

## Examination of the Relationship between Adolescents' Psychological Resilience and Depression and Somatic Symptoms During the COVID-19 Pandemic\*

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### Abstract

**Aim:** The COVID-19 pandemic has had profound impacts on physical, psychological, economic, and social aspects globally. This study was designed with the consideration of how the pandemic, which affects each age group differently, might impact individuals going through the challenging stages of adolescence. In line with this purpose, this study aims to examine whether the relationship between psychological resilience, depression, and somatic symptoms is significant during adolescence in the context of the COVID-19 pandemic.

**Method:** The sample comprised 417 students aged 14-17, living in Turkey. Instruments used included Demographic Information Form, DSM V Level-2 Somatic Symptoms Scale for 11-17 Years Old Child Form, Adolescent Psychological Resilience Scale and Kutcher Adolescent Depression Scale. Independent Sample T-Test, ANOVA and Correlation Analysis were used to analyze the data.

**Results:** As a result of the study, it was determined that there is a significant negative relationship between the psychological resilience levels of adolescents and their depression and somatic symptoms. It was also found that the mean scores of depression, somatic symptoms, and psychological resilience showed statistically significant differences in terms of the presence of a chronic illness, presence of a separate room for adolescents at home, time allocated for sports and physical activities, receiving support from family when experiencing problems, and receiving support from friends when experiencing problems.

**Conclusion:** Uncovering the relationship between adolescents' psychological resilience and their depression and somatic symptoms during the pandemic is expected to contribute to future psychological support efforts, particularly considering the negative impact of both somatization and depression on adolescents' functionality.

**Keywords:** COVID-19, resilience, depression, somatic symptoms.

### COVID-19 Salgın Sürecinde Ergenlerin Psikolojik Sağlamlıkları ile Depresyon ve Somatik Belirtileri Arasındaki İlişkinin İncelenmesi

### Öz

**Amaç:** COVID-19 pandemisi, dünya çapında fiziksel, psikolojik, ekonomik ve sosyal açılardan derin etkiler yaratmıştır. Bu çalışma, her yaş grubunu farklı şekilde etkileyen pandeminin, ergenliğin zorlu evrelerinden geçen bireyleri nasıl etkileyebileceği göz önünde bulundurularak tasarlanmıştır. Çalışmanın amacı COVID-

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**ETHICAL STATEMENT:** This study was approved by the Istanbul Gelisim University Ethics Committee Presidency with the decision dated 21/08/2020 and numbered 2020-22 to conduct the research.

19 salgın sürecinde ergenlerde psikolojik sađamlık ile depresyon ve somatik belirtiler arasındaki ilişkinin incelenmesidir.

**Yöntem:** Araştırmaya Türkiye’de yaşamakta olan 14-17 yaş arası 417 öğrenci katılmıştır. Araştırmanın verileri sosyodemografik veri formu, DSM V Düzey-2 Bedensel Belirtiler Ölçeđi 11-17 Yaş Arası Çocuk Formu, Ergen Psikolojik Dayanıklılık Ölçeđi ve Kutcher Ergen Depresyon Ölçeđi kullanılarak toplanmıştır. Verilerin analizinde Bağımsız Örneklem T-Testi, ANOVA ve Korelasyon Analizi kullanılmıştır.

**Bulgular:** Araştırma sonucunda ergenlerin psikolojik sađamlık düzeyleri ile depresyon ve bedensel belirtiler düzeyleri arasında negatif yönde anlamlı bir ilişki olduğu belirlenmiştir. Ayrıca, depresyon, somatik belirtiler, psikolojik sađamlık ortalama skorlarının kronik hastalığa sahip olma, evde ayrı odası olma, spor faaliyetlerine zaman ayırma, sorunla karşılaştığında aile ve arkadaşlardan destek alma değışkenlerine göre istatistiksel olarak anlamlı farklılıklar gösterdiği saptanmıştır.

