

The mediator role of school burnout in the relationship between self-regulation and subjective well-being*

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Abstract

This study aims to investigate the mediator role of school burnout in the relationship between self-regulation and subjective well-being. Participants of the study are 390 university students aged between 18 and 30. In the study, the Self-Regulation Scale, Maslach Burnout Inventory-Student Survey, and the short form of the Oxford Happiness Questionnaire have been applied to collect data. The results demonstrated that self-regulation positively affects subjective well-being while negatively affecting school burnout as school burnout also negatively affects subjective well-being. Additionally, it was concluded that school burnout has a mediatory role in the relationship between self-regulation and subjective well-being. Based on these findings, it could be stated that any study that would be carried out to promote the self-regulation skills of an individual would lead to positive results in subjective well-being and would improve skills to cope with school burnout.

Keywords:

Young Adult, Self-Regulation, School Burnout, Subjective Well-Being, University Students.

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INTRODUCTION

The period of young adulthood is the time when both higher education and making pivotal decisions are involved (Arnett, 2000). In this period, young adults generally continue their university education (Arnett & Tanner, 2006). As a result of these immense responsibilities, these individuals were pushed into a state where they should confront various problems. Therefore, these problems increase the risk of developing mental health issues and hurt young adults' well-being (Pedrelli et al., 2015; Yorgason et al., 2008).

One of the problems frequently seen in individuals who continue their university education is school burnout (Walburg, 2014). It is seen that subjective well-being is one of the situations that school burnout negatively affects (Raiziene et al., 2014). Previous studies have shown that people with high self-regulation skills are relatively better at overcoming school burnout (Choi et al., 2016; Kljajic et al., 2017). Furthermore, research shows that individuals with a high level of self-regulation skills also display a great level of subjective well-being (Hofer et al., 2011). In this context, this study investigates relationships between self-regulation, school burnout, and subjective well-being in university students.

Theoretical Background

Self-Regulation

The concept of self-regulation is based on social cognitive theory (Bandura & Walters 1977), which claims that people can evaluate, reassess, and change their behaviours (Bandura, 1996). From this perspective, self-regulation is defined as people's determination of limits and standards for themselves and organizing their life based on these measures (Bandura, 1988). When considered in this context, it can be stated that the concept of self-regulation has an important place in people's lives.

Self-regulation theory simply outlines establishing objectives, sources of motivation, and regulating and controlling behaviours (Pintrich, 2000). According to Risemberg and Zimmerman (1992), self-regulation is the concept of setting aims and developing strategies after supervising them to achieve these set objectives. For Zimmerman (1998), this concept consists of three stages which are foresight, performance control, and self-reflection. In this concept, individuals with high self-regulation skills strive to establish objectives and follow them.

Individuals with good self-regulation skills are more capable of also producing alternative solutions and problem-solving effectively (Karreman et al., 2006). In addition, individuals with a good level of self-regulation may overcome any problems that occur during their university life faster and successfully (Pintrich, 2000). Moreover, individuals with high levels of self-regulation are mentally healthier and happier (Boekaerts et al., 1999). Hence, it could be stated that self-regulation plays an essential role in resolving challenges that arise in their academic life. As aforementioned, self-regulation has a positive effect on the satisfaction and well-being of individuals.

School Burnout

The concept of burnout has been examined in individuals who have professional working life (Leiter et al., 2014; Pines, 1993). Later, students who continue their education are included in examinations of burnout conception research (Jacobs & Dodd, 2003; Schaufeli et al., 2002). Thereby, the term "school burnout" has increasingly become a subject of academic studies (Salmela-Aro et al. 2008; Salmela-Aro et al., 2009a).

Aypay (2011) defines school burnout as a syndrome caused by the high demands of education and school from students. Another definition of school burnout refers to a feeling of inadequacy and cynical

attitudes that students develop toward the demands of school (Salmela-Aro et al., 2008). Overall, this concept has been examined in three dimensions: "exhaustion, cynicism, and inadequacy" (Salmela-Aro et al., 2009a).

