

Does Psychological Maladjustment Mediate the Relationship Between Students' Perception of Teacher Rejection and Educational Stress?

Behire Kuyumcu¹

¹Gazi University, Turkey

ARTICLE INFO

Article History:

Received 17.11.2019

Received in revised form

25.01.2020

Accepted 12.03.2020

Available online

04.05.2020

ABSTRACT

This study examined the mediating role of psychological maladjustment in the relationship between Turkish high school students' perception of teacher rejection and educational stress levels. The study was based on a sample of 399 high school students located in Turkey (231 students were female; 168 students were male). The Teacher's Acceptance-Rejection Questionnaire: Child Version Short Form, the Personality Assessment Questionnaire: Child Version, Education Stress Scale, and Personal Information Form were used as measures. Result revealed that psychological maladjustment mediated the relationship between perception of teacher rejection and educational stress. Additionally, the results showed that female students' educational stress levels, psychological maladjustment levels, and GPAs were significantly higher than male students. However, male students' perception of teacher rejection levels was significantly higher than female students. Results also documented that younger female and male students tended to recall more educational stress than older female and male students. GPA was significantly and negatively correlated with psychological maladjustment for males. The results may help the expansion of the IPARTheory. At the practical level, school counselors may include individual or group counseling practices to increase students' psychological adjustment in intervention programs to prevent or eliminate educational stress.

Keywords:

psychological maladjustment, perception of teacher rejection, educational stress, adolescent, Turkey.

1. Introduction

The affective quality of dyadic teacher-student relationships influences both students' psychological development (Rohner, 2010) and academic gains (Hamre & Pianta, 2006; Pianta, 1999). Interpersonal acceptance-rejection theory (IPARTheory) attempts to predict and explain major causes, consequences of teacher-student relation as well as other interpersonal relation (Rohner, 2010). In IPARTheory, the teacher is an attachment figure for students and the perception of teacher rejection affects students' both psychological and academic development (Ali, 2011; Khan, Haynes, Armstrong, & Rohner, 2010). Considering the 2019 data in Turkey, the number of students in formal high school was 5 million 649 thousand 594 (Ministry of National Education [MNE], 2019), it may be important to study on the perception of teacher rejection among Turkish high school students.

Teacher rejection is defined as the lack of acceptance or accepting emotions and behaviors, as well as exhibiting various physical or psychological behaviors or emotions that hurt the individual in IPARTheory (Rohner, 2010). Students experience rejection of teachers in four ways: (1) *Coldness/lack of affection* is the opposite of warm and compassionate. (2) *Hostile/aggressive* can be physical or verbal such as hit bite, scratch, shove, pinch, curse, sarcasm, belittling, say thoughtless, unkind, cruel things to or about, etc. (3) *Indifferent/negligent* mean

¹Corresponding author's address: Counseling Psychology Department, Gazi University, 06500, Teknikokullar, Ankara, Turkey.

Telephone: +903122021682

e-mail: behire.kuyumcu@gazi.edu.tr

<http://dx.doi.org/10.17220/ijpes.2020.02.014>

that pays no attention to needs of students. (4) *Undifferentiated* rejection is an individual's belief that although the significant other (parent/spouse/friend/teacher) has no clear behavioral indication and neglects or is unkind or aggressive towards the individual, but believes that the attachment figure does not care or love the individual (Rohner, Khaleque, & Cournoyer, 2005; Rohner, 2010).

Adolescent students, who perceive teachers' behaviors as accepting, have academic intrinsic motivation (Makri-Botsari, 2015), school adaptation (Blankemeyer, Flannery, & Vazsonyi, 2002). Additionally, Turkish adolescent students, who perceive teachers' behaviors as accepting, have high academic achievement, positive attitudes towards school (Erkman, Caner, Sart, Börkan, & Şahan, 2010). It is known that issues related to school life (e.g., school work and school-related situation) are among the stress sources of adolescents in both Western and Asian countries (Isralowitz & Ong 1990; Kouzma & Kennedy, 2004; Stark, Spirito, Williams, & Guevremont, 1989; Sun, Dunne, Hou, & Xu, 2013). Similarly, students in the 10-21 age range in Turkey indicated that academic problems (e.g., failure in school/courses) and school-related problems (e.g., teaching style of teachers) are among the stress sources (Oral, 1994). Since these traits associated with teacher admission were also related to educational stress, it was thought that perceiving rejection of teacher behaviors by students could help to explain the educational stress of students.

The concept of educational stress refers to the connection of pressure, study, workload, and worry about grades, self-expectation stress, and despondency (Sun, Dunne, Hou, & Xu, 2011). Low academic achievement and intensive homework (Burnett & Fanshawe, 1997; Kouzma & Kennedy, 2004), high academic expectations of students and their families (Ang & Huan, 2006), and perceived high academic pressure (Xie, 2007) are the source of educational stress.

In the related literature, this type of student stress is expressed as educational stress or academic stress (e.g., Putwain, 2007; Sun, et al., 2011). In this research, the term of "educational stress" is used.

According to the related studies in Turkey, students with high educational stress level have (1) high school burnout level (Özdemir & Özdemir, 2015), (2) negative attitudes towards mathematics (Metin, 2019), and (3) high perfectionism and procrastination desires in the academic fields (Bayram, 2016). Students with less educational stress levels tend to have subjective well-being (Akpınar, 2016), reflective thinking skills and foreign language success (Yetim, 2014), emotional literacy skills (Balta-Özkan, 2019). However, these studies have not contained teacher-student relationships, which may affect the educational stress (Sun, et al., 2013) and other academic trajectories of children and adolescents (Pianta, 1999). Each year, approximately 2 million high school students study for the university entry exam. It is also known that 15-year-old Turkish students' achievements are below the Organization for Economic Cooperation and Development (OECD) average (OECD, 2019). In light of all this information, the researcher firstly aimed to examine the relationship between perception of teacher rejection and the educational stress among Turkish high school students.

In the IPARTheory, a teacher is a significant attachment figure for students (Rohner, 2010), and students' psychological maladjustment can be influenced by the teacher's rejection behaviors (Ahmed, Rohner, & Carrasco, 2012; Ali, Khaleque, & Rohner, 2015). On the other hand, students' acceptance of teacher perception may change the characteristics of psychological maladjustment into positive (Ali, Khaleque, & Rohner, 2015; Al-Yagon & Mikulincer, 2006; Rohner, Khaleque, Elias, & Sultana, 2010).

