

## The Effect of Attitude Towards School on the Students' Happiness: The Moderating Role of Math Anxiety

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*Abstract: This study aims to examine the moderating role of math anxiety in the effect of the attitude towards school on the students' happiness. In the semester of 2021-2022, 415 students at the 8<sup>th</sup> grade of secondary schools, participated in the study. In this study a correlational survey model was employed. "Scale for Attitude Towards School", "Math Anxiety Scale", and "Adolescent Happiness Scale" were used to collect data. In the analysis of data, SPSS Process Macro extension was utilized. This study reveals that attitude towards school positively affects students' happiness while math anxiety negatively affects students' happiness. Furthermore, the study demonstrates that math anxiety has an effect that could decrease the effects of attitude towards school on students' happiness. Therefore, it was determined that there is a moderating role of math anxiety in the effect of the attitude towards school on the students' happiness.*

Keywords: Happiness, attitude towards school, math anxiety.

### INTRODUCTION

Happiness affects the behaviors, dreams and targets as well as the decisions of people because it is a state of willingness to reach, and when it is reached, the state of happiness is not wanted to be lost. Since ancient times, people have been trying to understand what the happiness is, and how it is reached, and they have suggested ideas to explain the concept of happiness. The dynamics of life have led to a change in the meaning of happiness concepts in time. Therefore, happiness and its effects on people have been discussed in many disciplines such as philosophy, psychology, biology, medicine and economy nowadays (Kesik & Aslan, 2020; Yalvaç Arıcı, 2019).

Happiness is a concept that is related to satisfaction with life, pleasure in life, life quality and being good (Bora & Altınok, 2021; İme & Öztosun, 2020). In literature, the focus of the claims and recognized approaches to explain the happiness is on the self-realization of individuals and satisfaction of individuals. Happiness, which is explained by the self-realization of an individual

and the emergence of his/her whole potential, is conceptualized as psychological well-being. Drawing from this perspective, happiness means living in accordance with the nature of individuals to achieve targets in order to actualize his/herself. Therefore, happiness is based on the concept of living with wisdom, ethics, meanings and virtues (Deci & Ryan, 2008). Based on the approach of “psychological well-being”, happiness is defined as a permanent situation where individuals feel in tune with their targets, needs and their surroundings (Fidan, 2020).

According to the approach which explains the happiness as depending on the satisfaction of individuals, the pleasures that an individual takes as a result of his/her behaviours are an indicator of happiness. Happiness depends on pain and pleasure (Epicurus, 1949). Based on this approach conceptualized as subjective well-being, the majority of positive thoughts and emotions in their judgments in the field of work, school, marriage, and lack of negative emotions and thoughts indicate happiness (Diener, 2000). According to this approach, happy individuals experience positive emotions such as confidence, joy, fun, and hope much more than negative emotions such as anger, hate, anxiety, fear, hopelessness and sadness (Eryılmaz, 2011). In this regard, happiness can be defined as living the moment and having leisure with life, feeling good, being happy and healthy, and having a lovely family life that is admired by surroundings (Gökdemir-Dumludağ, 2011).

