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Autonomy Support and Children's School Attachment: Motivation as a Mediator*Özerklik Desteği ve Çocukların Okula Bağlılığı: Motivasyonun Aracılık Rolü***Ayşe Ayaz , İsmail Hakkı Tomar , Gürhan Can , Seydi Ahmet Satıcı ****Authors Information****Ayşe Ayaz**

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Article Information**Keywords**

School Attachment
Teacher's Autonomy Support
Intrinsic Motivation
Identified External Motivation
Introjected External Motivation

Anahtar Kelimeler

Okula Bağlanma
Öğretmenin Özerklik Desteği
İçsel Motivasyon
Özdeşleşmiş Dışsal Motivasyon
İçselleştirilmiş Dışsal Motivasyon

Article History

Received: 19/11/2021

Revision: 07/12/2021

Accepted: 10/12/2021

ABSTRACT

The present study examined the mediating role of motivation in the association between autonomy support and children's school attachment. The study participants consisted of 437 primary school students (232 girls and 205 boys) selected from six schools in a province located in Turkey's southeast region. A hypothesized model was developed and tested by structural equation modeling on cross-sectional data. The data were collected via The School Attachment Scale for Children and Adolescents, The Scale for Motivation in Education, and The Short Form of the Learning Climate Scale. The results indicated that autonomy support had an indirect effect on school attachment through internal motivation. Contrary to these findings, it has been determined that neither identified external motivation nor introjected external motivation affected attachment to the school's directly and indirectly.

ÖZET

Bu çalışmada, özerklik desteği ile çocukların okula bağlanması arasındaki ilişkide motivasyonun aracı rolü incelenmiştir. Araştırmanın katılımcılarını, Türkiye'nin Güneydoğu Anadolu bölgesinde yer alan bir ildeki altı okuldan seçilen 437 ilkököl öğrencisi (232 kız ve 205 erkek) oluşturmuştur. Kesitsel veriler üzerinde yapısal eşitlik modellemesi ile varsayımsal bir model geliştirilmiş ve test edilmiştir. Veriler Çocuklar ve Ergenler için Okula Bağlanma Ölçeği, Eğitimde Motivasyon Ölçeği ve Öğrenme İklimi Ölçeği Kısa Formu ile toplanmıştır. Sonuçlar, özerklik desteğinin içsel motivasyon yoluyla okula bağlanma üzerinde dolaylı bir etkisi olduğunu göstermiştir. Bu bulguların aksine, ne özdeşleşmiş dışsal motivasyonun ne de içselleştirilmiş dışsal motivasyonun okula bağlanmayı doğrudan ve dolaylı olarak etkilemediği belirlenmiştir.

Cite this article as: Ayaz, A., Tomar, İ.H., Can, G., & Satıcı, S.A. (2021). Autonomy support and children's school attachment: Motivation as a mediator. *Turkish Psychological Counseling and Guidance Journal*, 11(63), 591-602.

Ethical Statement: Ethics committee approval was obtained from the Ethics Committee of Hasan Kalyoncu University and was given permission (Date:19.11.2021, Ref: E-97105791-050.01.01-5482)

INTRODUCTION

The school's mission is to ensure the students' academic development and facilitate their physical, psychological, and social development at an optimum level. The school's success in fulfilling these responsibilities is closely related to student's attachment to school and happiness at school. "School attachment is a concept that involves students' behaviors and thoughts based on their experiences and feelings related to school" (Fredricks et al., 2005). According to Finn, school attachment (1993) is the feeling that students belong to a school and adopt their goals. Goodenow (1992) stated that school attachment involves respecting students' freedom rather than a simple sense of love and closeness.

Students who are bounding and happily attending the school become calmer with a stronger inner motivation. They, therefore, are more sufficient socially and academically, with the desire to participate much more in extra-curricular activities (Carr, 2011). When students feel that they attach to the school, they feel safe and comfortable, and they are proud of the school they belong to (Maddox & Prinz, 2003). Students who have adapted to a new school, who are going there happily and thinking they belong, gradually decrease their negative qualities and increase their positive ones. Some related literature findings have reported that students attached to a school, and feeling that they belong to school display less disruptive behavior than the ones showing no attachment to school (Simons-Morton et al., 1999).

Additionally, some authors stress that students attached to the school avoid smoking, drinking alcohol or substance abuse, committing a crime, and violent behavior (Dorbusch et al, 2001). Thus, they experience less emotional and peer problems, and more favorable well-being than the ones having no attachment to school (Karaşar & Kapçı 2016). In one of the earliest studies on school attachment, Hirschi (1969) reported that in addition to an individual's connection to family, friends, or religion, school attachment was also a deterrent for committing crimes.

