The mediating role of academic self-efficacy between the answer-copying tendency and the fear of negative evaluation

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Abstract: The aim of this research study was to analyse the relationship among answer-copying tendency, academic self-efficacy, and fear of negative evaluation. To this end, we formed a structural equivalence model, and we evaluated the mediating role of academic self-efficacy between answer-copying tendency and fear of negative evaluation. A total of 562 university students participated in the study. We used the following as data collection tools: The Brief Fear of Negative Evaluation Scale, Academic Self-Efficacy Scale, and Answer-Copying Tendency Scale. For the analysis of the data, first the measurement model was tested, then the Structural Equation Model was established and estimations were made with Maximum Probability Estimation. According to the results, academic self-efficacy plays the role of a mediatory variable between fear of negative evaluation and answer-copying tendency. As can be seen from the impact of fear of negative evaluation on answer-copying tendency, there is a meaningful, positive correlation between the two variables. When we included academic self-efficacy in the model as a mediatory variable, we observed that the relationship between fear of negative evaluation and answer-copying tendency weakened and became less noteworthy. In the light of these observations, we can assert that the tendency of individuals with high academic self-efficacy to cheat in academic contexts is lower even if they have a fear of negative evaluation.

1. INTRODUCTION

All around the world, answer copying or academic dishonesty, in general, have been controversial issues for decades. Answer copying is defined as the act of using unallowed sources during an exam or in the preparation of academic assignments, having some other people answer the questions in an exam or do an assignment (Evans et al., 1993), or the attempt to answer questions in an exam by illicitly using the materials that have been prepared by those who took the same exam previously (O'Rourke et al., 2010). While answer copying is regarded as a subcategory of academic dishonesty (Kibler et al., 1988), it can often be used as a synonym of academic dishonesty as well (Carpenter et al., 2006; Harding et al., 2004). Though there is no unanimous definition of answer copying, the term in this study hereby is used to refer to a test-taker's getting the answers from another source during an in-class assessment practice (Demir, 2018).

Answer copying has a technical dimension that affects reliability and validity. Answer copying negatively affects the reliability and thus the validity of a test as it increases the scope of errors in assessment (Angoff, 1974; Holland, 1996). Therefore, it is imperative that answer copying behaviour, which poses a threat to the psychometric features of a test, is well understood and be minimized to the extent possible. Previous studies (Gerdeman, 2000; Hughes & McCabe, 2006) have shown that to understand the nature of answer copying behaviour, one needs to closely observe all the relevant factors. At this point, working with variables that affect an individual's answer copying behavior will enable more reliable and valid measurement results to be obtained. However, it is considered extremely important to study the ethical dimensions that affect answer copying behavior.

As one of the ethical dimensions of the reasons for answer copying, the reasons stemming from the education system are stated. (McCabe & Trevino, 1996). It has been asserted that the fact that learners are assessed based on their exam scores rather than their performance during the learning process may lead them to display cheating behaviour (Alkan, 2008; Küçüktepe & Eminoğlu-Küçüktepe, 2014; Mert, 2012; Özden et al., 2015). In addition to that, the assumption that what one learns throughout a given course is of no use in practical life has been cited among the reasons why test-takers cheat (Mert, 2012).

Yet another reason for cheating in exams is related to the instructor of the course in question (Eminoğlu & Nartgün, 2009; Mert, 2012; Özden et al., 2015; Seven & Engin, 2008). The following factors have been listed as reasons for cheating: the teacher's use of items at lower cognitive levels in the exams s/he prepares for assessment purposes, the teacher's failure to administer the assessment process in an ethical manner, the tendency to use multiple-choice task type (Koç, 2018), and the lack of communication between the teacher and the student (Mert, 2012).

Except for the reasons related to the education system and the instructor, individual factors are also cited among the reasons for answer copying (Anderman & Murdock, 2007; Bacon et al., 2020; Kayiş, 2013; Lemons & Seaton, 2011; Özden et al., 2015; Polat, 2017; Seven & Engin, 2008). It has been stated that answer copying tendency of students who have attendance issues is higher than others who regularly attend classes, that answer copying tendency of those who aspire to be a faculty member is lower than others (Çeliköz, 2016; Sevgi & Memduhoğlu, 2021), and that answer copying tendency of the students with a high grade point average is lower than others (Tümkaya, 2019).

We have observed that previous research on answer copying has focused on the test-taker's attitude, perception, and tendencies (Hughes & McCabe, 2006; McCabe & Trevino, 1997) and has dealt with concepts such as self-efficacy, academic procrastination, motivation, perfectionism, academic success, and ethical values (Polat, 2017). Studies show that there is a negative relationship between answer copying tendency and academic self-efficacy. Even if a student has studied enough for the exam, it is known that if the perception of academic self-efficacy is low, the tendency to answer copying is high (Duran, 2020; Özden, Özdemir-Özden & Biçer, 2015; Saylık et al., 2021). However, most of the studies are related to self-efficacy and answer copying tendency. In this study hereby, one of the concepts that we worked on in relation to answer copying tendency is the concept of academic self-efficacy.

