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Psychological resilience, coping styles, and anxiety in young adults: A mediation analysis

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ABSTRACT

Aim: To examine the mediating role of psychological resilience between coping styles and anxiety in young adults.

Methods: The study included a total of 225 university students enrolled at Cappadocia University. All the participants completed the Sociodemographic Information Form, the Brief Coping Styles Scale (Brief-COPE), the Resilience Scale for Adults (RSA) , and the Beck Anxiety Inventory (BAI). To examine the mediating role of psychological resilience in the relationship between coping styles and anxiety, 3 separate simple mediation analyses were conducted, in each of which one coping dimension (avoidant/dysfunctional, emotion-focused, or problem-focused) served as the independent variable, anxiety as the dependent variable, and psychological resilience as the mediator.

Results: Psychological resilience partially mediated the relationship between coping styles and anxiety. Avoidant/dysfunctional coping was negatively associated with psychological resilience ($B = -0.89$, $p < 0.001$) and positively associated with anxiety ($B = 0.69$, $p < 0.001$). Both emotion-focused coping ($B = 1.01$, $p < 0.001$) and problem-focused coping ($B = 1.96$, $p < 0.001$) were positively associated with psychological resilience and indirectly contributed to lower anxiety levels ($p < 0.01$). Gender comparisons showed that female participants reported significantly higher anxiety levels than males ($t(223) = 3.26$, $p = 0.001$, $d = 0.50$), whereas no significant gender differences were found in psychological resilience ($t(223) = -0.52$, $p = 0.601$) or coping styles (all $p > 0.05$).

Conclusion: It can be said that psychological resilience acts as a protective mediating variable in the relationship between coping styles and anxiety among young adults.

Keywords: Anxiety, coping styles, psychological resilience, mediation analysis, young adults.

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1. Introduction

Young adulthood is a critical developmental period during which an individual transitions from adolescence to adulthood. During this period, significant changes occur in the individual's psychological, physical, and social life. This developmental stage, during which individuation and a sense of identity develop, also carries risks that increase vulnerability to life events and make it more difficult for young adults to cope with psychological distress [1]. According to the World Health Organization, the onset of psychiatric disorders occurs during

this period in about half of adults who develop such conditions [2]. It has also been stated that because these disorders often go undetected and untreated in early life, they develop into chronic mental health problems in adulthood [2]. Similarly, according to a comprehensive mental health profile study conducted in Turkey, a significant portion of mental illnesses, particularly anxiety and depression, emerge at an early age. Young people are one of the groups most at risk, and the severity of these problems tends to decrease with age [3]. A wide variety of psychiatric disorders, including anxiety, depression, attention-deficit/hyperactivity disorder (ADHD), and substance use disorders, emerge during young adulthood, and the prevalence of these disorders is currently increasing [1,4].

Anxiety disorders are among the most common mental health conditions among young adults both in Turkey and worldwide [1,2]. Anxiety is followed by depression and attention-deficit/hyperactivity disorder (ADHD) [5]. Symptoms of anxiety are observed at particularly high rates among young adult women [6,7]. Social media, stressful life events (childhood trauma, peer bullying, etc.), severe physical illnesses, or changes in lifestyle are considered the primary risk factors that increase anxiety symptoms in young people [8,9]. One of the factors determining the severity and course of these symptoms is the coping style employed by the individual.

Coping styles are the cognitive and behavioral strategies an individual employs in response to negative life events and stressors [10]. Numerous coping styles have been identified in the literature and classified under various categories [11]. In this study, however, coping styles were evaluated under three distinct categories: problem-focused, emotion-focused, and avoidant/dysfunctional [12,13]. Problem-focused coping focuses on the causes of stressors, emotion-focused coping focuses on the negative emotions caused by stressors, and avoidant/dysfunctional coping focuses on strategies aimed at directly avoiding stressors. Recent studies have found a positive association between emotion-focused and avoidant/dysfunctional coping styles and symptoms of anxiety and depression, while a negative association has been observed with problem-focused coping [11,14,15].

Another factor influencing young adults' mental well-being and their ability to cope with problems is psychological resilience. Broadly defined, this concept can be described as a psychological capacity that reduces an individual's biological, psychological, and social vulnerability in response to stressful and/or challenging life events and enables them to successfully adapt to new situations [16]. In young adults exposed to adverse life events, psychological resilience serves a protective function in terms of mental health [17,18,19,20,21,22]. Given the protective effect of psychological resilience on psychological symptoms, it is thought that the relationship between coping styles and anxiety can be partially explained through psychological resilience. Therefore, examining the mediating role of psychological resilience in the relationship between coping styles and anxiety is important from both theoretical and clinical perspectives.

