



Original Research / Özgün Araştırma

Investigation of the Relationship between Social Media Addiction and Optimism / Pessimism in Adolescents

Ergenlerde Sosyal Medya Kullanım Bağımlılığı ile İyimserlik/Kötümserlik Arasındaki İlişkinin İncelenmesi

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ABSTRACT

Aim: The aim of this study is to investigate the relationship between social media addiction and optimism/pessimism among adolescents. Using a descriptive design, the study was conducted with 231 high school students. A “Descriptive Data Form,” the “Social Media Addiction Scale for Adolescents” and the “Optimism-Pessimism Scale for Adolescents” were used as data collection tools. The students’ mean score on the Social Media Addiction Scale was calculated to be 15.29±2.42 and accordingly. **Results:** The results of the study showed that male students used social media more frequently and it was seen that the father’s education had an impact on the level of social media usage. It was found that the students’ attitudes of optimism varied depending upon their gender, class, income level, information-sharing on social media, and how much they used social media to pass the time. While a statistically significant, positive but weak correlation was seen between social media usage and optimism, the correlation with pessimism was statistically significant, negative, and weak.

Key words: Adolescent, social media, optimism, pessimism

ÖZET

Amaç: Bu çalışmanın amacı ergenler arasında sosyal medya kullanım bağımlılığı ile iyimserlik/kötümserlik arasındaki ilişkiyi incelemektir. Tanımlayıcı tipteki bu araştırma 231 lise öğrencisi ile yapılmıştır. Veri toplama aracı olarak “Tanıtıcı Bilgi Formu”, “Ergenlerde Sosyal Medya Bağımlılığı Ölçeği” ve “Ergenlerde İyimserlik Kötümserlik Ölçeği” kullanılmıştır. Öğrencilerin Sosyal Medya Bağımlılığı Ölçeğindeki ortalama puanı 15.29±2.42 olarak hesaplanmıştır. **Sonuç:** Araştırmanın sonuçları erkek öğrencilerin sosyal medyayı daha sık kullandığını göstermiş ve babanın eğitiminin sosyal medya kullanım düzeyi üzerinde etkili olduğu görülmüştür. Öğrencilerin iyimserlik tutumlarının cinsiyetlerine, sınıflarına, gelir düzeylerine, sosyal medyada bilgi paylaşımına ve sosyal medyayı zaman geçirmek için ne kadar kullandıklarına bağlı olarak değiştiği tespit edilmiştir. Sosyal medya kullanımı ile iyimserlik arasında istatistiksel olarak anlamlı, pozitif fakat zayıf bir korelasyon görülürken, kötümserlikle korelasyon istatistiksel olarak anlamlı, negatif ve zayıf bir ilişki bulunmuştur.

Anahtar Kelimeler: Ergen, sosyal medya, iyimserlik, kötümserlik

Received / Geliş tarihi: 11.10.2021, Accepted / Kabul tarihi: 31.01.2022

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Ürün J., Karayağız Muslu G., Manav G. Investigation of the Relationship between Social Media Addiction and Optimism / Pessimism in Adolescents. TJFMPC, 2022;16(1): 206-215.

DOI: 10.21763/tjfmipc.1008130

INTRODUCTION

“Social media” refers to how users can set up networks within their communities via online platforms such as Instagram, share content, and maintain identities on various electronic communication channels.¹ Today, tuning into social media and “always being online,” engaging in interaction with others on an electronic medium has begun to be accepted as a status symbol and a normative mode of communication for young people who were born into and can keep pace with the age of technology.² Some of the reasons for this can be cited as not being willing to miss anything, to keep on top of current events and always feel connected, and as such, social media is more than a way to pass the time but a way of “existing in the world”.³

Adolescence is an important period of biological and cognitive changes, as well as social development.⁴ The period is significant in that it is a time for personal growth and rethinking relationships with friends. Friendships and group activities are important for adolescents and they focus more on their relations with friends rather than on their relationships with their families.⁵

A study has reported that adolescents expect that they will lose favor with their friends if they don't respond to email messages right away.⁶ Feeling this kind of pressure and being afraid of the negative results of such delayed response may constitute a risk factor, not only in terms of an adolescent's concentrated use of social media but also because of problems that may arise as a consequence.² From this perspective, it can be said that although many positive aspects of social media, such as gathering information, communication, and sharing information, have been reported in the literature,⁷ it is not surprising to find that spending too much time online can also have negative outcomes.²