United Nations Education, Scientific, and Cultural Organization (UNESCO) accepted the search for happiness as a fundamental aim. The individual has a tendency to accept actions that have positive emotions, and has also a tendency to escape from actions that have negative emotions. Moreover, an individual’s evaluation of his/her life leads to positive/negative emotions. These emotions affect individuals’ both cognitive structure and behaviours (Salovey et al., 1995). Therefore, it can be said that happiness affects individuals in many ways. In literature, there are studies on happiness indicating that it is related to mental, psychological, social and general health. Happiness is associated with mental factors such as academic success (Bücker et al., 2018; Kirkcaldy, Fumham & Siefen, 2004; Winarso & Haqq 2019; Yıldırım & Turaç, 2020), exam or test anxiety (Feta, 2019; Steinmayr et al., 2016); creative thinking and creativity (Conner, DeYoung & Silvia, 2018; Flor et al., 2013; Soleimani & Tebyanian, 2011; Tan & Majid, 2011); motivation for participation in the class (Eryılmaz & Aypay, 2011). Furthermore, it has been determined that happiness is related to psychological factors such as, hope (Çankaya & Meydan, 2018; Namdar, 2018); stress (King et al., 2014; Monfort, Stroup & Waugh, 2015; Tan et al., 2019); anxiety (Dilmaç & Baş, 2019; Feta, 2019; Crego et al., 2021; Steinmayr et al., 2016; Milić et al., 2019; Takebayashi et al., 2018; Wasil et al., 2021); satisfaction of basic and psychological needs (Eryılmaz & Atak, 2011; İlhan & Özbay, 2010; Telef & Ergün, 2013; Türkdöğän & Duru, 2012). Happiness is also related to social factors: loneliness (Baltacı, 2019; Traş, Öztemel & Koçak, 2020; Yavuz, 2019); interpersonal relationship (Baytemir, 2019; Köse, 2015; Xu & Huang, 2021); social anxiety (Baltacı, 2019; Dilmaç & Baş, 2019; Maričić & Štambuk, 2015; Son & Kim, 2020), social appearance anxiety (Seki & Dilmaç 2015); social talents (Canbay, 2010; Telef & Ergün, 2013)

and family (Demir, 2020a; Mertoğlu, 2020). Besides, there is a relationship between happiness and healthy life (Lin, Pan & Yi, 2019; Mahon, Yarcheski & Yarcheski, 2005; Mehrabi, Ghazavi & Shahgholian, 2017). Therefore, when the aim is to develop individuals' cognitive, social, and affective skills in schools (Waters, 2011), it shouldn't be indifferent to students' happiness. In fact, governments transfer an important part of their budgets to education for the happiness of society. Families shape their life-style according to their children's education and spend most of their savings on their education. However, people shouldn't neglect their happiness at the moment while they about the future happiness of their children. Considering students' spending most of their life at school, their happiness shouldn't be ignored. Some thinkers consider that people concentrate on academic success, and happiness is neglected so it affects students' development negatively (Guilherme & de Freitas, 2017; Noddings, 2003; White, 2011).

The schools are the places where planned programs of education are achieved and where students are required to have the knowledge, emotions, and behaviours though planned actions and experiences (Demirel, 2021). Students' volunteer joining the social and educational activities is very important to achieve the targets which are needed to be acquired. Therefore, it can be said that attitude towards school is very important in the success of educational services. Attitude towards school can be defined as a cognitive, affective and behavioural attitude, and reaction and tendency that are formed in the minds of individuals based on previous experiences, knowledge and motivations towards school (İnceoğlu, 2010). Attitudes affect the definition of behaviours (Hortaçsu, 2012). Hence, attitude towards school is the predictor of the students' behaviours towards the school. Students, who have a positive attitude towards a school, attend the social and educational activities at school voluntarily. This provides a contribution to the school to achieve its mission. A negative attitude towards the school causes a loss of motivation for school and a perception that a school is boring. This results in seeing school as a place for a source of unhappiness. Seen as a place for the source of unhappiness, school affects the students academically, socially, and psychologically in a negative direction. In studies, there is a relationship between happiness and loyalty to school (Özdemir, 2017), academic procrastination (Demir, 2020b), truancy behaviour (Gülcemal, 2019), and school burnout (Koç, 2019). The students' school experience in the growth and developmental period has the potential to affect not only the academic success of students, but also all of their life as students. Thus, the effect of the attitude towards the school (as the determinant of the behaviours towards the school) on the happiness of the students should be searched.