Academic self-efficacy is a prominent concept when learning activities based on self-efficacy sources are taken into consideration (Ekici, 2009; Tabancalı & Çelik, 2013). The term self-efficacy was first put forward by Bandura (1977) and was defined as the ability to fulfil an academic task successfully and one's belief in the capability to reach a certain goal that one sets for himself or herself (Pajares, 2012; Yılmaz et al., 2007; Zimmerman 2000). An individual whose self-efficacy is high allocates more time to studying and uses this time more efficiently (Linnenbrink & Pintrich, 2003; Usher & Pajares, 2008), is more successful (Altun & Yazıcı,

2013; Bahar, 2019; Chemers et al., 2001; Choi, 2005; Robbins et al., 2004; Zajocava et al.,2005) and has a higher level of motivation (Aktaş, 2017; Eroğlu et al., 2017; Pajares & Schunk, 2001; Schunk & Pajares, 2002; Schunk & Mullen, 2012; Şeker, 2017), compared to an individual whose self-efficacy is low. When the related literature is reviewed, we can see that the number of studies that have been conducted on teacher candidates is high in number, and that the concept of self-efficacy has been studied by taking into account certain demographic variables (Bong, 2004; Ekici, 2012; Eroğlu & Yıldırım, 2018; Durdukoca, 2010; Oğuz, 2012; Polat et al., 2015). However, we can also observe that the relationship between academic efficacy and the following has been studied: various hidden variables (i.e., academic procrastination) (Albayrak, 2014; Ay et al.,2019; Nurbanu & Kumcağız, 2019; Odacı & Çelik, 2011), academic motivation (Alemdağ et al., 2014; Koca & Dadandı, 2019; Yıldız & Kardaş, 2021), self-esteem and self-compassion (Yıldırım & Demir, 2017), and anxiety about one's social appearance (Tekeli, 2017). When we consider the research studies focusing on both academic dishonesty and academic self-efficacy (Duran, 2020; Saylık et al., 2021) and those on academic dishonesty and efficacy jointly (Amelia & Usman, 2020; Büyükgöze, 2017; Karimah & Khairani, 2020; Mustika et al., 2021; Nora & Zhang, 2010; Permatasari, 2017), we can observe that a negative correlation exists between the two.
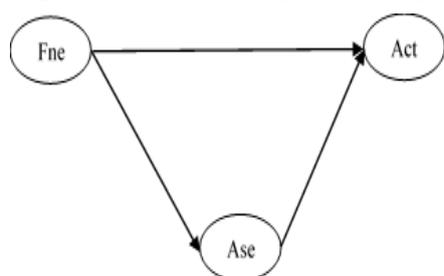
Another variable thought to have an impact on an individual's answer copying tendency is fear of negative evaluation (Bozdağ 2021; Bozdoğan & Öztürk, 2008; Kıral & Saracaloğlu; Ömür et al., 2014). Fear of negative evaluation refers to one's constant and excessive worry that he/she may be criticized harshly by others (Carleton et al., 2006; Weeks et al., 2009). These individuals, who think that people expect an outstanding performance of them feel a high level of apprehension. They have a fear of being ostracized by others because of the mistakes they may make, and owing to their fear of negative evaluation they tend to avoid engaging in activities which they do not believe they are excellent at (Frost et al., 2010). Those with a fear of negative evaluation consider themselves to be inferior to others, avoid creating an undesirable impression on them, and do not want to be alienated socially (Weeks et al., 2009). While some studies regard fear of negative evaluation as part of social anxiety (La Greca & Lopez, 1998), some others consider this fear in isolation from social anxiety (Kocovski & Endler, 2000). Although fear and anxiety are two different concepts, they are related to each other (Sylvers et al., 2011).

In previous research studies, fear of negative evaluation has been studied in relation to the following concepts or terms: the tendency towards academic dishonesty (Bozdağ, 2021; Kıral & Saracaloğlu; Ömür et al., 2014), grade orientation (Özgüngör, 2006), success rate (Alkan, 2015; Sevimli, 2009), social anxiety (Bilge & Kelecioğlu, 2008; Downing et al., 2020; Liu et al., 2020; Totan et al., 2009), depression and timidity (Bilge & Kelecioğlu, 2008), introversion (Watson, 2009), the level of boldness, (Erdoğan & Uçukoğlu, 2011) etc. It has been stated that there is a meaningful relationship between fear of negative evaluation and the tendency for academic dishonesty (Bozdağ, 2021; Kıral & Saracaloğlu; Ömür et al., 2014). We can see that there is a negative correlation between fear of negative evaluation and academic self-efficacy (Elcanlar, 2009; Han & Elçiçek, 2021).