In terms of demographics, adolescents are at more of a risk of developing social media addiction. This is because they can rapidly adjust to new technologies and are always in search of new technological developments by nature.⁸ Some recent studies have focused on the negative aspects of the use of social media among adolescents.⁹ It is reported that social media can lead to aggressiveness, bullying, disobedience, and other problematic behavior related to external factors in adolescents.¹⁰

Social media studies tend to examine effects related to psychological indicators, including perceptions of happiness and life

satisfaction,¹¹ stress, and quality of life,¹² decreased depression¹³, and body image.¹⁴ One of the variables that is thought might influence social media addiction is the individual's optimistic/pessimistic attitude.

Optimism refers to the basic inclination to generally perceive and think of events from a positive perspective.¹⁵ Optimism is an important and popular concept of positive psychology.¹⁶ Positive psychology focuses on many aspects of an individual's positive inclinations.¹⁶ Optimism is a form of behavior that keeps a person from displaying disgust with the world and is closely related to a disposition of focusing on purpose and being future-oriented.¹⁷ Pessimistic people, on the other hand, accept the negative situations in their lives as permanent, all-encompassing, and personal. They characteristically tend to believe that bad things will always happen to them, that everything will be ruined in the long run, and typically feel that all of this is their fault.^{18,16} In adolescence, a period of development in which the individual goes through enormous changes, having a perception of optimism gains more importance. This is the time in which the adolescent is in the process of creating a coherent perception of self, adapting to the various changes he/she is experiencing while trying to make decisions about the future, set up goals, and work to reach those goals.¹⁸ If the individual has expectations that he/she will be encountering adverse situations most of the time, this pessimism will lead the individual into doubt and uncertainty. Because of this, optimism is said to be an important variable in an adolescent's life, both in terms of avoiding the problems that may arise in this period such as social media addiction, and the difficulties of trying to meet expectations and to be able to create a healthy future.¹⁸ Many studies conducted on the matter of optimism/pessimism have examined the relationship between the two attitudes and their positive and negative effects on the personality. Study results indicate that optimism has a positive effect on factors such as mental health, high academic performance, happiness, satisfaction with life, problem-solving, and self-control.¹⁹ On the other hand, pessimism is associated with pathological factors such as worry, depression, and inefficient problem-solving.²⁰ No study was encountered in the literature that has treated the relationship between the use of social media and optimism/pessimism. The aim of this study is to investigate the relationship between social media addiction and optimism/pessimism among adolescents.

Research questions:

- What are the factors affecting social media use addiction in adolescents?

- What are the factors affecting the level of optimism/pessimism in adolescents?
- Is there a relationship between social media use addiction in adolescents and optimism/pessimism in adolescents?

METHODS

Study design, setting, and population

This descriptive study was conducted in 14 public high schools in the city center of Fethiye, Mugla, Turkey. The G-power program was used to determine the sample size. In terms of numerical data, calculations resulted in a Correlation ρ of 0.25 for H1, with a margin of error of 0.05 at a power of 0.80 and a Correlation ρ of 0.05 for H0. Statistical Correlation Testing via the Exact Test: Using the bivariate normal model and a two-way hypothesis, a sample size of 189 was reached. To avoid obtaining erroneous or deficient data, the number of questionnaires was increased by 20% and consequently, 231 questionnaires were administered. To achieve the homogeneous distribution of the students, the method of stratified random sampling was employed. The students are stratified according to their schools and grades. The stratification coefficient was determined to be 0.028. The stratified sampling method was used to calculate stratification weighting for each school.

Data Collection Tools

The “Descriptive Information Form,” “Social Media Addiction Scale for Adolescents” and “Optimism-Pessimism Scale for Adolescents” were used as data collection tools in the research.