**Sonuç:** Pandemi sürecinde ergenlerin psikolojik dayanıklılıkları ile depresyon ve somatik semptomları arasındaki ilişkinin ortaya konması, özellikle somatizasyon ve depresyonun ergenlerin işlevselliđi üzerindeki olumsuz etkisi göz önünde bulundurulduğunda, gelecekteki psikolojik destek çalışmalarına katkı sađlaması açısından önemlidir.

**Anahtar Sözcükler:** COVID-19, psikolojik sađamlık, depresyon, somatik belirtiler.

## Introduction

The COVID-19 pandemic has significantly impacted people both physically and psychologically, not only due to the pandemic itself but also as a result of the restrictive measures implemented as precautions. In this regard, the COVID-19 pandemic is considered a societal trauma. It has been reported that pandemics cause widespread anxiety, fear, and stress among individuals<sup>1</sup>. According to data from a study conducted in China at the beginning of the pandemic, involving approximately 194 cities, 54% of participants reported experiencing moderate or severe levels of anxiety, depression, and stress<sup>2</sup>. Another study conducted in Turkey found that the fear and uncertainty surrounding COVID-19 increased anxiety and depressive symptoms among individuals<sup>3</sup>. During pandemics, people often exhibit reactions similar to those observed in post-traumatic stress situations. Emotional breakdowns, difficulty in adapting, and anxiety are among these reactions, serving as defense mechanisms against the experienced circumstances<sup>4</sup>. In this sense, the COVID-19 pandemic has undermined people's confidence in life, leading to uncertainty and manifesting in crises throughout the process<sup>5</sup>. Prolonged exposure to stressors, social isolation, feeling of uncertainty during pandemic can contribute to a decline in psychological resilience<sup>3,4</sup>. Moreover, disruption of daily routines, lack of social support, persistent fear of infection may exacerbate vulnerability, making it difficult for individuals to cope effectively with challenges.

Adolescence is a period marked by significant psychological, sociological, and biological changes. During this period, adolescents often experience a heightened sense of identity confusion, crisis, and adjustment difficulties. It is believed that certain personal factors such as self-confidence, high resilience, and internal locus of control can help adolescents navigate this turbulent period more healthily and contribute to the formation of a stable identity<sup>6</sup>. Due to these characteristics of adolescence, much research has focused on the effects of COVID-19 and its restrictions on adolescents. Meherali et al. reviewed 18 studies involving 20,150 children and adolescents from five countries (Australia, Canada, China, Italy, and the USA) and found that COVID-19 restrictions significantly impacted their mental health, leading to increased anxiety, depression, sleep and appetite

disturbances, and impaired social interactions<sup>7,8</sup>. Furthermore, a review by Panda et al. identified anxiety, depression, irritability, boredom, inattention, and fear of the COVID-19 pandemic as prevalent psychological issues among children and adolescents<sup>9</sup>. Research has shown that as age and support decrease, coping with the pandemic becomes more challenging<sup>10</sup>, while psychological resilience is strengthened when external factors such as individual, familial, school, and peer relationships are strong and healthy<sup>11</sup>.

Somatization is the body's response to stress and emotional stimuli<sup>12</sup>. It has been known that psychological disorders, such as depression, can manifest as physical symptoms<sup>13</sup>. While the specific etiology of somatization disorders has not yet been conclusively determined, several possible risk factors have been identified, such as psychological strain and stressful life events<sup>14</sup>. In a study conducted with adolescents aged 13-17 in Turkey, it was reported that frequently experienced but unexpressed negative emotions and thoughts could manifest as physical complaints in adolescents<sup>15</sup>. Researchers have indicated that adolescents reported more somatization symptoms during the pandemic than before<sup>16</sup>. For the individual, somatization can lead to serious functional impairments, a reduction in quality of life, and diminished work participation<sup>17</sup>.

