Investigation of the Relationship Between Family Relationships and Self-Regulation Skills of Adolescents in the COVID-19 Pandemic: An Analytical Cross-Sectional Research

COVID-19 Pandemi Döneminde Ergenlerin Aile İlişkileri ile Öz Düzenleme Becerileri Arasındaki İlişkinin İncelenmesi: Analitik Kesitsel Araştırma

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ABSTRACT Objective: Coronavirus disease-2019 (COVID-19)] pandemic, which surrounded the world, affected all individuals, especially families and children. In this study, it is aimed to examine the relationship between " adolescents' family relationships and self-regulation skills during the COVID-19 pandemic in Turkey. **Material and Methods:** This analytical-cross-sectional study was conducted with 294 adolescents aged 13-18 years who were reached via social networks between June 20 and September 20, 2020. In data collection, the Youth Information Form, Family Assessment Scale, and Self-regulation Scale created by the researchers were used. **Results:** As a result of the study, while there was no significant difference between the Self-regulation Scale mean scores of adolescents and their demographic characteristics (p>0.05), there were significant differences between the Family Assessment Scale mean scores and some demographic characteristics (p<0.05). It was found that the self-regulation skills of adolescents were at the average level; family functions showed a slight tendency toward the non-functional and there was a negative relationship between the self-regulation scale and the family assessment scale. Regression analysis showed that emotional responsiveness and behavioral control significantly predicted self-regulation of adolescents (R²=0.43, F(2)=33, p<0.05). **Conclusion:** The findings showed that affective responsiveness and behavior control sub-dimensions of family functionality significantly predicted adolescents' self-regulation.

Keywords: Adolescent; COVID-19; self-regulation; family relations

ÖZET Amaç: Tüm dünyayı etkisi altına alan koronavirüs hastalığı-2019 (COVID-19) pandemisi, başta aileler ve çocuklar olmak üzere tüm bireyleri etkilemiştir. Bu araştırmada, Türkiye'de koronavirüs hastalığı-2019 pandemi sürecinde, ergenlerin aile ilişkileri ile öz düzenleme becerileri arasındaki ilişkiyi incelemek amaçlanmıştır. **Gereç ve Yöntemler:** Analitik-kesitsel tipteki bu araştırma, 20 Haziran-20 Eylül 2020 tarihleri arasında, sosyal ağlar aracılığıyla ulaşılan 13-18 yaş aralığındaki 294 ergen ile gerçekleştirilmiştir. Veri toplamada, araştırmacılar tarafından oluşturulan Genç Bilgi Formu, Aile Değerlendirme Ölçeği ve Öz Düzenleme Ölçeği kullanılmıştır. **Bulgular:** Ergenlerin Öz Düzenleme Ölçeği puan ortalamaları ile demografik özellikler arasında anlamlı bir farklılık saptanmazken (p>0,05), Aile Değerlendirme Ölçeği puan ortalamaları ile bazı demografik özellikler arasında anlamlı farklılıklar saptanmıştır (p<0,05). Ergenlerin öz düzenleme becerilerinin ortalama seviyede olduğu, aile işlevlerinin ise sağlıksız yönüne doğru hafif eğilim gösterdiği ve Öz Düzenleme Ölçeği ile Aile Değerlendirme Ölçeği arasında negatif bir ilişki olduğu bulunmuştur. Yapılan regresyon analizi ise duygusal tepki verebilme ve davranış kontrolünün ergenlerin öz düzenlemelerini anlamlı bir düzeyde yordadığını göstermiştir (R²=0,43, F(2)=33, p<0,05). **Sonuç:** Bulgular, aile işlevselliğinin duygusal duyarlılık ve davranış kontrolü alt boyutlarının ergenlerin öz düzenlemelerini anlamlı düzeyde yordadığını göstermiştir.

Anahtar Kelimeler: Ergen; COVID-19; öz düzenleme; aile ilişkileri

In order to be protected from the ongoing coronavirus disease-2019 (COVID-19) pandemic, which has emerged in China in December 2019 and began in Turkey by the appearance of the first cases in March 2020, various measures are taken such as masks, distance, and paying attention to hygiene. However, the fact that these rules are not sufficient in mitigating the pandemic, and the rapid increase in the number of cases and deaths have made it necessary to take more stringent measures. In this context, in Turkey, as in the world, short term and long-term lockdowns have started out since March 2020, and early on education suspended for a while; however, because of the increasing number of cases, schools continued with distance education and employees started to work remotely.

