Examining the Student–Teacher Relationships of Children Both With and Without Special Needs in Preschool Classrooms[*]

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Abstract

The purpose of this study is to comparatively examine the student-teacher relationships of preschool children with and without special needs (SN) and to identify the variables which predict student-teacher relationships. In order to collect data from 40 preschool teachers regarding 54 students with and 54 students without SN, the Student and Teacher Information Form (developed by the researchers), the Student-Teacher Relationship Scale, and the Preschool and Kindergarten Behavior Scale (for the validity and reliability studies) were used. The student-teacher relationships of students in the two groups were compared using the Mann-Whitney U-test, and the variables predicting student-teacher relationships were analyzed using stepwise regression. The results showed that students with SN had more conflict (U = 1034.50; p = .009) and less closeness (U = 982.50; p = .003) with their teachers than their peers without SN, ho wever, there was not a significant difference between the two groups in terms of dependency (U = 1362.50; p = .556). It was found that social skills predicted closeness with teachers, conflictual student-teacher relationships were predicted by problem behaviors, and dependent student-teacher relationships were predicted by teacher experience and classroom size. The findings of this study are discussed in line with the national and international literature.

Keywords: Preschool • Mainstreaming • Students with special needs • Students without special needs • Student-teacher relationship

Early childhood, from birth to eight years old, is the age when children have their fastest growth rate and highest interactions with their environment. This time is a critical period for the physical, mental, emotional, and social development of children as their personality is substantially and rapidly being shaped (Boyn & Bee, 2005; Stanton-Chapman & Raver, 2009). During early childhood, as in every developmental area, there is a rapid development in the social-emotional areas which play a critical role in helping a child adapt themselves to life (Deater-Deckard & Cahill, 2009). Social-emotional development is related to the fact that a child recognizes, organizes, and explains emotions, forms secure relationships with individuals in their environment, and learns the expectations of their social environment and culture (Stanton-Chapman & Raver, 2009). Many researchers try to explain human relationships and the characteristics which have a critical role in their social-emotional development based on different theories. Recently, human relationships have frequently been explained by Bronfenbrenner's Ecological Theory, based on the Systems Theory perspective, and also by Bowlby's Attachment Theory (Beyazkürk, 2005). Bronfenbrenner's Ecological Theory examines human and environmental interactions, lays the foundation for ecological, environmental, and contextual approaches in developmental psychology and also in the examination of the development of humans and culture. According to this theory, there are four basic systems, macrosystem, exosystem, mesosystem, and microsystem, and these systems affect one another from outermost to innermost. Thus, culture emanates from the macro level and it contains the exo, meso, and micro systems (Kağıtçıbaşı, 2010). The innermost part, the microsystem, includes family, school, and neighborhood, and the mesosystem shows the interaction among the phenomena of the microsystem. The exosystem represents the experiences children have in their social system in which they do not have a direct role. In another words, it includes family friends, mass media, and community services. As stated above, the macrosystem on the other hand represents the social culture where children live. The key feature of this theory is that when there is a change in one of the systems, it inevitably affects the other systems. Even though children directly interact with their immediate environment (in the microsystem), the culture and its impact also have an important role in this theory (Sandrock, 1997).

Bowlby's Attachment Theory on the other hand puts an emphasis on the interactions and relationship between a baby and their mother (or the caregiver). Healthy mother-child interactions which affect child development contribute to forming positive mother-child relationships. Children who have developed self-esteem and self-expression tend to establish and maintain positive relationships, firstly with their mother, and then with others in their environment (Bowlby, 2012/1969). When children reach three years of age, they more easily accept the temporary absence of their mother and start to play with their peers. When children start kindergarten, the absence of their mother leads them to choose a second attachment figure (Bowlby, 2012/1969; Sierra, 2012). Generally this figure is the teacher they spend a lot of time with (Bowlby, 2012/1969). When children start kindergarten and their social environment grows, the number of individuals they start to have a relationship with and the types of relationship they form become varied.

Studies in which the mother-child and preschool teacher-child attachment relationships were examined show that children who have a secure relationship with their mothers also form a secure and positive relationship with their teachers (Howes & Hamilton, 1992; Pianta, Nimetz, & Bennett, 1997; Zhang, 2011). Relationships formed with adults in the early childhood period have an impact on various areas such as skills for forming relationships with peers, emotional development, self-esteem, and school adjustment (Birch & Ladd, 1997; Howes, Hamilton, & Matheson, 1994; Pianta et al., 1997). Negative mother-child relationships are an important factor which may lead children to form insecure, conflictual, and dependent relationships with their teacher during the preschool period (Pianta et al., 1997; Zhang, 2011).