Psychological resilience refers to the ability, outcome, or dynamic process of successfully adapting to adversity, trauma, or other major stressors<sup>18</sup>. Many studies have shown that individuals with higher levels of psychological resilience cope better with adverse situations compared to others. Research has demonstrated that individuals with higher levels of psychological resilience tend to navigate challenging times more optimistically and maintain better mental health. Regarding these results, it is possible to mention that psychological resilience may mitigate the adverse effects of stress<sup>19,20</sup>. Thus, resilience serves as a buffer against stress or traumatic events and can protect against psychological distress. Assessing an individual's psychological resilience could, therefore, help predict their mental health status.

Considering the aforementioned studies, it is believed that the sudden onset of the COVID-19 pandemic has significantly affected adolescents, who are already undergoing numerous developmental changes. For these reasons, this study was designed based on the hypothesis that there would be a significant negative correlation between the psychological resilience of adolescents during the COVID-19 pandemic and their depressive and somatic symptoms. The aim of the study is to examine the relationship between the psychological resilience, depression levels, and somatic symptoms of adolescents aged 14-17 during the pandemic. Uncovering the relationship between adolescents' psychological resilience and their depression and somatic symptoms during the pandemic is expected to contribute to future psychological support efforts, particularly considering the negative impact of both somatization and depression on adolescents' functionality. This study is also expected to serve as an example for preventive and protective mental health efforts in Turkey in response to any global risk situation. Moreover, it aims to highlight the importance of conducting more sensitive psychological strengthening programs for adolescents.

## Material and Methods

### *Participants*

The sample of this study consists of adolescents aged 14-17 living in various cities across Turkey. According to the sample size standards developed by Yazıcıoğlu and Erdoğan (2004), with probabilities of  $p=0.8$  and  $q=0.2$ , a sampling error of 0.5, and a confidence level of  $\alpha=0.05$ , a minimum sample size of 384 individuals is required from a population exceeding 10 000 000<sup>21</sup>. Given the difficulty of reaching an equal number of participants from each city, a random sampling method was employed. In order to collect data, adolescents were reached through WhatsApp and social media platforms such as Facebook and Instagram, and surveys prepared using Google Forms were distributed. To ensure the accuracy and reliability of the collected data, all responses were reviewed to identify incomplete or inconsistent answers. Responses that were clearly invalid, such as contradictions or out-of-range values, were removed. The final dataset was carefully examined for any other anomalies or errors, and only the valid, complete responses were included in the analysis. A total of 427 students from the cities of Istanbul, Kocaeli, Diyarbakır, İzmir, Ankara, and Gaziantep participated in the study. Due to outlier responses, 10 surveys were excluded. Therefore, the final sample of the study consists of 417 adolescents aged 14-17 residing in Istanbul, Kocaeli, Diyarbakır, İzmir, Ankara, and Gaziantep.

**Data Collection:** In this study, the data collection method used was a survey. During the data collection phase, the predetermined scales were distributed to individuals via online survey forms.

**Data Collection Instruments:** The first section of the survey used in the study includes a Demographic Data Form, which collects personal information about the participants. The second section of the survey consists of the Adolescent Psychological Resilience Scale, the Kutcher Adolescent Depression Scale, and the DSM-5 Level-2 Somatic Symptoms Scale for Children Aged 11-17.

**Demographic Data Form:** The Demographic Data Form, prepared by the researcher, is a structured form designed to collect demographic information such as age, gender, and the presence of chronic illness from the sample.

**Adolescent Psychological Resilience Scale (APRS):** This scale was developed by Bulut et al. in 2012 to measure the psychological resilience levels of adolescents. It consists of sub-dimensions including family support, peer support, school support, adaptation, perseverance, and empathy<sup>22</sup>.

**Kutcher Adolescent Depression Scale (KADS-11):** Developed by Kutcher et al. in 2004<sup>23</sup>, the validity and reliability of this scale were tested in 2019 by Balcı and Uysal<sup>24</sup>. According to the exploratory and confirmatory factor analyses, the KADS-11 has a unidimensional structure. The confirmatory factor analysis revealed an excellent model-data fit for the one-factor model. The scale's Cronbach's alpha internal consistency coefficient was found to be 0.82.

