

Relationship Between Sociotropic Autonomic Personality Characteristics and Trait Anger and Anger Expression Styles in Adolescents: Descriptive Relationship Seeking Study

Ergenlerde Sosyotropik Otonom Kişilik Özellikleri ile Sürekli Öfke ve Öfke İfade Tarzları Arasındaki İlişki: Tanımlayıcı/İlişkisel Bir Çalışma

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Abstract

Purpose: Adolescence is an important period for personality development. In this period, adolescents experience intense feelings of anger as well as complex emotions. It is thought that personality traits play a significant role in regulating the anger of adolescents. This research was conducted to determine the relationship between sociotropic autonomic personality characteristics, and trait anger, as well as anger expression styles in adolescents.

Method: The research is a descriptive and relational study. The research was conducted with 201 female and 149 male adolescents, who were between the ages of 14 and 19. Before starting the study, permission from the Ethics Committee was obtained. The data was collected with the Descriptive Information Form, Sociotropy Autonomy Personality Scale, Trait Anger and Anger Expression Styles Scale.

Results: This study determined that the adolescents' sociotropic 69.32 ± 17.10 , autonomic 69.20 ± 14.10 , personality and trait anger 22.84 ± 5.52 , anger-in 17.54 ± 4.32 , anger-out 17.60 ± 4.96 , anger control 19.40 ± 4.94 scores were at a moderate level. It is observed that as the level of sociotropy increases, the level of trait anger and anger-in increases; and as the level of autonomy increases, the levels of trait anger, anger-in, and anger-out increase.

Conclusions: Nurses, school guidance service, school management, and families should work in cooperation to ensure the balanced development of adolescents' sociotropic autonomic personality characteristics and to improve anger control. They should plan and maintain the necessary training and monitoring activities.

Key Words: Adolescent, Anger, Sociotropic autonomic personality.

Özet

Amaç: Ergenlik kişilik gelişimi açısından önemli bir dönemdir. Bu dönemde ergenler karmaşık duyguların yanı sıra yoğun öfke duyguları da yaşarlar. Ergenlerin öfkesini kontrol etmede kişilik özelliklerinin önemli rol oynadığı düşünülmektedir. Bu araştırma, ergenlerin sosyotropik otonom kişilik özellikleri ile sürekli öfke ve öfke ifade tarzları arasındaki ilişkiyi belirlemek amacıyla yapılmıştır.

Yöntem: Araştırma tanımlayıcı ve ilişkisel bir çalışmadır. Araştırma, 14-19 yaş aralığındaki 201 kadın ve 149 erkek ergen ile gerçekleştirilmiştir. Araştırmaya başlamadan önce Etik Kurul izni alındı. Veriler Demografik Bilgi Formu, Sosyotropi-Otonomi Kişilik Ölçeği ve Sürekli Öfke ve Öfke İfade Tarzları Ölçeği kullanılarak toplanmıştır. Elde edilen veriler Shapiro-Wilk Testi, t-Testi, Tek Yönlü Varyans Analizi (ANOVA), Kruskal-Wallis Testi, Mann-Whitney U Testi, Post Hoc testleri ve korelasyon testleri kullanılarak analiz edilmiştir.

Bulgular: Bu çalışmada ergenlerin sosyotropik $69,32 \pm 17,10$, otonomik $69,20 \pm 14,10$ kişilik ve sürekli öfke $22,84 \pm 5,52$, öfke içe $17,54 \pm 4,32$, öfke dışı $17,60 \pm 4,96$, öfke kontrol $19,40 \pm 4,94$ puanlarının orta düzeyde olduğu belirlendi. Sosyotropi düzeyi arttıkça sürekli öfke ve içe yönelik öfke düzeyinin arttığı; özerklik düzeyi arttıkça sürekli öfke, içe yönelik öfke ve dışı yönelik öfke düzeylerinin arttığı görülmektedir.