Psychological maladjustment included in the personality sub-theory of IPARTheory (Rohner, 2004). The basic assumption of the sub-theory is that over the course of evolution humans have developed the enduring, biologically based emotional need for a positive response from the people most important to them (Rohner, Khaleque, & Cournoyer, 2005). When people can not satisfy these needs, they feel rejection by attachment figure/significant others (e.g. parent, friend, teacher) and this rejection leads to seven negative personality outcomes also defined psychological maladjustment. (1) Dependence is the internal, psychologically felt wish or yearning for emotional support, care, comfort, attention, nurturance, and similar responses from significant others. (2) Emotional unresponsiveness is a person's inability to express freely and openly their emotions. (3) Hostility and aggression. Aggression is any behavior where there is the intention of hurting someone, something, or oneself. It is differentiated into physical, verbal, and symbolic forms. Hostility is an internal or

emotional feeling of enmity, anger, or resentment. (4) Negative self-esteem implies that one dislikes or disapproves of oneself. It means also that one devalues oneself and sometimes feels inferior to others. (5) Negative self-efficacy is feelings of incompetence, the perceived inability to meet day-to-day demands successfully. (6) Emotional instability is individuals' unsteadiness of mood, their inability to withstand minor setbacks, failures, difficulties, and other stresses without becoming upset emotionally. (7) Negative worldview is a person's (often unverbally) overall evaluation of life, the universe, or the very essence of existence as being essentially negative (Rohner, 2005a).

It is also known that students' aggression, negative mood, and negative worldview (Khaneh & Basavaraj, 2011), low self-esteem (Nguyen, Wright, Deding, Pham, & Bunders, 2019), and low self-efficacy (Sun, Dunne, Hou, & Xu, 2013) are related with educational stress. A limited number of similar studies in Turkey showed that students with high educational stress have low students' self-esteem (Özdemir & Özdemir, 2015), subjective well-being (Akpınar, 2016), and emotional self-efficacy (Arslan, 2017). Most of these traits (e.g., aggression, negative worldview, self-esteem, self-efficacy) associated with educational stress are also in connection with psychological maladjustment. Due to this relationship between students' perception of teacher rejection and psychological maladjustment, the researcher hypothesized that psychological maladjustment could mediate the relationship between perception of teacher rejection and educational stress.

Specifically, the aim of this study is to examine the mediating role of psychological maladjustment in the relationship between Turkish high school students' perception of teacher rejection and educational stress levels. This study was conducted to address three general questions: (1) Are there significant gender differences between research variables, and do research variables significantly relate to each other? (2) Are adolescents' perception of teacher rejection significantly linked to the level of adolescents' educational stress? (3) To what extent is psychological maladjustment an important generative mechanism that helps explain why adolescents' perception of teacher rejection tends to predict levels of educational stress?

2. Method

2.1. Participants

Participants in this study were recruited via convenience sampling method. Convenience sampling is one of the nonprobability sampling methods in which researchers select participants who are easy to find for targeted research (Erkuş, 2016, p. 138). The participants of this study were 399 high school students living in the rural area of Turkey. While 231 students (57.9 %) were female, 168 students (42.1 %) were male. The age of students ranged from 14 to 18 years ($M_{age} = 16.09$, $SD = 1.14$).

Table 1. Descriptive Statistics

Variables	N	Mean	Sd
Gender	231 Female-168 Male	0.42	0.49
Age	399	16.09	1.14
GPA	399	69.03	14.58
PTR	399	42.89	11.39
ES	399	52.74	9.57
PM	399	98.06	14.39

GPA= grade point average, PTR = perception of teacher rejection, ES = educational stress, PM = psychological maladjustment.

2.2. Procedures

Only students with parental consent and adolescent assent participated in this study. They completed the necessary questionnaires during regular classroom meetings. The researcher of this study stayed in the classroom during the data collection. Before responding, the researcher informed participants about the purpose of research, and anonymity and confidentiality of their responses as required by Institutional Review Board (IRB). All participants responded to the Turkish-language versions of the self-report questionnaires as described below. This process took approximately about 25 minutes to complete.

2.3. Measures

2.3.1. Teacher's acceptance-rejection questionnaire-child version short form

This measure was developed by Rohner (2005b) to estimate the perception of teacher rejection levels. The questionnaire contains 24 items. The measure consists of four scales: (1) Warmth/Affection (e.g. My teachers say nice things about me), (2) Hostility/Aggression (My teachers hit me, even when I do not deserve it), (3) Indifference/Neglect (My teachers pay no attention to me), and (4) Undifferentiated rejection (My teachers seem to dislike me). The TARQ is scored on a 4-point Likert scale ranging from 1 = almost never true to 4 = almost always true. The sum of scores can range from 24 to 96. As commonly used in the worldwide, total scores were used in this study. A high total score shows a low perception of teacher acceptance of students. Scores at or above 60 on the acceptance-rejection portion of the TARQ indicate that the teacher is perceived to be qualitatively more rejection than accepting. Cronbach's alpha coefficient of the Turkish adapted version of the TARQ is .90 (Yıldırım & Erkman, 2008). Cronbach's alpha coefficient of the TARQ in this study was .88.

2.3.2. Personality assessment questionnaire-child version (PAQ)

This measure was developed to estimate the level of psychological maladjustment (Rohner & Khaleque, 2005). It consists of 42 items, six items for each of seven scales containing (a) Hostility/Aggression (e.g. I want to hit something or someone), (b) Dependence (I like my parents to make a fuss over me when I am hurt or sick), (c) Negative Self-Esteem (I get unhappy with myself), (d) Negative Self-Adequacy I think I am a failure), (e) Emotional Unresponsiveness (I have difficulty showing people how I feel), (f) Emotional Instability (I am in a bad mood and grumpy without any good reason), and (g) Negative Worldview (For me the World is unhappy place). The PAQ is scored on a 4-point Likert-type scale, with 1 (almost never true), 2 (rarely true), 3 (sometimes true), and 4 (almost always true). The sum of scores can spread from 42 to 168. A high total score means a low level of psychological adjustment of an individual. As commonly used in the worldwide, total scores obtained via the PAQ were employed in this study. Scores at or above 105 suggest significant psychological maladjustment. The Cronbach's alpha coefficient for the original form of the PAQ is .84. Extensive evidence reported in Rohner and Khaleque (2005) shows the measure to be reliable and valid for research in the United States and cross-culturally. Cronbach's alpha coefficient of the Turkish adapted version of the PAQ was .86 (Varan, 2003). Cronbach's alpha coefficient of the PAQ in this study was .80.