Many researchers have pointed out that many factors affect school attachment. Among these factors, such as symptoms of depression and anxiety (Yıldız & Kutlu 2015), quality of life (Savi-Çakar, 2011), satisfaction with life, school anger (Savi-Çakar & Karataş, 2017), self-respect (Karaşar & Kapçı, 2016), and internal locus of control (İhtiyaroğlu & Demir, 2015) are the factors related to individual factors. Apart from these, some school-related factors such as loss of interest in school, school burnout (Altuntaş & Sezer, 2017), school bullying (Duy & Yıldız, 2014), teachers' and friends' social support (Karababa et al., 2017), teachers' autonomy support, and educational motivation (Tyler et al., 2016) are the other factors affecting school attachment.

Teacher's autonomy support has a particular importance on student attachment to the school. It refers to an atmosphere in which the teacher does not force the students to behave in a certain way but instead encourages them to be themselves (Ryan & Deci, 2004). Being in such an environment for about 25-30 hours a week facilitates the teacher's supportive role. Teachers who support students' independence provide students with meaningful choices and opportunities to take ownership and initiative of their schoolwork to influence their interests (Ryan & Deci, 2020). Teachers can support students' autonomy by nurturing students' intrinsic motivation sources, providing them with explanatory rationales, using informative language, allowing students to form their learning patterns, and accepting students' expression of their emotions (Reeve, 2009). Some authors pointed out that the teacher has a vital role in the students' attachment to the school. In this context, Mengi (2011) argues that social support perceived by students from their teachers increases students' devotion to the school, while Osterman (2000) argues

that students who trust their teacher attach to the school at a high level. More importantly, Krane et al. (2016) stated that the teacher-student relationship's quality, including teacher support, is associated with dropout or actual dropout.

According to Self-Determination Theory, motivation, which is the reason and driving force behind the behavior (Deci & Ryan, 1985), affects students in many ways, such as their academic achievements, attitudes towards school, preferences, and attachments to the school. However, students perform all school-related behaviors either because they enjoy them or feel obliged to do so. For example, if a student attends school willingly and joyfully, the reason for this situation, which is an indicator of the student's attachment to school, is intrinsic motivation. All behaviors arising from intrinsic motivation are autonomous because individuals do these behaviors based on their own free will and personal pleasure (Can, 2015). Contrary to this, all behaviors arising from extrinsic motivation are partly self-determined and controlled. Individuals do extrinsically motivated actions to avoid internal or external pressures against his / her free will. However, types of integrated and identified extrinsic motivation are more autonomous than introjected and external types. (Deci & Ryan, 1985).

Autonomy support is the support given by those in authority positions to an individual during decision-making process willingly, and also the process of seeing the outcomes due to their choice, thereby making them choose the appropriate one. Thus, as Deci and Ryan state (1987), when teachers show respect for their student's preferences and to do so in a flexible and non-pressured manner, they would support their students' autonomy. Moreover, teachers would prepare the foundations for fulfilling their obligations and that of their students more productively (Reeve, 2009). As a matter of fact, in a study conducted with primary school students, Guay et al. (2001) found that communicating with children in a way that supports autonomy increases the child's intrinsic motivation and thus facilitates his/her coping with controlling and repulsive school environments. In a similar study, Vallerand et al. (1997) concluded that the behaviors of teachers, parents, and school administration towards students affect students' perceptions of competence and autonomy.

Consequently, the more the teacher supports the students' autonomy, the higher their school attachment behavior is. Also, it would not be wrong to say that teachers' effects on students' intrinsic motivation, introjected and identified regulation, would also affect school attachment.

The Present Study

This study aims at determining whether primary school students' perceived autonomy support from their teachers directly affects their levels of school attachment. Also, this study has the purpose of testing whether intrinsic motivation, introjected external regulation, and identified extrinsic regulation affect their school attachment levels or not. One of the ways of preventing negative behaviors in schools, which is one of the social institutions that people are in contact with, is to help students increase their level of attachment to school. This makes researches that will reveal the variables that may have an effect on school attachment important. In the hypothesis model of the research, it has been suggested that the autonomy support that students perceived from their teachers will directly affect their attachment to the school and indirectly through motivation types.