Similar to the relationship of a child with their mother, positive relationships with teachers in the early childhood period are important for social competence and classroom adjustment (Birch & Ladd, 1997; Hamre & Pianta, 2001; Howes, Matheson, & Hamilton, 1994). Negative student-teacher relationships in this period are related to school avoidance (Palermo, Hanish, Martin, Fabes, & Reiser, 2007; Pianta & Nimetz, 1991; Pianta, Steinberg, & Rollins, 1995) and decreased academic performance (Birch & Ladd, 1997, 1998; Hamre & Pianta, 2001; Howes, Hamilton et al., 1994).

These days, studies which aim to identify student-teacher relationships and the factors which affect these relationships during the preschool period

have become increasingly important. In these studies, the impacts of several factors related to teachers, classrooms, parents, and students on student-teacher relationships have been examined. Researchers have tried to identify the factors related to teachers in a few studies by examining *teachers' ethnicity, years of experience, self-efficacy and depression level, attitudes towards life, gender*, and *field of teaching*. There were controversial findings related to the ethnicity of teachers as to whether it is effective on student-teacher relationships (Saft & Pianta, 2001) or not (Fowler-Sanchez, Banks, Anhalt, Hinrichs, & Kalis, 2008), whereas increased experience was shown to be effective on the development of positive student-teacher relationships (Kıldan, 2011). Low teacher self-efficacy and high levels of depression were found to lead to negative student-teacher relationships (Hamre, Pianta, Downer, & Mashburn, 2007). However, positive attitudes towards life are effective on having positive relationships with students (Edwards & Kern, 1995). There was a study which showed that the gender of a teacher is not an effective factor on student-teacher relationships (İpek & Terzi, 2010). In a study on the predictability of field of teaching on student-teacher relationships, it was found that graduates of primary school teaching, preschool teaching, and Turkish-language teaching had more positive relationships with their students (Kıldan, 2011).

In a few studies, the factors related to classroom were examined and the impact of factors such as *classroom management, peer relations, play materials,* and *classroom size* on teacher-student relationships were investigated. Howes et al. (2011) found that classroom management, peer relations, and play materials were effective, whereas Eisenhower, Baker, and Blacher (2007) indicated that classroom size was not an effective factor on student-teacher relationships. Similarly, in the few studies which examined parental factors, factors such as *parents' educational level* and *income* were not found to be effective on student-teacher relationships (Blacher, Baker, & Eisenhower, 2009; Hamre & Pianta, 2005; Pianta et al., 1997).

Student factors which have been frequently addressed in studies and considered effective on student-teacher relationships were identified as *gender, ethnicity, temperament, problem behaviors, social behaviors,* and *having special needs.* It was suggested that teachers tend to have closer and less conflictual relationships with girls. With boys, however, their relationships are more conflictual

(Baker, 2006; Griggs, Gagnon, Huelsman, Ashley, & Ballard, 2009; Hamre & Pianta, 2001; Hughes, Cavell, & Willson, 2001; Rudasill, ReioJr, Stipanovic, & Taylor, 2010; Silver, Measelle, Armstrong, & Essex, 2005). It was also found that students of the same ethnicity have closer, less conflictual, and dependent relationships with their teachers (Saft & Pianta, 2001). In the only study conducted to examine student temperament, it was suggested that students with difficult temperaments had more conflictual relationships with their teachers (Rudasill et al., 2010). Problem behavior was found to highly correlate with conflictual student-teacher relationships, and they predicted conflictual student-teacher relationships (Doumen et al., 2008; Doumen, Verschueren, & Buyse, 2009; Hughes, Cavell, & Jackson, 1999; Ladd & Burgess, 1999; Stipek & Miles, 2008). Another student factor which affects student-teacher relationships is social skills. Findings showed that positive social behaviors increase close student-teacher relationships. Impairments in social skills, however, are correlated with conflictual and dependent student-teacher relationships (Birch & Ladd, 1998; Blacher et al., 2009; Fowler et al., 2008).

Even though mainstream classes have become increasingly more common, the effects of having a student with special needs (SN) on student-teacher relationships has not been adequately studied. In two of the related studies the purpose was to examine the relationship of SN students with their teachers (Brown & McIntosh, 2012; Robertson, Chamberlain, & Kasari, 2004), whereas in two other studies, the relationships between teachers and students both with and without special needs were compared (Blacher et al., 2009; Eisenhower et al., 2007).