In recent years, numerous studies in both national and international contexts have examined the relationship between psychological resilience and various psychological variables related to mental health (e.g., parenting attitudes, social support, and life stressors) [23,18]. However, to the best of our knowledge, there is a limited number of

studies that have simultaneously examined the relationships among coping styles, psychological resilience, and anxiety in a young adult sample.

There are very few studies that have investigated the mediating role of psychological resilience in this relationship. Therefore, examining the mediating role of psychological resilience in this relationship will help fill this gap in literature. As it is widely accepted that young adulthood is a critical period in terms of mental health [2,3], studies examining psychological variables that influence coping with mental health problems, such as anxiety, which are prevalent among young people, are gaining importance in literature. It is believed that these studies will contribute to the development of prevention and intervention programs for young people and the formulation of social policies.

The aim of this study was to examine the mediating role of psychological resilience in the relationship between coping styles and anxiety among young adults. The study hypothesis was that psychological resilience would serve as a mediator in the relationship between coping styles and anxiety, and specifically, that problem-focused and emotion-focused coping would be associated with higher psychological resilience and lower anxiety levels, while avoidant/dysfunctional coping would be associated with lower psychological resilience and higher anxiety levels.

2. Materials and methods

2.1. Research Design and Participant Characteristics: The study sample was formed from undergraduate and associate degree students enrolled at Cappadocia University. The data from 13 participants were excluded from the dataset because random, incomplete, and/or incorrect responses were identified during the administration of the scales. Subsequently, data obtained from a total of 225 participants, 167 (74.2%) females and 58 (25.8%) males were statistically analyzed.

The participants included were aged ≥18 years with no severe cognitive or neurodevelopmental problems. Individuals aged <18 years, those with neurological conditions such as dementia, or those with intellectual disabilities were excluded from the study. The study was designed using a cross-sectional and descriptive approach to examine the relationships among the variables.

2.2. Data Collection Instruments: The Sociodemographic Information Form, the Brief Coping Styles Scale, the Psychological Resilience Scale for Adults, and the Beck Anxiety Scale were used for data collection. To counteract the potential effect on the results of presenting the scales in a single order, the scales were not administered to each participant in the same order. Eight different orderings were created, and an equal amount of data was collected from each order.

2.3. Socio-Demographic Information Form: This form was used to assess sociodemographic characteristics, such as age, gender, family status, and income level.

2.4. Brief COPE Inventory (Brief COPE): The Brief COPE Inventory, developed by Carver et al. (1989) and later shortened by Carver (1997), is a 28-item self-report measure designed to assess coping strategies [13, 24]. The inventory uses a 4-point Likert-type scale, with responses ranging from 1 ("I haven't been doing this at all") to 4 ("I've been doing this a lot"). It consists of 14 subscales, each containing two items: Self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioral disengagement, venting, positive reframing, planning, humor, acceptance, religion, self-

blame. The scores for each subscale range from 2 to 8 [13].

The Turkish validity and reliability study of the Brief COPE Inventory was conducted by Bacanlı, Sürücü, and İlhan in 2013 [12]. In that study, Cronbach's alpha coefficients for the subscales ranged from 0.39 to 0.92, and the two-week test-retest reliability coefficients ranged from 0.44 to 0.90.

In accordance with the theoretical model of the study, the 14 subscales of the Brief COPE Inventory were grouped into three higher-order dimensions—problem-focused coping, emotion-focused coping, and avoidant/dysfunctional coping. This classification was based on the theoretical framework of problem-focused, emotion-focused, and avoidant/dysfunctional coping [13, 25]. According to this classification, active coping, positive reframing, use of instrumental support and planning. Focusing on and venting, acceptance, religion, humor and use of emotional support were grouped under emotion-focused coping. The remaining subscales of self-distraction, denial, behavioural disengagement, self-blame, substance use were grouped under avoidant/dysfunctional coping. All the mediation analyses were conducted using these three higher-order coping dimensions.