2.3.3. Education stress scale (ESSA)

This measure (Sun et al., 2011) was used to estimate the level of perceived academic stress. It contains 16 items under five factors including (1) Pressure from study (four items), (2) Workload (three items), (3) Worry about grades (three items), (4) Self-expectation stress (three items), and (5) Despondency (three items). Sample items include "I feel a lot of pressure in my daily studying" (Pressure from study), "I feel there is too much homework" (Workload), "I feel that I have disappointed my teacher when my test/exam results are not ideal" (Worry about grades), "I feel stressed when I do not live up to my own standards" (Self-expectation stress), and "I always lack confidence with my academic scores" (Despondency). The ESSA is scored on a five-point Likert-type scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). The total score, ranges from 16 to 80, with higher values indicating greater perceived stress. Total scores were used in this study. The Cronbach's alpha for original the ESSA is .81. Cronbach's alpha coefficient for the Turkish adapted version of the ESSA was reported as .86 (Çelik, Akın, & Sarıcam, 2014), and the Cronbach's alpha of the ESSA in this study was .78.

2.3.4. Personal Information Form

This form included questions about age, gender, and GPA. GPA was based on students' end-of-the latest-grade transcript records. A higher GPA reflected better academic performance.

2.4. Statistical Analyses

There were no missing values in the data, and there was one outlier detected in the data that was deleted (Mahalonabis ($df=4$)=18.47). Participants were 399 adolescent high school students. Skewness and kurtosis analyses showed values between -1.5 and +1.5 (Tabachnick & Fidell, 2007, p. 79) indicating that the sample was a normal distribution. Descriptive statistics, correlations of the variables, and t-test for independent groups were used to analyze the data. In addition, the SPSS macro PROCESS was run to examine the mediating effect of psychological maladjustment between perception of teacher rejection and educational

stress. As seen in Figure 1, psychological maladjustment was a mediator (PM) of the relationship between perception of teacher rejection (PTR) and educational stress (ES). A confidence interval of 95% deviation correction (bias-corrected confidence intervals) was constructed by extracting 5,000 bootstrap samples. In this procedure, a sample ocases from the complete data set was selected and the effects were determined in the resamples to generate the bootstrapping sampling distributions. When a confidence interval did not span zero, the result was considered statistically significant as noted by Preacher and Hayes (2008).

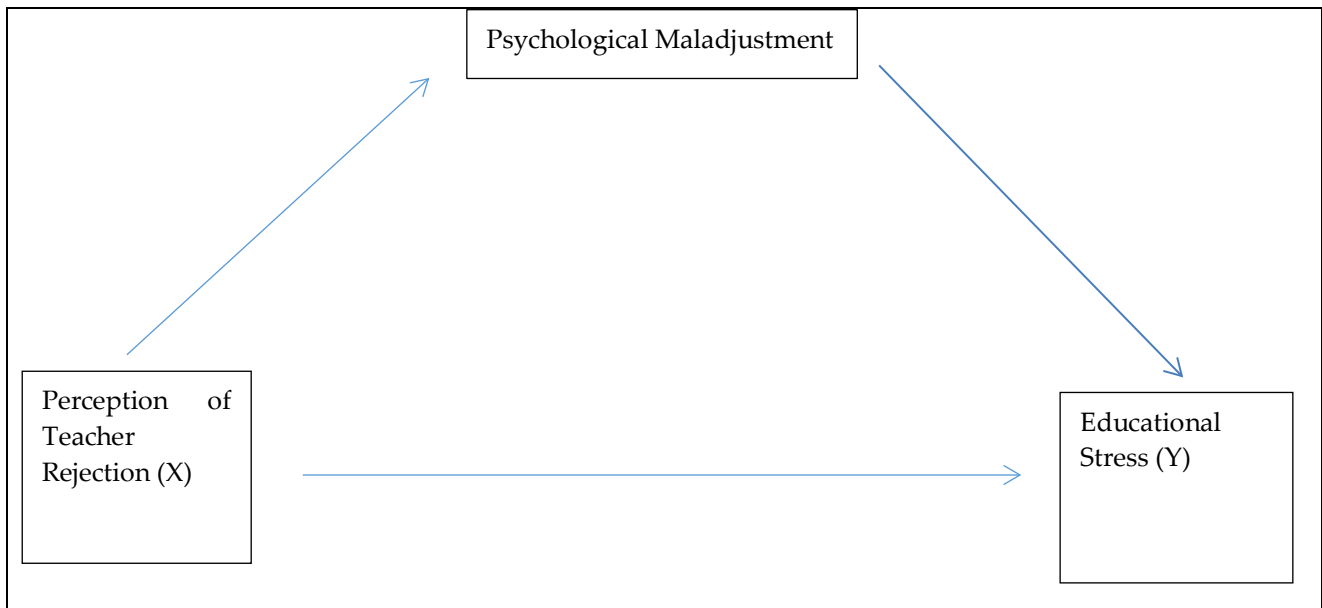


Figure 1. Mediation effect of Psychological Maladjustment on the relation between Perception of Teacher Rejection and Educational Stress.

Since the previous research studies conducted in Turkey (e.g., Balta-Özkan, 2019; Bayram, 2016; Metin, 2014; Yetim, 2014) revealed the relationships between (a) age, sex, and GPA and (b) educational stress levels, these variables were included as a control variable in the mediation model.

2.4. Ethics Clearance

The researcher in this study obtained ethics approval from the Gazi University Human Research Ethics Committee and Gazi University Institutional Review Board. Participation in the study was entirely voluntary and anonymous. This article does not contain any studies with animals performed by the author.

3. Results

3.1. Gender Differences and Correlations

Table 2 displays independent *t* test results for variables assessed in the present study. The results show that the average of female students’ educational stress levels, psychological maladjustment levels, and GPAs were significantly higher than male students.