Sonuç: Ergenlerin sosyotropik otonomik kişilik özelliklerinin dengeli gelişimini sağlamak ve öfke kontrolünü geliştirmek için hemşireler, okul rehberlik servisi, okul yönetimi ve aileler işbirliği içinde çalışmalıdır. Gerekli eğitim ve izleme faaliyetlerini planlamalı ve sürdürmelidirler.

Key Words: Adolescent, Anger, Sociotropic autonomic personality.

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INTRODUCTION

Adolescence is the transitional period spanning childhood to adulthood, between the ages of 10 and 19, in which physical changes occur rapidly, and a sense of identity begins to form (1). Personality development, which begins in the first years of life, is shaped by the end of adolescence; therefore, adolescence is critical for identity achievement and personality development (2). Beck et al. (3), one of the pioneers of cognitive theory, states that "adolescents reflect their emotions, thoughts and behaviors within the framework of sociotropy and autonomy, which are two dimensions of personality development". Individuals exhibiting sociotropic personality characteristics from these dimensions highly value being loved and respected by other people and getting the approval of the environment is more important than anything else for these individuals. Individuals with autonomic personality characteristics are success-oriented and do their own work without being affected by the environment, and controlling the events around them gives them a great sense of happiness (3,4). The balance of these traits is important for healthy interpersonal relationships. The fact that one side is more dominant may be related to some problems in interpersonal relations and emotion expression. Studies report that sociotropic and autonomic personality characteristics are associated with anger expression (4,5).

Anger, which is an emotion that can be experienced frequently in adolescence, is defined as "an aggressive reaction against frustration, disappointment or a negative experience" (6). Adolescents try to express themselves and their anger in a number of ways within the complexities they experience; and expressing anger in healthy ways is associated with healthy personality traits. Inability to express anger appropriately can cause interpersonal communication problems and make an individual open to verbal and physical attacks. If the feeling of anger experienced in adolescence cannot be properly controlled, the identity and personality development of the individual is negatively affected (7,8). The most important limitation of previous studies is the weak explanation of how individual differences mediate trait anger and anger (6).

In the literature, there are studies researching trait anger and anger expression style, and personality characteristics separately in adolescents. There are studies conducted with the elderly, married individuals and nurses, regarding sociotropic autonomic personality characteristics. However, no other study was found that investigated the relationship between the sociotropic autonomic personality characteristics and the trait anger and anger expression styles of adolescents. This research was conducted to determine the relationship between

sociotropic autonomic personality characteristics and trait anger and anger expression styles of adolescents.

Research questions

1. What are the sociotropic-autonomic personality characteristics of adolescents?
2. What is the level of trait anger and anger expression styles of adolescents?
3. Are adolescents' personality traits related to some demographic variables?
4. Are adolescents' anger levels related to some demographic characteristics?
5. Is there a relationship between adolescents' sociotropic-autonomic personality characteristics and trait anger and anger expression styles?

MATERIALS AND METHODS

Design, Population and Sample

The study employed a quantitative relational design with high school students in a provincial capital. The sample was selected using the "Stratified Sampling" method, one of the probability sampling techniques. Accordingly, each type of high school—Science High School, Anatolian High School, Imam Hatip High School, and Vocational High School—was considered a stratum, and one school from each stratum was selected for sampling. The sample size was then calculated using the known population sample calculation formula (9). The sample size was determined to be 350 adolescents. A preliminary application was conducted with 10 students outside the sample.

Data Collection and Tools

The purpose and content of the study were explained to the students, and students who agreed to participate were included in the sample. Data were collected via a face-to-face survey in the students' classrooms. Descriptive Information Form, Sociotropy Autonomy Scale (SAS), and Trait Anger and Anger Expression Styles Scale (TAAESS) were used for data collection. The students completed the forms in approximately 25 minutes after lunch. Ethics committee and institutional approvals were obtained before data collection.