2.4.1. Resilience Scale for Adults (RSA): This scale was developed by Friborg et al. (2005) and was translated into Turkish using the five-stage translation technique proposed by Brislin et al. (1973), as applied by Basım and Çetin (2011), comprising initial translation, evaluation of the initial translation, back-translation, evaluation of the backtranslation, and expert review [26, 27]. The scale consists of 33 items in six subscales of perception of self, perception of future, structured style, social competence, family cohesion, and social resources. To avoid biased responses, each item on the scale features five response options between two extremes (positive and negative), and respondents are asked to mark the option that best reflects their feelings. Therefore, the scoring method for the scale was left open-ended. Confirmatory factor analysis revealed that the scale's six-factor structure explained 57% of the variance. The Cronbach's alpha coefficient for the Turkish version of the scale was found to be 0.86. In the test-retest reliability analysis conducted after an interval of 23 days, Pearson correlation coefficients were found to be 0.72 for self-perception, 0.75 for future perception, 0.68 for structural style, 0.78 for social competence, 0.81 for family adjustment, and 0.77 for social resources [27].

2.4.2. Beck Anxiety Inventory (BAI): The scale was developed by Beck et al. in 1988 to measure anxiety levels. It generally focuses on the physiological dimension of anxiety. Responses for each item are rated on a scale from 0 (none) to 3 (severe), to give a total score in the range of 0 to 63. The internal consistency and test-retest reliability of the original form of the scale were found to be quite good (0.92 and 0.75, respectively) [28]. The inventory was adapted into Turkish by Ulusoy, Şahin, and Erkmen in 1998. The internal consistency of the Turkish version was also found to be quite high (0.93) [29].

2.4.3. Data Collection Process: Approval for the study was granted by the Scientific Research and Publication Ethics Committee of Cappadocia University on January 4, 2019 (Decision No. 3). Data were then collected from students enrolled in undergraduate and associate degree programs at Cappadocia University, beginning on January 4, 2019, immediately following ethical approval, and continued to February 15, 2020. Students were informed about the study before the

questionnaire was administered. Students were also informed that their participation was voluntary and that their responses would remain confidential. Each participating student signed an informed consent form, thereby declaring their voluntary participation in the study. To ensure that responses were not biased in any way, the questionnaire was distributed to each student in a sealed envelope and collected in the same manner.

2.5. Data Analysis: The data obtained from the study were analyzed using IBM SPSS Statistics 27 [30]. In line with the primary objective of the study, mediation analyses were conducted to examine the mediating role of psychological resilience in the relationship between coping styles and anxiety. In this context, the variables "avoidant/dysfunctional coping," "emotion-focused coping," and "problem-focused coping" were included in the model as independent variables; anxiety as the dependent variable; and psychological resilience as the mediating variable. Mediation analyses were conducted using Hayes' PROCESS Macro (Model 4) [31]. In the analyses, the mediating role of psychological resilience was tested separately for each coping style. Accordingly, the effect of coping styles on psychological resilience was examined first, followed by the effect of psychological resilience on anxiety. Subsequently, the total, direct, and indirect effects of coping styles on anxiety, mediated by psychological resilience, were evaluated. To determine the significance of the indirect effects, 5,000 bootstrap samples were used. The 95% confidence interval obtained via the bootstrap method not including zero was interpreted as indicating that the indirect effect was statistically significant. The analysis results include the unstandardized regression coefficient (B), standard error (SE), standardized coefficient (β), t-value, p-value, and 95% confidence interval. In all the statistical analyses conducted in this study, a value of $p < 0.05$ was considered statistically significant.

3. Results

The demographic information of the participants is presented in Table 1. The sample comprised 167 (74.2%) females and 58 (25.8%) with a mean age of 20.20 ±1.34 years (range, 18 – 25 years). The education level of the fathers of the participants was recorded as elementary school by 64 (28.4%), middle school by 52 (23.1%), high school by 58 (25.8%), and higher education/university by 51 (22.7%). These rates for the mothers of the students were elementary school by 90 (40.0%), middle school by 56 (24.9%), 25.8% had completed high school by 58 (25.8%), and higher education/university by 21 (9.3%).

In respect of family income level, 19.6% of the participants reported an income at the minimum wage level (n = 44), 48.0% reported an income slightly above the minimum wage (n = 108), and 32.4% reported an income well above the minimum wage (n = 73). Overall, females constituted most participants, the most common education levels for both mothers and fathers were elementary and high school, and the largest proportion of participants fell into the income group slightly above the minimum wage.

The descriptive statistics, normality indices, and reliability coefficients for the scales are presented in Table 2. Skewness coefficients for the variables ranged from -0.75 to 0.72, and kurtosis coefficients ranged from -0.30 to 0.44. As these values fall within the ±2 range, the variables were considered not to deviate significantly from a normal distribution and were deemed suitable for parametric analyses [30].