Table 2. Results of Descriptive Statistics with Gender Differences in Major Variables

Variables	Males (n=168)		Females (n=231)		t
	M	SD	M	SD	
1. Perception of Teacher Rejection	44.31	12.55	41.86	10.38	-2.13*
2. Psychological Maladjustment	94.77	14.30	100.45	14.00	3.96***
3. Educational Stress	50.47	10.14	54.39	8.79	4.13***
4. GPA	63.67	14.47	72.93	13.41	6.59***

p* < .05. **p* < .001.

Additionally, as seen in Table 2, the average of male students' perception of teacher rejection levels was significantly higher than female students. Because of these differences, correlation analyses were conducted among major variables by using total scores as well as scores for each gender.

As shown in Table 3, educational stress was significantly and positively correlated with perception of teacher rejection and psychological maladjustment. Age was significantly and negatively correlated with psychological maladjustment, educational stress, and GPA. GPA was significantly and negatively correlated with perception of teacher rejection.

Table 3. Results of Correlation Analyses with Correlation Coefficients among Major Variables

Variables	1	2	3	4	5
1. Perception of Teacher Rejection	-				
2. Psychological Maladjustment	.42**	-			
3. Educational Stress	.17**	.43**	-		
4. GPA	-.18**	-.01	.07	-	
5. Age	-.02	-.12*	-.31**	-.17**	-

* $p < .05$. ** $p < .01$.

As seen in Table 4, educational stress was significantly and positively correlated with perception of teacher rejection and psychological maladjustment, while educational stress was significantly and negatively correlated with age among both males and females.

Table 4. Results of Correlation Analyses with Correlation Coefficients among Major Variables by Gender

Variables	1	2	3	4	5
1. Perception of Teacher Rejection	-	.50**	.25**	-.16*	-.03
2. Psychological Maladjustment	.41**	-	.49**	-.21**	-.04
3. Educational Stress	.14*	.34**	-	-.07	-.32**
4. GPA	-.14*	.02	.07	-	.14
5. Age	-.02	-.15*	-.29**	-.39**	-

Note: Coefficients above the diagonal pertain to males; coefficients below the diagonal pertain to females.

* $p < .05$. ** $p < .01$.

Results documented that younger female and male students in this study tended to recall more educational stress than older female and male students. GPA was significantly and negatively correlated with psychological maladjustment for males. Age was significantly and negatively correlated with GPA and psychological maladjustment for females. Younger female students tended to have low GPAs and recall less psychological maladjustment than older female students. However, age was not significantly correlated with any variable for males other than educational stress.

3.2. Direct, Indirect, and Total Effects of Perception of Teacher Rejection on Educational Stress

When the direct effect between the variables was examined, it was seen that perception of teacher rejection predicted educational stress ($B_{se.04} = .15$, $t_{(395)} = 3.92$, $p = .001$). As shown in the Table 5, the direct effect of perception of teacher rejection on psychological maladjustment was also significant ($B_{se.06} = .55$, $t_{(395)} = 9.94$, $p < .001$).

Table 5. Results of Mediation Analyses with Estimated Coefficients for Mediation Model of Psychological Maladjustment

Model	R^2	F	df	B	se	p	Bootstrap Indirect Effect 95% CI	
							LL	UL
PTR -> ES (Path c)	.16	25.33	395	.15	.04	.001**	.08	.23
PTS -> PM (Path a)	.24	41.34	395	.55	.06	.000***	.45	.66
PTS -> PM-> ES (Path b)	.27	36.00	394	.25	.03	.000***	.18	.31
(Path c')			394	.02	.04	.719	-.07	.10

Note. CI = confidence interval; LL = lower limit; UL = upper limit, PTR = perception of teacher rejection, ES = educational stress, PM = psychological maladjustment.

** $p < .01$. *** $p < .001$.

Similarly, the direct effect of psychological maladjustment on educational stress was significant ($B_{se.03} = .25$, $t_{(394)} = 7.56$, $p < .001$). Results of mediation analyses revealed that psychological maladjustment mediated the relationship between perception of teacher rejection and educational stress ($B_{se.02} = .14$; $LLCI = .10$, $ULCI = .19$ [95% CI]). The mediation model was significant ($F_{(4/394)} = 36$, $p < .001$) and explained 27% of the educational stress ($R^2 = .27$). The relationship between perception of teacher rejection and educational stress was not significant when psychological maladjustment was added into the mediation model. This means that it was a complete mediation model (c' , $B_{se.04} = .02$, $t_{(394)} = .360$, $p = .719$). Figure 2 shows standardized paths of the mediation model.