**DSM-5 Level-2 Somatic Symptoms Scale for Children Aged 11-17:** This scale, translated and adapted into Turkish by Sapmaz et al. (2016)<sup>25</sup>, is an adaptation of the 15-item Patient Health Questionnaire Physical Symptoms (PHQ-15), developed by Kroenke

et al. in 2002, to assess somatic symptoms in children and adolescents. Items 4 and 11, which are specific to adults, were omitted from the children's version. Reliability analyses included internal consistency coefficients, item-total score correlation, test-retest reliability, and inter-rater reliability. Validity analyses involved exploratory factor analysis and correlation analysis with the 'Children's Somatization Scale' for concurrent validity<sup>26</sup>.

### ***Ethical Statement***

This study was approved by the Istanbul Gelisim University Ethics Committee Presidency with the decision dated 21/08/2020 and numbered 2020-22 to conduct the research. The participants in this study were informed before the survey and a consent form was signed.

### ***Data Analysis***

The skewness and kurtosis values of the variables analyzed in the study were found to fall between the critical values of -1 and +1, indicating a normal distribution<sup>27</sup>. The data were analyzed using IBM SPSS 21, where statistical tests and analyses were applied. The Independent Samples T-Test and ANOVA were used to determine group differences, while Pearson Correlation Analysis was used to examine the relationships between variables.

### ***Results***

According to sociodemographic variables, adolescents' levels of depression, somatic symptoms, and psychological resilience did not significantly differ by gender (Table 1).

It was found that the mean scores of somatic symptoms showed statistically significant differences in terms of the presence of a chronic illness, the presence of a separate room for adolescents at home, the time allocated for sports and physical activities, receiving support from family when experiencing problems, and receiving support from friends when experiencing problems. Adolescents who reported the presence of a chronic illness were found to have higher somatic symptoms compared to those without any chronic illness ( $p = 0.007$ ). Based on the LSD test, determined after the homogeneity test, it was found that adolescents who did not have a separate room at home had higher somatic symptoms compared to those who shared a room or had their own room ( $p = 0.007$ ). Adolescents who stated they did not allocate sufficient time for sports and physical activities had higher somatic symptoms compared to those who did ( $p = 0.014$ ). Furthermore, adolescents who reported not receiving or partially receiving support from their family or friends when facing problems were found to have higher somatic symptoms compared to those who received support ( $p = 0.000$ ;  $p = 0.042$ ).

**Table 1.** Depression, Somatic Symptom Scale and Psychological Resilience Scale scores according to participants sociodemographic characteristics.