Descriptive Information Form: In the questionnaire prepared by the researcher by scanning the literature there are 8 questions inquiring the individualistic and familial characteristics of adolescents.

Sociotropy Autonomy Scale (SAS): The SAS was developed by Beck, Epstein, and Harrison (1983) to measure individuals' dependency and autonomy traits and was adapted into Turkish by Şahin, Ulusoy, and Şahin (2003). The scale consists of 60 items in a 5-point Likert format and includes two subdimensions. The sociotropy subdimension comprises 30 items that assess concerns about disapproval, separation anxiety, and the desire to please others. The autonomy subdimension, on the other hand, consists of 30 items which measure personal achievement, freedom, and enjoyment of solitude. In this study, Cronbach's alpha coefficients were found to be 0.84 for general sociotropy and 0.81 for general autonomy.

Trait Anger and Anger Expression Styles Scale (TAAESS): The scale was developed by Spielberger, Krasner, and Solomon (1988) and was adapted into Turkish by Özer (1994). It consists of two subdimensions that measure trait anger and anger expression. The anger expression subdimension is further divided into three components: inward anger, outward anger, and anger control. The scale consists of 34 items in a 4-point Likert format. The first 10 items measure the "Trait Anger" subdimension, while the remaining 24 items assess "Anger Expression Styles." In this study, the Cronbach's alpha coefficients were found to be 0.78 for trait anger, 0.64 for inward anger, 0.81 for outward anger, and 0.83 for anger control.

Data analysis: The study data were analyzed using SPSS 23. Independent Samples t-test and One-Way ANOVA analyses were used for data evaluation, while the Mann-Whitney U and Kruskal-Wallis tests were applied for variables that did not show a normal distribution. Correlation analysis was used to determine relationships between variables, and a Post Hoc test was conducted to identify the source of differences in statistically significant variables. Tukey's HSD test was used as a post-hoc analysis following One-Way ANOVA to determine which groups differed significantly. Dunn's test with Bonferroni correction was applied after the Kruskal-Wallis test to identify the source of significant group differences. A significance level of $p < 0.05$ was considered statistically significant.

RESULTS

According to the descriptive characteristics of adolescents, it was determined that 57.4% of them are girls, 62% of them have an egalitarian and democratic upbringing attitude, 78.3% of them did not experience any event that they could call trauma throughout their lives, and 70% of them participated in both in-school and out-of-school social activities (Table 1).

Table 1. Distribution of adolescents according to their descriptive characteristics.

Descriptive Characteristics	Number	%
Age (years)		
14–16	184	52.6
17–19	166	47.4
Gender		
Female	201	57.4
Male	149	42.6
Income Status		
Income Less than Expenses	35	10.0
Income Equal to Expense	251	71.7
Income More Than Expenses	64	18.3
Grade		
9	84	24.0
10	100	28.6
11	91	26.0
12	75	21.4
Type of High School		
High School of Science	65	18.6
Anatolian High School	71	20.3
Vocational High School	68	19.4
High School of Religious Services	146	41.7
Recent Trauma Experience Status (Any life experience in the last month that is perceived as challenging for the adolescent)		
Yes	76	21.7
No	274	78.3
Participation in Social Activities In and Out of School		
Yes	245	70.0
No	105	30.0
The Parenting Attitude of the Family		
Oppressive and Authoritarian	57	16.3
Overprotective	53	15.1
Indifferent	5	1.4
Egalitarian and Democratic	217	62.0
Conflictive	18	5.2

Table 2. Trait Anger Expression Styles Scale Sub-Dimensions and General Sociotropy General Autonomy scales sub-dimension scores distribution according to descriptive characteristics of adolescents.

