Universal Journal of Psychology 11(1): 1-11, 2023
DOI: 10.13189/ujp.2023.110101 http://www.hrpub.org

# The Role of Self-esteem and Coping with Stress in Predicting the State Anxiety of Adolescents

**Gülşen Büyükşahin Çevik**

Department of Counseling and Guidance, Faculty of Education, Adıyaman University, Turkey

*Received October 17, 2022; Revised January 19, 2023; Accepted February 15, 2023*

***Cite This Paper in the Following Citation Styles***

***(a):*** *[1] Gülşen Büyükşahin Çevik , "The Role of Self-esteem and Coping with Stress in Predicting the State Anxiety of Adolescents," Universal Journal of Psychology, Vol. 11, No. 1, pp. 1 - 11, 2023. DOI: 10.13189/ujp.2023.110101.*

***(b):*** *Gülşen Büyükşahin Çevik (2023). The Role of Self-esteem and Coping with Stress in Predicting the State Anxiety of Adolescents. Universal Journal of Psychology, 11(1), 1 - 11. DOI: 10.13189/ujp.2023.110101.*



**Abstract** The current study aimed to investigate the impact of coping with stress and self-esteem on the state anxiety levels of the adolescents. It also aimed to investigate adolescent views on anxiety. In the present study, method triangulation was employed due to the collection of quantitative and qualitative data. The study group included 426 adolescents attending high schools in Adıyaman province in Southeastern Anatolia Region in Turkey. The quantitative study group included 426 adolescents, 218 of whom were female and 206 were male. The qualitative study group included 20 adolescents, 11 of whom were female and 9 were male. Finding of the study was the acquisition of six regression models that predicted the state anxiety levels of the adolescents. It was observed that the optimistic approach, a Stress Coping Scale dimension, explained 18% of the variation in state anxiety, and the inclusion of the search for social support, another Stress Coping Styles Scale, in the analysis increased the prediction power to 24%, while the inclusion of the Rosenberg Self-Esteem Scale in the analysis increased it to 28%, and the addition of the submissive approach increased it to 30% in the fourth stage of the analysis. The addition of the self-confident approach, a Stress Coping Scale dimension, to the analysis led to an explanation power of 30%, and finally, the addition of the helpless approach increased the predictive power to 31%, and it was determined that the regression model was significant. The qualitative study findings demonstrated that the reactions of the adolescents to anxiety could be categorized under the cognitive, emotional, physical and behavioral themes. Another qualitative finding of the study based on the views of the adolescents was that they associated anxiety with academic, personal, social and developmental dimensions. The current study findings revealed that the dimensions that adolescents associated with anxiety were personal, social and developmental domains. In conclusion, it could be suggested that state anxiety is an important variable in the identity development of adolescents.

**Keywords** Self-esteem, Coping with Stress, State Anxiety, Adolescent

## 1. Introduction

Adolescence was described as a stressful period characterized by several physical and psychological changes. It was reported that the individual experiences several emotional changes and psycho-social development during adolescence, which could lead to negative emotional states such as depression and anxiety [40]. During adolescence, as the individual develops social, emotional and cognitive traits, (s)he has to cope with various processes such as identity development, regulation of academic achievements, career selection, and planning of the future [60]. Several studies demonstrated that individuals experience intense anxiety during adolescence, and the changes experienced in this period and the search for an identity increase anxiety [31, 47].

Anxiety was described as the indecision between controlling the perception of threat and struggle [44]. Spielberger et al. [8] categorized anxiety as trait anxiety and state anxiety. Although trait anxiety reflects the closeness of the individual to anxiety, it was described as the individual's perception of the degree of self-threat

posed by the events under objective conditions. On the other hand, state anxiety was defined as the anxiety in the face of a certain event. The duration and degree of state anxiety is determined by the individual's perception of the situation. It is stated that state anxiety causes negative emotions in the individual and gives feelings such as distress and sadness [55]. On the other hand, anxiety symptoms could be physical, cognitive, emotional and behavioral, and personal [6]. Physical anxiety symptoms include rapid heartbeat, elevated blood pressure, flushing, difficulty in breathing, frequent urination, tremor, exhaustion, and sleep disorders [6, 46]. Cognitive anxiety symptoms include thinking that something bad would happen at any moment, pessimistic ideation, and difficulty in problem solving [58]. Furthermore, emotional symptoms include panic, fear, introversion, crying and anger. The behavioral symptoms of anxiety include introversion or hyperactivity, and avoidance [6].

Previous studies reported that anxiety is established in teenage years [28, 36]. Other studies argued that it could be concomitant with anxiety disorders, mood disorders, or substance abuse when untreated [11,53]. Similarly, it was emphasized that anxiety should be considered pathological in cases where the individual loses academic, social, and daily functions [16]. Previous studies associated anxiety with maternal state anxiety [10], stress [30] and self-esteem [26]. In another study, Öz [57] determined that individuals with low income had significantly higher state and trait anxiety levels.

Rosenberg [41] described self-esteem, another variable associated with anxiety, as an individual's positive and negative self-perceptions. However, Coopersmith [15] defined self-esteem as an individual's self-evaluation as competent, successful and important. Studies demonstrated that individuals with high self-esteem scores had higher psychological resilience [35], were optimistic [49], and were found to enjoy high life satisfaction and happiness [5]. On the other hand, individuals with low self-esteem were more pessimistic and negative about the future [14]. Also, when individuals perceived negative experiences as threats, their anxiety levels increased. It was emphasized that the self-esteem of individuals with high anxiety decreased. It was reported that individuals with low self-esteem had negative beliefs about themselves [27]. In a similar study, Özcan et al. [59] determined that the anxiety and self-esteem levels were correlated. In another study, Tunç and Özen-Kutanis [22], who investigated the correlation between self-esteem and state and trait anxiety types, reported that there was a significant correlation between self-esteem, state and trait anxiety. Various studies demonstrated that there was a strong correlation between anxiety and self-esteem, and as the anxiety level of individuals increased, their self-esteem decreased [7, 32].