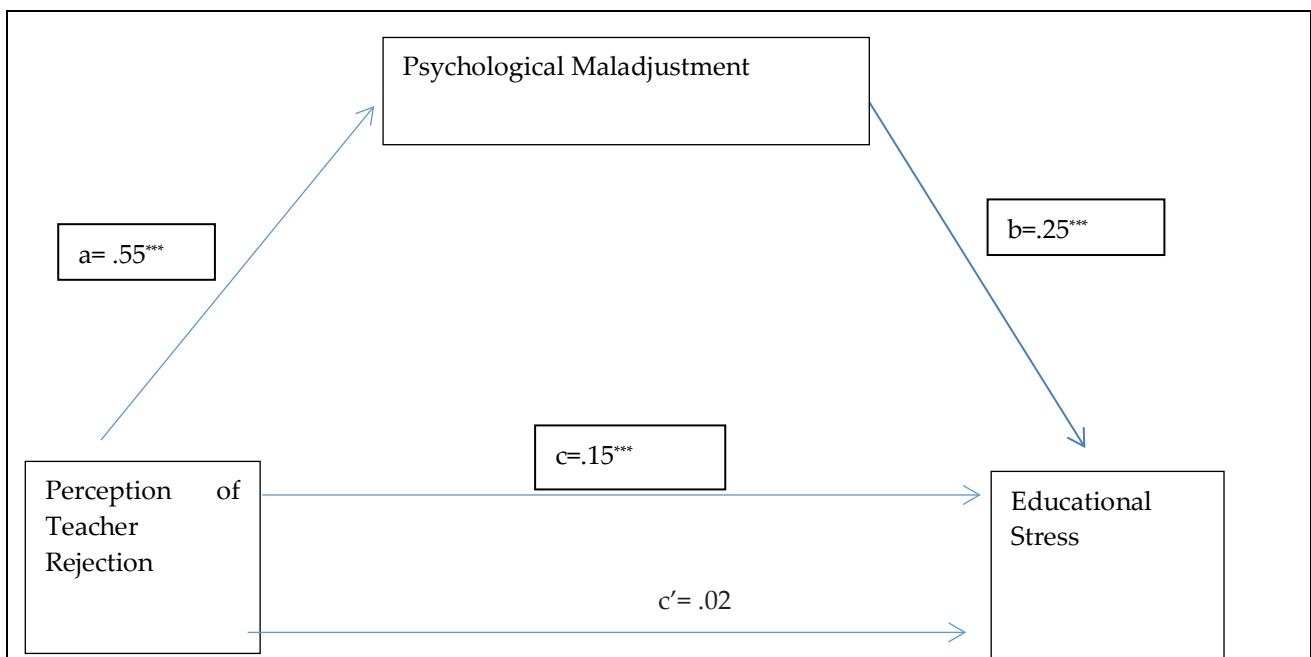


Figure 2. Mediation effect of Psychological Maladjustment on the relation between Perception of Teacher Rejection and Educational Stress. Age, and gender were entered into the model as covariates, but are not depicted ($p^{***} < .001$).

4. Discussion

4.1. Gender Differences and Correlations

Results of the current research indicated that female adolescents tend to have more educational stress than males. This result is consistent with prior research in Turkey (e.g., Bayram, 2016; Yetim, 2014). Female students being more stressed (Jones & Hattie, 1991) and being more sensitive to stress sources than male students (Misra & Castillo, 2004) may have an effect on the result. Additionally, in the collectivistic culture that is widely accepted in Turkey (Göregenli, 1995; Uskul, Hynie, & Lalonde, 2004) parents may believe that their sons are the continuation and future of families and that daughters do not need to go to schools as much as sons (İlhan-Tunç, 2009). These beliefs may cause girls to feel "I must be successful to be able to attend school." and female students to have high academic expectations and worry about their academic success in order to continue their education. Because high academic expectations (Ang & Huan, 2006) and concerns about academic failure (Jones and Hattie, 1991) can cause educational stress, female students may feel higher educational stress than boys.

Another gender related result revealed that female students' psychological maladjustment was higher than male students. Although there are studies in Turkey showing that there is no difference between psychological maladjustment of male and female adolescents (Bilen, 2013; Erkman & Rohner, 2006; Yener, 2005), there are also studies support the result (Gençtoprak, 2010; Kuyumcu & Coşkun, 2018). This result may be due to factors from the person or the environment, as well as psychological stress that affects psychological well-being was higher in female students (Balta-Özkan, 2019; Bayram, 2016; Xie, 2007; Zhao & Yuan, 2006).

Another result of the study regarding the gender difference was that male students' perception of teacher rejection was more than female students. There are studies supporting this result (e.g., Khan, Haynes, Armstrong, & Rohner, 2010; Parmar & Rohner, 2010; Tulviste & Rohner, 2010). Male students show their undesirable behaviors more frequently than female students such as running away from school, getting involved in fighting, carrying fighting tools, drug usage (Aras, Günay, Özcan, & Orçin, 2007), lower academic achievement (Berger, Alcalay, Torretti, & Milicic, 2011). These behaviors may prevent teachers from behaving warmly their male students and away from conflict. Additionally, the behaviors of teachers in order to maintain the school system may be perceived as rejecting by adolescent male students.

The results of the correlation analyses showed that educational stress was significantly and positively related with perception of teacher rejection and psychological maladjustment, and negatively associated with age among both male and female adolescents. Younger males and females tended to have less educational stress than older males and females adolescents. Similar results were obtained in other studies (Balta-Özkan, 2019; Bayram, 2016; Yetim, 2014). The increase in the number of exams that students are required to take, the need to choose a career and determine an education path, and the concern of being able to find a job can play a critical role in this result of higher educational stress in older adolescents. The developmental tasks by age can lead to pressure and educational stress. Another result is that the relationship between educational stress and GPA was not significant among both male and female adolescents. Although there is a study in the international literature (Arsenio & Loria, 2014) provide similar result, the result of current study contradicts with the study of Yetim (2014) who found that there was a significant, negative, but low relationship between GPA and educational stress among Turkish adolescent students. Other previous studies also provided evidence on the simple relationship between perceived poor academic grade and educational stress (e.g., Bjorkman, 2007; Xie, 2007; Zhao & Yuan, 2006). The result of the insignificant relationship between educational stress and GPA can be due to possible moderator variables in this relationship. Further research studies may use school-related issues such as school type (private or public school), school location (urban or rural), class size, and family-related issues (e.g., income, educational level, and occupation) as moderator variables.

4.2. Direct, Indirect, and Total Effects of Perception of Teacher Rejection on Educational Stress

Results showed that adolescents' perception of teacher rejection independently predicts educational stress. Teacher-child relationships that are characterized by a high level of rejection—cold, hostile and aggressive, indifference and neglect, and undifferentiated rejection—and low acceptance may becloud students to feel emotionally secure. Emotional security, however, may prevent students from the appraisal of their academic

activities, schoolwork, and school-related situations which can be stress resources for adolescents (Isralowitz & Ong, 1990; Kouzma & Kennedy, 2004) as a threat or harm-loss. Additionally, emotional security facilitates students' engagement in academic activities that can result in better academic performance (Bergin & Bergin, 2009). Also, students who perceive that their teachers care about them, respect them, and praise them are more tend to like school than are those who do not (Hallinan, 2008). In this way, the perception of teacher rejection may influence educational stress.

More importantly, the results of this study showed that psychological maladjustment fully mediated the relation between perception of teacher rejection and adolescents' educational stress. This result suggests that the perception of teacher rejection affects educational stress through psychological maladjustment, which is characterized by dependence or defensive independence, emotional unresponsiveness, hostility and aggression, negative self-esteem, negative self-adequacy, emotional instability, and negative worldview. This result is consistent with IPARTheory (Rohner, 2004), where the theory indicates that children's perception of both the parents and teachers were significantly correlated with their psychological adjustment, and perceived teacher acceptance made a unique contribution to variations in the adolescents (both males and females) psychological adjustment. Also, this result supports prior research suggesting that psychological maladjustment may be a consequence of the perception of teacher rejection (Ali, Khaleque, & Rohner, 2015; Erkman et al., 2010; Parmar & Rohner, 2010). Just two research studies (Arslan, 2017; Özdemir & Özdemir 2015) in Turkey investigated the relationship between self-efficacy and self-esteem, which are psychological maladjustment's sub-factors, and educational stress. Arslan (2017) found that students' emotional self-efficacy predicted educational stress levels. Özdemir and Özdemir (2015) documented that there was a significant relationship between secondary school students' self-esteem and educational stress levels. Therefore, it can be said that the result of the research has been consistent with almost similar previous studies in Turkey.