The descriptive information form consists of 15 questions. These queried the students’ age, gender, grade, place of residence, family type, parental education, parental occupation, family income level, whether or not they had a social media account, the time they spend on social media, how they use the social media, and how the use of the social media affects their lives. The questionnaire was drawn up by the researcher based on a scan of the literature.^{16,21}

Social Media Addiction Scale for Adolescents: The scale is composed of nine items. It is scored on the basis of “Yes” or “No” and the cut-off score is 5. Scoring ranges from 0-9. Accordingly, those who respond to 5 or more of the 9 items with a “Yes” are considered to be addicted to social media. The scale consists of 9 items; the lowest possible score is 0, the highest is 9. It was seen that the confirmatory factor analysis of the scale yielded good results in the goodness-of-fit

indexes [$\chi^2(27, n=601) 54.129, p=.002, CFI: .989, RMSEA= .041(90\% CI: .025-.057)$]. The reliability of the scale was measured with Cronbach’s alpha (0.82) and it was observed that reliability was good ($M=1.52, SD= 2.11$).²²

Optimism-Pessimism Scale for Adolescents: This scale displayed a construct of 16 items and 2 factors—optimism and pessimism. Cronbach’s alpha reliability coefficient was .86 for optimism and .82 for pessimism. The two-factor, 16-item construct comprises 8 items for optimism and 8 for pessimism. The ratings on the 5-point Likert-type scale range from “Not at all relevant” (1) to “Completely relevant” (5). High scores on the subscales indicate high levels of the relevant dimension.¹⁸

Data Collection Process

The aim of the study was explained to the school principals and an implementation plan was formulated with the administrators. Filling out the questionnaires took approximately 15-20 minutes within the lesson on the arrangement of the school administrations for the students who were willing to participate in the study. The aim of the study and instructions for the surveys were explained to the students, and they were also informed that the study data would be kept confidential to be used by the researchers only.

Ethical Permission

Ethical permission was obtained from the Ethics Committee for Research (Decision No. 229/2019) and institutional permissions were obtained from the Provincial Directorate of National Education. Students were informed about the pre-research data collection process. Written consent was obtained from the adolescents. Their parents’ written consent was obtained and they provided their voluntary participation. The approval of the authors for the use of the measurement tools was obtained.

Statistical Analysis

The data obtained from the study were analyzed with the SPSS 25.0 (Statistical Package for the Social Sciences) package program. The data set was explored for normal distribution with the Kolmogorov-Smirnov test. It was observed that the data set did not exhibit a normal distribution. Nonparametric tests were used in the statistic evaluation of the data set. The difference between the two groups in the comparison of quantitative data in the scales was assessed with the Mann-Whitney U test, while the Kruskal-Wallis H test was used to compare medians in more than two

groups. Correlation analysis was employed for continuous variables. Spearman's test was used in the correlation analysis. The level of statistical significance was accepted as $p < 0.05$.

RESULTS

Of the students participating in the study, 50.2% were male, 53.2% were between the ages 16-18, 75.8% lived in the district and 41.6% were in the 10th grade. Of the students, 84.4% lived in a nuclear family, 60.6% had a mother, 55.4% a father who was an elementary or middle school graduate; the fathers of 43.3% were self-employed, the mothers of 68% were housewives, while 13% of the working mothers worked as civil servants and 59.3% of the students lived in families where income was equal to expenditure.

It was found that all of the students had a social media account: 90% were on Instagram 73.6% were on Twitter, 59.7% used Facebook and 88.3% used WhatsApp; 82.3% did not make use of any other social media channel, 8.2% of those that chose the option "Other" used Snapchat and 34.6% spent about 3-5 hours a day on the social media.

It was noted that among the students, 74.5% used social media for sharing information, 65.4% for spending leisure time, 51.9% for entertainment, and 51.1% for chats. Furthermore, 52.4% of the students stated that social media affected their lives. The students' scores on the social media addiction scale were calculated to be 15.29 ± 2.42 . As a result, it was concluded that the students were not addicted to social media.

Table 1 displays a comparison of the students' descriptive features and their scores on the social media addiction, optimism, and pessimism scales. The male students in the study were found to be much more addicted to social media than female students ($p < 0.05$). A comparison of the effect of the father's education on the students' social media addiction produced a statistically significant difference ($p < 0.05$). No significant difference was found in the results of the test between the sub-groups. A comparison of optimism level median scores by gender showed that among the students in the study, females were more optimistic than males ($p < 0.05$). It was also seen that 12th-grade students had higher optimism scores than the 10th-grade students ($p < 0.05$). In the comparison of the effect of family income on the students' optimism levels, a statistically significant difference was seen ($p < 0.05$). No significant intragroup differences were found however in the sub-groups. It was seen that the students' pessimism subscale mean scores according to their

descriptive characteristics of gender, age, place of residence, income level, parental education and occupation did not display any difference. The finding was that a difference was seen only according to grade in the pessimism subscale mean scores, specifically that the pessimism level of 12-graders was higher than among the 9th and 10th-graders ($p < 0.05$). The fact that the 12th-grade students had higher scores compared to the 10th grade in both pessimism and optimism may perhaps be explained by the characteristic emotional ups and downs of adolescents of the ages of 16-18.