Characteristics	Trait Anger	Anger-In	Anger-Out	Anger Management	General Sociotropy	General Autonomy
	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$ $\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$
Age						
14-16	23.11±5.38	17.59±4.36	18.05±5.32	19.62±5.18	71.05±17.46	67.41±14.13
17-19	22.55±5.30	17.49±4.29	17.12±4.51	19.17±4.66	67.40±16.55	71.19±13.85
Statistical analysis	t=0.948 p=0.344	t=0.226 p= 0.822	t=1.752 p= 0.081	t=0.852 p=0.395	t=1.997 p=0.047	t=-2.530 p=0.012
Gender	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$
Female	22.35±5.38	17.77±4.35	17.03±4.67	19.51±4.98	71.16±17.46	70.90±14.01
Male	23.51±5.66	17.23±4.27	18.39±5.26	19.27±4.91	66.83±16.34	66.91±13.95
Statistical analysis	t=-1.953 p= 0.052	t= 1.149 p=0.251	t=-2.552 p=0.011	t=0.447 p=0.655	t=2.360 p=0.019	t=2.774 p=0.006
Grade	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$
9th Grade	22.79±6.02	16.71±4.30	17.39±5.28	20.29±5.33	71.73±16.71	66.62±15.10
10th Grade	23.56±5.37	18.29±4.54	18.77±5.30	19.28±5.24	69.04±17.74	68.72±14.13
11th Grade	22.75±5.09	17.55±3.74	16.78±3.80	19.00±4.23	70.80±16.70	69.67±13.83
12th Grade	22.07±5.65	17.47±4.61	17.31±5.21	19.08±4.86	65.20±16.72	72.16±12.86
Statistical analysis	F=1.068 p=0.363	F=2.053 p=0.106	F=2.858 p=0.037	F=1.225 p=0.301	F=2.266 p=0.081	F=2.132 p=0.096
Type of High School	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$
High School of Science	22.80±5.70	18.32±5.02	17.54±5.08	19.37±4.92	68.78±18.01	72.86±13.78
Anatolian High School	23.45±5.58	17.45±4.08	18.65±5.02	18.14±5.10	67.25±18.36	69.34±12.79
Vocational High School	21.85±5.73	16.49±3.99	17.16±5.23	20.04±5.14	68.69±16.31	70.79±2.91
Religious Vocational High School	23.03±5.32	17.73±4.19	17.34±4.74	19.74±4.72	70.86±16.44	66.76±15.02
Statistical analysis	F=1.070 p=0.362	F=2.192 p=0.089	F=1.369 p=0.252	F=2.174 p=0.091	F=0.781 p=0.505	F=3.223 p=0.023
Recent Status of Trauma Experience	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$
Yes	24.80±5.54	18.71±4.56	20.00±5.32	18.39±5.28	69.84±17.51	72.08±13.35