When the research studies were examined it was seen that 12 SN students in inclusive classrooms had positive relationships with their teachers and their problem behaviors were effective on these relationships (Robertson et al., 2003). In another study in which the relationships of SN students were investigated, the relationships of teachers and special-education assistants to preschool students with SN were examined over three years (Brown & McIntosh, 2012). It was concluded that problem behaviors predict student-teacher relationships and an increase in student problem behaviors led to more conflictual student-teacher relationships. Having examined the studies in which the relationships of teachers to students with and without SN were compared, one study in which the relationships of teachers with 37 SN students and 61 students

without SN were compared during a five year period, it was found that students with SN had a less close, more conflictual, and more dependent relationship with their teachers than their peers without SN had, and their social skills and problem behaviors were effective on these relationships (Blacher et al., 2009). In a longitudinal study by Eisenhower et al. (2007), it was propounded that the behavioral and social characteristics of students with and without SN predicted student-teacher relationships.

In the international literature there are studies in which the relationships of both SN students and non-SN students with their teachers were examined during the early childhood period. In Turkey, on the other hand, the student-teacher relationships have been studied mostly during the elementary and secondary school periods (Balay, Kaya, & Doğu, 2012; Celep & Erdoğan, 2002; Gümüş, 2007; İpek, 1999; İpek & Terzi, 2010; Telli, Brok, & Cakiroglu, 2010). There have only been a limited number of studies, however, in which the relationships of teachers with non-SN students were examined (Beyazkürk, 2005; Beyazkürk & Kesner, 2005; Kıldan, 2008, 2011), and there haven't been any studies that examined the relationships of teachers with SN students. Four studies of student-teacher relationships during the preschool period have been carried out in Turkey. Two of them were experimental studies that compared student-teacher relationships before and after an in-service education/intervention program which was offered to teachers (Beyazkürk, 2005; Kıldan, 2008). After offering an intervention program to improve the relationships of teachers with their students, Beyazkürk (2005) concluded that the perception of teachers about student-teacher relationships had changed significantly. In another study in which the effects of the in-service education structured on student-teacher and parent-teacher relationships were examined through constructivism, it was found that in-service education did not significantly affect student-teacher relationships but it positively affected parent-teacher relationships (Kıldan, 2008). In another study which examined student-teacher relationships and the factors predicting these relationships, it was shown that four variables (the experience and educational field of the teacher, and the gender and preschool education of the student) predicted student-teacher relationships (Kıldan, 2011). In the second study, the relationships of Turkish and American preschool teachers with their students were compared. There were differences in the relationships of Turkish and American teachers with their students. Turkish teachers had

significantly closer relationships with their students than their American colleagues. Moreover, having found that Turkish teachers had more dependent relationships with their students, researchers concluded that this was a result of the structure of Turkish families (Beyazkürk & Kesner, 2005).

When research studies that were conducted during early childhood in mainstream classrooms were reviewed, no studies regarding student-teacher relationships were found that had been conducted in Turkey. However, the student-teacher relationship is suggested as an effective factor with several other factors such as social skills, school adjustment, interpersonal communication, problem behaviors, and academic achievement. It is considered necessary to conduct studies related to the relationships of teachers to their students with SN in early childhood since there are a limited number of studies in the international literature and no studies in Turkey at all. With this necessity in mind, the purpose of this study is to examine the relationship of preschool teachers working in mainstream classrooms with their SN and non-SN students. In the direction of this general purpose, whether the relationship of students with and without SN to their teachers differentiated, and whether factors related to the students, teachers, and/or families could be predictors of these relationships were investigated. In line with this purpose, the aim of this study is to identify situations related to an important topic and therefore obtain data which could lay the groundwork for new research and contribute to academic studies nationally and internationally, as well as draw attention to conduct studies in order to improve student-teacher relationships in practice.

Method

In this study which aims to examine the student-teacher relationships of preschool children with and without SN in mainstream classrooms, the descriptive-relational model was used. The purpose of descriptive studies is to identify the situation of the research topic. In relational models, the purpose is to determine whether there is a relation among the variables by collecting data from research participants and statistically analyzing the data about two or more variables which are included in the research problem (Kırcaali-İftar, 1999).

Study Group

The study group of this research consisted of 40 teachers working in 33 mainstream schools in 7 provinces of Ankara, Turkey. Teachers provided information about themselves and 54 SN and 54 non-SN students and the families of these students. Of the 40 teachers, 27 teachers had one SN student, 12 had two SN students and 1 had three SN students in their classrooms yielding 54 SN students in total. As can be seen in Table 1, which includes the demographic information of teachers, the mean age for teachers was 35 and their mean experience was 11 years. The mean classroom size was 22. A total of 21 teachers indicated that they did not receive special education support services, whereas 19 teachers received support from the student's family, a special education institution, the internet, or the school counseling service.