Answer copying tendency behavior is one of the variables that threaten the psychometric properties of test scores, and it was stated that the way to understand the nature of this behavior is to consider the relevant factors. For this reason, answer copying tendency was considered as the dependent variable in this study. Based on the literature mentioned above, the present research suggests the relationship among fear of negative evaluation, academic self-efficacy, and answer-copying tendency within the framework of structural equation modeling. Therefore, the aim of this study was to investigate the dynamics behind the relationship between fear of negative evaluation and answer-copying tendency. That is, the mediator role in this relationship by academic self-efficacy was expected to be illuminated. The present study proposed that

answer-copying tendency could be the result of fear of negative evaluation via the effect of academic self-efficacy. Recently, models that investigate into the motives behind answer copying have emerged (Babanejad et al., 2021; Mih & Mih, 2016; Sabbagh; 2021; Yu et al., 2017; Yu et al., 2021), but no research study has been found that tests the mediatory role of academic self-efficacy (Ase) between fear of negative evaluation (Fne) and answer-copying tendency (Act). In order to reveal the relationship among these concepts, we used a structural equation modeling and examined the mediation role of academic self-efficacy between fear of negative evaluation and answer-copying tendency (Figure 1).

Figure 1. *Illustration of the mining model.*

2. METHOD

The main purpose of this research is to reveal the mediating role of academic self-efficacy in the relationship between the answer-copying tendency and the fear of negative evaluation. For this purpose, we used the relational screening model, which is designed to determine the presence and degree of change between variables thought to be related (Christensen et al., 2015).

2.1. Study Group

We carried out the study through an online data collection platform. Considering the variables used in the study, the purpose of the study, and the accessibility of the participants, we selected a total of 562 university students studying at Marmara University Atatürk Faculty of Education as participants. After obtaining ethical approval from Marmara University Social Sciences and Humanities Research and Publication Ethics Committee (Decision number: 2023-553006), during the selection process, we sought diversity at the highest possible level and took care to ensure that the subjects participated in the study of their own free will. Of the study group, 74.55% are women and 25.45% are men; 24.2% foreign languages (English - German Teaching), 30.3% psychological counselling and guidance, 29.0% Science (Science - Chemistry - Biology - Physics Teaching), 16.5% Social Studies (Social Studies - History - Geography Teaching); 16.3% 1st grade; 37.1% 2nd grade; 31.8% 3rd grade; 14.8% consists of 4th grade students.

2.2. Data Collection Tools

For the purpose of the study, Negative Evaluation Scale, Short Fear Scale, Academic Self-Efficacy Scale and Answer-Copying Tendency Scale were used.

2.2.1. *Short Fear of the Negative Evaluation Scale*

The Fear of Negative Evaluation Scale was developed by Leary (1983) to measure the fear of negative evaluation. The scale was developed in a 5-point Likert type, scored from 1 (Not at all appropriate) to 5 (Totally appropriate). There are 11 items in the scale. A minimum of 12 points and a maximum of 60 points can be obtained from the scale. Items 2, 7, and 11 in the scale are scored in reverse. The total score is obtained by adding the scores obtained from the scale items. An increase in the scores obtained from the scale indicates that the level of fear of negative evaluation increases; decrease indicates that the level of fear of negative evaluation decreases.

The validity and reliability study of the scale was carried out by Çetin et al., (2010). Construct validity and criterion-related validity methods were used to determine the validity of the Fear of Negative Evaluation Scale. As a result of the exploratory factor analysis, the KMO coefficient was calculated as .88 and the Bartlett test χ^2 value was calculated as 1095.56 (*p*<.001). 40.19% of the total variance of the scale. It has been determined that it has a one-dimensional structure that explains the Item 4 was removed from the scale due to the low correlation between the item and the total score of the 4th item in the scale. The scale was subjected to validity and reliability analysis with 11 items. As a result of confirmatory factor analysis, Fit index values were calculated as RMSEA=0.062, NFI=0.96, CFI=0.98, IFI=0.98, RFI=0.95, GFI=0.95 and AGFI=0.92. The internal consistency reliability coefficient of the scale was calculated as .84, the test-retest reliability coefficient as .82 and the test-half reliability coefficient as .83.