Cronbach's alpha coefficients calculated to assess the reliability of the scales ranged from 0.71 to 0.92. The values obtained for problem-focused coping (α = 0.72), emotion-focused coping (α = 0.74), avoidant/dysfunctional coping (α = 0.71), psychological resilience (α = 0.87), and anxiety (α = 0.92) indicate internal consistency ranging from acceptable to high [32]. Accordingly, the scales used in the study were considered to provide reliable measurements.

The Pearson correlation coefficients between the variables are shown in Table 3. A moderate, positive, and significant relationship was found between problem-focused coping and emotion-focused coping (r = 0.40, $p < 0.01$), and between problem-focused coping and psychological resilience (r = 0.36, $p < 0.01$).

A moderate, negative, and significant relationship was determined between problem-focused coping and anxiety (r = -0.34, $p < 0.01$), and there was a weak, negative, and statistically significant relationship between problem-focused coping and avoidant/dysfunctional coping (r = -0.17, $p < 0.05$).

Table 1. Sociodemographic profile of the enrolled participants.

Variable	Category	n	%
Gender	Female	167	74.2
	Male	58	25.8
Paternal Education Level	Primary school	64	28.4
	Middle school	52	23.1
	High school	58	25.8
	Higher Education / University	51	22.7
Maternal Education Level	Primary school	90	40.0
	Middle school	56	24.9
	High school	58	25.8
	Higher Education / University	21	9.3
Perceived Household Income Status	Minimum Wage equivalent	44	19.6
	Moderately Above Minimum Wage	108	48.0
	Substantially Above Minimum Wage	73	32.4

Age (years): Mean ± SD (range) = 20.20 ± 1.34 (18–25).

Table 2. Psychometric indices, normality diagnostics, and internal consistency reliability coefficients of the applied scales

Variable	n	Min	Max	Mean	SD	Skewness	Kurtosis	(α)
Problem-focused Coping	225	7	24	17.72	3.54	-.37	-.30	.72
Emotion-focused Coping	225	10	38	26.11	5.97	-.75	.44	.74
Avoidant/dysfunctional Coping	225	13	43	25.18	5.95	.59	.11	.71
Psychological Resilience	225	71	162	121.43	19.24	-.26	-.27	.87
Anxiety	225	0	63	19.63	13.20	.72	.08	.92

Table 3. Bivariate pearson correlation matrix of the primary study variables (N = 225).

Variable	1	2	3	4	5
1. Problem-focused coping	—				
2. Emotion-focused coping	.40**	—			
3. Avoidant/dysfunctional coping	-.17*	-.27**	—		
4. Psychological resilience	.36**	.31**	-.28**	—	
5. Anxiety	-.34**	-.33**	.36**	-.28**	—

$p < .05$ (*); $p < .01$ (**).

A moderate, positive, and statistically significant relationship was observed between emotion-focused coping and psychological resilience (r = 0.31, $p < 0.01$). A weak, negative correlation was found between emotion-focused coping and avoidant/dysfunctional coping (r = -0.27, $p < 0.01$), and there was a moderate, negative correlation between emotion-focused coping and anxiety (r = -0.33, $p < 0.01$). A moderate, positive, and significant relationship was found between avoidant/dysfunctional coping and anxiety (r = 0.36, $p < 0.01$). A weak, negative, and significant relationship was identified between avoidant/dysfunctional coping and psychological resilience (r = -0.28, $p < 0.01$), and between psychological resilience and anxiety (r = -0.28, $p < 0.01$).