Table 1
Demographic Information about the Teachers in the Study Group

Variables		n	%	X	SD
Age	23-36	24	60.00	35	6.50
	37-50	16	40.00		
Experience in Years	1-12	24	60.00	11	6.54
	13-27	16	40.00		
Classroom Size	12-20	15	32.50	22	3.25
	21-27	25	67.50		
Special Education Support	Yes	21	52.50		
	No	19	47.50		

The data related to SN students and their families was also collected via the teachers. For this purpose, teachers completed data collection forms for each SN student. For every student with SN, four additional data collection forms were filled for the non-SN students. In order to find non-SN students who had the most similar demographic characteristics (e.g., age, gender, family characteristics, etc.) as the students with SN, to avoid data loss and teacher bias, the following procedure was followed. In order to equalize the number of students with and without SN, the characteristics of students with SN were first examined and then students who had the most similar characteristics (e.g., age, gender, family income, parents' level of education, level of parental involvement, etc.) to the student with SN in the same classroom were identified. Thus, 54 students without SN who had similar characteristics to the students with SN were included in this study.

In order to examine whether there were differences among the families of students with and without SN related to the demographic characteristics, an independent samples t-test was conducted, the results of which are given in Table 2. As can be seen from Table 2, there were 54 students, 17 girls and 37 boys, in both groups of students with and without SN. The mean age of the female students with SN was 74.23 months, for the male SN students, 73.62 months. The mean age of students without SN for both girls and boys was 71 months. Of all the students with SN, ten had mental impairments, nine had speech and language disorders, nine had hearing impairments, seven had multiple impairments, six had physical/orthopedic impairments, five had emotional and behavioral disorders, four had autism, three had chronic health problems (epilepsy, allergy etc.) and one had a visual impairment. The independent samples t-test which was conducted to determine whether the families of students with and without SN had significant demographic differences (Table 2) showed that there weren't any significant differences between the two groups of students in terms of age, nor between their families in terms of their characteristics (income, level of parental education, and Family Involvement Score (FIS), $p > .05$.

Table 2
Demographic Information of Students and their Families in the Study Group and t-Test Results

		Students with SN				Students without SN				t
		n	X	Range	SD	n	X	Range	SD	
Student										
Age (Months)	Girls	17	74.23	68-89	6.75	17	71.00	66-81	3.33	1.77
	Boys	37	73.62	67-86	3.69	37	71.00	66-80	2.68	3.38
Family										
Income (TL)		54	1885.00	0-6000	1133.02	54	2618.00	800-10000	1722.25	2.61
Mother's Education (Years)		54	9.83	5-15	2.16	54	10.31	5-15	3.08	0.93
Father's Education (Years)		54	10.77	5-17	2.48	54	12.90	8-17	1.86	5.03
FIS*		54	6.07	0-8	.29	54	6.44	0-8	.26	0.93

*FIS: Family Involvement Score (Teachers were asked to score families in terms of their involvement in (1) education, (2) family meetings, (3) teacher interviews, and (4) activities based on a three rating criteria (1: Inadequate, 2: Moderate, 3: Adequate). The FIS, which ranged from 4 to 12, was obtained by totaling the scores that the teachers marked on these four options for families.)

Data Collection Tools

In order to collect data, the Teacher Information Form, Student Information Form, Student-Teacher Relationship Scale, and Preschool and Kindergarten Behavior Scale were used.

Teacher Information Form: This form was developed by the researchers in order to collect data related to teacher characteristics such as identification information, demographic information, and information related to the classroom and school.

Student Information Form: This form was developed by the researchers in order to collect data related to student identification information, demographic characteristics (age, gender, having special needs, diagnosis, etc.) and family characteristics (level of income, level of parental education, FIS, etc.).

Student-Teacher Relationship Scale (STRS): The STRS, which was used to collect data about the student-teacher relationships in this study, was developed following a series of studies conducted by Pianta (2001) in order to evaluate the relationships of students, 4 to 9 years old, with their teachers. This scale is identified as a measurement tool which is developed to examine how teachers perceive the relationship they form with a particular student, the problem behaviors of the student, and what the student thinks about the teacher (Pianta, 2001). It had 28 items which were scored on a five-point Likert scale and was filled by the teachers. Every item on the scale was scored from 1 (Definitely does not apply) to 5 (Definitely applies) with the 4th and 19th items reversely scored. The raw scores that were obtained from the scale ranged from 28 to 140. The total score was related to how effective the teacher perceived the communication between them and their student. High scores meant less conflict and dependency, but more closeness between student and teacher, and the general pattern of this relationship had positive characteristics. There were three sub-scales which were separately scored (conflict, 11 items; closeness, 10 items; and dependency, 7 items). The original scale had a three-factor structure, the first factor, conflict, explained 17.47% of the total variance. The second factor, closeness, explained 14.49% of the total variance, and the third factor, dependency, explained 9.25% of the total variance. In the original study, this three-factor structure explained 1.21% of the total variance. Reliability studies of the original scale included calculating both internal consistency and test-retest reliability coefficients, and the internal consistency coefficient was .92 for conflict, .86 for closeness, .64 for dependency, and .89 for the total scale. Test-retest reliability coefficients were .92 for conflict, .88 for closeness, .76 for dependency, and .89 for the total scale (as cited in Beyazkürk, 2005).