Looking at the data closer several studies have demonstrated that school burnout is a widespread problem among students. For example, research carried out on students in Finland shows that approximately 10% of adolescents experience severe school burnout (Salmela-Aro et al., 2008). Furthermore, it has been expressed that each experiences school burnout at different times during their education (Parviainen et al., 2021; Shreffler et al., 2020). Also, school burnout has varying consequences during the learning process of students, such as underachievement (Asikainen et al., 2020; Virtanen et al., 2016; Yang, 2004), school absenteeism (Yang & Farn, 2005), low motivation toward the lesson (David, 2010; Zhang et al., 2013), early dropout of school (Bask & Salmela-Aro, 2013) and depression (Salmela-Aro et al., 2009b).

School burnout also hurts the well-being of students (Tuominen-Soini et al., 2008). According to present studies, students suffering from school burnout problems also experience despair (Aypay & Eryilmaz, 2011; Yu & Chae, 2020). Consequently, school burnout which students extensively experience is a crucial problem to be dealt with during the education period.

Subjective Well-Being

One of the research topics of positive psychology is the concept of subjective well-being (Cummins, 2012; Eid & Larsen, 2008). Subjective well-being has been described as an individual's frequent experience of positive emotions unless having fewer negativities and attaining a high level of life satisfaction (Diener, 1984; Myers & Diener 1995). Subjective well-being involving both cognitive judgments and emotional responses is engaged with the questions of how and why individuals live their lives in positive ways (Diener, 1984). Diener (2009) has examined subjective well-being in three dimensions; happiness, life satisfaction, and positive emotions. Furthermore, in many studies, the concept of subjective well-being is intertwined with happiness (Diener, 2000). It can be stated that subjective well-being is a more inclusive concept that includes the concept of happiness (Diener et al., 2009; Eid & Larsen, 2008). In this context, the concept of subjective well-being was preferred in this study.

Numerous factors positively affect the subjective well-being of individuals as well as the ones negatively affect. These positive factors enhancing subjective well-being could be exemplified as social relations (Diener & Biswas-Diener, 2011), genetic susceptibility (Lyubomirsky et al., 2005), and characteristic features (Friedman et al., 2010). On the other hand, the factors that have negative impacts on subjective well-being, for instance, relationship problems (Moore & Diener, 2019) and challenges during education (Corominas et al., 2021), should not be ignored. Therefore, subjective well-being is associated with many variables and is affected by them either positively or opposite.

Relationships between Self-Regulation, School Burnout, and Subjective Well-Being

Demirtaş (2018) has concluded that emotion regulation affects happiness positively in Turkish university students. In another study, Katana et al. (2019) found that emotion regulation was a positive predictor of subjective well-being in geriatric nurses. Another study on Chinese students also has shown that self-regulation positively affects subjective well-being (Yang et al., 2019). Likewise, Hui and Harris-Bond (2010) have revealed in their study that self-regulation has a positive impact on subjective well-being in Chinese university students. Overall, it could be asserted that self-regulation has a positive effect on subjective well-being in light of the findings of studies. In addition, it was stated in Bandura's social cognitive theory that self-regulation skills have positive reflections on the lives of individuals (Bandura, 1991). It is stated that these positive reflections increase the subjective well-being of individuals (Bandura, 2005).



Kapıkıran et al. (2016) have found that self-regulation had a negative predictive effect on school burnout in their study on Turkish teenagers. In addition to that, there are studies examining the relationship between self-control which is a similar concept to self-regulation, and school burnout. For instance, Love et al. (2020) concluded that self-control hurts school burnout in American university students. In a similar study, Cooper et al. (2017) concluded that self-control is a negative predictor of school burnout in a study conducted with university students from different cultures. Likewise, in the study of Seibert et al. (2017), university students in the United States indicate a negative relation between affect regulation and school burnout. Therefore, previous studies show that self-regulation hurts school burnout. Moreover, it has been emphasized that self-regulation skill has a negative effect and role as it assumes a protective role on the negative situations experienced by students (Boekaerts, 2011). In this context, it can be stated that self-regulation hurts school burnout.

Ríos-Risquez et al.'s (2018) longitudinal study on nursing students in Spain, school burnout was found to be negatively affecting subjective well-being. In a similar study, Yu and Chae (2020) concluded that school burnout harms subjective well-being in Korean medical students. In addition, it was found that all sub-dimensions of school burnout in Turkish adolescents negatively predicted subjective well-being (Aypay & Eryilmaz, 2011). Raiziene et al. (2014) also revealed their findings in a longitudinal study on Lithuanian teenagers that school burnout affects subjective well-being in negative ways. Cazan and Năstăsă (2015) found that school burnout hurt life satisfaction among Romanian university students. In addition, it has been emphasized that burnout seen in both employees and students negatively affects the well-being of individuals (Salmela-Aro & Nurmi, 2004; Wolf, 1994). Consequently, the present literature has emphasized that school burnout harms subjective well-being among students and has been established to be a negative predictor of subjective well-being.