METHOD

Participants

This study's participants were 469 primary school 4th-grade students attending six schools in a province in Turkey. We chose the participants from the six primary schools using the convenience sampling method. After removing the data of 32 students with univariate and multivariate extreme values from the data set, we performed the analysis with the data of 437 students. Detailed information about the participants is in Table 1.

Variables	n	%
Gender		
Female	232	53.1
Male	205	46.9
Age		
9 years	103	23.5
10 years	290	66.4
11 and above	45	10.1
Participation in Extracurricular Activities		
Yes	302	69.1
No	117	26.8
Unspecified	18	4.1

Ethical Statement

The author declare that they continue to work in accordance with scientific study ethics and the Helenski declaration in this study. Accordingly, the research was reviewed by the Ethics Committee of Hasan Kalyoncu University and was given permission (E-97105791-050.01.01-5482).

Measures

The School Attachment Scale for Children and Adolescents (SASCA). This scale, a 5-point Likert-type instrument consisting of 13 items, was developed by Hill (2005). The high points obtained from the scale indicate a high level of school attachment. Savi (2011), who adapted the scale to Turkish, revealed a three-factor structure that explains 58.69% of the total variance resulting from the exploratory factor analysis. Cronbach's alpha coefficients of the Turkish version of the scale calculated for the subscales varied between .71 and .80. However, Cronbach's alpha value is .84 for the whole instrument. The test-retest reliability coefficient value for a two-week interval is .85, and the split-half reliability coefficient of this instrument is .78.

The Scale for Motivation in Education (MES). This scale, developed by Vallerand et al. (1989), is a five-point Likert-type scale consisting of four sub-dimensions and 12 items. Kara (2008), who adapted the scale to Turkish, found that the scale explained 63.47% of the total variance resulting from its exploratory factor analysis. The adapted scale has a four-factor structure as it was in the original. Item-total correlations of the scale vary between .60 and .83, and Cronbach's alpha internal consistency coefficients of the subscales (e.g., intrinsic motivation, identified regulation, introjected regulation) vary between .78 and .80. The Cronbach alpha coefficient value calculated for the whole scale is .84.

The Short Form of the Learning Climate Scale (LCS). This scale, developed by William et al. (1996), is a 7-point Likert type, a 6-item measuring instrument that aims to measure students' perceived autonomy support from their teachers. The scale was adapted to Turkish by Kandemirci and Cihangir-

Çankaya (2015). As a result of the exploratory factor analysis, the authors obtained a single factor structure explaining 66.33% of the scale's total variance. The scale items' factor loads are over .75, and the Cronbach alpha value for the scale's internal consistency is .88.

Procedure and Data Analysis

Data collection tools were applied to the participants in the schools in the sample by the first researcher. We used Lisrel 8.7 to test the hypothetical model and the Sobel test to test the relationships between variables and mediators in the model. Once the scale models' fit indexes had reached the desired level, we tested the hypothetical model and calculated the fit indices.

RESULTS

The first step of the study was to evaluate the relationships between the variables. The Pearson Moments Correlation Coefficients of the relationship between the study variables are in Table 2.

Table 2. Correlations among the study variables

Variables	1	2	3	4	5
1. School attachment	–				
2. Autonomy support	.14**	–			
3. Identified external motivation	.10*	.11*	–		
4. Introjected external motivation	-.06	-.13**	.02	–	
4. Intrinsic motivation	.21**	.13**	.10*	.11*	–

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

The findings revealed that school attachment has a significant and positive relationship with autonomy support ($r = .14, p < .01$), identified external motivation ($r = .10, p < .05$) and intrinsic motivation ($r = .21, p < .01$). The correlation analysis also showed that autonomy support has a significant and positive relationship with identified external motivation ($r = .11, p < .05$) and intrinsic motivation ($r = .13, p < .01$) and a significant and negative relationship with introjected external motivation ($r = -.13, p < .01$).

Testing the Measurement Models

Before testing the hypothetical model, we tested the measurement model for each scale. Therefore, the measurement model for the Learning Climate Scale (LCS), Motivation in Education Scale (MES), The School Attachment Scale for Children and Adolescents (SASCA) were each tested separately.

When the consistency indices for the LCS scale model was tested, it was determined as being in perfect fit ($\chi^2/df=.34, RMSEA= 0.00, NFI=1.00, NNFI=1.00, CFI=1.00, RMR=0.01, GFI=1.00, AGFI=0.99$). The fit indices for the MES measurement model upon being tested were also revealed to be of perfect fit ($\chi^2/df=.05, RMSEA= 0.00, NFI=.98, NNFI=1.02, CFI=1.00, RMR=0.01, GFI=0.99, AGFI=0.99$). Finally, the SASCA fit indices were revealed to be at a good level ($\chi^2/df=5.26, RMSEA= 0.09, NFI=.89, NNFI=.89, CFI=.91, RMR=0.05, GFI=0.90, AGFI=0.85$). After determining that the fit indices were high enough, we performed the hypothetical research model's next step.