The whole world has been affected by the COVID-19 pandemic. In an international study, it was determined that individuals' psychosocial tension increased in the process, and life satisfaction decreased with a considerable decrease in social activities.[1]

The restrictions due to the pandemic have caused changes in the daily routines of family members and their roles, domestic violence, child maltreatment, children's getting away from education, accommodation problems, increasing number of members per household, parental employment, and disruption of social networks.[2] The anxiety of being infected with the virus, the fear of transmitting it to others, being a carrier, and even the death of a family member with COVID-19 infection have affected the family relationships of individuals. In addition, the measures taken do not comply with the usual lifestyle, resulted in children having difficulties balancing the school-home relationship and parents' work-home relationship.[3]

When the problems that the family may encounter in the life cycle are added to the restrictions, the problems can become even more severe. For example, in the family cycle with an adolescent child, the adolescent's independence and mobility increase, school and profession choices coming to the agenda and causing anxiety, parents' worrying about possible risky behaviors related to sexuality, addiction, etc., aging of the grandparents, and the emergence of care and health problems may cause a crisis in the family.[4] The family's ability to cope with the crisis may vary according to lifestyle and cultural characteristics. While in some families, the adolescent is provided with responsibility, rights, and freedoms appropriate to his/her age, in some families, expectations about family roles increase, and tighter behavioral control can be applied.

One of the protective individual factors that will keep adolescents away from risky behaviors is their self-regulation skills. Murray et al. defined self-regulation as "*the act of managing cognition and emotion to enable goal-directed actions such as organizing behavior, controlling impulses, and solving problems constructively*".[5] Self-regulation skill is also crucial for mental health.[6] It is stated that children who have not developed self-regulation skills have more problem behaviors and experience more peer rejection and academic difficulties due to poor social interactions.[7,8] Intervention programs for the development of self-regulation skills have been reported to have positive effects on health and social measures such as academic achievement, social skills, mental health, behavioral problems/disorders, dropout, and substance use of children and adolescents.[9,10]

The pandemic has brought about the obligation of family members to adapt to changing conditions due to the changes in daily life routines. This change affected the functions of the family the most and required individuals to regulate themselves according to new situations. Since it is considered that adolescents with significant change and development in all areas of development will be more affected by changing family functions, this study aimed to determine the relationship between adolescents' family relationships and self-regulation skills in the pandemic period.

MATERIAL AND METHODS

PLACE AND TIME OF THE STUDY

This analytical-cross-sectional research was conducted between 20 June 2020 and 20 September 2020, with adolescents aged 13-18 years and their parents reached via e-mail and WhatsApp.

STUDY POPULATION AND SAMPLE

The population of the study consisted of all adolescents in the 13-18 age group, and the sample consisted of 294 adolescents who volunteered for the study and fully completed the data collection tools. The minimum number of individuals that should be included in the study sample was calculated based on Harma's (2008) study, "The Impact of Parental Control and Marital Conflict on Adolescents' Self-Regulation and Adjustment".[11] In the analysis made based on the data of this research, the minimum number of individuals to be sampled was calculated by taking

G*Power 3.1.9.2 with effect size: 0.7473699, α=0.05, power: 0.80, and df: 1 and found as 46.

DATA COLLECTION

The link containing the research forms was sent via e-mail and WhatsApp to parents of children between the ages of 13-18 through Aydın Adnan Menderes University Faculty of Health Sciences Department of Child Development students.

Young people in the 13-18 age group without any disability or chronic disease were included in the study. Three hundred twelve parents and young people were reached for the research. However, 6 parents did not want their children to participate in the study. Despite the consent of their parents to participate, 8 young people did not want to participate in the study. All 4 young people were not included in the study because they had a chronic illness, so the study was completed with a total of 294 young people.

Data Collection Tools

Research data were collected by using Family Assessment Scale, Self-Regulation Scale, and the Youth Information Form.

Youth Information Form

Sociodemographic characteristics of adolescents (age, gender, class level, whether they have chronic disease, etc.) and related to the COVID-19 process (the number of people in your household during the isolation period, etc.) consist of 15 questions.

Family Assessment Scale

Mc Master Family Assessment Scale was developed by Brown University and Butler Hospital in the USA as part of the Family Research Program. It was created to determine which family's functions are fulfilled or not and the problems in the family. There are 7 subscales in the family assessment scale. These are Problem Solving, Communication, Roles, Affective Responsiveness, Affective Involvement, Behavior Control, and General Functions. The scale consists of 60 items and is a 4-point Likert type. The adaptation study of the scale to our country was conducted by Bulut.[8] Scores from the scale range from 1 to 4. A score close to 4 indicates that the functions of the family have become non-functional. The Cronbach alpha coefficient of the Family Assessment Scale was found to be 0.89.[8] In this research, the Cronbach alpha coefficient of the scale is 0.90.

