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Evaluating the Student-Teacher Relationship in Elementary Schools: "My Teacher & I-Child"

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Abstract

Empirical evidence from national and international studies suggests that the teacher-student relationship has a great impact on students' academic success, and social and psychological wellbeing. Realizing the importance of this impact, the present study has two main purposes: firstly, to investigate the perceptions of 6–11 year old students in elementary schools in terms of the informational support, emotional support and closeness they receive based on grade level and the demographic characteristics of teachers and students; and secondly, to conduct an adaptation, validity and reliability study of an instrument which can be used in Turkey to investigate STR from the children's perspective of perceived social support. The data was obtained from 338 students. CFA, One-Way ANOVA, Independent Samples t-Tests and Chi-Square tests were employed for the data analysis. According to the results, overall there is no significant difference in students' perceptions based on the grade levels and students' or teachers' gender; however, there are differences among grades on the bases of some scale items in emotional support, informational support and closeness sub-dimensions. Additionally, the CFA revealed that the adapted My Teacher and I-Child Scale's $\chi 2/df$, RMSEA, RMR, SRMR, GFI, and AGFI values are perfectly consistent.

Keywords: Student-teacher relationship, Scale adaptation, Elementary education, Informational support, Emotional support and closeness, Elementary education.
JEL Classification: I20: Genereal Education, 131 General Welfare, Well-Being.

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Contents

1. Introduction

1.1. Student-Teacher Relationship (STR)

A well-functioning school is built on three relational building blocks. According to Riley (2010) these three building blocks are the relationship between the students and teachers from their own perspectives, and the school administration's attitudes toward the formation and preservation of these relationships. The organizational culture in the school has a direct effect on the student-teacher relationship (STR). It has been revealed that in a school where a supportive culture dominates, the students perceive the relationships with the teachers more democratically (İpek, 1999).

Scientific studies since the 1980s have demonstrated that the STR plays a key role in better understanding the behavior of teachers and students in the class, and that the educational process directly affects student outcomes (Roorda *et al*., 2011; Wubbels *et al*., 2012). Despite this fund of knowledge, teachers today are exposed to pressure to increase the academic achievement of children rather than focusing on relationships. For this reason, some very important issues such as teachers working on building strong relationships between teachers and students, and among students themselves, and facilitating children's social and moral development do not attract the attention they deserve in everyday practice (Watson and Ecken, 2003). Whereas, school environments that support only competition for high academic qualifications and grades reduce the motivation for learning in many children, even if they may be positive for some children (Meece *et al*., 2006).

Some studies revealed that a strong STR also has a protective effect on children who have developmental, behavioral and academic risks (Baker, 2006; Decker *et al*., 2007; Searle *et al*., 2013). For example, a recent study has shown that reducing hyperactivity and attentional behavior problems increases children's participation in school activities. The main factor in preventing these behavior problems is the warm and supportive relationships established with the child, which promote the child's self-perception (Searle *et al*., 2013). Reddy *et al*. (2003) found that levels of depression and self-esteem in 6–8th grade students do not influence their perception level of their relationship with their teachers, but rather that the teacher support they perceive affects their levels of depression and self-esteem. Adolescents who think that their teachers are positive about them and are supportive of them are also found to have higher levels of internal motivation to learn (Ivančič and Levpušček, 2016). Children express that they want to be educated in environments where their teachers care and support them cognitively and emotionally (Daniels and Perry, 2003; Knoell, 2012).

When international literature is reviewed, it can be seen that researchers evaluate STR by employing semi-structured interviews conducted with teachers (Aultman *et al*., 2009) and Likert-type scales reflecting only teachers' (Ang, 2005) only students' (Mantzicopoulos and Neuharth-Pritchett, 2003) or both teachers' and students' points of view (Furman *et al*., 1989). Aultman *et al*. (2009) in their qualitative study, examined the STR from a teacher's perspective and tried to explain how teachers describe and form the boundaries within this relationship. As a result of this research it has been shown that it is important for teachers to maintain a balance between healthy classroom control and building a caring and respectful relationship with their students. Ang (2005) developed a 14-item Teacher-Student Relationship Inventory (TSRI) to assess the STR from the teacher's perspective. This scale includes Satisfaction, Instrumental Help and Conflict sub-dimensions.

When the studies in this area are reviewed, it can be seen that instruments grounded on attachment theory and adapted from scales and forms originally developed for parent-child relationships were utilized in the majority of earlier studies. (Fraire *et al*., 2013). While some of them use observation tools that monitor educational interaction to collect data, most of them use assessment tools that include teacher notifications. The most common of these tools appears to be the Student-Teacher Relationship Scale (STRS), which is based on attachment theory, prepared by Pianta (2001). This scale is also adapted to the Italian, Spanish, Greek and Dutch cultures (Tsigilis and Gregoriadis, 2008; Koomen *et al*., 2012; Fraire *et al*., 2013). Pianta's 28-item STRS includes the dimensions of Conflict, Closeness, and Dependency (Beyazkurk and Kesner, 2005). Since the adult-child relationship is influenced by the cultural context, it is important to adapt the tools to be used in the STR analysis to different languages and cultures.

Although they are very few, there are studies that examine younger children's (5–7 years old) perceptions of STR. In these studies, different relational dimensions were examined with different test formats. The 14-item Young Children's Appraisals of Teacher Support (Y-CATS), a measure developed by Mantzicopoulos and Neuharth-Pritchett (2003) examines the STR based on the dimensions of warmth, conflict, and autonomy. In this scale, children are asked to answer questions about their relationship with their teachers by placing their cards in mailbox (true) and trashcan (untrue). As a result of the research, it was revealed that boys' relationships with their teachers are more conflicting compared to those of girls. There was found to be a correlation between children's Y-CATS answers, their academic achievement, and teacher-reported social skills and behavior problems. Murray *et al*. (2008) used My Family and Friends-Child (MFF-C) form as a scale, which was originally developed by Reid *et al*. (1989) for use in interviews with children. The findings demonstrated that the subjective perceptions of children between the ages of 6 and 12 on social support offered to them can be measured in a valid and reliable way and that children perceive and appreciate this support (Reid *et al*., 1989).

When the Turkish literature on STR is reviewed, it can be observed that STR in the early childhood period (Demirkaya, 2013) and STR in primary, secondary and higher education levels were investigated (İpek and Terzi, 2010; Williams, 2012; Yılmaz and Tosun, 2013). In addition to this research, studies on the adaptation of the STR scales for our country are also present (Beyazkürk, 2005; Sahin, 2014). An instrument entitled "Student - Teacher Relationship Scale" (STRS) (Pianta, 2001) which is used extensively in international STR literature, was adapted to Turkish by Zorbaz *et al*. (2016) and Sahin (2014) and an evaluation of its validity and reliability was presented. Similar to international literature, studies that examine the teacher-student relationship of children between the ages of 6 and 12 in Turkey are generally based on the teacher's view (İpek and Terzi, 2010; Demirkaya, 2013; Yılmaz and Tosun, 2013; Zorbaz *et al*., 2016).