A comparison of the students' social media addiction, optimism, and pessimism mean scores according to the characteristics of their social media usage is presented in Table 2. A statistically significant difference was found in the comparison of social media addiction medians according to the daily duration of social media usage ($p < 0.05$). According to the results of the test, those who were on social media for 0-2 hours/day had higher social media addiction scores than those who were on social media for 3-5 hours/day, 6-8 hours/day or 9 hours/day or more. Those who used social media for sharing information had higher social media addiction scores than those who did not use social media for information-sharing ($p < 0.05$). Those who did not use social media to pass the time had higher social media addiction scores than those who did use social media in their leisure time ($p < 0.05$). The students who stated that social media did not affect their lives had higher social media addiction scores ($p < 0.05$). Those who used social media for information-sharing were found to be more optimistic compared to students who did not use social media for information-sharing ($p < 0.05$). The optimism level median score of students who were on social media to pass the time was higher than in those who did not use the social media for this purpose ($p < 0.05$). Again, the comparison of the students' optimism level median scores according to whether their lives were affected by social media yielded a statistically significant difference ($p < 0.05$). Those who said their lives had not been affected by social media were found to be more optimistic than those who said they had been affected by using social media. In the comparison of pessimism level median scores according to social media daily usage durations, it was seen that those who were on the social media for 0-2 hours/day had higher pessimism levels than those who used the social media for 9 hours/day or more ($p < 0.05$). Those who said their lives had not been affected by social media were found to be more pessimistic than those who said their lives had been affected by using social media ($p < 0.05$). Those students who said that social media did not affect their lives displayed high scores in both optimism and pessimism. This can be explained by the

characteristic behavior of adolescents, who display development.
ambivalent emotions in this period of their

Table 1. Comparison of the students' descriptive characteristics and their scores on the social media addiction, optimism, and pessimism scale (n=231)

Descriptive characteristics			Social Media Addiction	Optimism	Pessimism
Gender	Female (1)	p	0.019^a	038^a	.954
	Male (2)	U	5494.500	5620.000	6641.000
		Difference	2>1	1>2	
Age	13-15 years	p	.298	.356	.056
	16-18 years	U	6120.500	6174.500	5675.500
		Difference			
Location	City	p	.416	.777	.185
	District	U	2.244	.445	3.379
	Village	Difference			
Grade	Grade 9 (1)	p	.141	.001^b	001^b
	Grade 10 (2)	U	5.465	16.771	17.253
	Grade 11 (3)				
	Grade 12 (4)	Difference		4>2	4>1 4>2
Income	Income less than expenditure	p	.551	.035^b	.052
	Income equal to expenditure	U	1.192	6.679	5.897
	Income more than expenditure	Difference			
Maternal Education	Elementary / Middle School	P	.184	.854	.137
	High School graduate	U	3.383	.316	3.981
	University and graduate school	Difference			
Maternal Education	Elementary / Middle School	p	.046^b	.927	.241
	High School graduate	U	6.138	.151	2.843
	University and graduate school	Difference			
Mother's Occupation	Unemployed	p	.925	.698	.128
	Employed	U	.897	2.206	7.154
	Self-employed	Difference			
Father's Occupation	Civil servant	p	.117	.218	.933
	Retired	U	.117	4.439	.433
		Difference			

a: Mann-Whitney U Test

b: Kruskal-Wallis H test

Table 2. Comparison of the students' social media usage characteristics and their scores on the social media addiction, optimism, and pessimism scale (n=231)