Self-regulation Scale

It was developed by Moilanen to measure the self-regulation skills of adolescents, and a Turkish validity and reliability study was conducted by Harma.[11,12] The scale is a 4-point Likert type ranging from 1 (never) to 4 (always) and consists of 32 items. The internal consistency coefficient of the scale was found to be 0.85.[11] In this study, the Cronbach alpha coefficient of the scale is 0.78.

STATISTICAL ANALYSIS

SPSS 20.0 program was used for coding and evaluation of data; from the parametric tests, t-test, Pearson correlation analysis, and multiple regression analysis were used in the analysis because the data showed normal distribution of frequency in percentage ratio.

ETHICAL CONSIDERATIONS

Permission was obtained from the Ministry of Health (03.06.2020) and Aydın Adnan Menderes University Faculty of Health Sciences Non-invasive Ethics Committee (16.06.2020/E.31155) for the study. Informed consent forms were obtained from all participants. The study was conducted in accordance with the principles of the Declaration of Helsinki.

▌ RESULTS

In Table 1, when the socio-demographic characteristics of the adolescents are examined, it was found that more than half of them were women (69%), aged 16 and over (69%), and almost half of them (43.9%) lived in a metropolitan city. During the isolation period, more than half of the parents were able to continue their jobs (73.8%), very few (6.5%) had to leave their jobs. It is seen that the majority of the adolescents were able to meet their care and food needs during the isolation period (88.8%); they could talk to their close friends via mobile phones or computers (95.9%); although the number of households was 4

TABLE 1: Distribution of descriptive features of adolescents (n=294).

Descriptive features number %		
Gender		
Female	203	69
Male	91	31
Age		
13-15	91	31
16-18	203	69
Grade		
6th grade	12	4.1
7th grade	10	3.4
8th grade	27	9.2
9th grade	39	13.3
10th grade	43	14.6
11th grade	77	26.2
12th grade	86	29.3
Residence		
Big city	129	43.9
City center	66	22.4
District	83	28.2
Town/village	16	5.4
Number of people in the household during the isolation period		
2	10	3.4
3	48	16.3
4	102	34.7
5	92	31.3
6	42	14.3
Illness and/or disability		
Yes	20	6.8
No	274	93.2
Meeting the need to be alone in isolation		
Yes	178	60.5
No	116	39.5
COVID-19 infection in the family		
Yes	28	9.5
No	266	90.5
Participation in distance education		
Yes	244	83
No	50	17
Mother/father's going to work in isolation		
Yes	217	73.8
No	77	26.2
Quitting the job of mother/father in isolation		
Yes	19	6.5
No	275	93.5
Meeting care and food needs in insulation		
Yes	261	88.8
No	33	11.2
Having trouble accessing the internet		
Yes	113	38.4
No	181	61.6
Contacting with close friends via phone/computer in isolation		
Yes	282	95.9
No	12	4.1
Regular artistic/sporting activities before isolation		
Yes	101	34.4
No	193	65.6
Continuing artistic/sportive activity during the isolation process		
Yes	77	76.2
No	24	23.8

or more (80.3%), they were able to fulfill their desire to be alone (60.5%); those who did artistic and sportive activities before isolation could continue these activities during the isolation period (76.2%).

Considering the self-regulation and family assessment scale scores of adolescents, it was found that self-regulation skills are at average level, and family assessment score averages show a slight tendency of family functions toward the unhealthy direction (Table 2).