Adaptation, validity, and reliability studies of the STRS into Turkish were conducted by Beyazkürk (2005). Turkish validity studies showed that the scale has a three-factor structure and these factors explained 41.21% of the total variance. The first factor, conflict, which consists of 11 items, explained 17.47% of the variance. The second factor, closeness, which consists of 10 items, explained 14.49% of the variance. The third factor, dependency, which consists of 7 items, explained 9.25% of the total variance. This three-factor structure was in line with the factor structure of the original scale. Beyazkürk (2005) found the test-retest reliability coefficient to be .90 for conflict, .82 for closeness, .55 for dependency, and .87 for the total scale. The internal consistency studies showed the Cronbach Alpha coefficient to be .84 for conflict, .80 for closeness, .72 for dependency and .86 for the total scale.

Preschool and Kindergarten Behavior Scale (PKBS-2): In order to collect data about the social skills and problem behaviors of the students who participated in this study, the PKBS, which was developed by Merrill to assess the social skills and problem behaviors of 3 to 6 year old children, was used. This scale was first developed in 1994 and was revised in 2003 by conducting a study to determine its norms with 3,317 children aged 3 to 6. It is a four-point Likert-type scale which includes the ratings of "Never, Rarely, Sometimes, and Often." The PKBS can easily be used by teachers, assistant teachers, families, and social workers. The PKBS has two independent scales, the Social Skills Scale (SSS) and Problem Behavior Scale (PBS) (as cited in Özbey, 2009). Validity studies for the PKBS included content, construct, and concurrent validity (Allin, 2004). Content validity shows that the correlation score for items from the SSS to be more than .32, whereas for the PBS, item correlations with the total score was more than .40. Concurrent validity studies showed the total score of the SSS had a correlation of .86 with the total score of the social competence sub-scale from the Social Skills Rating System. The PBS total score had a correlation coefficient between .85 and .87 with the Conners Teacher Rating Scale. For the reliability studies, Cronbach's Alpha, split-half reliability, and test-retest reliability coefficients were calculated (Allin, 2004). Cronbach's Alpha coefficient for the total score of

PKBS was .90 and the split-half test coefficient was .97. For the SSS and PBS, Cronbach's Alpha coefficients were .80, and the split-half test coefficient was .90. Two test-retest studies which were conducted with 82 children 3 weeks later and again 3 months later, showed the Pearson correlation coefficients for the total score to be .58 and .86.

Adaptation of the PKBS into Turkish and its validity/reliability studies were conducted by Özbey (2009). In order to examine whether the scale was convenient for exploratory factor analysis, Kaiser-Meyer-Olkin (KMO) factor analysis and the Bartlett test were conducted. Analyses showed that the KMO factor analysis for the SSS was .94 and .95 for the PBS; Bartlett's test of sphericity was significant at a level of $p < 0.01$. Analyses showed that the SSS had three factors. The first factor explained 45.57%, the second factor explained 10.43%, and the third explained 5.17% of the total variance. Total factor dimensions explained 61.17% of the total variance. Exploratory factor analysis results for the PBS yielded five factors. The five factors explained 44.24%, 8.35%, 4.57%, 4.23%, and 3.40% of the total variance respectively. The five factors together explained 64.79% of the total variance.

Having conducted a confirmatory factor analysis for the PBS, the fifth factor, which was produced from the exploratory factor analysis, was removed from the scale. Cronbach's Alpha coefficient for the total scale of the SSS was .94 and for the sub-scales, .92, .88, and .88 respectively. For the PBS, the total scale's Cronbach's Alpha coefficient was .96 and its sub-scales were .95, .87, .81, and .72 respectively.

Data Collection

Forty teachers who had accepted to voluntarily participate in this study were asked to complete the data collection tools for the students whom they had known for at least six months. The deadline to return the tools was decided with the teacher. Teachers were called two days in advance of the deadline to be reminded about the deadline and to completely fill out the tools. Data for this study was collected from April to June in 2012.

Data Analysis

Data was analyzed via the SPSS 17.0 package program according to the purposes of this study.