Negative emotions (fear, unease, sadness), which are contrary to positive emotions (joy, fun, happiness) observed in the happiness, are seen in the state of anxiety. Anxiety which has an important role in the formation of characters and behaviours of individuals means thoughts, sorrow, and sadness that causes anxiety (Kartopu, 2012; Manav, 2011; Turkish Language Society (TDK), 2022). Anxiety is an emotional state that depends on an unreasonable cause of affairs (Gall, 2012). In fact, low level of anxiety accelerates reflexes and it plays a role in protecting individuals

in case of danger by providing concentration. On the other hand, excessive anxiety causes numerous problems in individuals. In the case of anxiety, physical behaviours such as dried mouth, and swearing, and psychological behaviours: fear, unease, anger and thrilling as well as stuttering are seen (Geçtan, 2005). Hence, it can be said that there is an inverse relationship between happiness and anxiety. In literature, research studies demonstrate that there is a relationship between happiness and anxiety (Crego et al., 2021; Dilmaç & Baş, 2019; Feta, 2019; Steinmayr et al., 2016; Milić et al., 2019; Takebayashi et al., 2018; Wasil et al., 2021), social anxiety (Baltacı, 2019; Dilmaç and Baş, 2019; Maričić & Štambuk, 2015; Seki & Dilmaç 2015; Son & Kim, 2020) and exam anxiety (Feta, 2019; Steinmayr et al., 2016). When the students need to do the duties about math, the feelings such as sadness, hopelessness, stress, and fear as well as displeasure (Ma&Hu, 2004) and the lack of math performance (Bayırlı, Geçici & Erdem, 2021; Kesici & Aşılıoğlu, 2017; Ma, 1999) come from math anxiety that affects the students' happiness.

The physical structure of the school, and the communication and relationships among teacher, students, administrator and parents affect the students' attitudes towards school (Adıgüzel, 2012). Attitudes towards school develop depending on the experiences (İnceoğlu, 2010). Therefore, lessons at school can also affect the attitudes towards school. Math lesson is a very important part of the school programme. The subjects of mathematics are abstract objects. For this reason, math is perceived as a difficult lesson due to its nature. Considering the attention paid to math, math could be effective in the formation of the attitudes towards school. Math anxiety, which results from students' negative experiences about math, causes negative feelings such as inadequacy, anxiety, decline in success, guilt and shame. Furthermore, math anxiety can affect the whole life, leading to choices where mathematics is absent or less involved in the selection of a school and profession (Kesici & Aşılıoğlu, 2017; Ma, 1999; Namkung, Peng & Lin, 2019). The feeling of anxiety and tension which prevents the manipulation of numbers and solving of math problems (Richardson & Suinn, 1972) and the math anxiety which Newstead (1998) defines as a feeling of fear, tension and restlessness that affects the mathematics performance may be related to the attitude towards school. Accordingly, the interaction of mathematics anxiety and attitude towards school, which are related to each other and thought to have an effect on happiness separately, may also affect student happiness.

The search of happiness is a humanistic and existential state. Education aims to enable individuals to actualize themselves and maintain social order and peace by improving their cognitive, social, and psychological aspects. Considering the nature of humans, education needs to achieve educational targets. Therefore, educators pay attention to students' happiness. This study which aims to investigate the attitude towards school and math anxiety on students' happiness answers these research questions below:

1. Is there an effect of the attitude towards the school on the students' happiness?
2. Does math anxiety affect student happiness?

3. Is there a moderating role of math anxiety in the effect of the attitude towards the school on the students' happiness?

As it is thought that taking into consideration the students' happiness could help in using the labour and capital effectively and efficiently, this research study may contribute to determining the educational policy and preparing the educational plans, programmes and implications about education.

## METHOD

### Research Design

The aim of this study is to investigate the moderating role of math anxiety in the effect of the attitude towards school on the students' happiness. Correctional survey model is used to determine the existence and degree of change among variables (Karasar, 2014).

### Population and Sample

Participants of this study were 8<sup>th</sup> grade students who were aged at 14 were in secondary schools in Siirt Province, Turkey in the semester of 2021-2022, 415 students at the 8th grade from 6 secondary schools were selected by the cluster sampling method. 195 students are males and 220 are females.