There was no significant difference between the Self-regulation Scale mean scores of adolescents and their demographic characteristics (p>0.05). A significant difference was found between the Family Assessment Scale and age, meeting the need to be alone, being able to continue working and dismissal of the mother/father, meeting their care and food needs, and continuing previous artistic and sports activities during the isolation process (p<0.05). No significant difference was found between variables such as gender, grade, number of individuals in the household during the isolation process, place of residence, participation in distance education, chronic illness or disability, internet access status, communication with close friends via phone and computer, and COVID-19 infection in the family (p>0.05) (Table 3). When we look at the family assessment scale subscales, the age factor is found to have significant differences in communication (t=-2.173, p=0.031), roles (t=-2.421, p=0.016), and emotional response (t=-2.173, p=0.031) sub-dimensions. According to meeting the need of being alone during the isolation period, it was determined that there was a significant difference in the sub-dimensions of communication (t=-2.685, p=0.008), roles (t=-3.094, p=0.002), and affective involvement (t=-2.329, p=0.021). According to father/mother's continuing to work, significant differences were found in communication (t=-2.394, p=0.017), affective responsiveness (t=-2.822, p=0.005), affective involvement (t=-2.433, p=0.016), behavior control (t=-4.982, p=0.000), and general functions (t=-2.968, p=0.003) subscales. According to father/mother's dismissal in isolation period, significant differences were found in communication (t=2.915, p=0.004), roles (t=2.908, p=0.004), affective responsiveness

TABLE 2: Adolescents' self-regulation and family assessment scale mean scores.				
	Mean	Minimum	Maximum	Standard deviation
Self-assessment scale average score	82.25	49	124	11.57
Family assessment scale total score average	2.10	1.30	3.32	0.38
Problem solving subscale	2.07	One	4	0.67
Communication subscale	2.10	One	3.67	0.50
Roles subscale	2.18	1.09	3.18	0.44
Affective responsiveness subscale	2.05	One	4	0.66
Affective involvement subscale	2.39	1.57	3.57	0.42
Behavior control subscale	2.09	1.22	3.56	0.36
General functions subscale	1.92	One	3.58	0.58

TABLE 3: Self-regulation and family assessment scale scores according to socio-demographic characteristics.									
			Self regulation scale				Family assessment scale		
Characteristic	Response	n		SD	Test	p value	X	SD	Test	p value
Gender	Female	203	82.12	12.05	t=-0.281	0.779	2.09	0.42	t=-0.838	0.403
	Male	91	82.53	10.45			2.13	0.30		
Age	13-15	91	81.14	11.24	t=-1.104	0.271	2.02	0.36	t=-2.383	0.018
	16-18	203	82.75	11.70			2.14	0.39		
Meeting the need to be alone in isolation	Yes	178	82.80	12.28	t=1.007	0.315	2.06	0.37	t=-2.561	0.011
	No	116	81.41	10.36			2.17	0.39		
Parents' being able to go to work in isolation	Yes	217	82.83	11.73	t=1.443	0.150	2.06	0.38	t=-3.510	0.001
	No	77	80.62	11.00			2.23	0.36		
Dismissal of parents in isolation	Yes	19	81.78	11.54	t=-0.181	0.856	2.38	0.33	t=3.221	0.001
	No	275	82.28	11.59			2.08	0.38		
Meeting care/food needs in insulation	Yes	261	82.21	11.64	t=-0.153	0.879	2.08	0.38	t=-2.520	0.012
	No	33	82.54	11.11			2.26	0.39		
Continuing artistic/sportive activity during the isolation process	Yes	77	84.36	12.84	t=1.804	0.073	2.03	0.41	t=-2.489	0.014
	No	24	81.23	11.83			2.17	0.36		

SD: Standard deviation.

(t=3.238, p=0.001), affective involvement (t=2.110, p=0.036), behavioral control (t=2.024, p=0.044), and general functions (t=2.503, p=0.013) subscales. Significant differences were found in behavioral control (t=-4.034, p=0.000) and general functions (t=-2.717, p=0.007) sub-dimensions according to the status of meeting care and food needs during the isolation period. According to continuing the artistic and sportive activities that she/he did before the isolation, problem solving (t=-2.050, p=0.042), roles (t=-2.820, p=0.005), and emotional response (t=-2.841, p=0.005) sub-dimensions were found to be significantly different.

A negative relationship was found between Self-regulation Scale and Family Assessment Scale (Table 4). Multiple regression analysis was conducted to determine the extent to which the sub-dimensions of

TABLE 4: Correlation between self-regulation scale and family assessment scale (n=294).		
	Self-regulation scale	
Family assessment scale	r value	p value
Family avg.	-0.391	0.000
Problem solving subscale	-0.227	0.000
Communication subscale	-0.308	0.000
Roller subscale	-0.315	0.000
Emotional reaction subscale	-0.387	0.000
Showing attention subscale	-0.138	0.018
Behavior control subscale	-0.353	0.000
General functions subscale	-0.309	0.000

p<0.01.

family functionality perceived by adolescents such as problem solving, communication, roles, affective responsiveness, affective involvement, behavior control, and general functions predict self-regulation of