Coping with stress, another variable associated with anxiety, was described as individual reactions to the events that they perceive as threats of negative life experiences [2]. Similarly, Lazarus and Folkman [43] defined stress as cognitive evaluations induced by the interaction between the individual and the events. Coping with stress was also described as the cognitive and behavioral reactions of the individual on internal and external experiences that challenge the individual [43]. Stress could lead to high levels of tension and anxiety. Furthermore, it was determined that it could lead to various communication problems, physical and psychological symptoms, and negative effects on the individual [4,51]. The significance of social support in effective coping with stress has been emphasized [1].

Lazarus and Folkman [42] reported that there were two basic coping strategies in coping with stress: problem-oriented (active) and emotion-oriented coping. These basic strategies were analyzed in five dimensions: self-confident approach, optimistic approach, helpless approach, submissive approach and social assistance approach. Self-confident approach is a problem-oriented coping strategy and includes the belief that the individual could overcome challenging situations. The optimistic approach is a problem-oriented coping method that peruses the individual's ability to perceive the positive aspects of challenging situations. The dimension of seeking social assistance is another problem-oriented coping mechanism that entails request for support within the individual's close circle in stressful situations. The dimension of the helpless approach is an emotion-oriented approach and is described as an individual's acceptance of the situation due to despair. Similarly, the submissive approach is an emotion-oriented coping strategy where the individual accepts stressful situations without an effort. Studies demonstrated that coping with stress could be associated with learned helplessness [12] and state anxiety [9].

When the literature is examined, it has been seen that self-esteem and coping with stress are associated with anxiety, are important in adolescence, because adolescents have to decide on important issues such as identity, career, academic achievement and future anxiety. The findings reported in an international study conducted by UNICEF and Gallup [37] with about 21,000 individuals demonstrated that children, adolescents and young adults are often tense or anxious and often feel depressed or do not want to do anything. Thus, it could be suggested that the analysis of the variables that predict anxiety and adolescent anxiety would contribute to field specialists (school psychological counselors, psychologists, sociologists, teachers, school administrators, etc.). Therefore, it could be suggested that conducting studies that could help predict anxiety in adolescents would be important in the development of psychological interventions associated with anxiety and educational literature. In addition, it is thought that this study can fill a deficiency in the literature in terms of the emergence of anxiety and anxiety-related variables in studies conducted with adolescents in different cultures. Thus, the present study aimed to investigate whether self-esteem and coping with stress were predictors of state anxiety in adolescents.

It also aimed to determine the anxiety symptoms in adolescents and the variables that were associated with anxiety based on their views.

### 1.1. The Purpose of the Study

The current study aimed to investigate the impact of coping with stress and self-esteem on the state anxiety levels of the adolescents. It also aimed to investigate adolescent views on anxiety. Thus, the following research questions were determined:

1. Do adolescents' stress coping styles predict their state anxiety levels?
2. Do adolescents' self-esteem predict their state anxiety levels?
3. What are the views of adolescents regarding their reactions to anxiety?
4. What are the views of the adolescents on the variables they associate with anxiety?

### 1.2. Limitations

The study data are limited to the findings obtained with the State Anxiety Scale, the Stress Coping Styles Scale, the Self-Esteem Scale and the Semi-Structured Interview Form. It is also limited to the participants in the quantitative and qualitative sections of the study.

## 2. Methods

In this section, the study group, data collection instruments, the statistical methods employed in data analysis, and research limitations are discussed. Quantitative and qualitative research methods were employed to collect the study data. Research that employs both qualitative and quantitative data collection methods is defined as mixed or triangulation studies. The triangulation method includes more than one research method in the same study during the data collection process [21]. In the present study, method triangulation was employed due to the collection of quantitative and qualitative data. The method aims to determine the variables associated with research findings. Thus, it aims to employ correlated quantitative and qualitative data to interpret the study findings and to better present the research problem [18]. Triangulation is the process of using multiple perceptions to explain the meaning of a variable and to verify the repeatability of an observation or interpretation. It means looking at something from multiple perspectives to increase its accuracy. Measurement triangulation, which looks at the same phenomenon with different measurement approaches, is among the most widely used methods in education and social sciences.

### 2.1. Participants

The study group included 426 adolescents attending high schools in Adıyaman province in Southeastern Anatolia Region in Turkey. The quantitative study group included 426 adolescents (mean age=16.85, Sd=1.07, range=14-18), 218 (51.4%) of whom were female and 206 (48.6%) were male. The qualitative study group included 20 adolescents (mean age=15.95, Sd=1.5, range=14-18), 11 of whom were female and 9 were male.

### 2.2. Instruments

#### 2.2.1. State Anxiety Inventory (STAI)

The scale was developed by Spielberger et al. [8]. It was adapted to Turkish language by Öner and Le Compte [58]. State Anxiety Inventory is applied to individuals older than 14. The scale includes 10 positive items (1, 2, 5, 8, 10, 11, 15, 16, 19, 20) and 10 negative items (3, 4, 6, 7, 9, 12, 13, 14, 17, 18). It is a 4-point Likert-type scale (completely disagree, somewhat agree, agree, completely agree) that includes 20 items [58]. The lowest scale score is 20, and the highest scale score is 80. A high scale score reflects high anxiety. The internal consistency and reliability coefficients of the Turkish scale were between .94 and .96 based on Kuder Richardson alpha reliability. The test-retest reliability scores of the scale varied between .26 and .68. Internal consistency and test homogeneity scores varied between .83 and .87. It was determined that the scale was reliable for both adolescents and adults [58].