Yet, the relationships are twofold and the viewpoints of the learners are important. However, it was not possible to find a study which is based on the student's perception of the teacher-student relationship at early

childhood and elementary education levels. When it comes to the middle school level, only one study that reflects the perspective of the student could be found (Williams, 2012).

1.2. Importance and Purpose of the Study

Almost all of the studies summarized above report on the data obtained from teachers' notifications as regards the student-child relationship (Birch and Ladd, 1997; Howes *et al*., 2000). These studies have created a very valuable basis for educational researchers to better understand the child-teacher relationship today and to be able to produce new studies, while, on the other hand, it creates some limitations in our interpretation of this relationship (Murray *et al*., 2008; Spilt *et al*., 2010). For example, because the perceptions of teachers regarding children and their behavior are affected by the demographic characteristics of the students, such as ethnicity and gender, the answers given may not reflect the actual quality of the relationship or school adaptation (Pigott and Cowen, 2000; Saft and Pianta, 2001; Taylor *et al*., 2001; Ho *et al*., 2012). Another example can be given in relation to the academic outcomes of the teacher-student relationship. Hamre and Pianta (2001) who studied the relationship between teacher perspective, the teacher-child relationship and academic achievement, have stated that this relationship explains the variance of students' academic outcomes. However, in another study, when a different assessment method such as exam marks or standard test scores was selected instead of academic performance assessed by the teacher, the teacher's perception of the STR did not explain the variance in academic performance (Decker *et al*., 2007).

It is very difficult to collect valid and reliable self-reporting data from children (Fraire *et al*., 2013). Therefore, many studies at international and national level, which assess children's relationships with their family or teachers, are based on the interpretations made by parents and teachers based on the child's behavior (especially in early and middle childhood). It is important to keep in mind that there may be a difference between the results of self-reporting measures and concrete results from observations of actual behavior. Although there are limitations in the studies that use children's own assessments as the only source of data (Woolley *et al*., 2004) this does not indicate that understanding children's internal assessments is insignificant (Olson, 1977). On the contrary, the ways in which children perceive relationships and the mental representations they make in relation to these relationships play a decisive role in their psycho-social development (Lynch and Cicchetti, 1997). There are also studies that show significant concurrence between the ways children perceive relationships and the way parents and siblings perceive relationships (Furman *et al*., 1989).

The child-adult relationship is a co-built dyadic structure that is influenced by the characteristics of both the child and the adult (Henk, 2006). For this reason, it is critical to examine the child's perspective of their relationship with their teacher in order to better understand the teacher-student relationship (Spilt *et al*., 2010). Even if the teacher or parent reports are rich sources of information, they should not be a substitute for the child's own views (Varni *et al*., 2007; Spilt *et al*., 2010). However, studies that cover the first years of the educational period and examine the STR in this timeframe from the child's perspective are scarce (Lynch and Cicchetti, 1997; Baker, 2006). Although there are only a few studies that have examined this relationship based on the students' points of view in international literature (Murray *et al*., 2008; Spilt *et al*., 2010) no Turkish scale to examine the STR from a child's perspective could be found in the national literature review.

Realizing this gap, the present study has two main purposes: 1) to investigate elementary school students' perceptions of informational support, emotional support and closeness based on grade level and demographic characteristics of teachers and students; and 2) to conduct an adaptation, validity and reliability study of an instrument which can be used in Turkey to investigate STR from the children's perspective of perceived social support.

2. Method

2.1. Study Group

The present study included two separate groups of student participants. First group was recruited for the scale adaptation purposes. For the scale adaptation study, data was collected from 300 children (138 female and 162 male) who were selected from primary school students at different grade levels by using a typical group sampling method. A sample over 200is considered as a large sample and the error rate is lower in the small sample than the large sample. For scales with a small number of items, it is recommended that 20 times the amount of items be taken (Kline, 2005). Simple sizes can be evaluated in this category and it can be said that the study groups are large enough for validity-reliability analyses. The descriptive dimension of the study conducted on a separate group of children selected by using a typical group sampling method among primary school students at different grade levels. This method of sampling requires the collection of information from a sample through the determination of a typical situation from a large number of situations related to the research question (Büyüköztürk, 2010). To collect data, a total of 338 elementary school students, 152 girls and 186 boys (X = 7.4, ss = 1.01), were selected. The age range of the elementary school students in the study group was between 6 and 11.

2.2. Data Collection Tool

My Teacher and I-Child (MTI-C) scale. My Family and Friends-Child (MFF-C) scale, which was originally developed as a My Family and Friends interview form by Reid et al. in 1989, was transformed into a scale by Murray *et al*. (2008) by modifying the related items based on the student-teacher relationship (STR). Since the Turkish version of the scale focuses only on the STR, the name was changed to *My Teacher and I-Child (MTI-C)*. The scale contains a two-stage structure for each item. The first stage of each question requires the student to answer in the form of "yes" or "no." This first section assesses whether the child has received a certain type of support from his teacher. If the children say "no," a "0" score is given. If the children give a "yes" answer, they move on to the second stage. The second stage requires students to state their ratings for the perceived level of support. These support types are listed as four different factors on the scale. These factors are informational support, emotional support, closeness and conflict. The children need to answer the second part of the question with a feeling barometer that contains four levels (I feel no happiness; I don't feel very happy, I feel a little happy, I

feel very happy). The informational support factor of the original scale contains three items and accounts for 24.9% of the total variance (α = .65). The emotional support factor contains four items and accounts for 11.4% of the total variance (α = .51). The Closeness Factor contains three items and accounts for 10.9% of the total variance (α = .46). The Conflict factor contains one item and accounts for 9.6% of the total variance (α = 0.67).

2.3. Data Analysis and Processes

In order to achieve a reliable and valid adapted scale which is equivalent to the original version, there were several procedures to follow (Beaton *et al.*, 2000) and different approaches to employ (Hançer, 2003) in scale adaptations from one culture to another. In the present study, adaptation procedures were begun by requesting permission via e-mail from Murray *et al.* (2008) who converted the My Family and Friends interview form to the My Friends and Family-Child Scale and who conducted the first validity and reliability study on the scale. After securing their approval, work on adapting the scale to the Turkish context started.