TABLE 5: Multiple regression analysis results of self-regulation in adolescents.					
	B	Std. Error	B	t value	p value
Affective responsiveness	-4.90	1.05	-0.28	-4.64	0.000
Behavior control	-6.82	1.91	-0.21	-3.56	0.000

The dependent variable: self-regulation
R=0.43   R2=0.18
F=33   p=0.000

adolescents and the results are presented in Table 5. When the assumptions of the multiple regression analysis were examined, one-way and multi-way normality outlier analysis was performed, and the raw scores for one-way outlier analysis were created with Z standard scoring. The Mahalanobis distance was analyzed. Assumption analyzes were continued without outliers. In order to analyze whether there is a multicollinearity between the factors, the (multicollinearity) test was used. It was observed that the variance increase factor (VIF) values were less than 10, the tolerance value was greater than 0.10, and the condition index (CI) was less than 30. According to the findings obtained, it can be said that there is no multicollinearity between the independent variables.

The CI for the multicollinearity problem was found to be between 12.82-30.61 and less than 30. It was found that the tolerance values ranged between 0.25-0.69 and were higher than 0.10, and the VIF values were between 1.44-3.99 and higher than 10, and it was decided that there was no problem of multicollinearity. In addition, the highest correlation between variables was found to be 0.62. For the independence of independent errors, the Durbin Watson Test was looked at the end. It was found to be 1.7. This value below 2 shows that there is no correlation in residual values. After testing the assumptions, multiple regression analysis was performed.

The findings obtained from the regression analysis showed that affective responsiveness and behavior control sub-dimensions of family functionality significantly predicted adolescents' self-regulation (R^2=0.43, F(2)=33, p<0.05). It was observed that, in the regression equation, self-regulation in adolescents was significantly predicted by the affective responsiveness dimension moderately in a negative way (β=-0.28, p<0.05) and behavioral control in a negative way (β=-

0.21 p<0.05). It was observed that problem-solving, general functions, communication, roles, and affective involvement, which are other sub-dimensions of family functionality, were not significant in predicting self-regulation of adolescents (p>0.05). The most effective variable that predicts adolescents' self-regulation is affective responsiveness (Table 5).

DISCUSSION

In this study, self-regulation skills of adolescents were found to be at the average level. Studies have found that self-regulation is highly correlated not only with academic and social/behavioral skills but also with having a healthy lifestyle in the long run.[13,14] In our study, it was found that the self-regulation skills of adolescents were not affected by age, gender, and other demographic variables. In a study conducted with adolescents, gender did not have a significant effect on self-regulation at 13-19 years of age, but a significant difference was found in favor of women between middle adolescent males and females aged 13-15 years.[15] During adolescence, reconstruction occurs in the prefrontal cortex and limbic system. While the limbic system is responsible for emotions, the prefrontal cortex, as the major region responsible for self-regulation, is gradually better regulated until age 16. Around 14-17 years of age, adolescent thinking becomes similar to that of an adult. As the connections between the prefrontal cortex and the limbic system increase, self-regulation abilities become more reliable. Thus, adolescents are more successful in controlling their impulses and calculating the long-term consequences of their decisions.[16] There is a consensus that self-regulation characteristics show a U-shaped change from the beginning to the end of the adolescence period. It decreases in the middle of adolescence and then rises again.[17] In our study, the absence of a significant age-related difference in self-regulation skills of adolescents was associated with the individual, familial factors, and the majority (69%) of the adolescents participating in the study in the 16-18 age group.

Within the scope of the study we conducted, it was indicated that the young people participating in the study were 16 years and older (70.5%); they could talk to their close friends via mobile phones or com-

puters (95.9%), and some of them were able to continue their artistic and sporting activities (76.2%). Qi et al. in their study to examine the relationship between social support and mental health standard in adolescents during the COVID-19 pandemic, found that a large proportion of young people had average and above social support, and adolescents with low social support have a higher risk of showing depression and anxiety symptoms.[18] Akkaya-Kalaycı et al. stated in their study that both the global COVID-19 pandemic and the measures taken to prevent the pandemic, especially the quarantine practices, could have a negative impact on the psychological wellbeing and mental health of youth aged 15-25 years old.[19] Favieri et al. (2021) stated that post-traumatic stress disorder, low psychological wellbeing, anxiety, and depressive symptoms were observed due to the COVID-19 pandemic.[20] Self-regulation is supported when an atmosphere that supports needs in the physical and social environment is created, and when these needs are not met, frustration or negative consequences may occur.[21,22] In a study conducted with adolescents, it was stated that home, society, and peer environment significantly predict students' resilience levels, and especially, the home environment was the main determinant of resilience.[23] It is emphasized that self-regulation in adolescents is affected by the quality of peer relationships.[24,25] In line with the data obtained from our study, it was thought that most of the adolescents were able to meet their basic psychological needs because they had their own rooms and could meet the need to be alone during the restriction process, maintain their communication with their close friends, and continue their distance education and artistic and sports activities.