#### 2.2.2. Ways of Coping Inventory (WCI)

Developed by Folkman and Lazarus [29], the scale is used to determine the stress coping style of an individual. It was adapted to Turkish language by Şahin and Durak [30]. The scale includes items that aim to determine the stress coping style based on two dimensions: "Problem-oriented/active" and "Emotional/passive" styles. Active coping styles include seeking social assistance, optimistic approach, and self-confident approach. The passive stress coping styles include helpless and submissive approaches. Thus, the scale includes five sub-dimensions and 30 items. The scale items are scored between zero and three. A higher score indicates that the individual is more inclined to use the relevant coping style. To determine the validity study of the scale, it was tested with factor analysis in three stages. Thus, it was determined that the scale could be reduced to five dimensions. The internal consistency coefficients of the sub-dimensions were between .62 and .80 for the self-confident approach, between .64 and .73 for the helpless approach, between .49 and .68 for the optimistic approach, between .47 and .72 for the submissive approach, and between .45 and 47 for social assistance approach [30]. It was determined that the WCI was valid and reliable.

#### 2.2.3. Rosenberg Self-Esteem Scale (RSES)

The Rosenberg Self-Esteem Scale is a general and valid

scale employed in several studies conducted in various countries. The scale was developed by Rosenberg [41]. The total scale score varies between 10 and 40. A higher score reflects high self-esteem. The scale was adapted to Turkish language by Çuhadaroğlu [20], and the validity of the self-esteem category was tested. In the analysis conducted based on psychiatric interviews, self-esteem was categorized as high, medium and low self-esteem based on student views. The correlation between the student view data and self-esteem scale scores was determined and the validity ratio was determined as .71. It was concluded that the scale could be applied to groups of adolescents and adults. The scale includes 63 items in 12 sub-dimensions. The study data were collected with the 10-item self-esteem scale.

2.2.4. Semi-Structured Interview Form

An open-ended two-question "Semi-Structured Interview Form" was developed by the author to collect qualitative data. Türmüklü [25] emphasized that semi-structured interview technique and flexible questions help the preparation for an interview. Furthermore, it was argued that the interview would include various questions based on the length of the interview, leading to further explanation of the responses by the interviewees.

In the present study, the views of three qualitative research experts were obtained about the semi-structured interview form to determine whether it was suitable for the current study and whether the meaning and the scope of the questions were suitable, and to ensure content validity. The form was revised based on the expert opinion. Then, a pilot scheme was conducted (with five adolescents) with the semi-structured interview form, and the determined comprehension, lingual, semantic and scope problems were revised to finalize the form. The semi-structured interview form was applied by the author and the interviews were recorded. These qualitative data were then transcribed into digital documents.

### 2.3. Data Collection

After obtaining the permissions for the study, the author visited the schools that the adolescents attended to collect quantitative data, informed the students about the purpose of the study, and the scales were administered to volunteering participants face-to-face. The application of the scales lasted about 30-35 minutes in the quantitative section of the study. The qualitative study data were collected with the interviews conducted with volunteering adolescents. These interviews lasted 40-45 minutes.

### 2.4. Data Analysis

The quantitative study data were analyzed with descriptive statistics, Pearson Product Moments Correlation and stepwise linear multiple regression analysis. The analyses were conducted with the IBM SPSS 26.0 software. A .05 difference between the means was considered significant. The qualitative study data were analyzed with content analysis. Content analysis aims to determine the concepts and correlations associated with the study findings to explain the study data. The content analysis findings were initially analyzed and coded, and then meaningful data were conceptualized [23]. The study data were coded to develop in such meaningful themes and concepts, respectively. Then, the help of an expert using qualitative research methods was taken and the data were formed by taking the opinion on the creation of the themes and concepts of the coded data in order to ensure reliability. Frequencies (f) were presented to indicate the number of participants that shared the same view during coding. In the qualitative section, the Miles and Huberman [50] formula was employed to determine the reliability of the findings: Reliability= (Agreement) / (Agreement + Disagreement). The formula reflects the consensus on the codes that aim to reflect the views of the participants. On the other hand, the employment of different codes is considered disagreement. In the present study, to ensure reliability of the qualitative study data, the rate of agreement was analyzed by comparing the codes determined by another expert. The agreement rate was determined as .87 in the study. Qualitative research was reported to be reliable when the inter-coder agreement was 70% or more.

## 3. Findings

### 3.1 Quantitative Study Findings

Certain assumptions should be met to employ the regression analysis results in quantitative research. Kalaycı [34] reported that the data should exhibit normal distribution, there should be a linear correlation between the variables, the mean of the error terms should be zero, the Durbin-Watson data should be between 1.5 and 2.5, and the independent variables should not exhibit multiple covariance to employ regression analysis. It was determined that the quantitative study data exhibited normal distribution since the Mahalanobis distance calculated with outlier analysis met the assumption of normality. Data with a Mahalanobis distance above the chi-square table figure is excluded from the data set since it is considered as outliers. A significance level of .001 was recommended in this process [13]. Thus, 12 outliers were excluded from the data set. In the variable scatter plot, it was determined that there was a linear correlation. It was determined that the Durbin-Watson statistic was 1.98 and there was no autocorrelation or multiple covariance between variables. Descriptive statistics and Pearson correlation coefficients are presented in Table 1. It was determined that the skewness and kurtosis of the data were between +1.5 and -1.5 [48], reflecting normal distribution.

As seen in Table 1, the mean SI was 30.15, the mean SCA for the Coping with Stress Scale sub-dimensions was 18.98, HA was 19.57, SA was 14.91, OA was 14.37, SSS was 9.39, and STA was 44.70. The correlation coefficients varied between -.48 and .58. STA was negatively correlated with RSES (r=-.36) and SCA, the Coping with Stress subscales (r=-.40), positively correlated with HA (r=.41) and SA ( r=.37), negatively correlated with OA (r=-.43) and SSS (r=-.40).