In order to ensure the validity of the language, the first step in adaptation was the translation from English, the source language, to Turkish, the target language, which was conducted independently by two language specialists and two field specialists. The two language specialists did not have a background in education or related fields and were not informed about the research topic. Their translations were intended to reflect the language used in society colloquially. Field specialists were selected from the departments of elementary education and special education. Their translations were used to achieve a better equivalency from an educational perspective and evaluation standpoint. As a second step, the four translators and the researchers conducted a meeting to synthesize the translations. Scale items in the original and the translated forms were evaluated in order to achieve perfect concordance in terms of meaning and content, and some words were replaced with their synonyms. In this way, a first draft of the Turkish scale was obtained. The third stage was a blind translation of the draft back into English by two native speakers; this was to ensure the items, directions, and explanations in the Turkish version reflected the same meaning and content as in the original document and to prevent any conceptual errors. In the fourth stage, field experts and researchers reviewed the final draft version of the scale in terms of semantic, idiomatic, experiential and conceptual equivalency. The scale title has been changed from My Family and Friends-Child (MFF-C) to My Teacher and I-Child (MTI-C) to achieve better congruity with its new use and culture with respect to item content. After the processes of linguistic adaptation were completed, a pilot study was conducted. In this pilot study, comprehension and cognitive equivalence of the final draft MTI-C were examined through interviews with 35 elementary education students aged between 6 and 11. Findings demonstrated that the total t value of each item was higher than 1.96 ($p < .05$) and the internal consistency coefficient was .59. Missing data, extreme value, normality, linearity and multicollinearity analyses were performed on the raw data in the process of adapting the scale.

In scale adaptation studies, Explanatory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) are generally used. EFA is used when there is no prior knowledge of how the variables included in the analysis would be related to each other, whereas CFA is utilized for the verification of the scale adaptation to other cultures or groups when the sub-dimensions of the scale are previously determined and the relationships between measured variable and latent variables are known (Tabachnick and Fidell, 2001; Kline, 2005; Byrne, 2010; Çokluk *et al.*, 2010). Since the relationship between the variables in the MTI-C scale was specified previously, CFA was selected in the present study. Multiple compliance indices (RMR, REMSEA, SRMR, and CFI) are used in CFA. The following measurements were considered: in CFA >.90 is the acceptable limit for CFI and >.95 is the excellent compliance limit (Tabachnick and Fidell, 2001; Ullman, 2001; Kline, 2005); for RMSEA, SRMR and RMR, <.08 is the acceptable boundary and <.50 the excellent matching limit and LISREL 8.7 was used for CFA and SPSS 20 was used for One-Way-Anova and Chi-square analysis.

3. Findings

3.1. Construct Validity

Confirmatory factor analysis (CFA). Confirmatory factor analysis is a type of analysis conducted to test the validity of a measurement tool developed in a different culture or sample in a new sample or culture (Seçer, 2015); (Tabachnick and Fidell, 2001). An adaptation of the MTI-C scales model in Turkish culture was examined with first level CFA. CFA results were assessed using model fit indexes. For the first level CFA result, which was conducted to determine MTI-C scale's model consistency, it was found that the chi-square consistency value of the factor structure consisting of ten items and three factors was significant ($\chi 2 = 64.12$, sd = 32, p = .000 and the $\chi 2$/df value about the model consistency was 2.00. Fit index values were found to be RMSA: .033, RMR: .011, SRMR: .050, CFI: .90. The findings of the first-level CFA examination into the model consistency of the three-factor structure of My Teacher and the I-Child Scale (MTI-C) are given in Table 1.

Table-1. Findings related to the First Level Confirmatory Factor Analysis

Index	Excellent Criteria for Consistency	Acceptable Criteria for Consistency	Research Finding	Result
$\chi 2$/df	0–2	2–3	2.00	Perfect fit
RMSEA	≤.05	≤.08	.033	Perfect fit
RMR	≤.05	≤.08	.011	Perfect fit
SRMR	≤.05	≤.08	.050	Perfect fit
CFI	≥.95	≥.90	.91	Acceptable fit
IFI	≥.95	≥.90	.91	Acceptable fit
GFI	≥.90	≥.85	.96	Perfect fit
AGFI	≥.90	≥.85	.94	Perfect fit

Considering the fit index values presented in Table 1, while χ2 /df, RMSEA, RMR, SRMR, GFI and AGFI values are found to be at a perfect level of fit, the fit indexes of model related to CFI, IFI values are at an acceptable level (Tabachnick and Fidell, 2001; Ullman, 2001; Kline, 2005). The flow chart for the first level CFA related to MTI-C Scale is given in Figure 1.

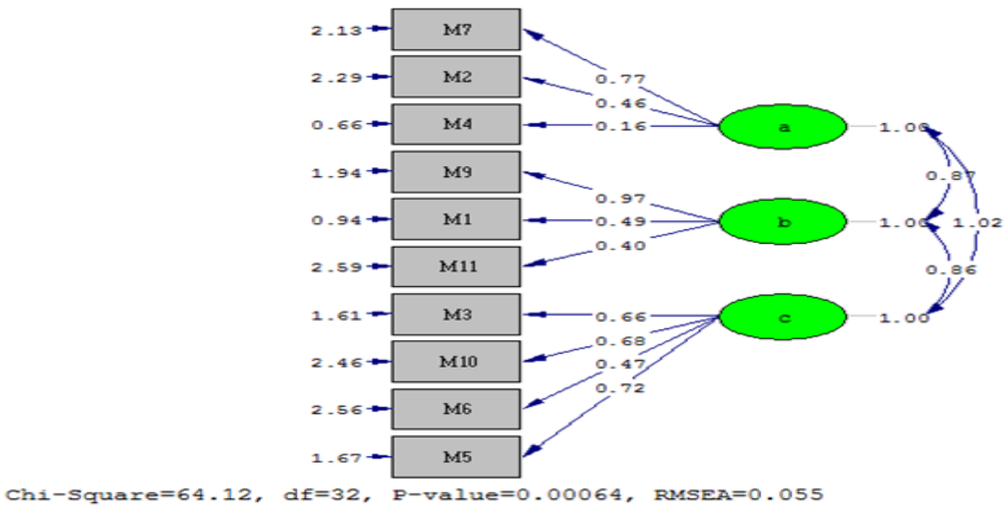

Figure-1. CFA Result on MTI-C Scale (a = Informational Support, b = Emotional Support, c= Closeness)

Table 2. shows the information on the standardized loads, t-values and regression coefficients (R^2) belonging to the indicators in the model.