Table 3

Descriptive Statistics of Scores of Students with and without SN Obtained from STRS, SSS, PBS, and Their Subscales

			X	Med.	SD	Min.	Max.	Skw.	Curt.	K-S
Students with SN n=(54)	STRS	Conflict	28.18	26	11.12	12	54	63	-.40	.13*
		Closeness	37.38	40	8.82	11	50	-.80	.20	.13*
		Dependency	13.42	13	5.06	5	23	.26	-.94	.12*
	SSS	Social Cooperation	34.05	36	8.46	11	44	-1.01	.27	.15*
		Social Acceptance	20.62	21	6.94	8	32	-.03	-.93	.07
		Social Interaction	10.24	11	4.33	4	16	-.14	-1.42	.12*
		Total Score	64.92	65	18.18	23	92	-.55	-.42	.10
	PBS	Externalizing	33.64	30	13.31	16	61	.47	-1.02	.13*
		Internalizing	10.59	10	4.45	5	18	.11	-1.41	.14*
		Antisocial	4.77	4	2.20	3	12	1.73	3.02	.24*
		Self-Centered	6.35	5	3.04	3	12	.69	-.76	.13*
		Total Score	55.37	52	18.72	27	102	.49	-.34	.10
Students w/o SN n=(54)	STRS	Conflict	23.50	19	10.42	12	55	1.56	1.84	.20*
		Closeness	42.29	43	5.91	27	54	-.47	-.30	.10
		Dependency	13.92	13	5.05	5	25	.31	-.56	.11*
	SSS	Social Cooperation	39.83	43	6.26	13	44	-2.41	6.49	.25*
		Social Acceptance	27.27	29	5.21	11	32	-1.55	1.74	.19*
		Social Interaction	13.16	15	3.81	4	16	-1.26	.45	24*
		Total Score	80.27	84	13.18	31	92	-1.90	4.15	.18*
	PBS	Externalizing	25.37	21	11.21	16	64	1.60	1.88	.13*
		Internalizing	7.57	6	3.53	5	19	1.56	2.02	.14*
		Antisocial	3.96	3	1.75	3	11	2.54	6.82	.24*
		Self-Centered	5.18	4	2.59	3	12	1.67	1.89	.26*
		Total Score	42.06	37	16.13	27	95	1.40	2.29	.18*

*$p > .05$

The first purpose was to examine whether the student-teacher relationships of SN and non-SN children significantly differed. For this purpose, the coefficients of skewness and kurtosis, and the Kolmogorov-Smirnov (K-S) hypothesis test values were examined to determine whether the scores obtained from the data collection tools were normally distributed or not. The results of the analyses are given in Table 3.

When the descriptive statistics from Table 3 are examined, it can be seen that all skewness and curtosis values for the STRS, SSS, and PBS, as well as all p-values for the K-S analysis of the scores of students with and without SN do not meet the criteria for normal distribution. These results show that since the assumptions for normal distribution are not met in coherence, the distributions obtained from the STRS, SSS, and PBS for students with and without SN were not distributed normally. Therefore, since the use of parametric tests was not appropriate, a non-parametric test was called for. In order to examine whether the relationships of SN and non-SN students with their teachers differentiated the independent samples Mann Whitney U-test was conducted.

For the second purpose of this study, multiple linear regression analysis was conducted in order to identify the variables predicting student-teacher relationships. Multiple linear regression analysis is used to predict a dependent variable based on two or more independent variables (predictive variables) which are related with the dependent variable (Büyüköztürk, 2011). In this study, in order to determine how well the independent variables predicted the dependent variable (Kalaycı, 2010), the adding variables and elimination method (stepwise selection), which is one of the multiple linear regression analyses, was used. This method is known as stepwise regression analysis. In stepwise regression analysis, each of the variables are added to the model in sequence and the model is then evaluated. If the added variable has a significant partial correlation with the dependent variable and it contributes to the model, it stays in the model. Meanwhile, every other variable is retested to see whether they are contributing to the model. In every step, of the variables which remain in the model, the variable with the highest partial correlation to the dependent variable is chosen as the best predictor. This process continues until there is no significant predictor left among the independent variables. At the end of this process a model is formed that contains only the best predictors of the dependent

variable (Kalaycı, 2010). In this study, before conducting the Stepwise Regression Analysis, "linearity and normality," "autocorrelation," and "multicollinearity" assumptions were examined and having met the assumptions analyses were conducted.

For stepwise regression analysis to identify the variables which predict student scores from the STRS, analyses were separately conducted for each of the dependent variables (conflict, closeness, and dependency scores obtained from the STRS). In order to identify independent variables which predict each of the dependent variables, independent variables related to the student, teacher, and the family were included in the analyses. Independent variables related to the student were age, gender, having SN, and the sub-scale scores from the SSS and PBS. Independent variables related to the teacher were having special education support, classroom size, and years of experience. The independent variables related to the family were education of the mother and father, income, and Family Involvement Score (FIS). To calculate FIS, teachers were asked to score families in terms of their involvement in (1) education, (2) family meetings, (3) teacher interviews, and (4) activities based on a three rating criteria (1: Inadequate, 2: Moderate, 3: Adequate). The FIS, which ranged from 4 to 12, was obtained by totaling the scores that the teachers marked on these four options for families. Before conducting stepwise regression analysis, the variables of categories related to the student (gender and having SN) and the teacher (having special education support) were coded as dummy variables and then were included in the analyses.