**Table 1.** Descriptive Statistics and Pearson Correlation Coefficients

| Variables | $\overline{X}$ | Ss | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 1.Rosenberg Self-Esteem Scale (RSES) | 30.15 | 5.32 | | | | | | |
| 2.Self-Confident Approach (SCA) | 18.98 | 4.72 | .44 | | | | | |
| 3.Helpless Approach (HA) | 19.57 | 5.33 | -.31 | -.33 | | | | |
| 4.Submissive Attitudes (SA) | 14.91 | 4.43 | -.28 | -.40 | .58 | | | |
| 5.Optimistic Attitudes (OA) | 14.37 | 3.38 | .37 | .45 | -.48 | -.35 | | |
| 6.Seeking Social Support (SSS) | 9.39 | 4.62 | .23 | .39 | -.41 | -.38 | .42 | |
| 7.Stait Anxiety (STAI) | 44.70 | 11.69 | -.36 | -.40 | .41 | .37 | -.43 | -.40 |
| n=424 | | | | | | | | |

**Table 2.** The Prediction of State Anxiety by the Variables

| Model | R | $R^2$ | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .432 | .187 | .185 | 10.55656 | |
| 2 | .499 | .249 | .245 | 10.15592 | |
| 3 | .535 | .287 | .282 | 9.90979 | |
| 4 | .556 | .309 | .302 | 9.76641 | |
| 5 | .564 | .318 | .309 | 9.71592 | |
| 6 | .571 | .327 | .317 | 9.66333 | 1.981 |

**Table 3.** B, Beta Correlation and Significance of the Variables

| | Predictors | B | Std. Error | β | T | P |
|---|---|---|---|---|---|---|
| 1 | (Constant) | 66,137 | 2,237 | | 29,563 | ,000 |
| | Optimistic Attitudes *(OA)* $F_{(1,422)}$=96.88** | -1,492 | ,152 | -,432 | -9,843 | ,000 |
| 2 | (Constant) | 66,934 | 2,156 | | 31,038 | ,000 |
| | Seeking Social Support (SSS) $F_{(2,421)}$=69.81** | -,695 | ,118 | -,275 | -5,912 | ,000 |
| 3 | (Constant) | 76,857 | 2,978 | | 25,807 | ,000 |
| | Self-Esteem (RSES) $F_{(3,420)}$=56.27** | -,462 | ,098 | -,211 | -4,709 | ,000 |
| 4 | (Constant) | 66,027 | 4,166 | | 15,850 | ,000 |
| | Submissive Attitudes (SA) $F_{(4,419)}$=46.80** | ,442 | ,121 | ,168 | 3,664 | ,000 |
| 5 | (Constant) | 68,551 | 4,285 | | 15,998 | ,000 |
| | Self-Confident Approach (SCA) $F_{(5,418)}$=38.91** | -,289 | ,125 | -,117 | -2,316 | ,021 |
| 6 | (Constant) | 62,752 | 4,920 | | 12,754 | ,000 |
| | Helpless Approach (HA) $F_{(6,417)}$=33.70** | ,279 | ,118 | ,127 | 2,359 | ,019 |

Tables 2 and 3 revealed that six regression models predicted the State Anxiety levels of the adolescents. Based on $R^2$, SSS, the sub-dimension of the Stress Coping Styles Scale that predicted state anxiety explained 18% of the variation in OA [$F_{(1.422)}$=96.88** p< .001], and the inclusion of SSS, the sub-dimension of the Stress Coping Styles Scale, in the regression analysis increased the rate of explanation to 24% [ $F_{(2.421)}$=69.81**p< .001]. The same rate increased to 28% [$F_{(3.420)}$=56.27**p< .001] with the inclusion of the Rosenberg Self-Esteem Scale in the analysis, and it increased to 30% with the addition of SA, the sub-dimension of the Stress Coping Styles Scale, in the fourth stage of the analysis [$F_{(4.419)}$ = 46.80** p< .001]. The rate was 30% [$F_{(5.418)}$=38.91**p< .05] with the addition of SCA, the sub-dimension of the Scale of Coping with Stress, and 31% with the addition of HA, the sub-dimension of the Scale of Coping with Stress, to the analysis [$F_{(6.417)}$=33.70** p< .05 ].

### 3.2. Qualitative Study Findings

In the qualitative section of the study conducted with the adolescents, the data collected with the semi-structured interviews were analyzed with content analysis. Literature review revealed that adolescent reactions to anxiety were categorized as cognitive, emotional, physical, and behavioral reactions. Then, the categories and codes associated with these themes were determined. The distribution of the categories, codes and themes based on adolescent reactions to anxiety is presented in Table 4.

**Table 4.** The distribution of the categories, codes and themes based on adolescent views

Adolescents' reactions to anxiety

| **1.Theme: Cognitive** | **f** | **2.Theme: Emotional** | **f** | **3.Theme: Physical** | **f** | **4.Theme: Behavioral** | **f** |
|---|---|---|---|---|---|---|---|
| Dissatisfaction with life | 16 | Nervousness | 18 | Acceleration of the heart rate | 17 | İncreased social media use | 16 |
| Negative ideation | 13 | Unhappiness | 17 | Sweating | 15 | Communication conflicts with parents | 14 |
| Delusional ideation | 12 | Anger | 15 | Difficulty in breathing | 14 | Communication conflicts with siblings | 7 |
| Skeptical ideation | 12 | Worry | 14 | Muscular tension | 14 | Studying more | 6 |
| İndecisiveness | 11 | Fear | 13 | Frequent bathroom visits | 12 | Reduced communication with teachers | 6 |
| Lack of concentration | 10 | İnsecurity | 8 | Headache | 9 | Not studying | 5 |
| İnability to solve problems | 10 | Crying | 6 | Abdominal pain | 7 | Communication conflicts with friends | 5 |
| Motivation loss | 9 | Trying to regulate emotions | 5 | Shaking hands | 4 | Help from a psychological counselor | 4 |
| Attempting to plan how to cope | 4 | | | Blushing | 2 | Reduced communication with parents | 4 |
| | | | | | | Peer assistance | 3 |
| | | | | | | Parental assistance | 3 |
| | | | | | | No peer contact | 2 |
| | | | | | | Uncommunication with all | 1 |