No	22.30±5.41	17.22±4.20	16.95±4.66	19.69±4.82	69.18±17.02	68.40±14.22
Statistical analysis	t=3.553 p=0.000	t=2.687 p=0.008	t=4.899 p=0.000	t=-2.024 p=0.044	t=0.300 p=0.764	t=2.02 p=0.044
	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$
Participation in Social Activities In and Out of School						
Yes	22.58±5.67	17.22±4.28	17.53±5.10	19.49±4.99	68.27±16.46	68.98±14.50
No	23.46±5.15	18.29±4.35	17.78±4.66	19.20±4.85	71.78±18.37	69.72±13.19
Statistical analysis	t=-1.363 p=0.174	t=-2.117 p=0.035	t=-0.425 p=0.671	t=0.509 p=0.611	t=-1.768 p=0.078	t=-0.4 p=0.650
	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$
Level Of Income						
Good	23.13±5.78	16.83±4.95	18.03±5.24	20.33±5.40	65.14±17.73 ¹	69.95±13.40
Average	22.70±5.57	17.71±4.17	17.34±4.95	19.31±4.83	69.80±16.30 ²	69.17±14.34
Low	23.34±4.78	17.63±4.17	18.77±4.47	18.43±4.73	73.54±20.34 ²	68.06±13.91
Statistical analysis	F=0.308 p=0.735	F=1.078 p=0.341	F=1.568 p=0.210	F=1.858 p=0.158	F=3.112 p=0.046	F=0.206 p=0.814
	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$	$\bar{x} \pm ss$
The Parenting Attitude of the Family						
Oppressive	26.44±5.40 ^a	19.47±4.34 ^a	19.81±4.91 ^a	18.72±4.83 ^a	72.14±17.98	71.79±13.88
Overprotective	23.85±4.30 ^a	17.83±3.67 ^a	18.92±4.47 ^a	18.28±5.14 ^a	70.02±14.50	66.25±10.79
Indifferent	25.00±5.70 ^a	18.80±5.63 ^a	20.60±9.29 ^a	18.40±9.07 ^a	51.80±26.53	76.40±25.07
Democratic	21.63±5.42 ^b	16.90±4.30 ^b	16.66±4.79 ^b	20.09±4.73 ^a	69.00±16.80	69.12±14.45
Conflictive	22.56±5.10 ^a	17.94±4.41 ^b	17.39±4.20 ^a	16.94±4.73 ^b	67.00±20.46	68.72±15.07
Statistical analysis	$\chi^2=36.913$ p<0.001 *	$\chi^2=17.271$ p=0.002*	$\chi^2=25.863$ p<0.001 *	$\chi^2=11.972$ p=0.018*	$\chi^2=5.536$ p=0.237	$\chi^2=6.126$ p=0.190

(a,b) Different letters indicate statistically significant differences between groups according to post-hoc Dunn's test with Bonferroni correction (p < 0.05)

(1,2) Different number indicate statistically significant differences between groups according to post-hoc Tukey's HSD test (p < 0.05)

Above, statistically significant differences were found between trait anger, anger-in, anger-out, anger control, general autonomy, their general sociotropy scores, age, gender, grade levels, type of high school they attended, family's parenting attitude, family income level, participation in social activities, and trauma status of adolescents (*p<0.05) (Table 2).

Table 3. Adolescents' sociotropic autonomic personality scale and trait anger and anger expression styles scale score averages.

Sociotropic Autonomic Personality Scale	$\bar{x} \pm SS$	M(Min-Max)
General Sociotropy Level	69.32±17.10	69.20(17-106)
General Autonomy Level	69.20±14.10	69.0(30-102)
Trait Anger and Anger Expression Styles Scale	$\bar{x} \pm SS$	M(Min-Max)
Trait Anger	22.84±5.52	22.0(12-38)
Anger Introversion (Anger-In)	17.54±4.31	17.0(8-32)
Anger Expression (Anger-Out)	17.60±4.96	17.0(8-32)
Anger Management	19.40±4.94	19.0(8-32)

$\bar{x} \pm ss$:Average±Standard Deviation M(Min-Max):Median(Minimum-Maximum)

This study determined that the adolescents' sociotropic (69.32±17.10), autonomic (69.20±14.10) personality and trait anger (22.84±5.52), anger-in (17.54±4.32), anger-out (17.60±4.96), anger control (19.40±4.94) scores were at a moderate level (Table 3).

Table 4. Table of correlation between adolescents' sociotropy autonomy personality scale and trait anger and anger expression styles scale mean scores.

	General Sociotropy	General Autonomy	Trait Anger	Anger-In	Anger-Out	Anger Management
General Sociotropy	1					
General Autonomy	r= ,174** p= ,001	1				
Trait Anger	r= ,124* p= ,020	r=,235** p=,001	1			
Anger-In	r= ,202** p= ,001	r=,288** p=,001	r=,350** p=,001	1		
Anger-Out	r= -,020 p= ,706	r=,210** p=,001	r=,688** p=,001	r=,282** p=,001	1	
Anger Management	r= ,087 p= ,104	r= -,016 p=,764	r=,435** p=,001	r= -,023 p=,661	r= -,485** p=,001	1

*p<0.05 **p<0.01

This study determined that there was a low level of positive correlation with $r=0.124$ between general sociotropy and trait anger, and a moderate positive correlation with $r=0.202$ with anger-in ($p<0.05$, $p<0.01$). We found moderately significant relationships between the mean scores of general autonomy and trait anger, anger-in and anger-out scores, $r=0.235$, $r=0.288$, $r=0.210$, respectively ($p<0.01$) (Table 4).