Results

For the first purpose of this study in order to examine whether the student-teacher relationships of SN and non-SN students differed, the Mann Whitney U-test was conducted and the results are given in Table 4.

When Table 4 is examined, the Mann Whitney U-test results show that there was a significant difference between SN and non-SN students regarding the sub-scales of conflict (U = 1034.50; p = .009) and closeness (U = 982.50; p = .003). The mean rank of students with SN (3366.50) was higher than students without SN (2519.50), thus meaning that students with SN had more conflictual relationships with their teachers than

Table 4
Mann Whitney U-Test Results Related to Comparison of Scores of Students with and without SN Obtained from the STRS Sub-scales

STRS	Students	n	Mean Rank	Sum of Ranks	U
Conflict	with SN	54	62.34	3366.50	1034.50*
	without SN	54	46.66	2519.50	
Closeness	with SN	54	45.69	2467.50	982.50*
	without SN	54	63.31	3418.50	
Dependency	with SN	54	52.73	2847.50	1362.50
	without SN	54	56.27	3038.50	

*p < .01

students without SN. Similarly, the mean rank of the sub-scale scores of closeness for students with SN (2467.50) was significantly lower than students without SN (3418.50). When the mean rank was taken into account, it was concluded that students without SN had closer relationships with their teachers than their peers with SN did. Lastly, there was no significant difference between the sub-scale scores for dependency of students with and without SN (U = 1362.50; *p* = .556).

For the second aim of this study, in order to find which factors predict the relationship of students with their teachers in mainstream preschool classrooms, stepwise regression analysis was conducted and the results are given in Table 5.

When Table 5 was examined it could be seen that the *externalizing* and *self-centered* scores of the PBS predicted the sub-scale score of conflict for the STRS. When the β values were examined, it could be seen that there was a positive relationship between the conflict scores and the scores for the sub-scales of externalizing and self-centered. The scores for

externalizing and self-centered contributed to the variance of conflict by 39.5% and 6.8% respectively, and these two variables together explained 46.3% of the variance of the conflict scores.

Secondly, *social interaction* and *social acceptance and independence,* sub-scales of the SSS, predict the scores of students for the sub-scale of closeness in the STRS. When the β values were examined, it could be seen that there was a positive relationship between the closeness scores and the scores of social interaction and social acceptance and independence. The social interaction and social acceptance and independence scores contributed to the variance of closeness by 48.6% and 2.5% respectively. These two variables together explained 51.1% of the variance of the closeness scores.

Thirdly, the *years of experience and classroom size* of teachers and the PBS *self-centered* and SSS *social interaction* scores of the students predicted the scores of students for the dependency sub-scale of the STRS. When the β values were examined, it could be seen that there was a positive relationship

Table 5
Stepwise Regression Analysis Results Related to the Prediction of Students' STRS Sub-scale Scores

	Predictor	R	R^2	R^{2}Change	B	SH$_B$	β	t
Conflict	Constant	-	-	-	7.354	2.093	-	3.514*
	Externalizing	.629	.395	.395	.397	.071	.468	5.583**
	Self-Centered	.681	.463	.068	1.172	.321	.307	3.655**
	F(1.29) = 45.335; *p* = .000; Durbin-Watson Coefficient: 2.23							
Closeness	Constant	-	-	-	22.340	.1924	-	11.610**
	Social Interaction	.697	.486	.486	.878	.211	.482	4.166**
	Social I. & Acc.	.715	.511	.025	.302	.131	.267	2.309**
	F(6.63) = 54.898; *p* = .000; Durbin-Watson Coefficient: 1.86							
Dependency	Constant	-	-	-	13.383	3.458	-	3.870**
	Years of Experience	.270	.073	.073	.083	.073	.108	1.143**
	Classroom Size	.332	.110	.037	-.344	.137	-.222	-.251**
	Self-Centered	.390	.152	.042	.518	.165	.295	3.145**
	Social Interaction	.470	.221	.065	.328	.109	.281	3.011**
	F(2.71) = 7.306; *p* = .000; Durbin-Watson Coefficient: 1.76							

*p < .001; **p < .000

between the scores for dependency and years of experience, and the self-centered and social interaction scores. There was a negative relationship between the dependency score and classroom size, however. Experience, the social interaction score, the self-centered score, and classroom size contributed to the variance of dependency by 7.3%, 6.5%, 4.2%, and 3.7% respectively. These 4 variables together explain 21.7% of the variance in the dependency scores.