The cognitive dimension, the 1st theme determined based on the reactions of adolescents to anxiety identified in the semi-structured interviews, included the "dissatisfaction with life" (f:16), "negative ideation" (f:13), "delusional ideation" (f:12), "skeptical ideation" (f:12), "indecisiveness" (f:11), "lack of concentration" (f:10), "inability to solve problems" (f:10), "motivation loss" (f:9) and "attempting to plan how to cope" (f:4) categories. The emotional dimension, the second theme determined based on the reactions of adolescents to anxiety identified in the semi-structured interviews, included the "nervousness" (f:18), "unhappiness" (f:17), "anger" (f:15), "worry" (f:14), "fear" (f:13), "insecurity" (f:8), "crying" (f:6), and "trying to regulate emotions" (f:5) categories. The following categories were determined under the 3rd theme, the physical reactions theme: "acceleration of the heart rate (f:17), "sweating" (f:15), "difficulty in breathing" (f:14), "muscular tension" (f:14), "frequent bathroom visits" (f:12), "headache" (f:9), "abdominal pain" (f:7), "shaking hands" (f:4), and "blushing" (f:2). In the behavioral dimension, "increased social media use" (f:16), "communication conflicts with parents" (f:14), "communication conflicts with siblings" (f:7), "studying more" (f:6), "reduced communication with teachers" (f:6), "not studying" (f:5), "communication conflicts with friends" (f:5), "help from a psychological counselor" (f:4), "reduced communication with parents" (f:4), "peer assistance" (f:3), "parental assistance" (f:3), "no peer contact" (f:2), and "uncommunication with all" (f:1) categories were determined.

The distribution of the themes and categories that were associated with anxiety by the adolescents are presented in Table 5. The academic dimension associated with anxiety, namely the 1st theme, included "academic achievement" (f:16), "exam anxiety" (f:14), "vocational indecision" (f:12), "academic procrastination" (f:10), "academic motivation" (f:9), "conflict with teachers" (f:7), and "conflict with school administration" (f:6) categories. The variables associated with personal space in the 2nd theme included "anger" (f:14), "internet addiction" (f:13), "coping with stress" (f:12), "communication skills" (f:12), "depression" (f:7), "self-esteem" (f:6), "negative life experiences" (f:6), "daily life problems" (f:6), "happiness" (f:5), "loneliness" (f:4), and "Shyness" (f:1). The dimension of the social space, the 3rd theme, included "parental attitudes" (f:12), "cyberbullying" (f:12), "social media use" (f:11), "friendship relations" (f:10), "lack of social skills" (f:6), and "socio-economic status" (f:5) categories. The developmental dimension, the 4th theme, included "developmental problems" (f:8), "body image" (f:7) and "diseases" (f:4) categories.

**Table 5.** The distribution of the categories and themes associated with anxiety based on adolescent views

Anxiety-related variables

| **1.Theme: Academic Dimension** | **f** | **2.Theme: Personal Space** | **f** | **3.Theme: Social Space** | **f** | **4.Theme : Developmental Dimension** | **f** |
|---|---|---|---|---|---|---|---|
| Academic achievement | 16 | Anger | 14 | Parental attitudes | 12 | Developmental problems | 8 |
| Exam anxiety | 14 | Internet addiction | 13 | Cyberbullying | 12 | Body image | 7 |
| Vocational indecision | 12 | Coping with stress | 12 | Social media use | 11 | Diseases | 4 |
| Academic procrastination | 10 | Communication skills | 12 | Friendship relations | 10 | | |
| Academic motivation | 9 | Depression | 7 | Lack of social skills | 6 | | |
| Conflict with teachers | 7 | Self-esteem | 6 | Socio-economic status | 5 | | |
| Conflict with school administration | 6 | Negative life experiences | 6 | | | | |
| | | Daily life problems | 6 | | | | |
| | | Happiness | 5 | | | | |
| | | Loneliness | 4 | | | | |
| | | Shyness | 1 | | | | |

## 4. Discussion, Results, and Suggestions

In this section, the quantitative and qualitative study findings are discussed based on the literature. The present study findings revealed a negative significant correlation between state anxiety and self-esteem. Similar studies also reported negative significant correlations between anxiety and self-esteem [24, 26]. Thus, it was determined in the literature that there was a negative significant correlation between self-esteem and anxiety. This was an expected finding since the anxiety of an adolescent could lead to a negative self-perception. International studies on anxiety reported that high anxiety could be experienced during adolescence, which could have a negative impact on the adolescent's search for identity [31, 47].

It was also determined in the study that there were negative correlations between anxiety and self-confident coping approach, optimistic coping approach, and seeking social support, and positive correlations between helpless and submissive coping approaches. The study findings demonstrated that there was a negative correlation between state anxiety and problem-oriented coping strategies and there was a positive correlation between state anxiety and emotion-oriented coping strategies. Şahin and Durak [30] reported that stress coping styles could be "problem-oriented/active" and "emotion-oriented/passive". The sub-dimensions of active coping styles include social support, optimistic approach and self-confident approach. Passive coping styles include the helpless and submissive approaches. Similar studies reported that individuals who adopt emotion-oriented coping strategies were more likely to experience psychological problems such as depression and anxiety [19]. In a similar study, Hofmann et al. [33] demonstrated that there were significant correlations between anxiety, interpersonal emotion regulation strategies, emotional intelligence and stress coping styles. Another study reported correlations between emotion-oriented coping styles and anxiety [19]. Thus, the current study findings were consistent with previous reports. It could be suggested that adolescents with high anxiety prefer emotion-oriented coping strategies, while those with low anxiety levels prefer problem-oriented coping strategies. Because adolescents with high anxiety could feel helpless and accept anxiety; however, these individuals would not adopt a self-confident or optimistic approach, and find it difficult to seek social support.