DISCUSSION

This study determined that adolescents had moderate levels of sociotropic and autonomic personality traits, including trait anger, anger-in, anger-out, and anger control. We found that female students had higher levels of sociotropic and autonomic personality traits than male students. Balık (2017) reported no relationship between gender and sociotropic and autonomic personality traits in their study. Uğurlu and Pako (2016) found, in their study with high school students, girls exhibited high sociotropy and boys exhibited high autonomy. This may be due to the different sample sizes used in the studies. We determined that the level of autonomy in adolescents increased with age. Hithit and Şimşek (2021), in their study with high school students, found that, similar to the results of the study, the level of autonomy of the students increased as the grade level increased. Balık (2017) stated in their study with adults that there is no relationship between age and sociotropic autonomic personality traits. This difference may be due to the fact that the sample groups in the studies reviewed in the literature consist of both adults and students. The educational atmospheres and curricula of different types of schools differ. It is thought that this will have an impact on the personality development of adolescents. In this direction, the autonomy levels of the students studying at high schools of science were found to be significantly higher than those of the adolescents studying at other high schools. No study has been found in the literature examining the relationship between sociotropy autonomy, personality traits, and high school type. We found the autonomic characteristics of adolescents who experienced trauma (any life experience perceived as challenging for the adolescent in the last month) to be higher. This result supports the knowledge of Beck, one of the pioneers of cognitive theory, who also formed the philosophy of the study, that the current situation, not the past experiences, is important in acquiring sociotropy autonomy personality traits. We determined that low-income adolescents exhibit more sociotropic behaviors. In their study with high school students, Ciriş (2018) determined that a high-income level increases the autonomy level of students. Low level of income may have caused the adolescents to behave more limitedly in expressing themselves and to be more accepting towards their environment in establishing positive relationships with people, which may have led to higher sociotropy scores.

Anger is one of the basic emotions, such as love, fatigue, and loneliness (18). When the anger and anger expression styles of the adolescents were evaluated, it was found that as the age of the adolescents decreased, their trait anger characteristics increased. There are other studies in the literature that found that anger level increases as age decreases (19,20). Although this

indicates that anger levels are higher in the early stages of adolescence, it suggests that the adolescent's adaptation to this process over time reduces their anger levels. We found the anger-out scores of the male to be significantly higher. There are studies in the literature that support the findings of the study (19). This result may be due to the fact that females' anger-in is considered as normal as males' anger-out is considered normal within cultural characteristics.

Anger is a possible reaction after trauma (20). There are studies in the literature that found that high school and university students, who were exposed to traumatic experiences such as abuse, neglect, traffic accidents, and conflict at home, had high levels of both internal and external anger (20,21). Our results are compatible with the literature, and it was found that the trait anger, anger-in, and anger-out scores of adolescents who stated that they had experienced trauma were higher. Trauma may have affected the cognitive processes of adolescents by causing distortions in the perception of emotions they experience and may have increased their anger levels by disrupting their interpersonal relationships. According to Beck's cognitive theory (2005), challenging experiences can increase an individual's anger level by causing negative thoughts about themselves, their environment, and the future.