### Data collection instruments

*Scale for Attitude Towards School:* To determine the students' attitude towards the school, "The Scale for Attitude Towards School" which was developed by Alici (2013) was used. The scale has 20 items with 5-point Likert-type. The scale explains 51.67% of variance. Cronbach Alpha coefficient is calculated as .907. There are three sub-dimensions of scale: "school as a barrier in personal development", "supports for personal development" and "school as a missing place". In this study, Cronbach Alpha coefficient of "The Scale for Attitude Towards School" is calculated as .925.

*Math Anxiety Scale:* Students' math anxiety was determined by using the "Math Anxiety Scale" which was developed by Bindak (2005). The scale has 10 items with 5-point Likert-type. The scale has only one dimension and Cronbach Alpha coefficient is calculated as .84. The scale explains 51.7% of variance. In this study, Cronbach Alpha coefficient is calculated as .905 for Math anxiety scale.

*Adolescent Happiness Scale:* To determine the level of the students' happiness, the "Adolescent Happiness Scale" developed by Işık and Atalay (2019) was used. Based on the students' self-evaluation, the scale, which explains their cognitive and affective judgments, and life satisfaction, has only one dimension and 15 items with a 5-point Likert-type. The scale explains 50.41% of variance and Cronbach Alpha value is calculated as .91. For this study, Cronbach Alpha coefficient of Adolescent happiness scale is calculated as .93.

## Collecting Data

The data were collected in the lesson by students' teachers. The teachers working at those schools were informed about the study. Teachers were also asked to inform their students about the study and involve the volunteer students in the study. Additionally, the ethical approval was taken from Siirt University Ethics Committee for this study (Date: 29.03.2022, Number: 2442).

## Analysis of Data

The collected data were analysed by using SPSS programme. First of all, mean scores of attitudes towards school, math anxiety, happiness were converted into z scores and 4 outlier values which were not between the levels of (-3, +3) were identified. These the data set were removed from the study. After that, skewness and kurtosis coefficients for the remaining 411 data were identified between the levels of (-1,+1). Thus, it was determined that data provides the normal distribution. In this study, descriptive statistics (mean, standard deviation, kurtosis and skewness) were used in the analysis of the data. Furthermore, it was determined that there is a linear relationship among variables by using the correlation analysis and the level of the relationship among variables do not cause a multicollinearity problem ( $r < .80$ ) (Can, 2014; Büyüköztürk, 2011). The moderating role of math anxiety in the effect of the attitude towards school on the students' happiness was analysed by using SPSS Process Macro extension. Moderation analysis is used to determine in which situations the relationship between two variables increase, decrease or change directions (Bayram, 2016; Gürbüz, 2021).

## RESULTS

In this study, mean scores of the attitude towards school, math anxiety, happiness level of participants, standard deviation, skewness and kurtosis coefficients were calculated. To determine the level of the relationship among variables, Pearson correlation coefficients were calculated through the correlation analysis. Results are shown in Table 1.

|                             | N   | Mean | Sd.  | Skewness | Kurtosis | (1)    | (2)    | (3) |
|-----------------------------|-----|------|------|----------|----------|--------|--------|-----|
| Attitude Towards School (1) | 411 | 3.90 | .78  | -.46     | -.72     | 1      |        |     |
| Math Anxiety (2)            | 411 | 2.62 | 1.04 | .19      | -.86     | -.38** | 1      |     |
| Happiness (3)               | 411 | 3.47 | .95  | -.26     | -.72     | .45**  | -.47** | 1   |

\*\*  $p < .01$

Table 1. Descriptive statistics and correlation coefficients



As seen in Table 1, the mean scores of participants' attitude towards school, math anxiety, happiness were calculated as 3.90 (sd.= .78), 2.62 (sd. = 1.04), 3.47 (sd. = .95) over 5.00 respectively. Kurtosis and skewness coefficients were between -1 and +1 values. There is a positive, and statistically significant relationship between attitude towards school and happiness ( $r=.45$ ;  $p<0.01$ ). There is a negative, significant relationship between attitude towards school and math anxiety ( $r=-.38$ ;  $p<0.01$ ). Also, there is a negative, and significant relationship between happiness and math anxiety ( $r=-.47$ ;  $p<0.01$ ).