Descriptive characteristics Variables			Social Media Addiction	Optimism	Pessimism
Frequency of social media use	0-2 hours / day (1)	p	.000^a	.67	.002^b
	3-5 hours / day (2)	U	41.532	7.156	14.601
	6-8 hours / day (3)	Difference	1>2 1>3 1>4		1>4
	9 hours/day and more (4)				
Entertainment	Yes	P	.265	.302	.652
	No	U	6096.500	6132.500	6426.500
		Difference			
Information-sharing	Yes (1)	p	.041^b	.008^a	.402
	No (2)	U	4179.000	3896.500	470.500
		Difference	1>2	1>2	
Chat	Yes	p	.789	.477	.267
	No	U	6532.500	6306.000	6104.500
		Difference			
Passing the Time	Yes (1)	p	.000^b	.008^a	.89
	No (2)	U	4282.500	4756.500	5218.500
		Difference	2>1	2>1	
Other	No	p	.249	.90	.197
	Watching Lectures Videos	U	2.779	4.820	3.248
	Place Notification	Difference			
Influences her/his life?	Yes (1)	p	.000^b	.035^a	.001^a
	No (2)	U	3431.500	5585.500	5013.500
		Difference	2>1	2>1	2>1

a: Kruskal-Wallis H test
b: Mann-Whitney U test

Table 3. Distribution of analysis of correlations between continuous variables

	Social media addiction	Optimism	Pessimism
Social media addiction	1	.260**	-.349**
p	-	0	0
Optimism	.260**	1	-.586**
p	0	-	0
Pessimism	-.349**	-.586	1
p	0	0	-

p<0.05*

There is a statistically significant, positive but weak correlation between the students' social media addiction mean scores and their optimism subscale mean scores ($r=.260$, $p<0.05$). There is a statistically significant, negative, and weak correlation between the students' social media addiction mean scores and their pessimism subscale mean scores ($r=-.349$, $p<0.05$). There is a statistically significant, negative, and moderate correlation between the optimism-pessimism subscale mean scores ($r=-.586$, $p<0.05$) (Table 3).

DISCUSSION

The aim of this study was to investigate the relationship between social media addiction and optimism/pessimism among adolescents. Towards this aim, the differences in the scores on the social media addiction scale, the optimism/pessimism scale, and their subscales were reviewed in terms of the variables of gender, age group, grade level, income level, parents' education, mother's occupation, father's occupation, frequency of social media usage, most common purposes for using the social media and how the social media affected the adolescents' lives.

The data showed that one of the variables that had an impact on social media addiction was the duration of daily social media usage. The study points to a relationship between social media addiction and the duration of daily social media usage. According to the data obtained from those who were on social media for 0-2 hours/day had higher social media addiction scores than those who were on social media for 3-5 hours/day, 6-8 hours/day or 9 hours/day or more. It was surprising to see that as the duration of daily social media usage increased, the level of social media addiction decreased since the literature indicates that social media addiction levels are higher when durations of social media usage are longer.^{23,24,25} It may be that spending more time on social media meets the need for psychosocial interactions and therefore the dependency on social media may increase to satisfy this need. It was similarly seen in the study that the pessimism subscale scores of the adolescents who spent 0-2 hours/day on social media were higher than those who used social media for 9 hours/day.

It is reported that social media has a negative affect on interpersonal relationships²⁶ and psychological wellbeing.²⁷ Adolescents whose daily usage durations are high also exhibit high depression levels²⁴, and it is reported that there is a positive correlation between anxiety and depression levels and daily social media usage durations.²⁸

The fact that addiction and pessimism levels increase as the daily duration of social media usage decreases may be an outcome of students' perceptions of social media as a medium of communication, of their unawareness of how much time they spend on social media or of their deliberately marking their usage time as less than it is really is.

When we looked into whether the social media addiction mean scores of the students in the study revealed a significant difference by gender, we observed that the social media addiction scores

of the male students were significantly higher than the female students. In the review of social media usage in terms of the variable of gender, it was seen that boys were more addicted and girls were less addicted to social media. Some studies provide differing results regarding social media dependency according to gender. Some studies report a higher social media addiction in boys²⁹ while others point to results that show that girls are more addicted than boys.^{30,31} The higher level of social media addiction in the boys in our study may perhaps be a consequence of Turkey's patriarchal society, where as in other such areas of the world, males have easier access to channels of communication and can share their thoughts more freely on social networks, being more readily available for interacting on the social media. Another variable that was examined was optimism-pessimism. We found that girls are more optimistic than boys. This finding is similar to what has been reported.³² The tendency of girls to be less likely to develop social media addiction may be a result of their higher levels of optimism. In past Turkey, girls in the family generally went through a different process of socialization than boys, in an environment in which they were more protected, kept under stricter control, and more conservative parental attitudes that restricted their taking initiative and caused them to develop a personality that complied with traditional roles. However, women now play an active part in community life and have carved out a place for themselves irrespective of gender in the family, at school, and in the workplace. The gains that women have achieved in their lives may have been an element that has given female students a more optimistic perspective.