Variables		n(%)	Depression (mean±SD)	Analysis results	Somatic Symptoms (mean±SD)	Analysis results	Psychological Resilience (mean±SD)	Analysis results
Sex	Female	297(71.2)	14.71±7.48	t=-0.536	8.23±4.66	t=0.057	88.64±10.89	t=0.223
	Male	120(28.8)	12.12±6.84	p=0.593	5.75±4.26	p=0.954	87.96±11.90	p=0.824
Presence of chronical diseases	Yes	47(11.3)	14.53±6.82	t=0.559	9.26±4.57	t=2.726	90.83±10.36	t=1.555
	No	370(88.7)	13.89±7.46	p=0.577	7.29±4.65	<b>p=0.007</b>	88.14±11.26	p=0.121
Presence of a separte room at home	Only room	181(43.4)	13.55±7.15	f=0.509 p=0.602	7.11±4.35	f=4.999 <b>p=0.007</b> 3 > 1, 2	89.22±10.66	f=3.453 <b>p=0.033</b> 1, 2 > 3
	Shared room with siblings	206(49.4)	14.29±7.75		7.51±4.83		88.49±11.25	
	No separte room	30(7.2)	14.23±6.27		10.00±4.95		83.47±12.75	
Sports or outdoor activites	Yes	95(22.8)	12.89±7.93	f=7.674	6.68±4.43	f=4.346	92.20±11.13	f=13.386
	Sometimes	179(42.9)	12.99±6.62	<b>p=0.001</b>	7.26±4.74	<b>p=0.014</b>	89.22±10.01	<b>p=0.000</b>
	No	143(34.3)	15.90±7.60	3 > 1, 2	8.39±4.66	3 > 1, 2	84.99±11.67	1, 2 > 3
Support from family in time of crisis	Yes	258(61.9)	12.14±7.10	f=23.155	6.86±4.61	t=8.767	92.17±9.94	f=54.960
	Partially	126(30.2)	16.69±6.58	<b>p=0.000</b>	8.23±4.33	<b>p=0.000</b>	83.97±10.07	<b>p=0.000</b>
	No	33(7.9)	17.82±8.06	3, 2 > 1	9.94±5.41	3, 2 > 1	76.39±9.71	1 > 2 > 3
Support from friends in time of crisis	Yes	199(47.7)	12.74±7.63	f=7.662	7.21±4.81	f=3.197	92.08±10.35	f=36.902
	Partially	174(41.7)	14.55±7.11	<b>p=0.001</b>	7.45±4.38	<b>p=0.042</b>	86.94±10.56	<b>p=0.000</b>
	No	44(10.6)	17.18±6.18	3 > 1, 2	9.16±5.00	3 > 1, 2	77.95±9.15	1 > 2 > 3

The mean scores of depression showed statistically significant differences in terms of time allocated for sports and physical activities, receiving support from family when experiencing problems, and receiving support from friends when experiencing problems. According to the results of the LSD test, determined after the homogeneity test, adolescents who stated they did not allocate enough time for sports and physical activities had higher levels of depression compared to others ( $p = 0.001$ ). Adolescents who reported receiving support from their family during times of difficulty had lower levels of depression compared to others ( $p = 0.000$ ), while adolescents who reported not receiving support from their friends during times of difficulty had higher levels of depression compared to other adolescents ( $p = 0.001$ ).

The mean scores of psychological resilience were found to show statistically significant differences in terms of the presence of a separate room for adolescents at home, time allocated for sports and physical activities, receiving support from family when experiencing problems, and receiving support from friends when experiencing problems. According to LSD test results conducted following the homogeneity test, adolescents who had a shared or their own room at home had higher resilience scores compared to those who did not have a separate room ( $p = 0.033$ ). Additionally, adolescents who reported allocating sufficient time for sports and physical activities had higher resilience scores compared to those who did not ( $p = 0.000$ ). Adolescents who reported receiving support from their family or friends during times of difficulty had higher resilience scores



compared to those who did not receive support from family or friends ( $p = 0.000$ ;  $p = 0.000$ ).

**Table 2.** Relationship between depression, somatic symptoms, and psychological resilience.

	1	2	3	4	5	6	7	8	9
1. Depression	-								
2. Somatic Symptoms	0.62**	-							
3. Psychological Resilience	-0.52**	-0.32**	-						
4. Family Support	-0.32**	-0.27**	0.69**	-					
5. Peer Support	-0.12*	-0.10*	0.58**	0.31**	-				
6. School Support	-0.38**	-0.19**	0.62**	0.21**	0.12*	-			
7. Adjustment	-0.39**	-0.21**	0.62**	0.26**	0.23**	0.23**	-		
8. Perseverance	-0.54**	-0.29**	0.51**	0.12*	-0.03	0.48**	0.31**	-	
9. Empathy	-0.07	-0.02	0.44**	0.21**	0.32**	0.04	0.37**	-0.04	-

According to the results of the Pearson Correlation Analysis presented in Table 2, a significant negative correlation was observed between adolescents' psychological resilience levels and both depression ( $r(415) = -0.52$ ,  $p < 0.001$ ) and somatic symptom levels ( $r(415) = -0.32$ ,  $p < 0.001$ ). Additionally, a significant positive correlation was observed between depression and somatic symptom levels ( $r = 0.62$ ,  $p < 0.001$ ).