Another significant finding of the study was the acquisition of six regression models that predicted the state anxiety levels of the adolescents. It was observed that the optimistic approach, a Stress Coping Scale dimension, explained 18% of the variation in state anxiety, and the inclusion of the search for social support, another Stress Coping Styles Scale, in the analysis increased the prediction power to 24%, while the inclusion of the Rosenberg Self-Esteem Scale in the analysis increased it to 28%, and the addition of the submissive approach increased it to 30% in the fourth stage of the analysis. The addition of the self-confident approach, a Stress Coping Scale dimension, to the analysis led to an explanation power of 30%, and finally, the addition of the helpless approach increased the predictive power to 31%, and it was determined that the regression model was significant. Similar studies reported a negative correlation between self-esteem and anxiety [7, 32]. Saka [9] reported that anxiety was a predictor of problem-oriented coping strategies. Similarly, Koçhan [39] investigated the correlation between stress coping styles and depression and anxiety levels. Koçhan reported that there was a positive correlation between anxiety and helpless approach, and significant negative correlations between anxiety and self-confident and optimistic approaches. Similar to the current study findings, it was demonstrated that individuals, who cannot effectively cope with stressful events and exhibit avoidance behavior, could not adopt emotion regulation strategies and exhibit high anxiety levels [36]. In another study, it was reported that individuals, who adopt problem-oriented coping styles, exhibited lower anxiety and depression symptoms. It was determined that individuals who prefer emotion-oriented coping strategies exhibited higher depression and anxiety symptoms [3]. Thus, based on the findings reported in the literature and the present study, it could be suggested that emotion-oriented and problem-oriented strategies are significant variables in predicting state anxiety. Furthermore, self-esteem also affects anxiety, and adolescents with high anxiety could exhibit low self-esteem. The current study findings and the literature demonstrated that the individual tries to find a personal identity in addition to several new responsibilities and developmental tasks in adolescence. Thus, career choices, academic achievement and various social and developmental tasks could lead to anxiety, a decrease in self-esteem, and the employment of emotion-oriented strategies in adolescence.

The qualitative study findings demonstrated that the reactions of the adolescents to anxiety could be categorized under the cognitive, emotional, physical and behavioral themes. Similarly, Norris and Murrell [52] reported that cognitive symptoms of anxiety include problems such as inability to recall learned knowledge, lack of self-esteem, unhappiness, ideation of failure, and inability to focus. Emotional symptoms of anxiety include panic, fear, introversion, crying, and anger. The behavioral symptoms of anxiety include introversion or hyperactivity, and avoidance [6]. Similarly, Cormier and Hackney [17] determined that individuals could exhibit physical symptoms when they experience anxiety (irregular bowel movements, stomach cramps, dizziness, etc.). Thus, both of the study findings demonstrated that the anxiety symptoms could be analyzed in cognitive, emotional, physical and behavioral dimensions.

Another qualitative finding of the study based on the views of the adolescents was that they associated anxiety with academic, personal, social and developmental

dimensions. During adolescence, the individual tries to complete developmental tasks, achieve academic success, and has to choose a career. Thus, this study finding could be expected. Similarly, Seginer and Lilach [60] emphasized that in adolescence, the individual has to cope with several challenges such as academic achievement, choosing a career and planning the future, as well as developmental tasks (social, emotional and identity development). The majority of the students who prepare for central exams globally are adolescents. Thus, academic achievement could also be considered as a significant factor that defines the identities of adolescents and the process of self-actualization [38]. On the other hand, the adolescents included in the present study sample are Turkish residents. The number of students who take the university allocation exam in Turkey is about three million [56]. Thus, the university allocation exam is important for Turkish students. Therefore, this could increase the anxiety levels of the adolescents, affecting their personal, social and developmental status.

The current study findings revealed that the dimensions that adolescents associated with anxiety were personal, social and developmental domains. Similar studies also reported that low social support was associated with anxiety and depression, as well as low self-esteem [54]. Similarly, it was emphasized that developmental variables were significant during adolescence, and that body image was an important part of the identity development in adolescence. It was emphasized that the sincerity and social support provided by the parents and friends were important for the adolescent who tries to establish an identity [45].

## 5. Conclusion

In conclusion, it could be suggested that state anxiety is an important variable in the identity development of adolescents. The current study findings and the above-mentioned literature demonstrated that self-esteem and coping with stress play a key role in state anxiety. Thus, for a healthy cognitive, physical, social and behavioral development of adolescents, self-esteem, which predicts state anxiety, and coping with stress should be analyzed by field experts (psychological counselors, psychologists, psychiatrists, social workers, teachers, school administrators, etc.) when planning interventions.

## REFERENCES


[1] Akbağ M., "An investigation of the coping styles of the university students in terms of negative automatic thoughts, ego states ain transactional analysis and other variables", Unpublished Doctoral Dissertation, Marmara University, 2000 İstanbul.

[2] Atkinson D. L., Atkinson R.C., Hilgard E.R., "Psikolojiye Giriş" I-II. (Çev. Kemal Atakay, Mustafa Atakay, Aysun Yavuz). İstanbul, 1995, Sosyal Yayınlar.

[3] Baker J. P., Berenbaum H., "Emotional approach and problem-focused coping: A comparison of potentially adaptive strategies", Cognition and Emotion, vol, 21, no. 1, pp. 95–118, 2007. DOI:10.1080/02699930600562276

[4] Bakusic J., Schaufeli W., Claes S., Godderis L., "Stress, burnout and depression: A systematic review on DNA methylation mechanisms", Journal of psychosomatic research, vol. 92, pp. 34–44. 2017. DOI: 10.1016/j.jpsychores.2016.11.005

[5] Bartoletti B. B., "Effectiveness of Mruk's self-esteem change program on psychological and physiological measures of well-being", Unpublished Doctoral Dissertation. Marywood University. 2006. Scranton.