Testing the Hypothetical Model

The hypothetical model's findings based on autonomy support for school attachment and its motivation types as predictors are in Figure 1.

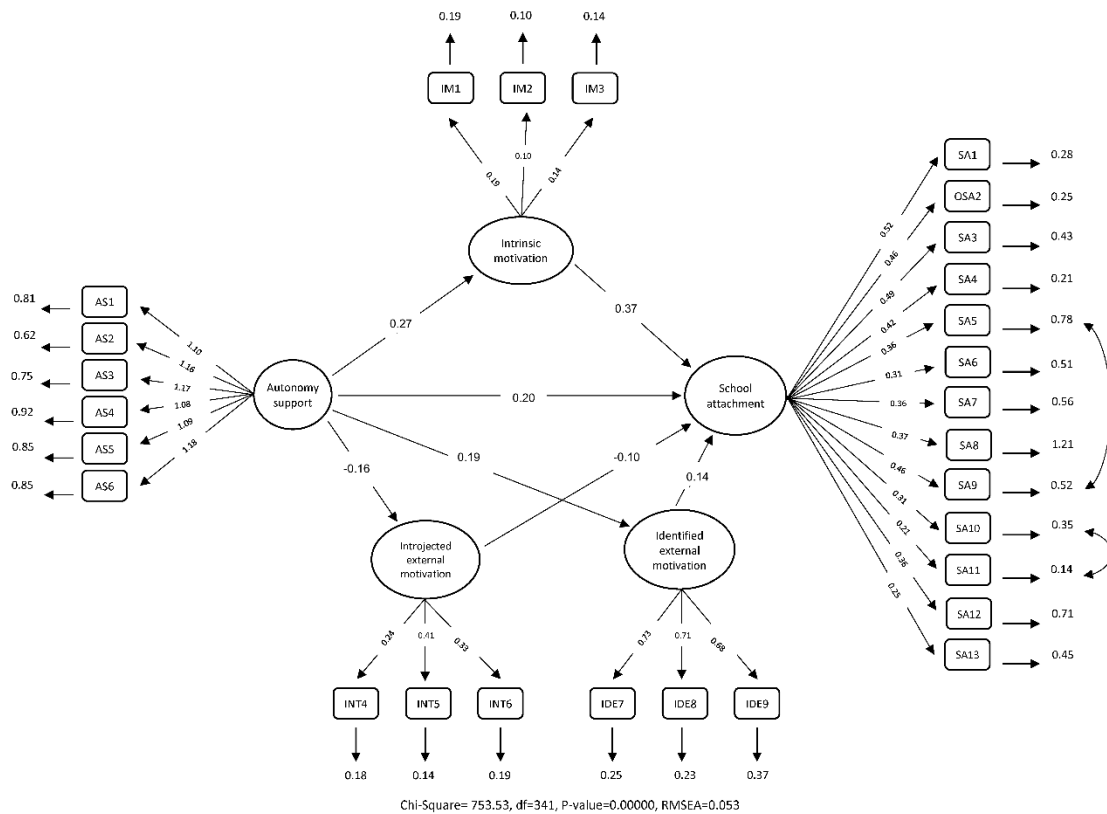


Figure 1. The hypothetical model on the study

As it is laid out in Figure 1, all direct relations are entirely significant. The consistency indices of the model created are shown to be at a good level ($\chi^2/df=2.02$, RMSEA=0.05, NFI=0.89, NNFI=0.93, CFI=0.94, RMR=0.04, GFI=0.87, AGFI=0.85). In addition to this, that autonomy support accounts for 20% of school attachment is evident. Intrinsic motivation explained 37% of school attachment, while the identified external motivation explained 14%, and introjected external motivation explained only 10%. While introjected external motivation is negatively related to school attachment, autonomy support, intrinsic motivation, and identified external motivation could be positively related to school attachment.