## Discussion

As a result of this study, a significant and negative correlation was found between adolescents' psychological resilience levels and depression symptoms. As adolescents' psychological resilience increases, their depression scores decrease. This finding is consistent with many studies in the literature. A study examining the effects of childhood trauma also found that increased psychological resilience alleviated the levels of depressive symptoms<sup>28</sup>. Research has shown that strong psychological resilience has a protective effect against the psychological symptoms of the COVID-19 pandemic and reduces the prevalence of depression<sup>10,29,30</sup>.

This study demonstrated that as psychological resilience increases, the scores of somatic symptoms decrease. In a study examining psychological resilience, coping styles, and psychological symptoms during the coronavirus pandemic, it was found that somatization symptoms were negatively affected by low levels of psychological resilience, fear of infection, and dysfunctional coping mechanisms<sup>10</sup>. A study from China in 2020 also identified a negative relationship between individuals' psychological resilience levels and somatization symptoms<sup>30</sup>. In light of literature, it can be concluded that psychological resilience plays a protective role against mental health problems.

As another finding of the study, a significant and positive correlation was found between depressive symptoms and somatic symptoms. It has long been known that mental disorders, such as depression, can manifest with physical symptoms and that somatization can accompany the clinical picture<sup>13</sup>. When individuals are exposed to stressful life events and struggle to cope, they tend to exhibit physical responses. According to research findings that examined the relationship between life satisfaction

and somatic symptoms in adolescents, a significant relationship was found between adolescents' life satisfaction, depressive symptoms, and somatization<sup>31</sup>. In a study conducted by Kapıkıran (2001), it was found that the adaptation levels of adolescents were significantly negatively correlated with somatic symptoms<sup>32</sup>. Upon reviewing the existing research in the field, it was observed that this study supports previous studies.

The study also revealed that during the COVID-19 pandemic, adolescents' levels of depression, somatic symptoms, and psychological resilience did not significantly differ by gender. Across many cultural contexts, female adolescents have a predisposition to develop depression primarily due to biological vulnerabilities. While many studies in the literature suggest that female adolescents tend to have higher levels of depression and somatization compared to males<sup>33-36</sup>, there are also studies in line with this study's findings in terms of depression scores<sup>37,38</sup>. The differing results in this research may be attributed to the unequal gender distribution in the sample, the self-report nature of measures, and methodological differences such as the variation in scales used.

Regarding the studies examining the differences in adolescents' psychological resilience levels by gender, while some studies found no significant differences<sup>39</sup>, other studies indicated that girls had higher psychological resilience levels compared to boys<sup>40,41</sup>. The effect of gender on psychological resilience has been tested in many studies, but no consensus has been reached. The differing results across studies may be due to methodological differences, such as unequal gender distributions, the scales used, the environments from which the samples were drawn, and the differences in sample sizes.

As a result of the study, it was found that the average depression scores of adolescent individuals did not show a statistically significant difference based on the presence of chronic illness. Both groups were found to exhibit mild levels of depressive symptoms. However, upon reviewing the literature, it was identified that many studies have reached different conclusions from this research. In his study, Toros (2002) reported that depressive symptoms in children and adolescents could increase due to chronic illness<sup>42</sup>. According to research, depressive findings in individuals with chronic illness range between 20% and 80%<sup>43</sup>. The differing results in our study may be due to the smaller number of adolescents with a chronic illness (47) compared to those without, the reliance on self-report symptom scales, and the fact that the study was conducted during the pandemic, which may have caused the entire sample group to already exhibit mild depressive levels, thus leading to no significant difference being detected. These factors may have influenced the results.