The data showed that the adolescents in the study who used social media for information-sharing and not for spending leisure time had higher social media addiction and optimism mean scores compared to those who were on social media for passing the time and not for information-sharing. We believe that adolescents who receive positive feedback about themselves over social media may tend to use social media more. With its diverse content, social media gives individuals the opportunity to socialize with others. This might also be a reason for an increase in social media usage. In a study by Valkenburg et al. (2006), the authors found that adolescents who received positive feedback on their social media profiles had a higher sense of self-image.³³ It was reported in another study that as the perception of self-image dropped, addiction to social media, to the internet, to computers, and overuse of social media increased.³⁴ In this study, it was found that participants who used social media for a particular purpose displayed increased levels of optimism and social media dependency.

It was observed that the adolescents who exhibited high social media addiction mean scores stated that social media did not have a negative effect on their lives. Those students who said that social media did not affect their lives displayed high scores in both optimism and pessimism. This can be explained by the characteristic behavior of adolescents, who display ambivalent emotions in this period of their development. Although many studies have demonstrated that social media harms adolescents' psychological functioning, there is also research pointing to the positive influence of social media on adolescents. Using social media provides the opportunity for new social relations, interpersonal communications, facilitates interactions, and strengthens friendships.³⁵ Its ability to provide information about friends and relatives located at a distance from the individual and the models of positive social behavior it may introduce can have a good influence on adolescents.³⁴ The fact that the adolescents with high social media addiction mean scores stated that the social media did not harm their lives can be explained by the way they consider the social media as a normal part of their lives and a form of escape from their real lives.

The adolescents in the study who were in the 12th-grade exhibited higher mean scores compared to the 10th-grade students in both optimism and pessimism, which might be a reflection of the characteristic ambivalence and emotional complexities of this time in their lives.

As the social media addiction of the adolescents in the study rose, their optimism levels rose as well, but their pessimism levels fell. It might be said that this was a result of the low level of social media addiction that the adolescents in the sample displayed. This thought is based on the reports in the literature that there is a relationship between social media usage and psychological disorders. In one study, the authors held that social media addiction as a psychological disorder had the highest correlation with psychotic behavior, paranoid thoughts, phobic anxiety, and anger-aggression, in that order.³⁶

Limitations and Directions/Suggestions for Future Research

This study has some limitations. The data on all the variables however were collected based on student self-reporting and this might also be considered a limitation. At the same time, the study investigated the relationship between social media addiction levels and optimism-pessimism and did not treat other variables that may affect the use of social media. In terms of time and cost, this study was limited to the 231 students studying in the central district of Fethiye. Data in the study were obtained

only with a questionnaire. The methods of observation, interviewing and other techniques were not employed.

In conclusion, the adolescents taken into the study exhibited a low level of social media addiction. As adolescents' addiction to social media increases, their levels of optimism also rise while their pessimism levels fall. Variables such as daily social media usage frequency and purpose, gender, and the adolescent's grade in school affect the level of social media addiction. Adolescents with high social media addiction scores say that their lives are not affected by social media.

We recommend that more expansive studies with larger samples are conducted to investigate the social media addiction tendencies of adolescents and that longitudinal, quantitative studies as well as qualitative research in which adolescents can express themselves are also carried out.

Acknowledgements

The research received no external or grant funding. All authors contributed to the study conception and design. Material preparation, data collection, and analysis were performed by J.U., G.K.M., and G.M. J.U., G.K.M., and G.M. participated in conceiving the design of the study, collecting the data and the data analysis. The first draft of the manuscript was written by J.U., and supervision was made by G.K.M., and G.M. All authors commented on previous versions of the manuscript. All authors read and approved the final manuscript. The authors have declared that they have no competing or potential conflicts of interest. The authors acknowledge the cooperation of the Turkish Ministry of Education, as well as the many principals, teachers, parents, and students who participated in this study.

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