2.2.2. *Academic Self-Efficacy Scale*

Perceived academic self-efficacy is defined as a student's belief that he or she can successfully complete an academic task. The Turkish version of the "Academic Self-Efficacy Scale" developed by Jerusalem and Schwarzer in 1981 was made by the researchers. The original language of the scale was German and the Cronbach alpha reliability value was .87. The translation of the scale into Turkish was carried out by linguistic experts and its suitability to Turkish was evaluated by experts in terms of content and evaluation. In line with the analyses, it was revealed that the scale adapted to Turkish was one-dimensional like the original scale and consisted of seven items in total. The Cronbach alpha reliability value of the scale was determined as .79.

2.2.3. *Answer-Copy Tendency Scale in University Students*

The Answer-Copy Tendency Scale in University Students is a scale developed to reveal the potential of students to detect suspicious answer patterns. The total scores and item score distributions of the scale consisting of two factors and 20 items were normal. The item discrimination index was 0.40 or higher. α inconsistency coefficient was 0.88 or higher, while test-retest reliability coefficient was 0.80. No significant and serious differential function was detected on the substances. Goodness of fit statistics show at least acceptable model-data fit (χ^2/sd=2.79, RMSEA=0.056, SRMR=0.036, GFI=0.92, NFI=0.98, CFI=0.99). The results show that the validity and reliability levels of the scale are quite high and can be used to understand the nature of response replication.

2.3. Data Analysis

In order to determine the relationship between the concepts, a structural equation model was created and the mediating role of academic self-efficacy between fear of negative evaluation and answer-copying tendency was investigated. For all analyses Lisrel 8.51 was used.

First, descriptive statistics and correlation analyses were made, and then the pre-SEM measurement model was tested. After the measurement model, predictions were made in the structural model. SEM estimates were made using Maximum Probability Estimation. This tool was chosen because it is less likely to affect fit values from sample size and distribution (Anderson & Gerbing, 1988; Hu & Bentler, 1998).

The Fear of Negative Evaluation and Academic Self-Efficacy scales used in the research study are one-dimensional. Item parcellation is one of the important methods used to normalize the distribution of variables observed on the scales with a single factor structure and to increase the reliability of these indicators. When the literature is examined, it can be said that there are different parcellation methods (Matsunaga, 2008; Wu & Wen, 2011). Among these methods, we used the relatively frequently used parceling method in the parcellation of the Fear of

Negative Evaluation and Academic Self-Efficacy scales. We sorted items according to the parceling method by the size of the item-total correlation and created plot indicators by adding item sets to obtain equivalent indicators. Therefore, in order to increase the chances of obtaining relatively equivalent indicators, we spread the "better" and "worse" items on different parcels. We made analyses by creating two parcels of both scales. For Fear of Negative Evaluation scale the items in the first parcel of the scale are respectively; 6th, 3rd, 11th, 12th and 7th items, in the second parcel are respectively; 9th, 8th, 5th, 1st, 2nd and 10th items. For Academic Self-Efficacy scales the items in the first parcel of the scale are respectively; 4th, 6th and 5th items, in the second parcel are respectively; 3rd, 2nd, 1st and 7th items. First, the measurement model must show an acceptable fit, then the structural model must be tested (Anderson & Gerbing, 1988). We analysed the distribution of variables using skewness, the curtose value and skewness - kurtosis value divided by standard error. These obtained values are given in Table 1.

Table 1. *Descriptive statistics for sub-dimension and parcels.*

		Statistic	Std. Error	Statistic / Std. Error
FNE1PRCL	Skewness	-.011	.114	-0.09
	Kurtosis	-.411	.228	-1.80
FNE2PRCL	Skewness	.011	.114	0.09
	Kurtosis	-.275	.228	-1.20
EV	Skewness	.212	.114	1.85
	Kurtosis	-.364	.228	-1.60
NPEG	Skewness	.165	.114	1.44
	Kurtosis	-.315	.228	-1.38
ASE1PRCL	Skewness	.037	.114	0.32
	Kurtosis	-.339	.228	-1.49
ASE2PRCL	Skewness	-.166	.114	-1.45
	Kurtosis	-.106	.228	-0.46

When we examined the Table 1, all values obtained as a result of dividing the skewness and kurtosis values by the standard error range from -1.96 to 1.96, which is the critical value. In addition to these values, we used one of the normality tests, the Kolmogorov-Smirnov test (*p* > .05). Based on these results, we can argue that all variables are normally distributed in the sample. For multicollinearity problem such as Variance inflation factor (VIF) and condition Index (CI) (Alin, 2010) were determined. In the current study VIF and CI values were lower than the critical values, 10 and 30, respectively. Findings demonstrated that there were no multicollinearity issues.