To determine the moderating role of math anxiety in the effect of attitude towards school on students' happiness, regression analysis was computed. Before regression analysis, values of estimated variable (attitude towards school) and moderator variable (math anxiety) are standardized. Based on the regression analysis, model statistically and significantly explains 30% of happiness of students ( $R^2=.298$ ;  $F=57.71$ ;  $p<.001$ ). Regression analysis results are shown in Table 2.

|                                 | $\beta$ | S.E. | $t$   | $p$   | Confidence Interval |             |
|---------------------------------|---------|------|-------|-------|---------------------|-------------|
|                                 |         |      |       |       | Lower Bound         | Upper Bound |
| Constant                        | 3.43    | .04  | 81.35 | <.001 | 3.35                | 3.51        |
| Attitude Towards School         | .34     | .04  | 7.85  | <.001 | .25                 | .42         |
| Math Anxiety                    | -.29    | .04  | -6.71 | <.001 | -.37                | -.20        |
| Interaction (moderating effect) | -.12    | .04  | -3.25 | <.002 | -.20                | -.05        |

$\beta$ : Unstandardized regression coefficients; S.E.: Standard error.

Table 2. Results of regression analysis

As seen Table 2, attitude towards school has a positive and significant effect on students' happiness ( $\beta= .34$ ;  $p<.001$ ). Math anxiety affects students' happiness in a negative direction and significantly ( $\beta=-.29$ ;  $p<.001$ ). Attitude towards school and math anxiety's common interaction (moderating effect) affect students' happiness in a negative direction and significantly ( $\beta= -.12$ ;  $p<.001$ ). Therefore, study shows the moderating role of math anxiety in the effect of attitude towards school on students' happiness. In order to analyse the moderating effect in depth, slopes analysis was calculated. In case of low, medium, and high level of math anxiety, the effect of the attitude towards school on students' happiness is presented as follows in Table 3.

| Predictor Variable      | Dependent Variable | Level of Math Anxiety | $\beta$ | S.E. | $t$  | $p$   | Confidence Interval |             |
|-------------------------|--------------------|-----------------------|---------|------|------|-------|---------------------|-------------|
|                         |                    |                       |         |      |      |       | Lower Bound         | Upper Bound |
| Attitude Towards School | → Happiness        | Low Level             | .48     | .06  | 7.43 | <.001 | .35                 | .61         |
|                         |                    | Medium Level          | .34     | .04  | 7.90 | <.001 | .25                 | .43         |
|                         |                    | High Level            | .20     | .06  | 3.50 | <.002 | .10                 | .31         |

$\beta$ : Unstandardized regression coefficients; S.E.: Standard error

Table 3. Regression analysis which was done to show moderating role of math anxiety in the effect of attitude towards school on students' happiness

As seen table 3, there is a positive and significant effect of attitude towards school on students' happiness in case there is low, medium, and high level of math anxiety. In case of a low level of math anxiety, the effect of attitude towards school on students' happiness is  $\beta=.48$  ( $p<.001$ ). In case of a medium level of math anxiety, the effect of attitude towards school on students' happiness is  $\beta=.34$  ( $p<.001$ ). And, the effect of attitude towards school on students' happiness is  $\beta=.20$  ( $p<.002$ ) in case there is a high level of math anxiety. Moderating role of math anxiety in the effect of attitude towards school on students' happiness is shown in the graphic in the Figure 1.