5. Conclusion

This study is one of the first studies examining relations among Turkish high school students' perception of teacher rejection, and educational stress, as fully mediated by their psychological maladjustment. The study does reveal that perception of teacher rejection explains 27% of the educational stress level over the students' psychological maladjustment.

The results of this study have implications for research and practice. Results may help the expansion of the IPARTheory. Based on this information, other factors originating from the person or environment such as achievement goals, academic coping, school conditions, education system, parental attitude towards education and academic achievement can be included in the future similar research.

At the practical level, these findings suggest that school counselors may include individual or group counseling practices to increase students' psychological adjustment in intervention programs to prevent or eliminate educational stress. Since major variables of the current study differ based on gender, the psychological counselor may consider the gender of the participating students when preparing these programs. In addition, teachers can be informed that not only is it important to know one's course materials and deliver information effectively, but also their own accepting behavior is vital for both the psychological adjustment and educational stress of the student. However, the present study has several limitations. Given the cross-sectional methodology, causal conclusions cannot be drawn among the targeted variables in the study. Therefore, future studies need to implement a longitudinal design in order to establish the sequential nature of the relationships among perception of teacher rejection, psychological maladjustment, and educational stress. The participants were recruited using convenience sampling. Thus, the results cannot be generalized to other high school student groups. Replication studies comparing various ages, racial groups, and education levels can be useful in determining the generalizability and specificity of the current findings. Lastly, the present study utilized a mono-source/mono-method research strategy, obtaining information through self-report measures for each study variable. It was possible that participants may have minimized their actual beliefs/behaviors. For this reason, data can be collected from teachers and families. Despite these limitations, the study shows that the Turkish high school students' psychological maladjustment fully mediates the relationships between the perception of teacher and the educational stress and that age and gender are significant variables for major variables.

References

- Ahmed, R. A., Rohner, R. P., & Carrasco, M. A., (2012). Relations between psychological adjustment and perceived parental, sibling, best friend, and teacher acceptance among Kuwaiti adolescents. In K. Ripoll-Nuñez, A. L. Comunian, & C. M. Brown (Eds.), *Expanding horizons: Current research on interpersonal acceptance*, (1-10). Boca Raton, FL: Brown Walker Press.
- Akpınar, M. (2016). *Okul tükenmişliği ile akademik stres ve öznel iyi arasındaki ilişkinin incelenmesi*. [The relationships between school burnout, academic stress and subjective well-being] (Unpublished master's thesis). Institute of Education Sciences, Atatürk University, Erzurum, Turkey.
- Ali, S. (2011). Perceived teacher and parental acceptance-rejection, and the academic achievement, adjustment, and behavior of children: Literature review. *International Journal of Peace and Development Studies*, 2, 138-147.
- Ali, S., Khaleque, A., & Rohner, R. P. (2015). Influence of perceived teacher acceptance and parental acceptance on youth's psychological adjustment and school conduct: A cross-cultural meta-analysis. *Cross-Cultural Research*, 49, 204-224. [doi:10.1177/1069397114552769](https://doi.org/10.1177/1069397114552769)
- Al-Yogan, M., & Mikulincer, M. (2006). Children's appraisal of teacher as a secure base and their socio-emotional and academic adjustment in middle childhood. *Research in Education*, 75, 1-18. [doi:10.7227/RIE.75.1](https://doi.org/10.7227/RIE.75.1)
- Ang, R. P., & Huan, V. S. (2006). Relationship between academic stress and suicidal ideation: Testing for depression as a mediator using multiple regression. *Child Psychiatry and Human Development*, 37, 133-143.
- Aras, Ş., Günay, T., Özcan, S., & Orçın, E. (2007). Risky behaviors among high school students in İzmir. *Anatolian Journal of Psychiatry*, 8, 186-196.
- Arsenio, W. F., & Loria, S. (2012). Coping with negative emotions: Connections with adolescents' academic performance and stress. *The Journal of Genetic Psychology*, 175, 76-90. [doi:10.1080/00221325.2013.806293](https://doi.org/10.1080/00221325.2013.806293)
- Arslan, N. (2017). Investigating the relationship between educational stress and emotional self-efficacy. *Universal Journal of Educational Research*, 5, 1736-1740. doi: 10.13189/ujer.2017.051010
- Balta-Özkan, A. (2019). *İlkokul ve ortaokul öğrencilerinin duygusal okuryazarlık ve akademik stres düzeyleri* [Emotional literacy and academic stress levels of primary and secondary school students] (Unpublished master's thesis). Social Sciences Institute, Recep Tayyip Erdoğan University, Rize, Turkey.
- Bayram, S. B. (2016). *Ergenlerin mükemmeliyetçilik özellikleri ve akademik alanda arzularının ertelenmesi ile akademik stres arasındaki ilişkinin incelenmesi* [Examination of the relationship between postponement of desires in academic field and academic stress] (Unpublished master's thesis). Social Sciences Institute, İstanbul Sabahattin Zaim University, İstanbul, Turkey.
- Berger, C., Alcalay, L., Torretti, A., & Milicic, N. (2011). Socio-emotional well-being and academic achievement: Evidence from a multilevel approach. *Psicologia: Reflexão e Crítica*, 24, 344-351. [doi:10.1590/S0102-79722011000200016](https://doi.org/10.1590/S0102-79722011000200016)
- Bergin, C. & Bergin, D. (2009) Attachment in the Classroom. *Educational Psychology Review*, 21, 141-170.
- Bilen J. (2013). *Anne-baba kabul-reddinin psikolojik uyum üzerindeki etkisinin kimlik duygusu açısından incelenmesi* [The relationship between perceived parental acceptance-rejection, psychological adjustment, and identity] (Unpublished Master's Thesis). Adnan Menderes University, Health Sciences Institute, Aydın, Turkey.
- Bjorkman SM. (2007). *Relationships among academic stress, social support, and internalizing and externalizing behavior in adolescence* (Unpublished doctoral dissertations). Northern Illinois University, Illinois.
- Blankemeyer, M., Flannery, D. J., & Vazsonyi, A. T. (2002). The role of aggression and social competence in children's perceptions of the child-teacher relationship. *Psychology in the Schools*, 39, 293-304. [doi:10.1002/pits.10008](https://doi.org/10.1002/pits.10008)
- Burnett, P. C., & Fanshawe, J. P. (1997). Measuring school-related Stressors in Adolescents. *Journal of Youth and Adolescence*, 26, 415-428.
- Çelik, İ., Akın, A., & Sarıçam, H. (2014). A scale adaptation study related to the examination of adolescents' levels of educational stress. *Üniversitepark Bülten*, 3, 44-55.