Parental attitudes are as effective on adolescents' personality as they are on their emotional expression. We determined that oppressive parental attitudes increased the trait anger and anger-in scores in adolescents, the indifferent attitude increased the anger-out scores of adolescents, and the democratic attitude increased the anger control levels in adolescents. In their study with adolescents, Mousavi, Low, and Hashim (2016), in their study examining the relationship between parental attitudes and anxiety in a cultural context, found that parental rejection in all cultures increased negative emotions such as anxiety in adolescents. This suggests that oppressive family attitudes prevent adolescents from expressing their emotions, causing them to experience their anger inside. It is recommended that students who have problems with anger expression take part in social activities at school in order to increase their social skills (24). We found the anger-in scores of the adolescents who did not participate in school activities to be high. Nas, Şahan Birol and Temel (2016) found that the trait anger and anger expression subscale scores were low in the study they conducted with futsal players, while Temel and Nas (2018) found that high school students participating in school sports had low anger levels in adolescents, similarly. This suggests that participating in social and sports activities can be a positive method for coping with anger.

The instability of both the sociotropic and autonomic dimensions of the personality is defined as personality styles that support negative emotions such as anger and stress in social life (27). Accordingly, in the study, it was determined that there was a positive and significant relationship between sociotropic personality traits and mean scores of trait anger and anger-in. This aspect of personality includes disapproval anxiety, separation anxiety, and pleasing others. Sociotropic people are prone to abuse by others and show submissive behaviors (28). This prevents the emotions from being expressed in a timely and appropriate manner. The feeling of frustration, on the other hand, triggers a range of negative emotions, particularly anger. Unexpressed anger can be suppressed and turn into introverted anger. This suggests that increasing sociotropic characteristics may even lead to cognitive distortions by increasing the anger level. In studies on the subject, it is stated that sociotropic personality traits are associated with negative experiences, anxiety, anger, and depression (29,30). The study is consistent with the literature.

In the study, it was determined that there was a positive and significant correlation between the autonomic personality trait and the mean scores of trait anger, anger-in, and anger-out. Since life satisfaction in autonomic individuals is based on personal achievements and control over life, these attitudes sometimes trigger anger experiences (31). Although the feeling of success is a motivating factor for the individual, sometimes not being able to determine the boundaries of this life experience can become a stressful situation. While adolescents can be confident and outgoing when they are successful, the anxiety and feelings of being unsuccessful can trigger the experience of anger. This situation can lead to pride in success, shame in failure, and a dislike of oneself in comparison to others, resulting in a lack of self-acceptance (32). This indifference can also lead to loneliness. Mistry-Patel et. al., (2024) state in their studies that increased anger reduces cognitive control and external behavior and increases loneliness. On the other hand, the fact that adolescents cannot be satisfied with their interpersonal relationships causes their feelings of loneliness to increase their anger levels (34). Yet, insufficient self-control over suppressed schemas and emotions will increase the anger experienced in individuals with autonomous characteristics, which supports the result of the study, and will make it difficult to control. In addition, the overly autonomic individual will not accept the restriction and hindrance placed on them. Every event that is not in their control or that develops beyond their control will often be a source of stress, anxiety, and even anger for people who are overly fond of freedom. Supporting the conclusion obtained in this study too, it was determined

that as the autonomic personality traits of the adolescents increased, their trait anger, anger-in, and anger-out levels increased.

In line with the study results, it may be suggested to examine the school curricula in terms of their contribution to the sociotropic autonomic personality traits of adolescents and to make necessary arrangements. In addition, it is thought that it would be beneficial to add an adolescent mental health nurse who has completed their education in this field, who will support the psychological problems in adolescents by undertaking preventive mental health services, in addition to the school nurse, to the guidance service team, which is especially focused on school success. Adolescent mental health nurses who will work in this field can both organize in-school monitoring and training activities that will ensure the balanced development of adolescents' sociotropy autonomic personality traits and also inform and counsel families on this issue at regular intervals.

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Author Contributions: S.P. conceptualized the study, developed the design, wrote and reviewed the article; Z.C.Y. Participated in the conceptualization, design development, data collection, manuscript writing, and journal submission stages of the study. All authors have read and approved the final manuscript.

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