[6] Beck A. T., Emery G., "Anksiteye bozuklukları ve fobiler" (Çev.Öztürk, V.) 4. Baskı, 2006, İstanbul, Litera Yayınları.

[7] Begley C. M., White P., "Irish nursing students' changing self-esteem and fear of negative evaluation during their preregistration programme", Journal of Advanced Nursing, vol. 42, no. 4, pp. 390-401. 2003. DOI:10.1046/j.1365-2648.2003.02631.x

[8] Spielberger C.D., Gorsuch R.L., Luschene R.E., "Manual for the State-Trait Anxiety Inventory", California: Consulting Psychologists Press. 1970.

[9] Saka E., "Examination of the relationships between anxiety levels, methods of coping with stress, and life satisfaction levels of young adult individuals, Master Thesis, Çağ University, Mersin, 2021.

[10] Boğday H., Aktan Z.D., Yardımcı E., "Maternal anxiety level on the adolescent anxiety level", Journal of Development and Psychology, vol. 2, no.3, pp.25-42. 2012. DOI:10.51503/gpd.878839

[11] Brunello N., Den Boer, J. A., Judd L. L., Kasper S., Kelsey J. E., Lader M., Lecrubier Y., Lepine J.P., Lydiard L.P., Mendlewicz J., Montgomery S.A., Racagni G., Stein M., Wittchen H. U., "Social phobia: Diagnosis and epidemiology, neurobiology and pharmacology, comorbidity and treatment", Journal of Affective Disorders, vol. 60, no.1, pp.61-74. 2000. DOI:10.1016/S0165-0327(99)00140-8

[12] Büyükşahin Çevik G., Gündoğdu H. M., "An Investigation of the stress, hopelessness, mothers' learned helpnessness, predicting learned helpnessness", Turkish Psychological Counseling and Guidance Journal, vol.5, no. 43, pp.21-34. 2015. https://dergipark.org.tr/tr/download/article-file/200307

[13] Büyüköztürk Ş., "Sosyal bilimler için veri analizi el kitabı", 4.Baskı, Ankara, 2004. Pegem A Yayıncılık.

[14] Coleman J., Hendry L., "The nature of adolescence", (Second Edit.). London, 1990. Routledge.

[15] Coopersmith S., "The antecedents of self-esteem" San Francisco: W. H. Freeman & Co.1967.

[16] Corey G., "Psikolojik danışma, psikoterapi kuram ve uygulamaları" Ankara: Mentis Yayıncılık. 2005.

[17] Cormier S., Hackney H., "Psikolojik danışma: Stratejiler

ve müdahaleler" Ankara: Pegem Akademi. 2013.

[18] Creswell J. W., "A Concise İntroduction to Mixed Methods Research", Thousand Oaks, CA: Sage, 2014.

[19] Dabrowska, A., Pısula E., "Parenting stress and coping styles in mothers and fathers of preschool children with autism and down syndrome", Journal of Intellectual Disability Research, vol. 54, pp.266-280, 2010. DOI: 10.1111/j.1365-2788.2010.01258.x

[20] Çuhadaroğlu F., "Adölesanlarda Benlik Saygısı", Hacettepe University, Master's Thesis, Ankara. 1986.

[21] Denzin N. K., "Triangulation", İn. T. Husen & T. N. Postlethwaite, The International Encyclopedia of Education, Oxford: Pergamon. 1994.

[22] Tunç T., Özen-Kutanis R., "The relationship between self-esteem and state-trait anxiety ın nurses: a sample of a university hospital" Industrial Relations And Human Resources Journal. Vol.15, no. 2, pp. 1-15. 2013.

[23] Yıldırım A., Şimşek H., "Nitel araştırma yöntemleri, 3.Baskı, Ankara: Seçkin Yayınevi. 2003.

[24] Serin N., Öztürk S., "Anne-babası boşanmış 9–13 yaşlarındaki çocuklar ile aynı yaş grubundaki anne-babası boşanmamış çocukların benlik saygısı ve kaygı düzeyleri" Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi, vol.8, no.2, 2007. http://hdl.handle.net/20.500.12397/7439

[25] Türmüklü A., "Eğitim bilim araştırmalarında etkin olarak kullanılabilecek nitel bir araştırma tekniği: görüşme", Kuram ve Uygulamada Eğitim Yönetimi, vol.24, pp.543-559.

[26] Eriş Y., İkiz F.E., "The relation between self-esteem and social anxiety levels of adolescents and the effects of personal variables", Turkish Studies, vol.8, no.6, pp.179-193, 2013. DOI:10.7827/TurkishStudies.4726

[27] Fennell M. J. V., "Low self-esteem: a cognitive perspective", Behavioural and Cognitive Psychotherapy, vol.25, pp.1–25. 1997.

[28] Flanagan K. S., Erath S. A., Bierman A. L., "Unique associations between peer relations and social anxiety in early adolescence", Journal of Clinical Child & Adolescent Psychology, vol.37, no.4, pp.759-769. 2008. DOI:10.1080/15374410802359700

[29] Folkman S., Lazarus R. S., "Analysis of coping in a middle aged community sample", Journal of Health and Social Behavior, vol.21, no.3, pp.219-239. 1980. https://www.jstor.org/stable/2136617#metadata_info_tab_contents

[30] Şahin N. H., Durak A., "Stresle başa çıkma tarzları ölçeği: Üniversite öğrencileri için uyarlanması" Türk Psikoloji Dergisi, vol.10, no.34, pp.56-73. 1995.