We applied the Sobel test for each variable to test the indirect effect of autonomy support on school attachment through motivation types. As a result of the Sobel test, the partial mediating impact of autonomy support on school attachment through intrinsic motivation was significant (2.75, $p < .01$). While the direct effect of autonomy support on school attachment was .20, we observed that its partial mediation effect through intrinsic motivation increased to .30. The indirect effect of autonomy support on school attachment through identified extrinsic motivation was not significant (1.87, $p > .05$). Finally, we tested the mediating effect of autonomy support on school attachment through introjected extrinsic motivation. Sobel test results revealed that introjected extrinsic regulation mediation was not significant (1.69, $p > .05$).

DISCUSSION

This study examines teachers' autonomy support on primary school fourth-grade students' attachment to the school. The research has shown that teacher's autonomy support directly affects students to attach the school. The mediating role of intrinsic motivation in the relationship between teacher autonomy support and student attachment to school made a significant contribution to school attachment. While the direct effect of teacher's autonomy support on school attachment was .20, this value increased to .30 through intrinsic motivation. On the other hand, the mediating role of both the identified regulation and the introjected regulation in the relationship between the teacher's autonomy support and school attachment did not significantly contribute to students' school attachment level. The study's finding that teachers' autonomy support has a predictive role on students' school attachment is consistent with Hallinan's (2008) view that teacher behaviors will affect students' feelings about school. Also, this finding is consistent with the research findings suggesting that one of the factors that make up school attachment is teacher support (Libbey, 2004) and that students in schools with positive student-teacher communication have higher school attachment (Eccles et al., 1993) than the other ones. In other words, teachers' support for autonomy increases students' intrinsic motivation, and consequently, their levels of school attachment increase.

On the other hand, the finding of this research regarding the positive effect of intrinsic motivation on school attachment is consistent with Ryan's and Deci's (2000) view that students with high intrinsic motivation see school as more valuable. Also, the findings of Karaşar and Kapçı (2016), Özdemir (2015) and Demir (2017) suggesting that academic motivation increases students' levels of school attachment is similar to the positive effect of intrinsic motivation on school attachment in this study. The fact that controlled motivation types such as identified regulation and introjected regulation do not significantly affect school attachment suggests that school attachment can only develop in completely free environments where students can behave without doubts and anxiety. Even though the identified and introjected regulations are partially autonomous, they are still alien to individuals' selves since they have been placed or introjected due to internal or external pressures. These qualities of controlled regulations may be one of the reasons why they are not effective in developing school attachment behavior in students.

Although the findings obtained from this study show that teachers' autonomy support affects student attachment to the school directly and indirectly through intrinsic motivation, the correlation coefficients for these effects are pretty low. This situation requires helping teachers improve their current autonomy support practices. For this purpose, some activities to be carried out within the scope of "consultancy services" can be included in school psychological counseling and guidance programs. Thus, school counselors can be an advisor for school administrators, teachers, and other student-related staff in the school so that they can support their students' autonomy more effectively. Also, school counselors can assist teachers in how they can improve students' intrinsic motivation. Such efforts of school psychological counselors will also help all school staff develop a common understanding in activities that can be done to support students' autonomy and improve their intrinsic motivation.

In our study, there are some limitations to consider in interpreting the results. First of all, participants selected from only one province do not allow the research findings to be generalized across the country. Although schools of different socio-economic levels in a region participated in the study, the study sample was a convenience sampling method that requires a generalization of the findings only to schools in the

study sample and similar schools. The fact that the measurement tools used in this study were not suitable for the first three primary education classes made it obligatory to limit the participants to the final grade (4th.grade). For this reason, the age-related change in school attachment did not examine in this study, and the study was limited to only primary school fourth-grade students.

Conclusion

In this study, which investigated the effect of perceived autonomy support and motivation from the teacher on primary school students' school attachment, it was found that the teacher's autonomy support had a significant direct effect on school attachment. While the direct effect of teacher's autonomy support on school attachment was .20, this value increased to .30 through intrinsic motivation. On the other hand, the mediating role of both the identified regulation and the introjected regulation in the relationship between the teacher's autonomy support and school attachment did not significantly contribute to students' school attachment level.

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Author Contribution

This study was conducted by all the authors working together and cooperatively. All of the authors substantially contributed to this work in each step of the study.

Conflict of Interest

It has been reported by the authors that there is no conflict of interest.

Funding

No funding support was received.

Note

This study has been produced Ayse Ayaz's master thesis.

Ethical Statement

This study was completed in accordance with the Helsinki Declaration. In line with this, the study was permitted by Hasan Kalyoncu University, Ethics Committee.

Ethics Committee Name: Hasan Kalyoncu University, Ethics Committee.

Approval Date: 19/11/2021

Approval Document Number: E-97105791-050.01.01-5482