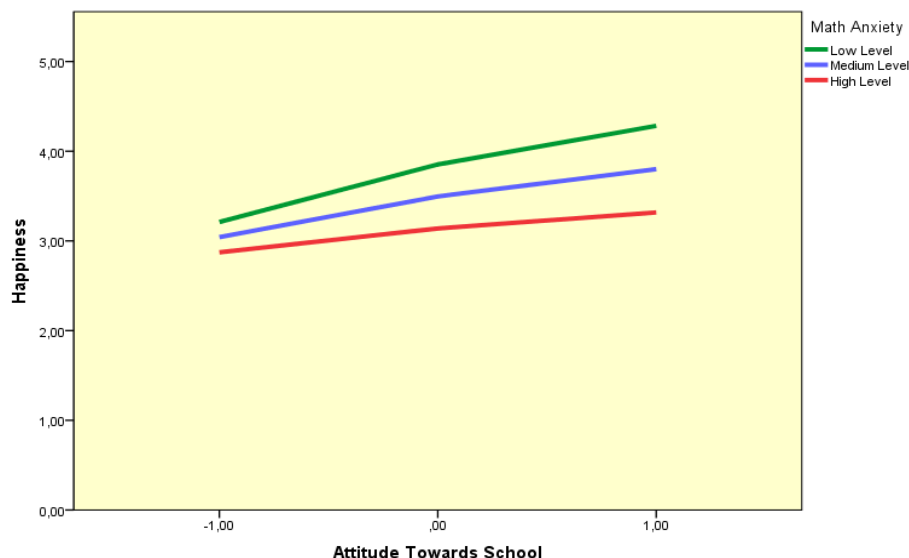


Figure 1. Graphic illustration of moderating role of math anxiety



As seen in Figure 1, when math anxiety is at low level, the effects of attitude towards school on students' happiness are higher than medium and high level of math anxiety. When math anxiety is at medium level, the effects of attitude towards school on students' happiness are more effective than the high level of math anxiety. Math anxiety changes the attitudes towards school on the students' happiness. It was determined that math anxiety has lessened the positive effects of attitudes towards school on students' happiness. This shows the moderating role of math anxiety.

## CONCLUSION, DISCUSSION AND SUGGESTIONS

This study was conducted to examine the direct and common interaction effects of attitude towards school and math anxiety on students' happiness. The model which was created to explain the effects of attitude towards school and math anxiety on students' happiness significantly explains approximately 30% of changes in student happiness. The study shows that students' attitudes towards school statistically affect their happiness in a positive and significant way. As a consequence of this, when students' attitude towards school increases, their happiness level will increase.

There are some studies in the literature that show that different factors about school are related to happiness and which the findings of this study. It was determined that there is a positive relationship between happiness and school satisfaction (Chen & Lu, 2009; Long et al., 2012) and school alienation affects students' happiness negatively (Natvig, Albrektsen & Qvarnström, 2003), and there is a positive relationship between loyalty to school and happiness (Bora & Altınok, 2021; Vuorinen, Hietajärvi, & Uusitalo, 2021). Furthermore, it was found that there is an invert relationship between school happiness and school burnout (Akpınar, 2016; Aypay & Eryılmaz, 2011; Özhan & Yüksel, 2021) and good school atmosphere has a positive effect on students' happiness (Asıcı & İkiz, Aldridge et al., 2016; 2019; Suldo et al., 2013). As a result of the effects of the attitude towards the school on students' happiness in this study, these findings are essential in the student-centred education today. Today, education accepts the approach of the constructivist paradigm as it is more relevant to the nature of learning. Therefore, it is seen that such applications as multiple intelligences, problem-solving, and cooperation approaches and techniques which put the student in the centre are used more in education (Kesici, 2019). In addition to student-centred cognitive approaches which have harmony with human nature, considering the affective aspects for students' happiness are also effective and efficient in education. In educational planning and implications, the aim of happiness should be addressed as the necessity of human nature. To make students happy, the social and educational activities should be more for students so that they could develop their autonomy, establish positive social relationships with their environment and be aware of their talents and limits (İme & Öztosun, 2020). Therefore, schools should be turned into places where students can develop their hobbies. In doing so, students' self-actualization can be supported. In order to help students be happy, their attitudes towards school should be improved. Positive attitude towards school has a positive effect on academic success. Activities that students love should be decided and suitable ones should be employed. Establishing healthy social

relationships with surroundings affects students' happiness. To develop social skills, workshops should be done and their social development should be followed.