Gender was entered as a covariate in all three models. Avoidant/dysfunctional coping was determined to significantly and negatively predict psychological resilience (B = -0.89, SE = 0.21, β = -0.28, t = -4.29, $p < 0.001$, 95% CI [-1.30, -0.48]). Psychological resilience, in turn, negatively and significantly predicted anxiety (B = -0.13, SE = 0.04, β = -0.19, t = -2.98, $p = 0.003$, 95% CI [-0.21, -0.04]). The direct effect of avoidant/dysfunctional coping on anxiety was seen to be positive and significant (B = 0.69, SE = 0.14, β = 0.31, t = 4.97, $p < 0.001$, 95% CI [0.41, 0.96]). The indirect effect was also significant, as the confidence interval did not include zero (B = 0.11, SE = 0.05, β = 0.05, 95% CI [0.03, 0.22]). As the direct effect remained significant, this was classified as partial mediation. Emotion-focused coping was determined to positively and significantly predict psychological resilience (B = 1.01, SE = 0.21, β = 0.31, t = 4.94, $p < 0.001$, 95% CI [0.61, 1.42]). Psychological resilience negatively and significantly predicted anxiety (B = -0.13, SE = 0.04, β = -0.18, t = -2.89, p = .004, 95% CI [-0.21, -0.04]). The direct effect of emotion-focused coping on anxiety was seen to be negative and significant (B = -0.61, SE = 0.14, β = -0.28, t = -4.32, p <0.001, 95% CI [-0.89, -0.33]). The indirect effect was also significant (B = -0.13, SE = 0.05, β = -0.06, 95% CI [-0.23, -0.04]), indicating that psychological resilience partially mediated the relationship between emotion-focused coping and anxiety.

Problem-focused coping was determined to positively and significantly predict psychological resilience (B = 1.96, SE = 0.34, β = 0.36, t = 5.76, p < 0.001, 95% CI [1.29, 2.63]). Psychological resilience negatively and significantly predicted anxiety (B = -0.12, SE = 0.04, β = -0.17, t = -2.69, p = .008, 95% CI [-0.21, -0.03]). The direct effect of problem-focused coping on anxiety was seen to be negative and significant (B = -1.01, SE = 0.24, β = -0.27, t = -4.13, p < 0.001, 95% CI [-1.49, -0.53]). The indirect effect was also significant, as the confidence interval did not include zero (B = -0.23, SE = 0.10, β = -0.06, 95% CI [-0.46, -0.05]). This mediation was also classified as partial mediation.

Table 4. Structural path estimations and indirect effects of coping strategies on anxiety through psychological resilience.

Model Pathway	*B*	*SE*	*β*	*t*	*p*	*95%CI Lower*	*95%CI Upper*
Avoidant/Dysfunctional Coping → Psychological Resilience (a_1)	-.90	.21	-.28	-4.31	.001*	-1.31	-.49
Psychological Resilience → Anxiety (b_1)	-.13	.04	-.19	-3.02	.003*	-.22	-.05
Avoidant/Dysfunctional Coping → Anxiety (Total Effect, c_1)	.81	.14	.37	5.85	.001*	.54	1.08
Avoidant/Dysfunctional Coping → Anxiety (Direct Effect, c_1')	.69	.14	.31	4.88	.001*	.41	.97
Indirect Effect (a_1b_1)	.12	.05	.05			.03	.22
Emotion-Focused Coping → Psychological Resilience (a_2)	1.01	.20	.31	4.94	.001*	.61	1.42
Psychological Resilience → Anxiety (b_2)	-.13	.04	-.19	-2.96	.003*	-.22	-.04
Emotion-Focused Coping → Anxiety (Total Effect, c_2)	-.73	.14	-.33	-5.23	.001*	-1.01	-.46
Emotion-Focused Coping → Anxiety (Direct Effect, c_2')	-.60	.14	-.27	-4.12	.001*	-.88	-.31
Indirect Effect (a_2b_2)	-.13	.05	-.06			-.24	-.05
Problem-Focused Coping → Psychological Resilience (a_3)	1.97	.34	.36	5.79	.001*	1.30	2.63
Psychological Resilience → Anxiety (b_3)	-.12	.05	-.18	-2.69	.008*	-.21	-.03
Problem-Focused Coping → Anxiety (Total Effect, c_3)	-1.27	.24	-.34	-5.40	.001*	-1.73	-.81
Problem-Focused Coping → Anxiety (Direct Effect, c_3')	-1.03	.25	-.28	-4.13	.001*	-1.52	-.54
Indirect Effect (a_3b_3)	-.24	.10	-.06			-.47	-.06

*N = 225. Gender was entered as a covariate in all three mediation models. B = Unstandardized regression coefficient; SE = Standard error; β = Standardized regression coefficient; CI = Confidence interval; LL = Lower limit; UL = Upper limit. Standard errors and bias-corrected 95% confidence intervals for the indirect pathways were generated utilizing a non-parametric bootstrapping procedure based on 5,000 resamples. Statistical significance for the hypothesized mediation is established if the derived 95% CI does not straddle zero. *p < 0.05.*