Bootstrap analysis was applied to examine the mediating role of academic self-efficacy between fear of negative evaluation and tendency to copy answers. This analysis was performed with 5000 bootstrap samples and 95% confidence intervals. The absence of a "0" value between the Bottom (BootLLCI) and Upper (BootULCI) Bootstrap values is interpreted as the effect of the factor variable. In the literature, it is stated that the bootstrap method is much stronger and gives better results than other methods such as Sobel Test (Creedon & Hayes, 2015; Hayes, 2009; Ecclesiastes & Kelley, 2011). With this method, a small rehearsal of the population is made by repeatedly burying it over the existing dataset. If the confidence interval calculated after this procedure does not contain zero, we can safely say that there is an indirect effect (Bollen & Stine, 1990; Ecclesiastes & Hayes, 2008; Shrout & Bolger, 2002).

3. RESULTS

3.1. Measurement Model Testing

This study had three latent variables and six indicators of these variables. First, we examined the descriptive statistics and correlation values of each indicator, the values of which are given in Table 2. The measurement model was tested using indicators for each of the three hidden variables.

Table 2. *Means, standard deviations and correlations of observed variables.*

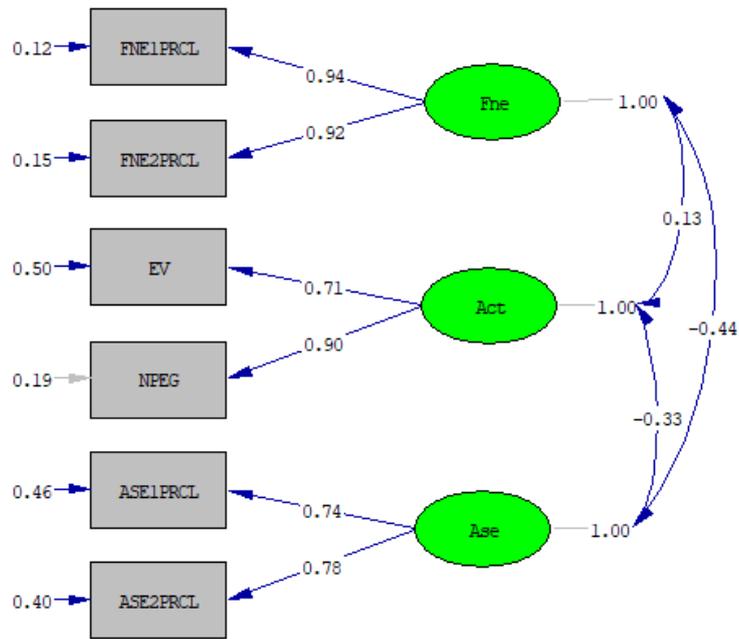| Observed variables	M	sd	1	2	3	4	5	6
Fear of Negative Evaluation								
1 FNE1PRCL	14.22	4.89	1.00					
2 FNE2PRCL	18.19	5.07	.86**	1.00				
Academic Self-Efficacy								
3 ASE1PRCL	7.83	2.31	-.32**	-.32**	1.00			
4 ASE2PRCL	12.70	2.27	-.30**	-.29**	.57**	1.00		
Answer-Copying Tendency								
5 EV	17.79	7.89	-.03**	-.04**	-.11**	-.17**	1.00	
6 NPEG	27.95	12.72	.15**	.11**	-.18**	-.26**	.61**	1.00

Notes: N=562. $^{**}p < 0.01$

We checked for correlations between all indicator variables in the model and found them all to be statistically significant before testing the measurement model ($p<.01$, see Table 2). After descriptive statistics and correlation values, we tested the measurement model. The factor loads, standard errors, and *t*-values for the measurement model are shown in Table 3.

Table 3. *Factor loads, standard errors and t-values for the measurement model.*

Measure and variable	Unstandardized factor loading	SE	t	Standardized factor loading
Fear of Negative Evaluation				
1 FNE1PRCL	4.58	1.23	22.46	0.94
2 FNE2PRCL	4.68	1.29	22.12	0.92
Academic Self-Efficacy				
3 ASE1PRCL	1.71	0.31	14.69	0.74
4 ASE2PRCL	1.77	0.32	15.24	0.78
Answer-Copying Tendency				
5 EV	5.56	1.87	18.14	0.71
6 NPEG	11.44	1.87	26.74	0.90

As seen in Table 3, standardized factor loading varies between .71 and .94. The *t* values were found to be between 14.69 and 26.74 and significant. Standardized parameter estimates for the measurement model are given in Figure 2.