In conclusion, considering previous studies, self-regulation has a direct effect on subjective well-being. It was also considered important to examine the indirect effect of self-regulation on subjective well-being through school burnout. There appears to be a gap in the literature on this issue. In this context, it can be stated that it is important to examine the mediating role of school burnout. Therefore, it can be stated that it is important to examine the relationship of 3 variables (self-regulation, school burnout, and subjective well-being) within the scope of a holistic model.

The Current Study

The bilateral relations between self-regulation, school burnout, and subjective well-being were examined in the studies (Aypay & Eryilmaz, 2011; Cazan & Năstăsă, 2015; Cooper et al., 2017; Demirtaş, 2018; Hui & Harris-Bond, 2010; Kapıkıran et al., 2016; Love et al., 2020; Ríos-Risquez et al., 2018; Seibert et al., 2017; Yang et al., 2019; Yu & Chae, 2020). However, the relation between these three notions has not been thoroughly investigated in an integrative approach. In this context, this study aims to find out the indirect relationship between self-regulation through school burnout in addition to its direct relationship to subjective well-being. Consequently, the main hypothesis of this study is "Is there a mediating role of school burnout in the relationship between self-regulation and subjective well-being?" To test the hypothesis, the following hypotheses formed the hypotheses of this study, respectively:

H₁: Self-regulation is a positive predictor of subjective well-being.

H₂: Self-regulation is a negative predictor of school burnout.

H₃: School burnout is a negative predictor of subjective well-being.

H₄: School burnout has a mediating role in the relationships between self-regulation and subjective well-being.

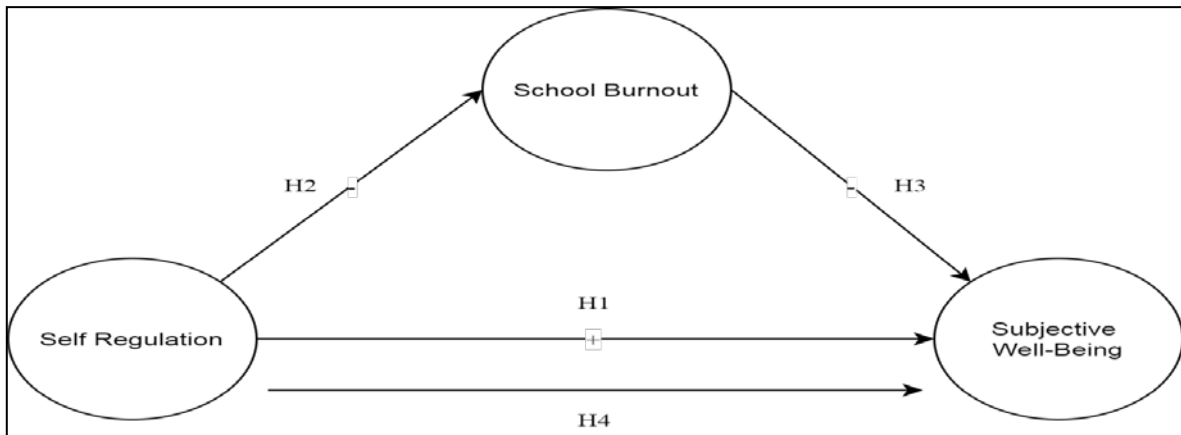


Figure 1. Hypothesis model

METHOD

Participants

This study was carried out on a total of 390 teacher candidates, 210 female (54%) and 180 male (46%) aged between 18-30 who continue their university education at Niğde Ömer Halisdemir University Faculty of Education. Distribution of students participating in the study by departments; 75 of them are elementary teachers (%19), 80 of them are Turkish language teachers (%21), 66 of them are elementary mathematics teachers (%17), 90 of them are guidance and psychological counseling (%23), 79 of them are science teachers (%20).