The study reveals that math anxiety affects students' happiness negatively. When math anxiety is high, students' happiness will be affected negatively. This finding can be explained as the negative emotions that math anxiety creates in students affect happiness negatively, because these negative emotions are the opposite of the emotions that are felt at the time of happiness. This finding is consistent with the findings that there are inverse relationships between happiness and anxiety (Crego et al., 2021; Dilmaç & Baş, 2019; Feta, 2019; Milić et al., 2019; Steinmayr et al., 2016; Takebayashi et al., 2018; Wasil et al., 2021), social anxiety (Baltacı, 2019; Dilmaç & Baş, 2019; Seki & Dilmaç 2015; Son & Kim, 2020; Maričić & Štambuk, 2015), and exam anxiety (Feta, 2019; Steinmayr et al., 2016). (Wasil et al., 2021; Crego et al. 2021; Steinmayr, Crede, McElvany & Wirthwein, 2016; Feta, 2019; Milić et al., 2019; Takebayashi, Tanaka, Sugiura & Sugiura, 2018; Dilmaç & Baş, 2019), social anxiety (Baltacı, 2019; Son & Kim, 2020; Maričić & Štambuk, 2015; Dilmaç & Baş, 2019; Seki & Dilmaç 2015), test anxiety (Steinmayr, Crede, McElvany & Wirthwein, 2016; Feta, 2019) in the literature.

This study shows the moderating role of math anxiety in the effects of attitude towards school on students' happiness. In the case of low math anxiety, the positive effects of positive attitude towards school on students' happiness are higher than medium and high levels of math anxiety. In the case of medium math anxiety, the positive effects of positive attitude towards school on students' happiness are higher than in the case of the high level of math anxiety. Math anxiety decreases the positive effects of positive attitudes towards school on students' happiness and this shows the moderating role of math anxiety.

In the study, it was defined that there is an inverse relationship between math anxiety and attitude towards school, and math anxiety is a predictor that affects attitude towards school negatively. Researchers who have studied math education pay attention to math anxiety. In meta-analysis studies, there is an inverse and meaningful relationship between math anxiety, math performance (Zhang, Zhao & Kong, 2019) and math success (Barroso et al., 2021; Bayırlı, Geçici & Erdem, 2021). Therefore, math anxiety is an important problem for math teaching. However, the study reveals that besides the math lesson, math anxiety affects various things such as attitude towards school and students' happiness. Therefore, the solution to the problem is important not only for an individual's math success but also for his/her whole education. According to Namkung, Peng and Lin (2019), math anxiety can cause low math success. And, low math success can cause math anxiety. However, both math anxiety and math success can cause the formation of a circle that affects each other. If this circle is not broken, there can be negative results. For this reason, it should be put into an effort to break the circle between performance and anxiety. In this regard, it should be taken measures to develop math performance of students who have low math performance. To lessen the negative effects of anxiety, guidance should be offered to students who have the high math anxiety.

This study was conducted with 8<sup>th</sup> grade students at secondary schools. In Turkey, the high-school entrance exam is organized by central mechanisms. Families, school managements, and teachers take this exam seriously to the extent that it can pressurize students. As a result of this, the condition which renders the sample of the research specific might be considered as the limitation of this study. In further research, research studies, which aim to examine the happiness of students at different levels and classes, could be conducted. This study investigates the effects of the attitude towards school and math anxiety on students' happiness. There can be various factors that affect students' happiness with regard to school. There could be numerous school-related factors that have an effect on students' happiness. Thus, further studies, which aim to investigate the school-related factors that affect students' happiness, can contribute to the field of study.