- Erkman, F., Caner, A., Sart, H., Borkan, B., & Sahan, K. (2010). Influence of perceived teacher acceptance, self-concept, and school attitude on the academic achievement of school-age children in Turkey. *Cross-Cultural Research*, 44, 295-309. doi:10.1177/1069397110366670
- Erkman, F., & Rohner, R. P. (2006). Youths' perceptions of corporal punishment, parental acceptance, and psychological adjustment in a Turkish metropolis. *Cross-Cultural Research*, 40, 250-267. doi:10.1177/1069397106287924
- Erkuş, A. (2016). *Davranış bilimleri için bilimsel araştırma süreci* [Scientific research process for behavioral sciences]. Ankara: Seçkin Publisher.
- Gençtoprak, S. (2010). *Çocukların anne-babalarıyla ilişkide kabul veya red algıları, psikolojik uyumları ve akademik başarılarının incelenmesi* [The relationship children's' perceptions of parental acceptance-rejection, psychological adjustment, and academic achievement] (Unpublished Master's Thesis). Karaelmas University, Social Sciences Institute, Zonguldak, Turkey.
- Göregenli, M. (1995). Kültürümüz açısından bireycilik-toplulukçuluk eğilimleri: Bir başlangıç çalışması [Individualism-collectivism tendencies in terms of our culture: An initial study]. *Turkish Journal of Psychology*, 10, 1-14.
- Hallinan, T. M. (2008). Teacher influences on students' attachment to school. *Sociology of Education*, 81, 271-283.
- Hamre, B. K., & Pianta, R. C. (2006). Student-Teacher Relationships. In G. G. Bear & K. M. Minke (Eds.), *Children's needs III: Development, prevention, and intervention* (59-71). National Association of School Psychologists.
- Isralowitz, R.E., & Ong, T.H. (1990). Singapore youth: the impact of social status on perceptions of adolescent problems. *Adolescence* 25, 357-62.
- İlhan-Tunç, A. (2009). Kız çocuklarının okula gitmeme nedenleri Van ili örneği [Reasons why not go to school for girls: Van sample]. *Van Yüzüncü Yıl University Journal of Education*, 6, 237-269.
- Jones, R.W., & Hattie, J.A. (1991, April 24-26). *Academic stress amongst adolescents: An examination by ethnicity, grade, and sex*. Paper presented at the Annual Conference of the New England Educational Research Organization, Portsmouth, NH. Retrieved from <https://files.eric.ed.gov/fulltext/ED336668.pdf> (12.11.19)
- Khan, S., Haynes, L. Armstrong, A., & Rohner, R. P. (2010). Mississippi delta region of the united states achievement, and school conduct of middle school students in the perceived teacher acceptance, parental acceptance, academic. *Cross-Cultural Research*, 44, 283. doi:10.1177/1069397110368030
- Khaneh K. A., & Basavaraj, A. (2011). The Relationship of academic stress with aggression, depression and academic performance of college students in Iran. *Journal on Educational Psychology*, 5, 24-31.
- Kouzma, N. M., & Kennedy, G. A. (2004). Self-reported sources of stress in senior high school students. *Psychological Reports*, 94, 314-316. doi:10.2466/pr0.94.1.314-316
- Kuyumcu, B., & Çoşkuner, K. (2018, September 6-8). *The relationship between perception of teacher acceptance psychological adjustment and school attachment among secondary school students*. Paper presented at the meeting of 13. International Balkan Education & Science Congress, Edirne, Turkey.
- Makri-Botsari, E. (2015). Adolescents' unconditional acceptance by parents and teachers and educational outcomes: A structural model of gender differences. *Journal of Adolescence*, 43, 50-62. doi:10.1016/j.adolescence.2015.05.006
- Metin, Ö. F. (2019). *Lise öğrencilerinin akademik streslerinin, matematik kaygılarının ve matematiğe yönelik tutumlarının incelenmesi* [Analysing high school student's academic stress, their maths anxieties and attitudes towards math](Unpublished Master's Thesis). Social Sciences Institute, Kahramanmaraş Sütçü İmam University, Kahramanmaraş, Turkey.
- Ministry of National Education (2019). *National Education Statistics: Formal Education 2018/2019*. Retrieved from http://sgb.meb.gov.tr/meb_iys_dosyalar/2019_09/30102730_meb_istatistikleri_orgun_egitim_2018_2019.pdf
- Misra, R., & Castillo, L. G. (2004). Academic stress among college students: Comparison of American and international students. *International Journal of Stress Management*, 11, 132-148. doi: 10.1037/1072-5245.11.2.132