[31] Hampel P., Meier M., Kummel U., "School-based stress management training for adolescents: Longitudinal results from an experimental study", Journal of Youth and Adolescence, vol.37, no.8, pp.1009-1024. 2008. DOI:10.1007/s10964-007-9204-4

[32] Hiller T., Steffens M., Ritter V., Stangier U., "On the context dependency of implicit self-esteem in social anxiety disorder" Journal of Behavior Therapy & Experimental Psychiatry, vol. 57, pp. 118-125. 2017. DOI: 10.1016/j.jbtep.2017.05.005

[33] Hofmann S., Carpenter J., Curtiss J., "Interpersonal Emotion Regulation Questionnaire (IERQ): Scale Development and Psychometric Characteristics", Cogn Ther Res, vol.40, pp.341–356. 2016.DOI:10.1007/s10608-016-9756-2

[34] Kalaycı Ş., "SPSS uygulamalı çok değişkenli istatistik teknikleri", (3.Baskı). Ankara: Asil Yayınları, 2008.

[35] Karaırmak, Ö., "Investigation of personal qualities contributing to psychological resilience among earthquake survivors: A model testing study", Unpublished Doctoral Dissertation, Middle East Technical University, Ankara. 2007.

[36] Kashdan T. B., Steger M. F., "Expanding the topography of social anxiety an experience sampling assessment of positive emotions, positive events, and emotion suppression", Psychological Science, vol.17, no.2, pp.120-128. 2006.

[37] Unicef https://www.unicef.org/reports/state-worlds-children-2021.

[38] Tyson K., "The making of the 'burden': Tracing the development of a ' burden of acting white' in schools", K. Tyson, & E. M. O'Connor (Ed.), Beyond acting white: Reframing the debate on black student achievement (57-88). Lanham, MD: Rowman & Littlefield. 2006.

[39] Koçhan A., "The relationships between parental stress levels, ilness burden, coping and mindfulness levels of parents with disabled children", Master Thesis, Başkent University, Ankara. 2019.

[40] Larson R., Asmussen L., "Anger, worry, and hurt in early adolescence: An enlarging World of negative emotions", In M. E. Colten & S. Gore (Eds.), Adolescent stress: Causes and consequences, pp. 21–41, 1991.

[41] Rosenberg, M., "Society and the adolescent self-image", Princeton, New Jersey: Princeton University Press. 1965.

[42] Lazarus R. S., Folkman S., "An analysis of coping in a middle-aged community sample", Journal of Health and Social Behaviour, vol.21, pp.219-239. 1980.

[43] Lazarus R., Folkman S., "Stress", Appraisal, and Coping. New York: Springer. 1984.

[44] Leahy R., "Bilişsel Terapi ve Uygulamaları", İstanbul: Litera Yayıncılık. 2007.

[45] Lerner R., Steinberg, L., "Handbook of adolescent psychology: Individual bases of adolescent development. New York: Wiley. 2004.

[46] Le Gall A., "Anksiyete ve Kaygı", Çev. İ. Yerguz, Dost Kitabevi Yayınları, Ankara. 2006.

[47] Liberska, H., "Life perspectives of adolescents in the context of social and economic changes in Poland",. J. Trempała & L. E. Malmberg (Ed.), Adolescents' future orientation: Theory and research, 691. Frankfurt am Main: Peter Lang. 2002.

[48] Tabachnick B. G., Fidell L. S., "Using multivariate statistics" (6th ed.). Boston: Pearson. 2013.

[49] Lucas R. E., Diener E., Suh, E., “Discriminant validity of well-being measures”, Journal of Personality and Social Psychology, vol.71, pp.616–628. 1996. DOI:10.1037/0022-3514.71.3.616

[50] Miles M. B., Huberman A. M., “Qualitative data analysis” An expanded sourcebook. Sage. 1994.

[51] Miller BF., Seals DR., Hamilton KL. A., “View point on considering physiological principles to study stress resistance and resilience with aging”, Ageing Research Reviews. Vol.38, pp.1–5. 2017.

[52] Norris F. H., Murrell S. A. “Prior experience as a moderator of disaster impact on anxiety symptoms in older adults”, American Journal of Community Psychology, vol.16, no.5, pp.665-683. 2016. DOI: 10.1007/BF00930020

[53] Ohayon M. M., Schatzberg, A. F., “Social phobia and depression: Prevalence and comorbidity”, Journal of Psychosomatic Research, 68(3), 235-243. 2010. DOI: 10.1016/j.jpsychores.2009.07.018

[54] Teoh H. J., Rose, P., “Child mental health: Integrating Malaysian needs with international experiences”, Mental health in Malaysia, Kuala Lumpur: University Malaya Press 103-121. 2001.

[55] Spielberger C. D., “State- Trait Anxiety Inventory for Adults”, Mind Garden Inc, California. 1983.

[56] OSYM (2022)https://dokuman.osym.gov.tr/pdfdokuman/2022/YKS/sayisalbilgiler18072022.pdf

[57] Öz M., “Evaluation of anxiety levels and coping strategies of mothers and fathers with disabled children”, Master Thesis, Üsküdar University, İstanbul. 2018.

[58] Öner N., Le Compte, A., “Durumluk sürekli kaygı envanteri el kitabi”, Boğaziçi University Yayınları, İstanbul, 1-26. 1983.

[59] Özcan H., Subaşı B., Budak B., Çelik M., Gürel Ş.C., Yıldız, M., “Relationship between self esteem, social appearance anxiety, depression and anxiety in adolescent and young adult women”, Journal of Mood Disorders, vol.3, no.3, pp.107-113. 2013. DOI:10.5455/jmood.20130507015148

[60] Seginer R., Lilach E., “How adolescents construct their future: The effect of loneliness on future orientation”, Journal of Adolescence, vol.27, pp.625-643. 2004. DOI:10.1016/j.adolescence.2004.05.003