Data Collection Tools

The following measurement tools were utilized to obtain data:

Self-Regulation Scale (SRS)

The original form of the scale was developed by Schwarzer et al. (1999) and Diehl et al. (2006) and adapted into English. The self-regulation scale is a 7-item Likert-type measurement tool that determines the self-regulation skills of individuals. The SRS was adapted into Turkish by Çevik et al. (2015). The scale consists of 7 items and one dimension as a result of the Turkish adaptation. A high score on the scale indicates a high level of self-regulation, and a low score indicates a low level of regulation ability. Result of the adaptation, the Cronbach Alpha internal consistency coefficient of the scale was found .84, and the test-retest safety coefficient was found .67 (Çevik et al., 2015). Moreover, the fit values of SRS were found accurate to meet desired criteria ($\chi^2/df= 2.85$, RMSEA= .069, SRMR= .034, CFI= .99, NNFI=.98; Çevik et al., 2015). In this study, Cronbach's alpha was found to be .86.

Maslach Burnout Inventory-Student Scale (MBI-SS)

MBI-SS was developed by Schaufeli et al. (2002) to examine school burnout in university students. The adaptation of the scale was made by Capri et al. (2011) for Turkish people. MBI-SS is a Likert-type scale consisting of 13 items and 3 factors ("exhaustion, cynicism, and efficacy"). A total score can be obtained from the scale. A high score on the scale indicates a high rate of school burnout, and a low score indicates a low level of school burnout. In the adaptation, the Cronbach's Alpha value of the scale was found to be .76 for the first sub-factor, .82 for the second sub-factor, and .61 for the third sub-factor. Besides, the adaptation values of the scale into Turkish case found to be convenient ($\chi^2/df=2.87$, TLI=.97, CFI=.98; GFI=.97, AGFI=.95, RMSEA, .049, SRMR=.037; Çapri et al., 2011). In this study, Cronbach's alpha was found to be .89.

Short Form of Oxford Happiness Questionnaire (OHQ-SF)

OHQ-SF was designed to assess the happiness and subjective well-being of individuals by Hills and Argyle (2002). A high score on the scale indicates a high level of subjective well-being, and a low score indicates a low level of subjective well-being. OHQ-SF adaptation for Turkish culture was made by Doğan and Çötök (2011). The Likert-type scale comprises 7 items. In the adaptation of OHQ-SF, the internal reliability coefficient of the scale was found to be .74, and the test-retest reliability coefficient was found to be .85. Likewise, the adaptation process indicates good results in fit values ($\chi^2/df=2.77$, RMSEA=0.07, AGFI=0.93, GFI=0.97, NFI=0.92, CFI=0.95, IFI=0.95; Doğan & Çötök, 2011). In this study, Cronbach's alpha was found to be .77.

Data Collection and Analysis

The study was conducted on university students after obtaining the necessary ethical permissions and collecting permissions. In this context, data were collected on 395 university students who volunteered to participate in the study. However, since 5 students filled in the scales leaving serious gaps, these students were not included in the data set. As a result, the study was carried out on 390 students.

Correlation and regression analysis, as well as the bootstrap method, were applied for data analysis in this study. Prerequisites such as consistent data with normal distribution, removal of outliers, and solving multicollinearity problems (Pallant, 2013) have been double-checked before data analysis. To prevent multicollinearity problems, it is considered that a correlation between binary variables should be less than .90 (Pallant, 2013). Having normally distributed data, it is tested that skewness and kurtosis values are between -1.5 and +1.5 (Tabachnick & Fidell, 2013). Later, it is consulted in a bid to remove outliers based on Mahalanobis distance values and concluded that no outliers had been found in the data set that would adversely affect the analysis.

Additionally, the mediation model was tested in the study by using the bootstrap method developed by Hayes (2013). In this context, the mediation model was tested with the help of the PROCESS macro (<https://www.processmacro.org/download.html>) developed by Hayes (2013) as the least-squares method was applied. "Mediation Model 4" was used among the models utilized in testing specific models that appeared to have mediating and regulatory effects (Hayes, 2013).

FINDINGS

Preliminary analysis

Before testing the mediation model, the correlation values between the binary variables were examined and it was checked whether the data were normally distributed. As a result of the correlation analysis, a negative relationship ($r=-.40$; $p<.01$) between self-regulation and school burnout, a positive relationship ($r=.40$; $p<.01$) between self-regulation and subjective well-being, and a negative relationship ($r=-.54$; $p<.01$) between school burnout and subjective well-being have been found (Table 1). In addition, it can be stated that there is no multicollinearity problem since the correlation value between the variables is lower than .90 (Pallant, 2013). Likewise, since the skewness and kurtosis values are between -1.5 and +1.5, the distribution of the data could be considered normal (Tabachnick & Fidell, 2013).