Figure 2. *Standardized parameter estimates for the measurement model.*

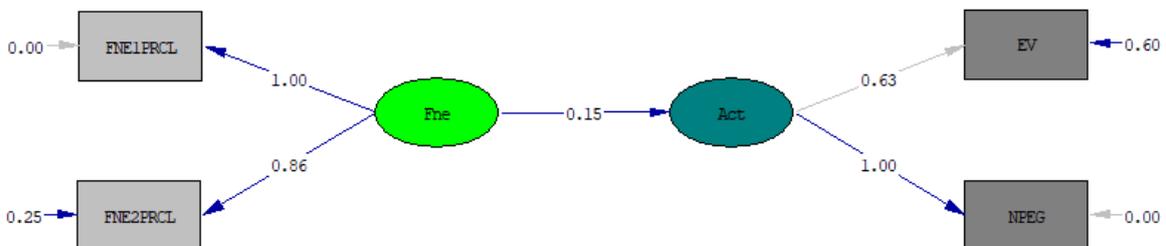Chi-Square=23.58, df=7, P-value=0.00135, RMSEA=0.065

Notes: FNE1PRCL-FNE2PRCL = fear of negative evaluation; ASE1PRCL- ASE2PRCL = Academic Self-efficacy; EV (Ethical Value) – NPEG (Negative Perception of Test and Grade) = Tendency to Answer-Copy

Testing of the measurement model resulted in an acceptable fit to the data, as indicated by the goodness of the following fit statistics: χ^2(7, N=562)= 23.58; Root Mean Square Approximation Error (RMSEA)=0.065; 90 percent confidence interval for RMSEA=(0.037; 0.095); Compliance Goodness Index (GFI)=0.99; Comparative Fit Index (CFI)=0.99; Standardized Root Mean Square Meter Residue (SRMR)=0.038; Incremental Adjustment Index (IFI)=0.99; Non-normative Compliance Index (NNFI)=0.97. As shown in Table 3, all the loads of the sub-dimensions and parcels on hidden structures were statistically significant.

3.2. Testing of Structural Models

Within the scope of the research, we first tested the direct relationship between the fear of negative evaluation and the tendency to copy-answer. The results are shown in Figure 3.

Figure 3. *Baseline model - Standardized parameter estimates for the direct relationship between fear of negative evaluation and tendency to copy answers.*
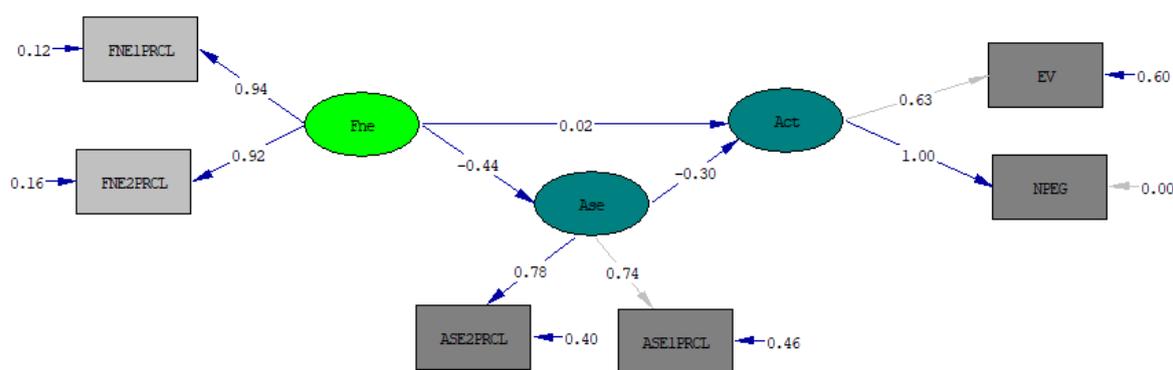

Chi-Square=11.56, df=3, P-value=0.00905, RMSEA=0.071

The test of the direct relationship between fear of negative evaluation and the pattern of the tendency to copy the response found an acceptable fit to the data, as indicated by the goodness of the following fit statistics: χ^2(3, N=252)=11.56; Root Mean Square Approximation Error (RMSEA)= 0.071; 90 percent confidence interval for RMSEA=(0.031; 0.12); Compliance Goodness Index (GFI)=0.99; Comparative Fit Index (CFI)=0.99; Standardized Root Mean Square Meter Residue (SRMR)= 0.048; Incremental Adjustment Index (IFI)=0.99; Non-normative Compliance Index (NNFI)=0.97.

After the direct relationship between fear of negative evaluation and tendency to copy answers, we investigated the mediating role of academic self-efficacy between fear of negative evaluation and tendency to copy answers. The results are shown in Figure 4.

Figure 4. *Standardized parameter estimates for the mediating role of academic self-efficacy between fear of negative evaluation and answer-copy tendency.*

Chi-Square=22.03, df=7, P-value=0.00251, RMSEA=0.062

Testing the mediating role of academic self-efficacy between fear of negative evaluation and the response copying tendency model found an acceptable fit for the data, as indicated by the goodness of the following fit statistics: χ^2(7, N=562)=22.03; Root Mean Square Proximity Error (RMSEA)=0.062; 90 percent confidence interval for RMSEA=(0.034; 0.092); Compliance Goodness Index (GFI)=0.99; Comparative Adjustment Index (CFI)=0.99; Standardized Root Mean Square Meter Residue (SRMR)=0.037; Incremental Adjustment Index (IFI)=0.99; Non-normative Compliance Index (NNFI)=0.97.