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## Appendix: Items of the scales

### *Scale for Attitude Towards School*

- |   |   |
|---|---|
| 1. Okula gitmek benim için işkence gibi.                        | 11. Okulda öğretilenler bana çok şey katıyor.                         |
| 2. Elimden geldiğince okuldan kaçırım.                          | 12. Okul, psikolojik ve sosyal gelişimi destekler.                    |
| 3. Okul denince hep soğuk duvarları olan bir bina düşünürüm.    | 13. Okulsuz bir eğitim düşünemiyorum.                                 |
| 4. Okulda olmaya katlanamıyorum.                                | 14. Okulsuz bir toplum düşünemiyorum.                                 |
| 5. Okul olmasa daha eğlenceli bir çocukluk geçiririm/ geçirdim. | 15. Okulda benim için yararlı olduğunu düşündüğüm şeyler öğreniyorum. |
| 6. Okulda kendimi hapsedememiş gibi hissedirim.                 | 16. Okul, bilgi ve becerilerimi arttırdığı yerdir.                    |
| 7. Diplomaya ihtiyacım olmasa okula gitmek istemezdim.          | 17. Her gün aynı heyecanla okula giderim.                             |
| 8. Okulların kapatılması gerektiğini düşünüyorum.               | 18. Keşke okullar hiç kapanmasa.                                      |
| 9. Okulun kişisel gelişimim için önemli olduğunu düşünüyorum    | 19. Tatilde okulun açılmasını dört gözle beklerim.                    |
| 10. Okul, zihinsel ve bedensel gelişimi destekler.              | 20. Okula gittiğimde saatlerin nasıl geçtiğini anlamam.               |

### *Math Anxiety Scale*

- |  |   |
|--|---|
| 1. Matematik denince aklıma karmaşık, anlaşılmaz şeyler gelir.               | 6. Matematik yüzünden sınıfımı geçemeyeceğinden korkuyorum.           |
| 2. Matematik derslerinde tahtaya kalkmak bana zor geliyor.                   | 7. Matematik dersine girdiğimde kendimi korkudan büzülmüş hissedirim. |
| 3. Matematik derslerinde bana daima soru sorulacağından endişelenirim.       | 8. Matematik sınavlarına nasıl çalışacağımı bilemiyorum.              |
| 4. Şimdi matematik anlıyorum fakat giderek zor olacağından endişe duyuyorum. | 9. Benim için matematik çok eğlencelidir.                             |
| 5. Matematik sınavlarından korktuğum kadar diğer hiçbir şeyden korkmam.      | 10. Matematik dersinde soru sormaktan korkuyorum.                     |

### *Adolescent Happiness Scale*

- |   |  |
|---|--|
| 1. Hayatın tadını çıkaran biriyim.                  | 9. Her ne olursa olsun hayatımın eğlenceli olduğunu düşünürüm. |
| 2. Yapmaktan keyif aldığım etkinlikler var.         | 10. Kendimi çok dinç hissediyorum.                             |
| 3. Huzurlu bir hayatım var.                         | 11. Kendimi mutlu bir insan olarak tanımlanırım.               |
| 4. Hayatımda güvenebileceğim insanlar var.          | 12. Hayatın güzel yanları üzerine odaklanırım.                 |
| 5. Kendimi güvende hissediyorum.                    | 13. Hayatım tam da istediğim gibi gidiyor.                     |
| 6. Gelecekte iyi bir yaşamım olacağını düşünüyorum. | 14. Hayatımda her şey yolunda gidiyor.                         |
| 7. Geçirdiğim her anın keyfini çıkarmaya çalışırım. | 15. Geleceğe umutla bakarım.                                   |
| 8. Mutlu olmak için pek çok sebebim var.            |  |