competing Interests

The author declares that no competing interests in this manuscript.

Funding

Not applicable.

Authors' Contributions

AİS and AS carried out the proposal of the main idea of the research. AİS contributed to the data collection. AİS and AS performed the analyses and contributed to the interpretation of the findings. AİS and AS made a significant contribution to writing the introduction and discussion sections of the article. All authors have read and approved the final version of the article

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