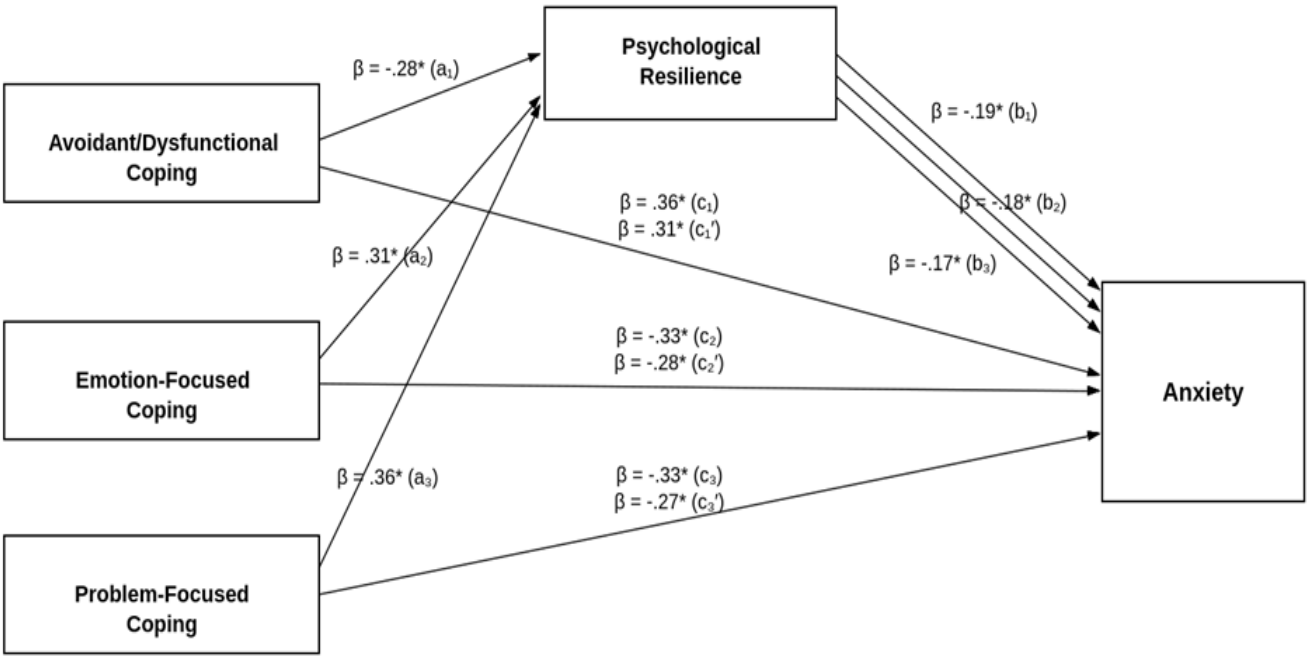

Figure 1. Conceptual Pathway and Structural Mediation Configurations of Psychological Resilience Between Coping Modalities and Anxiety.

Values represent standardized regression coefficients (β) from the three separate simple mediation models (one per coping dimension), with gender entered as a covariate. The paths indicate the impact of coping styles on psychological resilience (a), the influence of resilience on anxiety (b), and the total effect of coping mechanisms on anxiety (c). The direct effect of coping styles on anxiety, controlling for psychological resilience, is denoted as c'. Statistical significance is set at p <0.05.

Overall, the analysis results showed that avoidant/dysfunctional coping reduced psychological resilience while increasing anxiety, whereas emotion-focused and problem-focused coping increased psychological resilience and reduced anxiety. The significant indirect effect observed across all three models suggests that psychological resilience may play a protective mediating role in the relationship between coping styles and anxiety.

Whether the study variables varied according to sociodemographic characteristics other than gender was also examined. The results of One-way ANOVA analysis indicated no significant difference in the scores of all five study variables (problem-focused, emotion-focused, and avoidant/dysfunctional coping, psychological resilience, and anxiety) according to the paternal or maternal education level (all $p > 0.05$). Family income level was found to be associated with significant differences in emotion-focused coping, $F(2, 222) = 7.93$, $p < 0.001$, and psychological resilience, $F(2, 222) = 5.16$, $p = 0.006$, but not in problem-focused coping, avoidant/dysfunctional coping, or anxiety (all $p > 0.05$). Taken together, these findings suggest that with the possible exception of family income, sociodemographic characteristics are unlikely to account for the observed mediation effects.