Table 1. Correlation and descriptive statistics

	1	2	3
1. Self-Regulation (SR)	1		
2. School Burnout (SB)	-.40**	1	
3. Subjective Well-Being (SBW)	.40**	-.54**	1
Cronbach's alpha	.86	.90	.77

Min.	7	16	7
Max.	35	65	33
Mean	23.25	40.17	20.89
Standard deviation	5.15	10.66	5.06
Skewness	-.27	-.01	-.10
Kurtosis	-.13	-.81	-.16

** $p < .01$

Mediation Test

The findings obtained from the mediation model test of the mediating role of school burnout in the relationship between self-regulation and subjective well-being is shown in Figure 2 and Table 2.

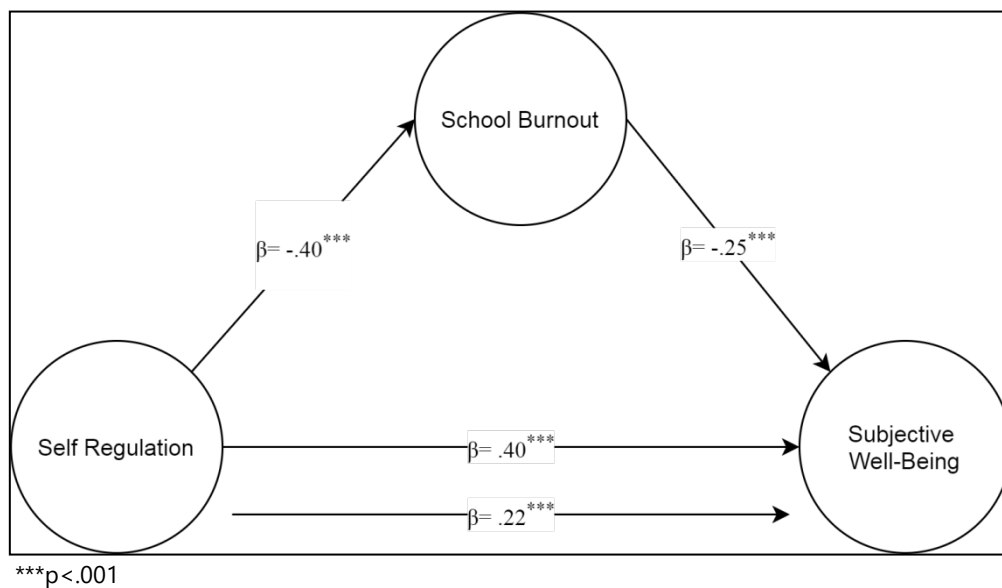


Figure 2. Mediation role of SB in the relationship between SB and SBW and standardized beta values

As a result of bootstrapping analysis, figure 2 presents that self-regulation positively predicts subjective well-being ($\beta = .40$, $SE = .04$, $t = 8.64$, 95% CI [.30; .48], $p < .001$) and explains 16% [Hypothesis 1]. Self-regulation negatively predicts school burnout ($\beta = -.40$, $SE = .09$, $t = -8.69$, 95% CI [-1.02; -.64], $p < .001$) and explains 16% [Hypothesis 2]. School burnout adversely predicts subjective well-being ($\beta = -.25$, $SE = .02$, $t = -12.47$, 95% CI [-.29; -.21], $p < .001$) and explains 29% [Hypothesis-3]. Self-regulation ($\beta = .22$, $SE = .04$, $t = 4.86$, 95% CI [.12; .30], $p < .001$) and school burnout ($\beta = -.44$, $SE = .02$, $t = -9.77$, 95% CI [-.25; -.16], $p < .001$) together explain 32% of subjective well-being [Hypothesis 4]. Significantly, the confidence intervals without zero show that the mediation test is meaningful, and that school burnout plays a mediating role in the relationship between self-regulation and subjective well-being (Hayes, 2013).