Table-2. Standardized Loads, t-Values and Regression Coefficients (R^2) belonging to the Indicators in the Model

	Load (λ)	**t**	**R²**
M1 (item 1)	.49	6.46	.17
M2 (item 2)	.46	4.03	.09
M3 (item 3)	.66	6.86	.21
M4 (item 4)	.16	2.76	.04
M5 (item 5)	.72	7.18	.03
M6 (item 6)	.47	4.20	.08
M7 (item 7)	.77	5.23	.22
M9 (item 9)	.97	7.54	.33
M10 (item10)	.68	5.93	.16
M11 (item 11)	.40	3.48	.06

Table 2 demonstrates that the factor loads of the items vary from .40 to .97 except in item four, where the factor load is .16 and the variance explained in the model is .04. It was intended that this item be removed from the measurement in these circumstances, but given that the value of *t* was 2.76 (p <.05), it was decided that it should remain on the scale. Also, item 8 included in the "Closeness" factor of the scale was removed from the scale when its t value was found to be below 1.96, and the values were re-examined.

In the analysis made for the reliability study of the scale, the internal consistency Cronbach value was .59. Murray *et al.* (2008) reported a Crombach alpha value of .67 for the entire scale. Values between .40 and .60 are considered as weak but reliable (Özdamar, 1999). Additionally, the low number of items of scale may have reduced the reliability score. Therefore, we decided to examine the construct validity. The structural reliability of the MTI-C scale and the test repeatability was found to be .64 and .67 respectively. Highest and lowest possible scores on the scale are 40 and 0 respectively. As a conclusion, the three-factor structure of the "MTI-C Scale" was found to be usable in Turkey with the name "My Teacher and I-Child (MTI-C)" for children between the ages of six and eleven.

3.2. Teacher-Student Relationship Based on the Grade Level

Table-3. One-Way Analysis of Variance of Elementary Education Students' Student-Teacher Relationship Scores based on Grade Levels

Source of Variance	**Total of Squares**	**sd**	**Average of Squares**	**F**	**p**
Inter-groups	67.722	3	7.439	.484	.694
Intra-groups	15592.683	334	13.88		
Total	15660.404	337			

According to the results of the analysis, the teacher-student relationship does not differ with respect to the total scores according to the grade level attended (F (3,334) = .484, p > .05). However, when examined in terms of subscale total scores, it was found that there were significant differences between some of the items in the factor dimensions according to grade level attended. The results of the Chi-Square for teacher-student relationship level according to the grade level attended for these items are presented in Table 4.

Table-4. Chi-Square Results on the Informational Support Factor in STR Based on the Grade Attended

Items	Ratings	Grades								Chi-Square		
		1		2		3		4		x^2	sd	p
		%	f	%	f	%	f	%	f			
2a. When you need help with doing your school work, like learning the alphabet, do you ask (teachers' name) for help? Y N 2b. If you go to your teacher for help with school work, how helpful is he/she?	0 (No)	32	21	30	27	11	12	21	15	47.42	15	.000*
	1	0	0	1	1	0	0	0	0			
	2	8	5	12	10	2,7	3	2,7	2			
	3	15	10	27	24	32	35	11	8			
	4	45	30	30	37	55	60	66	48			
	T	100	66	100	89	100	110	100	73			
4a. When you want someone to help you learn how things work, like how to build something, do you ask (teacher' name) to tell you? 4b. How much do you learn about how things work from your teacher?	0	33	22	24	21	27	30	32	23	8,39	12	.672
	1	1,5	1	1,1	1	0	0	0	0			
	2	4,5	3	4,5	4	5,5	6	2,7	2			
	3	14	9	24	21	20	22	26	19			
	4	47	31	47	42	47	52	40	29			
	T	100	66	100	89	100	110	100	73			
7a. When you need help putting on your shoes or coat, do you go to your teacher for help? 7b. If you go to your teacher for help putting on your shoes or coat, how helpful is he/she?	0	12	8	27	24	27	30	30	22	26,28	12	.010*
	1	0	0	1	1	2	2	1,4	1			
	2	12	8	1	1	5,5	6	6,8	5			
	3	26	17	11	10	14	15	25	18			
	4	50	33	60	53	52	57	37	27			
	T	100	66	100	89	100	110	100	73			

Table 4 demonstrates a significant difference between the answers to the "informational support" factor of the students who attend different academic grades. While the first graders gave the answer "no" (32%) mostly to questions such as "When you need help with doing your school work, like learning the alphabet, do you ask (teacher's name) for help?," in the second part of the same item, "the class that thought the teacher was most helpful" was the fourth grade (66%). In other words, there is a significant difference between students' responses based on grade level in terms of asking for help from their teacher in tasks related to school x^2 (sd = 15, n = 338) = 47.42,p ≤ .05. In the example of wearing coat and shoes, 88% of the first graders stated that they asked for help, while the fourth graders (37%) reported that they had received the least amount of help when they asked for help. In other words, asking for help in self-help tasks is significantly different between grade levels x^2 (sd = 12, n = 338) = 26.28, p ≤ .05.

Table-5. Chi-Square results on the "Emotional Support" Factor in STR Based on the Grade Attended

Items	Ratings	Grades								Chi-Square		
		1		2		3		4		x^2	sd	p
		%	f	%	f	%	f	%	f			
1a. When you want to share your feelings, for example when you feel happy or sad, do you share them with your [teacher's name] teacher? 1b. How much better do you feel when you share your feelings with your teacher?	0 (No)	15	10	23	20	26	28	36	26	26.57	15	.000*
	1	0	0	0	0	1	1	0	0			
	2	1	1	4,5	4	9	10	1,4	1			
	3	20	13	15	13	22	24	21	15			
	4	64	42	58	52	43	47	43	31			
	T	100	66	100	89	100	110	100	73			
8a. If you want to be with someone who makes you happy, would you go to your teacher? 8b. How happy do you feel if you are with your teacher?	0	29	19	28	25	22	24	29	21	17.85	12	.120
	1	0	0	0	0	0	0	0	0			
	2	0	0	1	1	4	4	6	4			
	3	9	6	12	11	13	14	17	13			
	4	62	41	59	52	62	68	48	35			
	T	100	66	100	89	100	110	100	73			
10a. Do you want help from your teacher when there is something you do not know much about? 10b. If you go to your teacher for help, how much do you learn from him/her?	0	18	12	16	14	13	14	26	19	24,08	15	.640
	1	0	0	0	0	1	1	1,4	1			
	2	8	5	8	7	6	8	1,4	1			
	3	15	10	22	20	21	23	33	24			
	4	59	39	54	48	58	64	38	28			
	T	100	66	100	89	100	110	100	73			

Table 5 demonstrates a significant difference between the answers to the "emotional support" factor of the students who attend different academic grades. In response to "When you want to share your feelings, for example when you feel happy or sad, do you share them with your [teacher's name] teacher?," while the fourth graders gave the answer "no" (36%) the most, in the second part of the same item, "the class that felt best when they shared their feelings" emerged as the first grade (64%). In other words, the levels at which students share their feelings with the teacher is significantly different according to the class level, x^2(sd = 1, n = 338) = 47.42, p ≤ .05.