In the basic model, the path coefficient between the fear of negative evaluation and the response-copying tendency decreases from 0.15 to 0.02 in the mediation model. In the mediation model, the relationship between fear of negative evaluation and the tendency to copy-answer decreased in this way; However, when the mediation variable was added to the model, the relationship between the fear of negative evaluation and the tendency to copy the answer became meaningless. According to Baron & Kenny's (1986) method, this shows the full mediating effect of academic self-efficacy between these two variables.

3.3. Bootstrap Analysis

According to the findings of the study, the structural model showed an acceptable fit to the data. In addition, bootstrap confidence intervals were calculated for mediation. We aimed to test the importance of indirect pathways, i.e. from fear of negative evaluation (independent variable) to academic self-efficacy (mediator) and from academic self-efficacy to response-copying tendency (dependent variable) using the Bootsrap method. In the study, we plotted 5000 bootstrap samples and examined the upper and lower limits of 95% CI.

The results of the Bootstrap analysis, which was used to determine whether the mediating role between fear of negative evaluation of academic self-efficacy and the response-copying tendency was statistically significant, are given in Table 4.

Table 4. *Bootstrap analysis results on the indirect effect of academic self-reliance.*

Standardized indirect impact	Boot standard error	BootLLCI (Low value)	BootULCI (Upper value)
0.0445	0.0092	0.0273	0.0636

The standardized value for the lower value is 0.0273 and the upper value is 0.0636. Significant mediation is specified when the upper and lower limits of 95% CI do not contain zeros." 0" is not between these two values, so we can say that the mediating role of academic self-efficacy between fear of negative evaluation and tendency to copy responses is statistically significant. According to Gürbüz (2019), if the K^2 value is close to 0.01, it is interpreted as low effect, if the K^2 value is close to 0.09, it is considered as medium effect, if the K^2 value is close to 0.25, it is interpreted as high effect. When the fully standardized effect size of the mediation effect (K^2=0.0414; S.H.=0.0083; 95% CI [0.0258, 0.0588]) is considered, it is seen that this value indicates a medium effect level of mediation. And also confidence intervals of the effect size value significant because it does not cover 0 (zero).

In line with this finding, the relationship between the fear of negative evaluation and answer-copy tendency differs when the academic self-efficacy variable is included in the model. In other words, although there is a low correlation between the fear of negative evaluation and and answer-copy tendency, the relationship between these two variables is based on academic self-efficacy, since full mediation was detected.

4. DISCUSSION and CONCLUSION

Although there are different reasons for cheating, it is seen that the reasons originating from the individual are mostly studied (Bacon et al., 2020; Strap, 2013; Lemon & Seaton, 2011; Özden et al., 2015; Polat, 2017; Seven & Engin, 2008). It is important to examine the variables linked to individuals themselves, because such a study will lead to a deeper understanding of the tendency to copy responses and provide insight into ways to reduce this tendency. When the relevant literature is examined, it is seen that the copying of answers is examined in relation to concepts such as academic procrastination, self-efficacy, motivation, perfectionism, academic success, ethical values (Polat, 2017). Similarly, in this study, we examined the tendency to answer-copy along with the following variables: academic self-efficacy and fear of negative evaluation. According to the results of the research, we have determined that academic self-efficacy is a variable that clearly has a mediating role between the fear of negative evaluation and the tendency to copy answers. When we consider the direct relationship between the fear of negative evaluation and the tendency to copy answers, we observe that there is a significant positive relationship between the two variables. We observe that when academic self-efficacy enters the model as a mediating variable, the relationship between fear of negative evaluation and tendency to copy responses weakens and, therefore, the relationship becomes less meaningful. Based on this, we can say that although individuals with high academic self-efficacy have high fear of negative evaluation, they have a low tendency to copy answers.

When we reviewed the relevant literature, we found no previous research that examined the variables of response copying tendency, academic self-efficacy, and fear of negative evaluation together. Therefore, we interpreted these variables based on studies that compared two of the three variables listed.