Table 2. Mediation Test Direct and Indirect Effects

	β	SE	t	Bootstrapping 95% BCa		p
				LCL	UCL	
Direct Effect						
SR \rightarrow SBW	.40	.04	8.64	.30	.48	***
SR \rightarrow SB	-.40	.09	-8.69	-1.02	-.64	***
SB \rightarrow SBW	-.25	.04	-9.77	-.29	-.21	***
Indirect Effect						
SR \rightarrow SB \rightarrow SBW	.22	.04	4.86	.12	.30	***

*** $p < .001$ (β =Standardized Estimate, SE=Standard Error, LCL= Lower Confidence Limit, UCL= Upper Confidence Limit, SR=Self-Regulation, SB=School Burnout, SBW= Subjective Well-Being)

DISCUSSION AND CONCLUSION

Various concepts may have a positive or negative effect on the subjective well-being of university students who continue their education during the young adulthood period. It is noteworthy that self-regulation has a positive effect on subjective well-being while school burnout has a negative effect. The relation between these three concepts was utilized in an integrative way. In this context, the mediator role of school burnout in the relationship between self-regulation and subjective well-being was examined in this study.

In the current study, the first hypothesis was questioned whether self-regulation had a predictive role on subjective well-being and the results revealed that self-regulation positively predicts subjective well-being. This led us to claim self-regulation has a positive effect on subjective well-being and the results are consistent with existing studies (Demirtaş, 2018; Hui & Harris-Bond, 2010; Yang et al., 2019; Katana et al., 2019) as they also support our hypothesis.

The second hypothesis of the study was whether self-regulation had a predictive role in school burnout among university students. After evaluation of our findings, self-regulation was found to be a negative predictor of school burnout. In short, self-regulation plays an important role in overcoming school burnout. It can be argued that the studies in the literature support the result of this study and are consistent with the result of this study (Cooper et al., 2017; Kapikiran et al., 2016; Love et al., 2020; Seibert et al., 2017).

The third hypothesis was to test whether school burnout had a predictive role on subjective well-being. According to the results, it could be concluded that school burnout predicts subjective well-being negatively. As school burnout indicates an adverse effect on subjective well-being. The results of previous studies are also consistent with the result of this study (Aypay & Erylmaz, 2011; Cazan & Năstasă, 2015; Raiziene et al., 2014; Ríos-Risquez et al., 2018; Yu & Chae, 2020).

The fourth and main hypothesis of the study was to find out whether school burnout had a mediator role in the relationship between self-regulation and subjective well-being. It was concluded that school burnout has a mediator role in the relationship between self-regulation and subjective well-being. According to this conclusion, self-regulation is effective on subjective well-being through school burnout. In other words, self-regulation has a direct effect on subjective well-being, and it also has an indirect effect on subjective well-being through school burnout. In the supporting literature, self-regulation is claimed to be positively effective in dealing with problems that students came across during school life, and resulted to make students feel happier and more enthusiastic (Isen, 2000; Taylor et al., 1998). Likewise, students with a high level of self-regulation skills often stated that they have a positive attitude toward school (Ozan & Kincal, 2018). In virtue of this positive attitude, students become more involved in participating in school activities and lessons with a higher level of motivation as they willingly continue their education (Swalander & Taube, 2007).

Recommendations and Limitations

Results of the study revealed that self-regulation eliminates school burnout. In other words, university students who have strong self-regulation skills are less prone to experience school burnout. Thus, this skill also ensures a high level of subjective well-being. In a vein to enhance the skill of self-regulation, new studies would have positive reflections on students while they find solutions for problems during the educational process and to have more efficient learning. Thus, it is logical to conclude that self-regulation has a positive contribution to young adults in overcoming school burnout. Furthermore, the skills of self-regulation contribute to students keeping their subjective well-being at a good level.

Therefore, it's imperative to understand the importance of raising awareness and executing psycho-educational research on students to increase self-regulation skills.

The current study had several limitations along with significant findings that would contribute to the literature. The first limitation is the way of data collection which solely relies on self-report scales that students provide while questioning. As it is widely known that the data collected with self-report scales narrow the questions only to provided items. To reduce this limitation, a qualitative data collection method such as observation and interview could be utilized to interpret the data deeply in future research. The second limitation is that the research is only conducted among university students. This limitation can be reduced by involving students from secondary schools and high schools in the new studies. Another limitation is that the participants of the study are only Turkish university students. This limitation also can be decreased by involving university students from various countries or of other origins living in Turkey for future research.

Statement of Researchers

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