The study found that the average somatic symptom scores of adolescents showed a statistically significant difference based on the presence of chronic illness, with those presence of chronic illness exhibiting higher symptom levels than those without. This finding is in line with other studies in the literature<sup>44,45</sup>. This study also found that the average psychological resilience scores of adolescent individuals did not show a statistically significant difference based on the presence of chronic illness. When the literature is examined, it is noted that patients with chronic diseases often experience repetitive psychological stress, meaning they can be vulnerable to maladaptation<sup>46</sup>, so a lower level of psychological resilience would be expected. The inconsistency of our results



with the literature may be due to the small number of adolescents with chronic illness<sup>47</sup> compared to those without.

As a result of the study, it was determined that adolescents without a separate room at home exhibited higher somatic symptoms compared to those with shared or private rooms, and their psychological resilience levels were lower. In the literature review, no studies directly examining this relationship were found. However, it is thought that presence of a separate room, which provides personal space and privacy, could influence factors such as psychological resilience and somatization in adolescents. Adolescents without a private room may experience more physical symptoms of stress (e.g., headaches, stomach issues) due to constant social pressures and the lack of personal space. This may increase somatization symptoms. Individuals need private space to cope with difficulties and to rest. Presence of a personal room can enhance an adolescent's academic and personal interests, making them feel respected within the family and reinforcing their sense of individuality. These positive feelings may enable adolescents to recover more easily after facing challenges, as they feel more comfortable in their environment.

The study also found that adolescents who reported not allocating enough time to sports and physical activities had higher levels of depression and somatic symptoms, and lower levels of psychological resilience compared to those who did. Numerous studies have found that exercise reduces stress and prevents many illnesses, as well as decreasing depression and somatic symptoms<sup>47-49</sup>. Moreover, having a healthy body and mind is shown to be a protective factor in coping with challenges<sup>50</sup>. In this context, our findings align with the existing literature.

In this study, it was found that adolescents who are able to receive support from their family or friends when facing problems have lower depression and somatic symptom scores and higher psychological resilience scores. Similarly, a study by Eskin and colleagues (2008) conducted among 805 high school students in Aydın province found a significant relationship between weak family and friend support and the level of depression in students<sup>51</sup>. Studies in the literature have shown that as the social support for adolescents increases, their level of adjustment improves and their level of depression decreases<sup>52-54</sup>.

## Conclusion

This study highlights the significant relationships between psychological resilience, depression, and somatic symptoms among adolescents. The findings demonstrate that higher levels of psychological resilience are associated with lower levels of depression and somatic symptoms, reinforcing the protective role of resilience in adolescent mental health. The study also reveals no significant gender differences in depression, somatic symptoms, or resilience, contradicting previous literature. Additionally, while no differences were found in depression or resilience based on the presence of chronic illness, adolescents with chronic illnesses exhibited higher somatic symptoms. Other key findings include the impact of personal space, with adolescents lacking private rooms showing higher somatic symptoms and lower resilience, and the role of physical activity and social support in improving mental health outcomes. The relationship between adolescents' psychological resilience, depression, and somatic symptoms during the

pandemic is expected to provide valuable insights for future psychological support efforts, especially given the negative impact of both somatization and depression on adolescents' overall well-being and functioning. This study is also expected to serve as an example for preventive and protective mental health efforts in Turkey in response to any global risk situation.

However, the study's limitations must be considered. These include an unequal gender distribution and reliance on self-reported measures. Furthermore, the study was conducted during the COVID-19 pandemic, which may have affected the overall levels of depressive symptoms across the sample.

For future research, larger and more diverse samples should be considered to examine the interactions. Longitudinal studies could help establish causal relationships and explore the long-term effects of resilience-building interventions. Additionally, examining the influence of personal space on adolescent mental health warrants further investigation, as this study offers preliminary insights into a potentially significant but underexplored area.

**Ethical Considerations:** This study was approved by the Istanbul Gelisim University Ethics Committee Presidency with the decision dated 21/08/2020 and numbered 2020-22 to conduct the research. The participants to be included in the study were informed before the survey, and a consent form was signed.

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### Conflict of Interests

The authors declare no conflict of interests.

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