Table-6. Chi-Square results on the "Closeness" Factor in STR Based on the Grade Attended

Items	Ratings	Grades								Chi-Square		
		1		2		3		4		x^2	sd	p
		%	f	%	f	%	f	%	f			
3a. Does your teacher say things that make you feel good about yourself? 3b. How good does (teacher's name) make you feel about yourself?	0 (No)	6	4	6	5	1,8	2	1,4	1	17,26	12	.140
	1	0	0	0	0	1,8	2	0	0			
	2	0	0	0	0	2,7	3	0	0			
	3	4	6	12,4	11	14	15	14	10			
	4	89	58	82	73	80	88	85	62			
	T	100	66	100	89	100	110	100	73			
5a. Do you get upset or angry with your teacher, even if you don't show it to him/her? 5b. How angry or upset do you get with your teacher, even if you don't show it?	0	64	42	30	27	28	31	18	13	56,67	12	.000*
	1	9	6	6,7	6	15	16	4	3			
	2	14	9	11	10	20	22	27	20			
	3	1,5	1	21	19	12	13	21	15			
	4	12	8	30	27	25	28	30	22			
	T	100	66	100	89	100	110	100	73			
6a. When you do something good at school that makes you feel really happy, like making a beautiful picture, do you tell (teacher's name)? 6b. If you tell your teacher about these good things, how happy does it make you feel?	0	3	2	5	4	8	9	12	9	23.76	12	.022*
	1	2	1	1	1	0	0	0	0			
	2	0	0	2	2	3	3	4	3			
	3	5	3	10	9	8	9	21	15			
	4	90	60	82	73	81	89	63	46			
	T	100	66	100	89	100	110	100	73			
9a. Do you ever feel like (teacher's name) really understands you or really knows you? 9b. How much does your teacher really understand or know you?	0	32	21	28	25	40	44	34	25	24.24	12	.019
	1	0	0	0	0	4	4	1,4	1			
	2	6	4	8	7	10	11	4,1	3			
	3	18	12	34	30	29	32	32	23			
	4	44	29	30	27	17	19	29	21			
	T	100	66	100	89	100	110	100	73			

When Table 6 is examined, a significant difference can be seen in the responses given to items 5 and 6 in the "closeness" factor by students at different grades. The biggest difference can be observed between the first and fourth grades. Among the four grade levels, the percentages of children who do not feel angry toward their teachers is highest in the first grade (64%), while it is lowest in the fourth grade (18%). In other words, there is a significant difference between the grade levels in terms of feeling angry toward the teacher: $x^2(sd = 12, n = 338) = 56.67$, $p \leq .05$. The results demonstrate that first graders share with their teachers most frequently (90%) when they do something good at school and feel the most happiness as a result of this sharing. The student group which expresses that the teacher understands and recognizes them most is also the first graders (44%). When we examine all of the grade levels who participated in the study, about 30% of the students stated that the teachers do not know and understand them.

Teacher-student relationship and demographic characteristics. The students' views on the teacher relationship were not significantly different when analyzed based on the students' gender, $t(336) = .207$, $p \geq .05$. According to the results of the chi-square analysis of total scores for this item, the percentages of female students (64.8%) feeling happy when they are with their teachers are higher than male students (51.4%). Likewise, when they are informed by the teacher, girls feel better at a higher level (87.3%). Teachers' gender did not have any significant difference on the teacher-student relationship, $t(336) = 1.174$, $p \geq .05$. When evaluating teachers' seniority and student views, there is a significant difference in the "emotional support factor" according to teachers' seniority status. Results related to the subject are presented in Table 7.

Table-7. One Way ANOVA results for the "Emotional Support" Factor in STR based on the Teacher Seniority Level

Source of Variance	Total of Squares	sd	Average of Squares	F	p
Inter-groups	51.405	1	51.405	4.65	.032
Intra-groups	3718.145	336	11,066		
Total	3769.550	337			

According to the results of the analysis, the teacher-student relationship emotional support dimension differs based on the teachers' levels of seniority ($F(1,336) = 4.65$, $p \leq .05$. Teachers with seniority of 15 years or more offer emotional support to their students more than teachers with lower levels of seniority. Informational support and closeness factors do not differ according to the seniority level, $p \geq .05$.

4. Discussion and Conclusion

One of the most important factors affecting the quality of STR, which is bilateral in nature, Henk (2006) is the cultural context in which the child and the teacher live (Hofstede, 1986; Pianta *et al.*, 2002; Crosnoe *et al.*, 2004). Along with the increase in multinational and multicultural scientific research, the need to adapt assessment and measurement tools to different languages and cultures has also increased (Beaton *et al.*, 2000). This study focuses on the adaptation and validation of the MFF-C scale developed in the United States to the context of Turkey.

Perceived levels of STR by children is important in terms of their academic achievement, academic self-esteem, behavioral, social and emotional adjustment (Reddy *et al.*, 2003; Murray and Malmgren, 2005; Hughes *et al.*, 2012; Knoell, 2012; Sakiz, 2017). Despite the importance of the matter, when the relevant national and international literature is reviewed, the lack of information on the nature and the developmental course of STRs during the primary education level, especially covering the mid-childhood years, is striking (Baker, 2006).

The driving force for this research was the need for a tool which would save the researchers from the limitations of methods based merely on teachers' (or adults') opinions, and which can be used in education, psychology and other related fields in order to reveal the children's perception toward STR at elementary school level in Turkey. The My Family and Friends-Child (MFF-C) form prepared by Reid *et al.* (1989) was converted to a scale with an identical name by Murray *et al.* (2008). When adapting the scale into Turkish, the name of the scale was changed to My Teacher and I-Child (MTI-I), since the focus of the instrument was on the relationship between students and teachers. In the process of adapting the scale to Turkish culture, the focus was first on ensuring linguistic validity, and expert opinions were sought for this purpose. After piloting the study and making the necessary adjustments, the scale was finalized (Beaton *et al.*, 2000; Hançer, 2003; Cha *et al.*, 2007).

Factor loadings of the items range from .40 to .97, except for Item 4. It was observed that, while the factor load for Item 4 was .16, the variance explained by this item in the model was .04. At first, this item was going to be excluded from the measurement based on the values mentioned above; however, when its t value was found to be 2.76 ($p < .05$), Item 4 was kept in the scale. Item 8 included in the "Closeness" factor of the scale was removed from the scale when its t value was found to be below 1.96, and the values were re-examined. For Item 5, the LİSREL program gave an error since it was the sole item included in the "Conflict" factor in the original scale and the program suggested that it should be included in the "closeness" factor. Factor analysis is a statistical method aimed at finding and exploring a small number of unrelated and conceptually meaningful new variables (factors) by combining p number of variables (Büyüköztürk, 2010). As a result of these analyses, after dropping the "Conflict Factor," the final version of the adapted scale included three sub-dimensions.