The scale scores were compared according to gender using the Independent Samples t-test (Table 5). The findings revealed a significant difference in anxiety scores between female and male participants, $t(223) = 3.26$, $p = 0.001$, $d = 0.50$. The mean anxiety scores of females (21.29 ±13.35) were significantly higher than those of male participants (14.86 ±11.61), reflecting a moderate effect size.

No significant gender differences were found for problem-focused coping, $t(223) = -0.57$, $p = 0.570$; emotion-focused coping, $t(223) = 0.24$, $p = 0.810$; avoidant/dysfunctional coping, $t(223) = 0.26$, $p = 0.792$; or psychological resilience, $t(223) = -0.52$, $p = 0.601$. These findings indicate that gender only affected anxiety levels and not coping styles or psychological resilience.

Table 5. Independent Samples t-Test results and descriptive statistics of scale scores according to gender

Variable	**Gender**	**N**	**Mean**	**SD**	**Sd.**	***t***	***p***	***d***
Problem-focused coping	Female	167	17.64	3.55	223	-0.57	.570	0.09
	Male	58	17.95	3.52				
Emotion-focused coping	Female	167	26.17	5.95	223	0.24	.810	0.04
	Male	58	25.95	6.09				
Avoidant/Dysfunctional coping	Female	167	25.24	5.93	223	0.26	.792	0.04
	Male	58	25.00	6.06				
Psychological resilience	Female	167	121.03	18.79	223	-0.52	.601	0.08
	Male	58	122.57	20.60				
Anxiety	Female	167	21.29	13.35	223	3.26	.001*	0.50
	Male	58	14.86	11.61				

** $p < 0.05$.*

4. Discussion

Anxiety is one of the most commonly observed mental health problems among young adults [2,3]. Coping mechanisms have the potential to influence the chronicity of anxiety and the risk of its developing into a psychiatric problem in adulthood [2]. Similarly, psychological resilience serves as a mediating variable that determines the intensity of an individual's cognitive, emotional, and behavioural responses to stressors and adverse life events [22]. It has also been shown to be positively correlated with mental well-being and therefore plays both a preventive and protective role for young adults in coping with psychological problems. Numerous studies have shown that psychological resilience has a mediating, predictive, and/or correlational role, thereby emphasizing its critical importance for the mental health of young adults [18,19,20,21,22]. The findings of the current study revealed significant relationships among psychological resilience, coping styles, and anxiety symptoms in young adults.

First, a positive and significant association was found between avoidant/dysfunctional coping styles and anxiety symptoms. Similarly, O'Rourke et al. [33] reported a positive association between avoidant coping styles and anxiety, and a negative association between problem-focused coping styles and anxiety. In a case-control study of individuals aged 15–24 years in Latin America, Hudson et al. [34] found that young people with high anxiety and depression scores preferred avoidant/dysfunctional coping mechanisms over problem-focused coping, compared to the control group. The findings of the current study, consistent with the literature, indicate that an avoidant/dysfunctional coping style is inadequate for managing mental health problems, particularly anxiety, whereas problem-focused coping styles may play a protective role in mental health.

Many studies in the literature have shown a positive relationship between emotion-focused coping and anxiety [11, 15, 25, 33]. However, in this study, coping styles were classified under three higher-order dimensions, and the emotion-focused coping factor includes more functional strategies such as venting, acceptance, religion, humor, and use of emotional support. Therefore, the current study findings showed a negative relationship between emotion-focused coping and anxiety. This discrepancy across studies may stem from the fact that dysfunctional emotion-focused coping strategies have, in some studies, as in the present one, been categorized under avoidant/dysfunctional coping rather than emotion-focused coping [25]. It can be argued that the varying categorization of coping mechanisms across literature makes it difficult to compare, evaluate, and discuss the findings of different studies. Likewise, Stanton et al. [35, 36, 37] emphasized that adaptive emotion-focused coping and emotional avoidance are conceptually distinct coping processes, although they are often treated as components of the same construct. Collectively, these differences in theoretical perspectives may help explain the inconsistencies in the associations between emotion-focused coping and anxiety reported in the literature.

Although all three indirect effects were statistically significant, their standardized magnitudes were small ($\beta \approx .05–.06$), indicating that psychological resilience accounts for only a modest proportion of the association between coping styles and anxiety. In practical or clinical terms, this suggests that interventions targeting resilience alone are unlikely to substantially reduce anxiety. Resilience should

instead be considered one of several contributing mechanisms, together with factors such as social support, cognitive appraisal, and life circumstances, which together shape the coping–anxiety relationship. The mediation findings obtained in this study should be interpreted as evidence of a statistically robust but practically modest pathway, rather than as evidence that resilience is a dominant explanatory mechanism.