- Nguyen DT, Wright EP, Dedding C, Pham TT, and Bunders J (2019). Low Self-Esteem and Its Association With Anxiety, Depression, and Suicidal Ideation in Vietnamese Secondary School Students: A Cross-Sectional Study. *Frontiers in Psychiatry*, 10, 698. doi: 10.3389/fpsy.2019.00698
- Oral, A. (1994). *Source of stress and coping strategies during adolescence*. (Unpublished Master's Thesis). Graduate School of Social Sciences. Middle East Technical University, Ankara, Turkey.
- Özdemir, Y., & Özdemir, M. (2015). Eğitim stresi ve benlik saygısının ortaokul öğrencilerinin okul tükenmişliği üzerindeki doğrudan ve dolaylı etkileri [Direct and indirect effect of educational stress and self-esteem on school burnout among secondary school students]. *Adnan Menderes University Journal of Educational Science*, 2, 1-10.
- Organization for Economic Cooperation and Development (OECD, [2019]). *The Programme for International Student Assessment (PISA) Results from PISA 2018*. Retrieved from https://www.oecd.org/pisa/publications/PISA2018_CN_TUR.pdf (12.04.2019)
- Parmar, P., & Rohner, R. P. (2010). Perceived teacher and parental acceptance and behavioral control, school conduct, and psychological adjustment among school-going adolescents in India. *Cross-Cultural Research*, 44, 253-265. doi:10.1177/1069397110367613
- Pianta, R. (1999). *Enhancing relationships between children and teachers*. Washington, DC: American Psychological Association.
- Preacher, K. J., & Hayes, A. F. (2008). Contemporary approaches to assessing mediation in communication research. In A. F. Hayes, M. D. Slater, & L. B. Snyder (Eds.), *The Sage sourcebook of advanced data analysis methods for communication research* (pp. 13-54). Thousand Oaks, CA: Sage.
- Putwain, D. 2007. Researching academic stress and anxiety in students: Some methodological considerations. *British Educational Research Journal* 33, 207–219. doi:10.1080/01411920701208258
- Rohner, R. P. (2004). The parental “acceptance–rejection syndrome”: Universal correlates of perceived rejection. *American Psychologist*, 59, 830–840. doi:10.1037/0003-066X.59.8.830
- Rohner, R. P. (2005a). Glossary of significant concepts in parental acceptance-rejection theory. In R. P. Rohner & A. Khaleque (Eds.), *Handbook for the study of parental acceptance and rejection* (4th ed., pp. 379–397). Storrs, CT: Rohner Research.
- Rohner, R. P. (2005b). Teacher acceptance-rejection/control questionnaire (TARQ/ Control): Test manual. In R. P. Rohner & A. Khaleque (Eds.), *Handbook for the study of parental acceptance and rejection* (4th ed., pp. 327–334). Storrs, CT: Rohner Research.
- Rohner, R. P. (2010). Perceived teacher acceptance, parental acceptance, and the adjustment, achievement, and behavior of school-going youth internationally. *Cross-Cultural Research*, 44, 211-221. doi:10.1177/1069397110366849
- Rohner, E. C., Chaille, C., & Rohner, R. P. (1980). Perceived parental acceptance-rejection and the development of children's locus of control. *Journal of Psychology*, 104, 83-86.
- Rohner, R. P., Cournoyer, D., & Khaleque, A. (2007). Basic principles of parenting. *Contemporary Family*, 1, 16-17.
- Rohner, R. P., & Khaleque, A. (2005). Personality assessment questionnaire (PAQ): Test manual. In R. P. Rohner & A. Khaleque (Eds.), *Handbook for the study of parental acceptance and rejection* (4th ed., pp. 187–226). Storrs, CT: Rohner Research.
- Rohner, R. P., Khaleque, A., & Cournoyer, D. E. (2005). Parental acceptance-rejection theory, methods, evidence, and implications. In R. P. Rohner & A. Khaleque (Eds.), *Handbook for the study of parental acceptance and rejection* (4th ed., pp. 1–37). Storrs, CT: Rohner Research.
- Rohner, R. P., Khaleque, A., Elias, S., & Sultana, S. (2010). The relationship between perceived teacher and parental acceptance, school conduct, and the psychological adjustment of Bangladeshi adolescents. *Cross-Cultural Research*, 44, 239-252. doi:10.1177/1069397110366900
- Stark, L. J., Spinto, A., Williams, C. A., & Guevremont, D. C. (1989). Common problems and coping strategies: Findings with normal adolescents. *Journal of Abnormal Child Psychology*, 17, 203-212.
- Sun, J., Dunne, P. M., Hou, X., & Xu, X. (2011). Educational stress scale for adolescents: Development, validity, and reliability with Chinese students. *Journal of Psychoeducational Assessment*, 26, 534-546. doi:10.1177/0734282910394976
- Sun, J., Dunne, M. P., Hou, X., & Xu, A. (2013). Educational stress among Chinese adolescents: individual, family, school and peer influences, *Educational Review*, 65, 284-302. doi: 10.1080/00131911.2012.659657

- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. Boston, MA: Pearson Education.
- Tulviste, T., & Rohner, R. P. (2010). Relationships among perceived teachers and parental behavior, and adolescent outcomes in Estonia. *Cross-Cultural Research, 44*, 222-238. [doi:10.1177/1069397110366797](https://doi.org/10.1177/1069397110366797)
- Uskul, A.K., Hynie, M., & Lalonde, R. N. (2004). Interdependence as a mediator between culture and interpersonal closeness for Euro-Canadians and Turks. *Journal of Cross-Cultural Psychology, 35*, 174-191. [doi:10.1177/0022022103262243](https://doi.org/10.1177/0022022103262243)
- Xie, L.N. 2007. *Study on learning stress, social support and their relationship among senior high school students: An investigation of two senior high schools in hennan province* (Unpublished Master's Thesis). East Huadong Normal University, China.
- Varan, A. (2003). *EKAR kuramı değerlendirme araçlarının Türkiye güvenilirlik ve geçerlik çalışması* [Reliability and validity study of the Turkish version of IPARTheory's measures](Unpublished study). Ege University, Department of Psychiatry, Turkey.
- Yener, N. (2005). *Çocukların algıladıkları ebeveyn kabul veya reddinin okul başarısı ve okul uyumu ile ilişkisi* [The relationship between perception of parental acceptance-rejection, school achievement and school adaptation of children] (Unpublished Master's Thesis). Ege University, Social Science Institute, İzmir, Turkey.
- Yetim, N. (2014). *Ortaöğretim öğrencilerinde yansıtıcı düşünme becerisi, akademik stres düzeyi ve yabancı dil dersi akademik başarısı ilişkisi* [The relationship between reflective thinking skills, academic stress level and academic achievement in foreign language course in secondary school students](Unpublished Master's Thesis). Institute of Education Sciences, Gazi Osman Paşa University, Tokat, Turkey.
- Yıldırım, S., & Erkman, F. (2008). Validity, reliability, and partial norm study of the Turkish Teacher Acceptance-Rejection/Control Questionnaire: Child, Short Form. In F. Erkman (Ed.), *Acceptance: The essence of peace* (pp. 257-273). Istanbul, Turkey: Turkish Psychology Association.
- Zhao, L.X., & Yuan, L. (2006). Investigation on the current status of acadmic stress among secondary school students. *Journal of Tianjin Academy of Educational Science 67*, 18-21.