The Original MFF_C scale containing four factors (Closeness, Conflict, Emotional and Informational Support) and 11 items Murray *et al.* (2008) was transformed into its Turkish version containing three factors (Closeness, Emotional and Informational Support) and 10 items [by removing Item 8 ($t = 1.55$; $p > .05$)]. The model fit of the three-factor structure of the scale was tested with first level CFA. As a result of first level CFA, the three- factor structure of the MTI-C form was found to be perfectly consistent in terms of the model fit indices (RMSA:0.33, RMR: .011, SRMR: .050 and CFI: .91) and it was concluded that the scale had model fit. In the analyses made for the reliability study of the scale, the internal consistency Cronbach value was .59. Murray *et al.* (2008) reported a Cronbach alpha value of .67 for the entire scale. Values between .40 and .60 are regarded as weak but reliable (Özdamar, 1999) and a low number of items on the scale can reduce the reliability scores (MTI-C form contains 11 items). For this reason, it was decided to examine the structural reliability of the scale. The structural reliability value of the MTI-C scale was found to be .64 and test-retest reliability was found to be .67. In the study conducted in 1989, the test-retest reliability of the MFF scale was calculated as .69 using interclass correlation coefficient value .69 (Reid *et al.*, 1989). As a result, it is concluded that a three-factor structure of "MTI-C Scale" can be used in Turkey for children aged between 6 and 11.

In the current study, the internal consistency of the MTI-C scale Cronbach alpha value was calculated as .59. This value is similar to the findings of Reid *et al.* (1989) who used the first version of this scale. Reid *et al.* (1989) reported the internal consistency coefficient (Cronbach's Alpha) of the scale as $\alpha = .61$ for non-family members. The internal validity for the entire MFF scale was .72. The Emotional Support dimension emerged as the sub-dimension with the highest internal validity. In this subscale, the internal validity of emotional support from teachers was reported as .78. Wolchik *et al.* (1989) reported that the internal consistency coefficient for the MFF scale ranged from .28 to .97 and the median test-retest coefficient was .70.

In addition to the CFA, it has also been investigated whether the STR varies according to class level, gender and teachers' professional experience. For this sample, when the whole scale is assessed, the perceptions of the STR do not differ according to the academic grade level. This finding contradicts the results of Lynch and Cicchetti (1997) who worked with older age groups. 2nd–5th grade students describe their relationships with their teachers as more reliable than 6–8th grade students. This is thought to be the effect of adolescence during which children shift from adult-centered to peer-centered relationships (Lynch and Cicchetti, 1997).

However, the differences according to the grade level in some items that were included in the factors of the MTI-C scale attract attention. When the items in the Informational Support sub-dimension are examined in Table 4, it is seen that the 1st graders stated that they cannot ask their teacher for support while they are doing their school related tasks (Item 2); however, they can get support from their teachers for wearing their coat and shoes (Item 7). For the 4th graders, the situation is the opposite for these two items. In the first years of elementary education in our country, children have an intense relationship with a single teacher. This period is also the period when children are relatively dependent on their teachers in many skills such as self-care. Similar to our child participants, Turkish teachers report significantly more dependency in their relationships with students as compared to their counterparts in the US (Beyazkürk, 2005). As the grades advance, however, the weight of academic duties increases, the number of teacher-student interactions decreases, and the student becomes more independent from the teacher, and in addition, new teachers enter the child's life. The findings related to the 4th graders can be explained by the inconsistencies occurring in children's lives due to the changes addressed above, and by the onset of children building mostly functional relationships with their teachers as required by school life (Lynch and Cicchetti, 1997).

Similarly, there is a significant difference between grades 1 and 4 in item 1 in the Emotional Support Factor and items 5 and 6 in the Closeness Factor. First graders are those who like to share their emotions with their teachers and who think the teacher is well acquainted with them the most; the fourth graders are those who are most upset or angry at what the teacher does. The fact that 30% of all participants think that their teachers do not know them is a remarkable finding. Teachers have to act within boundaries, such as emotional, personal, institutional, curriculum, and relationship boundaries, when dealing with their students. Many find themselves in a dilemma where they wish to establish close relationships with their students, and at the same time they also have to provide classroom control (Aultman *et al.*, 2009).

The study results revealed that the gender of the teacher did not make a significant difference on the children's perceptions with respect to the STR. However, female participants of the present study reported that they feel happier than boys when they are with their teachers. Ivančič and Levpušček (2016) study, working with a higher

age group, found that boys perceive their interaction with class teachers more negatively than their female classmates. There are studies evaluating the effect of the gender variable on the STR at various educational levels. Girls at high school level view their relationships with their teachers more positively, especially when they first start school (Lynch and Cicchetti, 1997; Reddy *et al*., 2003). Differences regarding gender are expressed in studies based on the teachers' opinions. Teachers describe their relationship with female students as closer and less conflicting compared to male students (Hamre and Pianta, 2001; Baker, 2006). According to the students who participated in the study, teachers who have 15 years and more professional experience provide more Emotional Support compared to less experienced teachers. On the other hand, Informational Support and Closeness factors do not differ according to seniority level.

In conclusion, the results of the present study demonstrate that the MTI-C Scale, the Turkish version of MFF-C, is a reliable and valid tool for evaluating the teacher-student relationship in Turkey for children from grades 1 to 4. This finding has important implications for teacher educators, policy makers and researchers especially in the fields of education and psychology.

5. Limitations

This study contributed a valid and reliable scale to be used in Turkey for developing a better understanding of STR from the child's perspective. Through this study a valid and reliable scale has been contributed to the literature on this topic. However, it should be kept in mind that the scale would only reflect the students' subjective points of view. Therefore, using other data collection methods such as interviews and in-class observations would strengthen research projects investigating STRs.

References

Ang, R.P., 2005. Development and validation of the teacher-student relationship inventory using exploratory and confirmatory factor analysis. The Journal of Experimental Education, 74(1): 55-74. Available at: https://doi.org/10.3200/jexe.74.1.55-74.

Aultman, L.P., M.R. Williams-Johnson and P.A. Schutz, 2009. Boundary dilemmas in teacher–student relationships: Struggling with "the line". Teaching and Teacher Education, 25(5): 636-646. Available at: https://doi.org/10.1016/j.tate.2008.10.002.