Another finding of this study was that psychological resilience had a partial mediating effect on the relationship between coping styles and anxiety. Numerous recent studies have revealed strong associations between depression and dysfunctional coping styles, characterized by emotion-focused and avoidant coping traits, and have emphasized that psychological resilience serves as a strong mediating variable between coping styles and depression [19]. Studies examining psychological variables such as anxiety, depression, and childhood trauma have similarly reported that psychological resilience may serve a mediating and protective function in the mental health of young adults [18,19,20,21]. This partial mediating effect suggests that the relationship between coping styles and anxiety can be explained not only directly but also through an individual's capacity to adapt to stressful life events.

In other words, anxiety levels associated with coping styles may vary depending on the individual's level of psychological resilience. That individuals who use problem-focused and more functional coping strategies tended to report higher psychological resilience may partly explain the relationship between these strategies and anxiety. Conversely, the lower psychological resilience associated with avoidant/dysfunctional coping strategies may be one of the mechanisms contributing to higher anxiety symptoms in these individuals. As psychological resilience accounts for only part of this relationship, other psychological and environmental factors, such as social support, personality traits, cognitive appraisal processes, and life events, most likely also play a role. Overall, psychological resilience seems to be of decisive importance both for maintaining mental well-being and for coping with mental health problems.

Finally, the relationship between sociodemographic variables and psychological resilience, anxiety, and coping styles was examined. Despite previous studies having shown that psychological resilience is lower in females than in males, no significant difference was observed in this study [21]. However, females exhibited significantly higher levels of anxiety symptoms than males, which is consistent with the findings of other studies in the literature [38, 39]. Furthermore, some studies have indicated that females rely more on emotion-focused coping styles and seeking social/emotional support compared to males [38, 40], whereas in this study, no significant differences were found between the genders for any of the three coping styles.

4.1. Conclusion: The results of this study demonstrated significant relationships among coping styles, psychological resilience, and anxiety in young adults. Avoidant/dysfunctional coping was seen to be associated with lower psychological resilience and higher anxiety levels, whereas emotion-focused and problem-focused coping were associated with higher psychological resilience and lower anxiety levels. Furthermore, the significant indirect effect of psychological resilience observed across all models suggests that it may play a protective mediating role in the relationship between coping styles and anxiety. These findings highlight the

importance of interventions aimed at strengthening psychological resilience and enhancing functional coping skills in mental health promotion programs for young adults.

4.2. Limitations and Recommendations: This study was conducted using a cross-sectional design with a single sample group, which limits comparisons between different groups and the generalizability of the findings. The cross-sectional design also prevented the evaluation of causal relationships between variables, so the findings only reveal associations between variables and indirect effects consistent with the mediation model. Future studies incorporating mixed clinical and non-clinical samples and employing longitudinal designs could contribute to a more comprehensive evaluation of these effects across different samples, as well as potential causal relationships.

Another limitation of this study was that all constructs were assessed using self-report instruments. Although procedural measures were implemented to reduce potential order effects by administering the questionnaires in eight different orders rather than in a fixed sequence, no formal statistical assessment of common method variance (e.g., Harman's single-factor test) was performed. Therefore, the potential influence of common method variance on the observed associations cannot be completely discounted. Future studies should incorporate formal statistical assessments of common method variance, and where feasible, employ multi-method or multi-informant designs.

Another limitation concerns the fact that coping styles are evaluated under different theoretical models, classifications, and factors in the literature. In this study, the 14 subdimensions of the Brief COPE were analyzed under the three higher-order dimensions of problem-focused, emotion-focused, and avoidant/dysfunctional coping. In some studies, emotion-focused coping and avoidant coping have been evaluated together, whereas in the present study, more functional and positive coping styles were examined under the emotion-focused coping factor. Consequently, differences in measurement tools and theoretical frameworks across studies remain key factors that complicate the comparison and interpretation of findings.

In addition, no information was collected about psychiatric history or current psychiatric treatment status of the participants. As pre-existing psychiatric conditions or ongoing treatment could independently influence anxiety levels, coping style, and psychological resilience, the lack of data limits the ability to rule out these factors as potential confounding influences on the observed associations. Future research should assess psychiatric history and treatment status so that their potential contribution can be examined or statistically controlled.

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