According to the results of family assessment mean scores in our study, family functions were found to be slightly non-functional. Family functions are evaluated in terms of communication, problem-solving capacity, sharing of feelings, mutual respect, and cooperation. A family with high function does not mean a family that has no problems. A family with a high function means having the capacity to overcome the difficulties experienced.[26] In a meta-analysis study, a strong relationship was found between family functionality and children's problem

behaviors, social competencies, quality of life, and physical and mental health.[27] The pandemic process has caused changes in the lives of families in many ways, such as individuals leaving their jobs or continuing their jobs by working from home, children and young people receiving distance education, interruption of social relations, and suffering from illness. With these changes, the time spent by family members awake together during the day increased from an average of 5-7 hours before the pandemic to 13-15 hours during the pandemic. This situation has caused changes in family functions, mainly in family communication, and the family members were obliged to adapt to these changes. In the study conducted in Bangladesh to examine the effects of COVID-19 on the mental health and wellbeing of the high school and university students; fear of infection, economic uncertainty, inadequate food supply, lack of physical exercise, and limited or no recreational activity were found to be significantly associated with stress, anxiety, depression, and post-traumatic symptoms.[28] Bodas and Peleg stated that continuous and regular earning is a critical factor, especially in people's willingness to quarantine themselves.[29] It is indicated that economic status can affect the self-regulation skills of adolescents through parental behavior.[30,31] It is observed that the majority of the parents of the adolescents in our sample group continue their jobs from their homes and do not have any problems with regular income.

Within the scope of our study, as a result of the regression analysis conducted after detecting a negative relationship between the Self-regulation Scale and the Family Assessment Scale, it was determined that affective responsiveness and behavioral control within the family predicted self-regulation of adolescents. Akhlaq et al. stated that family communication is the most important predictor of family satisfaction in young people and expressed that young people who can communicate with their families in a healthy way have higher problem-solving skills and tend to be more satisfied with their relationships.[32] In a study conducted with adolescents, Çelik Özden indicated that there is a positive relationship between the behavioral control of parents and their self-regulation scores of young people.[33] Family members actively

serve as role models for children in the process of acquiring life skills. Young people's having individuals to take as role models and having hopeful expectations for the future are parallel to the acquisition of self-regulation skills.[34] Parents should raise awareness of their children that the feeling of negative emotions as well as positive emotions is an integral part of being human, that negative emotions can also be expressed, and that they will be accepted when negative emotions are expressed, and they should be role models. Sometimes parents, in their communication with their adolescent children who are in the transition from childhood to adulthood, can be influenced by their own emotions, and while being permissive to their adolescent children's demands for autonomy, sometimes they may expect them to think and decide like adults or to cope with difficulties like themselves. This type of situation may cause parents to misinterpret the behaviors of their adolescent children. However, as adults, parents should understand and support their child who is preparing for adulthood.

CONCLUSION

Our study found that adolescents' self-regulation skills are at a moderate level, and family functions showed a slight tendency toward the non-functional. There was a negative relationship between the Self-regulation Scale and the Family Assessment Scale. Family functions, especially affective responsiveness, and behavioral control have a significant effect on self-regulation.

Adolescents' self-regulation skills are extremely important in terms of being able to overcome crises such as COVID-19 in a healthy way. When the results of this study and other studies on the subject are examined, it is understood that self-regulation skills are directly related to family functions.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Selvinaz Saçan, Sevinç Zeynep Kavruk; Design: Selvinaz Saçan, Sevinç Zeynep Kavruk; Control/Supervision: Selvinaz Saçan; Data Collection and/or Processing: Sevinç Zeynep Kavruk; Analysis and/or Interpretation: Selvinaz Saçan; Literature Review: Selvinaz Saçan, Sevinç Zeynep Kavruk; Writing the Article: Selvinaz Saçan, Sevinç Zeynep Kavruk; Critical Review: Selvinaz Saçan, Sevinç Zeynep Kavruk; References and Fundings: Selvinaz Saçan.

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