Baker, J.A., 2006. Contributions of teacher–child relationships to positive school adjustment during elementary school. Journal of School Psychology, 44(3): 211-229. Available at: https://doi.org/10.1016/j.jsp.2006.02.002.

Beaton, D.E., C. Bombardier, F. Guillemin and M.B. Ferraz, 2000. Guidelines for the process of cross-cultural adaptation of self-report measures. Spine, 25(24): 3186-3191. Available at: https://doi.org/10.1097/00007632-200012150-00014.

Beyazkürk, D., 2005. The effects of banking time intervention program on student–teacher relationships during preschool period. Unpublished Doctoral Thesis. Izmir: Ege Universitesi Sosyal Bilimler Enstitusu.

Beyazkurk, D. and J.E. Kesner, 2005. Teacher-child relationships in Turkish and United States Schools: A cross-cultural study. International Education Journal, 6(5): 547-554.

Birch, S.H. and G.W. Ladd, 1997. The teacher-child relationship and children's early school adjustment. Journal of School Psychology, 35(1): 61-79. Available at: https://doi.org/10.1016/s0022-4405(96)00029-5.

Büyüköztürk, Ş., 2010. 11th Edn., Handbook of data analysis for social sciences: Statistics, research design, SPSS applications and interpretation. Ankara: Pegem Publishing.

Byrne, B.M., 2010. 2nd Edn., Structural equation modeling with AMOS: Basic concepts, applications, and programming. New York: Routledge/Taylor & Francis.

Cha, E.-S., K.H. Kim and J.A. Erlen, 2007. Translation of scales in cross-cultural research: Issues and techniques. Journal of Advanced Nursing, 58(4): 386-395.

Çokluk, Ö., G. Şekercioğlu and y. Büyüköztürk, 2010. Multivariate statistics for the social sciences: SPSS and LISREL applications. Ankara: Academia Pegem.

Crosnoe, R., M.K. Johnson and E.J.G. H, 2004. Intergenerational bonding in school: The behavioral and contextual correlates of student-teacher relationships. Sociology of Education, 77(1): 60-81. Available at: https://doi.org/10.1177/003804070407700103.

Daniels, D.H. and K.E. Perry, 2003. Learner-centered" according to children. Theory into Practice, 42(2): 102-108. Available at: https://doi.org/10.1353/tip.2003.0012.

Decker, D.M., D.P. Dona and S.L. Christenson, 2007. Behaviorally at-risk African American students: The importance of student–teacher relationships for student outcomes. Journal of School Psychology, 45(1): 83-109. Available at: https://doi.org/10.1016/j.jsp.2006.09.004.

Demirkaya, P.N., 2013. Examination of the student-teacher relationship of students with and without special need for kindergarten. Unpublished Master's Thesis, Ankara: Ankara University Faculty of Educational Sciences.

Fraire, M., C. Longobardi, L.E. Prino, E. Sclavo and M. Settanni, 2013. Examining the student-teacher relationship scale in the italian context: A factorial validity study. Electronic Journal of Research in Educational Psychology, 11(3): 649-664.

Furman, W., L. Jones, D. Buhrmester and T. Adler, 1989. Children's, parents', and observers' perspectives on sibling relationships. In sibling interaction across cultures. New York: Springer.

Hamre, B.K. and R.C. Pianta, 2001. Early teacher–child relationships and the trajectory of children's school outcomes through eighth grade. Child Development, 72(2): 625-638. Available at: https://doi.org/10.1111/1467-8624.00301.

Hançer, M., 2003. Translation of scales from one language to another, and different approaches used. Balıkesir University Journal of Institute of Social Sciences, 6(10): 47-61.

Henk, J.K., 2006. Dyadic reciprocity in the emerging relationship between low-income African American mothers and their toddlers (Doctoral Dissertation, University of Missouri--Columbia).

Ho, H., M. Gol-Guven and S.J. Bagnato, 2012. Classroom observations of teacher–child relationships among racially symmetrical and racially asymmetrical teacher–child dyads. European Early Childhood Education Research Journal, 20(3): 329-349. Available at: https://doi.org/10.1080/1350293x.2012.704759.

Hofstede, G., 1986. Cultural differences in teaching and learning. International Journal of Intercultural Relations, 10(3): 301-320.

Howes, C., L.C. Phillipsen and E. Peisner-Feinberg, 2000. The consistency of perceived teacher–child relationships between preschool and kindergarten. Journal of School Psychology, 38(2): 113-132. Available at: https://doi.org/10.1016/s0022-4405(99)00044-8.

Hughes, J.N., J.-Y. Wu, O.-M. Kwok, V. Villarreal and A.Y. Johnson, 2012. Indirect effects of child reports of teacher–student relationship on achievement. Journal of Educational Psychology, 104(2): 350. Available at: https://doi.org/10.1037/a0026339.

İpek, C., 1999. Organizational culture and teacher-student relationship in private high schools with official high schools. Educational Administration in Theory and Practice, 19(19): 411-442.

İpek, C. and A.R. Terzi, 2010. Determination of teacher-student relations in primary and secondary schools according to teachers' views: The case of Van province. Journal of Educational Administration in Theory and Practice, 16(3): 433-456.

Ivančič, K.Š. and M.P. Levpušček, 2016. The motivational objectives and the academic performance from the perspective of the quality perceived by the students of the relationship with their class teachers at the beginning of the level of upper secondary education. Solsko Polje, 27(1/2): 113.

Kline, R.B., 2005. Principles and practice of modeling structural equations. 2nd Edn., New York/London: Guilford Press.

Knoell, C.M., 2012. The role of the student-teacher relationship in the lives of fifth graders: A mixed methods analysis. Lincoln, USA: University of Nebraska.

Koomen, H.M., K. Verschueren, E. van Schooten, S. Jak and R.C. Pianta, 2012. Validating the student-teacher relationship scale: Testing factor structure and measurement invariance across child gender and age in a dutch sample. Journal of School Psychology, 50(2): 215-234. Available at: https://doi.org/10.1016/j.jsp.2011.09.001.

Lynch, M. and D. Cicchetti, 1997. Children's relationships with adults and peers: An examination of elementary and junior high school students. Journal of School Psychology, 35(1): 81-99. Available at: https://doi.org/10.1016/s0022-4405(96)00031-3.

Mantzicopoulos, P. and S. Neuharth-Pritchett, 2003. Development and validation of a measure to assess head start children's appraisals of teacher support. Journal of School Psychology, 41(6): 431-451. Available at: https://doi.org/10.1016/j.jsp.2003.08.002.

Meece, J.L., E.M. Anderman and L.H. Anderman, 2006. Classroom goal structure, student motivation, and academic achievement. Annual Review of Psychology, 57(1): 487-503. Available at: https://doi.org/10.1146/annurev.psych.56.091103.070258.