According to the results of the research, the relationship between the fear of negative evaluation and the tendency to copy the answer was found to be significant. There are other studies in the literature that support this conclusion. Bozdoğan & Öztürk (2008) stated in their study on teacher candidates that those who had a fear of failure in some courses cheated in exams. Ömür et al. (2014) found a positive relationship, although not very strong, between the fear of negative evaluation and the tendency of teacher candidates to copy answers. When the sub-dimensions are examined, we can see that the sub-dimension with the strongest relationship with the fear of negative evaluation is the tendency to dishonesty in research and reporting. King & Saracaloğlu (2018) reaches similar conclusions in her studies with undergraduate and graduate students: There is a weak but significant relationship between the tendency to academic dishonesty and the fear of negative evaluation. Wu et al. (2019), in their study on individuals aged 17-62 years, stated that there was a negative, moderate and significant relationship between fear of negative evaluation and dishonesty. In his study on university students, Bozdağ (2021) identified a weak but positive relationship between the fear of negative evaluation and the tendency to academic dishonesty, and stated that the higher the students' fear of negative evaluation, the higher the tendency to academic dishonesty.

According to the results of this study, there is a negative, medium and significant relationship between fear of negative evaluation and academic self-efficacy. While we haven't found a study that focuses on the relationship between fear of negative evaluation and academic self-efficacy, there are a few studies that deal with fear of negative evaluation and self-efficacy. In previous studies (Elcanlar, 2009; Han & Elçiçek, 2021), it is stated that individuals with high levels of self-efficacy have a relatively lower level of fear of negative evaluation. Roomman & Özcan (2019) found that academic procrastination among students is associated with fear of negative evaluation and this relationship is mediated by academic self-efficacy. The findings suggest that improving students' academic self-efficacy may play an important role in reducing procrastination behavior. Sook-Cho & Hee-Kyung (2015) found that fear of negative evaluation has a negative impact on the academic self-efficacy and academic achievement of secondary school students. These results highlight the importance of students' academic self-efficacy and fear of negative evaluation. Additionally, the article suggests that increasing students' self-efficacy may help reduce fears of negative evaluation and increase their academic success.

The results of the study show that there is a negative and significant relationship between the tendency to copy answers and academic self-efficacy. There may be studies supporting this conclusion in the literature. Gordon & Demment (1993) examined the relationship between academic self-efficacy, coping strategies, and academic performance among college students. The study found that academic self-efficacy determines college students' coping strategies, and these strategies influence their academic performance. The results suggest that improving college students' academic self-efficacy may help improve their ability to cope with stress and ultimately improve their academic performance. Nora & Zhang (2010), in their study of students, stated that those with low levels of self-efficacy tended to copy a stronger response. Büyükgöz (2017) found a moderate and negative relationship between academic dishonesty tendency and self-efficacy levels in her study on teacher candidates. In a similar way, Akyüz *et al*. (2016) stated that there is a negative and significant relationship between a person's perception of academic self-efficacy and unethical behavior. Permatasari (2017) stated that there is a significant negative relationship between self-efficacy and cheating behavior in vocational high schools. Similar results have been obtained in recent studies. In the structural equivalence model they created, Sabzian & Mirderikvand (2020) and Sabzian & Mirderikvand (2018) stated that academic self-efficacy directly affects academic cheating behaviors. In their study of high school and college students, Amelia & Usman (2020) found that self-efficacy plays a role in response copying behavior. Karimah & Khairani (2020) found a negative, moderate, and significant relationship between self-efficacy and cheating behavior. Saylık et

al. In their (2021) study, they noted that students who felt a high level of effectiveness in academic life had a weak tendency to have a positive attitude toward copying answers. Similarly, Mustika et al. (2021) revealed that there is a negative, moderate and significant relationship between self-efficacy and academic cheating.

Although some models have been developed in recent years on the causes of response copying behavior, no other studies have been conducted testing the mediating role of fear of negative evaluation between academic self-efficacy and the tendency to copy answers. On the other hand, this study has some limitations. The results of this study were obtained by using self-reporting scales. The study was limited in that it saw fear of negative evaluation as the predictive variable predicting the tendency to copy answers and academic self-efficacy as the mediator variable. In future studies, different forecasting and mediation variables can be developed and tested. In this study, university students were used as participants. The same pattern can be tested on students at different stages of training. 25% of the cohort consisted of male participants, so the same study could be carried out with more men included. This study provides information to all stakeholders in the field of education on how the level of academic self-efficacy affects the strength of the tendency to copy answers. Qualitative data can be studied in other studies as to why the academic self-efficacy variable is a full mediator. The same research can be carried out at different educational levels. It is recommended that activities to increase students' academic self-efficacy should be designed to curb the tendency to copy answers.

Declaration of Conflicting Interests and Ethics

The authors declare no conflict of interest. This research study complies with research publishing ethics. The scientific and legal responsibility for manuscripts published in IJATE belongs to the authors. **Ethics Committee Number**: Marmara University/Institution, 23.05.2023/05-05 - 553006.

Authorship Contribution Statement

Müge Uluman Mert: Investigation, Resources, Methodology, Visualization, Software, Formal Analysis, and Writing-original draft. **Emine Burcu Tunç**: Methodology, Supervision, and Validation.

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