Murray, C. and K. Malmgren, 2005. Implementing a teacher–student relationship program in a high-poverty urban school: Effects on social, emotional, and academic adjustment and lessons learned. Journal of School Psychology, 43(2): 137-152. Available at: https://doi.org/10.1016/j.jsp.2005.01.003.

Murray, C., K.M. Murray and G.A. Waas, 2008. Child and teacher reports of teacher–student relationships: Concordance of perspectives and associations with school adjustment in urban kindergarten classrooms. Journal of Applied Developmental Psychology, 29(1): 49-61. Available at: https://doi.org/10.1016/j.appdev.2007.10.006.

Olson, D.H., 1977. Insiders' and outsiders' views of relationships: Research studies. In G. .Levinger, H. L. Raush (Ed.), Close relationships: Perspectives on the Meaning of Intimacy. Amherst: Univ of Massachusetts Press. pp: 115-135.

Özdamar, K., 1999. Statistical data analysis with packet programs. 2nd Edn., Eskisehir: Kaan Bookstore.

Pianta, R.C., 2001. The student–teacher relationship scale. Charlottesville: University of Virginia.

Pianta, R.C., M.W. Stuhlman and B.K. Hamre, 2002. How schools can do better: Fostering stronger connections between teachers and students. New Directions for Youth Development, 2002(93): 91-107. Available at: https://doi.org/10.1002/yd.23320029307.

Pigott, R.L. and E.L. Cowen, 2000. Teacher race, child race, racial congruence, and teacher ratings of children's school adjustment. Journal of School Psychology, 38(2): 177-195. Available at: https://doi.org/10.1016/s0022-4405(99)00041-2.

Reddy, R., J.E. Rhodes and P. Mulhall, 2003. The influence of teacher support on student adjustment in the middle school years: A latent growth curve study. Development and Psychopathology, 15(1): 119-138. Available at: https://doi.org/10.1017/s0954579403000075.

Reid, M., S. Landesman, R. Treder and J. Jaccard, 1989. " My family and friends": Six-to twelve-year-old children's perceptions of social support. Child Development, 60(4): 896-910. Available at: https://doi.org/10.2307/1131031.

Riley, P., 2010. Attachment theory and the teacher-student relationship: A practical guide for teachers, teacher educators and school leaders. Routledge.

Roorda, D.L., H.M. Koomen, J.L. Spilt and F.J. Oort, 2011. The influence of affective teacher–student relationships on students' school engagement and achievement: A meta-analytic approach. Review of Educational Research, 81(4): 493-529. Available at: https://doi.org/10.3102/0034654311421793.

Saft, E.W. and R.C. Pianta, 2001. Teachers' perceptions of their relationships with student: Effects of child age, gender, and ethnicity of teachers and children. School Psychology Quarterly, 16(2): 125-141. Available at: https://doi.org/10.1521/scpq.16.2.125.18698.

Sahin, D., 2014. Adaptation of student-teacher relationship scale to Turkish. Journal of Educational Sciences & Practices, 13(25).

Sakiz, G., 2017. Perceived teacher affective support in relation to emotional and motivational variables in elementary school science classrooms in Turkey. Research in Science & Technological Education, 35(1): 108-129. Available at: https://doi.org/10.1080/02635143.2017.1278683\.

Searle, A.K., L.R. Miller-Lewis, M.G. Sawyer and P.A. Baghurst, 2013. Predictors of children's kindergarten classroom engagement: Preschool adult–child relationships, self-concept, and hyperactivity/inattention. Early Education & Development, 24(8): 1112-1136. Available at: https://doi.org/10.1080/10409289.2013.764223.

Seçer, İ., 2015. Psychological test development and adaptation process: SPSS and LISREL applications. Ankara: Anı Publishing.

Spilt, J.L., H.M. Koomen and P.Y. Mantzicopoulos, 2010. Young children's perceptions of teacher–child relationships: An evaluation of two instruments and the role of child gender in kindergarten. Journal of Applied Developmental Psychology, 31(6): 428-438. Available at: https://doi.org/10.1016/j.appdev.2010.07.006.

Tabachnick, B.G. and L.S. Fidell, 2001. Using multivariate statistics. 5th Edn., Boston: Allyn and Bacon.

Taylor, P.B., P.L. Gunter and J.R. Slate, 2001. Teachers' perceptions of inappropriate student behavior as a function of teachers' and students' gender and ethnic background. Behavioral Disorders, 26(2): 146-151. Available at: https://doi.org/10.1177/019874290102600206.

Tsigilis, N. and A. Gregoriadis, 2008. Measuring teacher–child relationships in the Greek kindergarten setting: a validity study of the student–teacher relationship scale–short form. Early Education and Development, 19(5): 816-835. Available at: https://doi.org/10.1080/10409280801975826.

Ullman, J.B., 2001. Structural equation modeling. Using multivariate statistics. 4th Edn., Needham Heights, MA: Allyn & Bacon.

Varni, J.W., C.A. Limbers and T.M. Burwinkle, 2007. How young can children reliably and validly self-report their health-related quality of life?: An analysis of 8,591 children across age subgroups with the pedsql™ 4.0 generic core scales. Health and Quality of life Outcomes, 5(1): 1. Available at: https://doi.org/10.1186/1477-7525-5-43.

Watson, M. and L. Ecken, 2003. Learning to trust: Transforming difficult elementary classrooms through developmental discipline. Indianapolis, IN: Jossey-Bass.

Williams, S., 2012. Examining the qualities of the homeroom teacher/student relationship. Master Thesis, Bilkent University, .Ankara.

Wolchik, S.A., J. Beals and I.N. Sandler, 1989. Mapping children's support networks: Conceptual and methodological issues. In D. Belle (Ed.), Children's Social Networks and Social Supports: New York: John Wiley and Sons Inc. pp: 191-220.

Woolley, M.E., G.L. Bowen and N.K. Bowen, 2004. Cognitive pretesting and the developmental validity of child self-report instruments: Theory and applications. Research on Social Work Practice, 14(3): 191-200. Available at: https://doi.org/10.1177/1049731503257882.

Wubbels, T., P. den Brok, J. van Tartwijk and J. Levy, 2012. Interpersonal relationships in education: An overview of contemporary research. Springer Science & Business Media, 3.

Yılmaz, K. and M. Tosun, 2013. The relationship between teachers' beliefs about education beliefs and teacher student relations. Journal of Education and Teaching Research, 2(4): 205-218.

Zorbaz, S.D., Ö. Arif, D. Gençtanirim-Kurt and T. Ergene, 2016. The adaptation of the teacher-student relationship scale. Journal of Measurement and Evaluation in Education and Psychology, 7(2): 407-418.