Discussion

The first finding of this study shows that students with SN have more conflict but less closeness with their teachers than their peers without SN. This finding is consistent with the findings of other research in the literature. Other research studies which had examined the student-teacher relationships of students with and without SN also indicated that students with SN have more conflict and less closeness. They have more negative relationships than their peers without SN do with their teachers (Blacher et al., 2009; Eisenhower et al., 2007). In several other research studies which examined the relationships of students with and without SN to their teachers, it was also suggested that the social skills and problem behaviors of students impact these relationships (Birch & Ladd, 1998; Blacher et al., 2009; Doumen et al., 2008; Eisenhower et al., 2007; Howes, Hamilton et al., 1994; Hughes et al., 1999; Palermo et al., 2007). Studies which examined the relationships of students without SN to their teachers suggested that students who have more problem behaviors have more conflicts with their teachers, and students who have better social skills have closer relationships with their teachers (Birch & Ladd, 1998; Hamre et al., 2007; Palermo et al., 2007; Pianta & Nimetz, 1991; Pianta et al., 1995). Studies which examined the relationships of students with SN to their teachers also showed similar results (Blacher et al., 2009; Eisenhower et al., 2007).

Even though it was not an aim of this study, when both the problem and social behaviors of students with and without SN were compared, it was seen that there is a significant difference between the two groups in terms of the total scores for the PBS (U = 808.00; p = .000). Students with SN have higher mean ranks (3593.00) than students without SN (2293.00) on their score totals for the PBS thus showing that students with SN have more problem behaviors than students without SN. When the social skills of the two groups were also compared, it was found that there is a significant difference between the total scores of students with and without SN (U = 674.50; p = .000) for the SSS. Students without SN (3726.50) had higher mean ranks than students with SN (2159.50) thus implying that students with SN have less social skills than students without SN. These findings might suggest the reasons why special needs students have more conflict and less closeness with their teachers than their peers.

When the findings related to dependency sub-scale scores of students with and without SN were examined, it could be seen that even though there was not a significant difference between the dependency scores of the two groups, students with SN had less dependency with their teachers than their peers without SN. This finding is not consistent with the findings of other related research studies. Other research studies suggested in contrast with the findings of this study that there was a significant difference between the dependency scores of the two groups. Students with SN had more dependency on their teachers than their peers without SN (Blacher et al., 2009; Eisenhower et al., 2007).

The finding of this study related to the sub-scale scores for dependency might be related to the Turkish culture and family structure, the correlations of the sub-scales of the STRS with each other, and lastly to the characteristics of the dependency sub-scale. Firstly, in a cross-cultural study in which student-teacher relationships of Turkish and American teachers were comparatively examined, it was found that Turkish teachers had closer, more dependent, and less conflictual relationships with students than American teachers (Beyazkürk & Kesner, 2005). In this study, the finding that there is a high dependency of Turkish students on teachers is positively accepted and is explained by the collectivist nature of the Turkish family structure. In a culture where a collectivist family structure is common, valuing characteristics such as family bonds, dependency, and obedience are dominant (Kağıtçıbaşı, 1990). Consequently, in Turkish culture where a collectivist cultural structure is dominant, in terms of the perception of mothers having obedient and dependent children, this is desired and favorable (Yağmurlu, Sanson, & Köymen, 2005). It is known that in the early childhood period, the mother-child relationship is an effective factor on student-teacher relationships and children have a similar relationship with their preschool teachers (Pianta et al., 1997; Zhang, 2011). Considering all of these, it might be

suggested that since obedience and dependency are perceived as positive in the Turkish family structure, it is plausible that this is an effective factor firstly on the mother-child relationship then later on the student-teacher relationship during the early childhood period.

Secondly, the finding that there is not a significant difference between the dependency sub-scale scores of students with and without SN can be explained by the correlation among the sub-scales of the STRS. For the original scale, the dependency sub-scale had a positive correlation with the conflict sub-scale, whereas it had a negative correlation with the closeness sub-scale (Pianta, 2001). In this study, the dependency sub-scale has a positive correlation with both the closeness sub-scale (= .39) and the conflict sub-scale (r = .36). This finding is thought to reflect both positive and negative ideas of Turkish teachers about dependent student-teacher relationships.

Thirdly, since there is not a significant difference with the dependency sub-scale scores of students with and without SN, it might be due to the correlation among items in the dependency sub-scale of the STRS and the characteristics of this scale. In the original scale, the dependency sub-scale had five items whereas the adaptation, validity, and reliability studies into Turkish revealed seven items on this scale (Beyazkürk, 2005). It might be suggested for the Turkish version of the scale that since the dependency sub-scale has one item from the conflict and another item from the closeness sub-scales, a positive correlation of the dependency sub-scale with these two sub-scales might explain this positive correlation.

The finding that students with SN have more conflict and less closeness with their teachers than their peers have might also be related to the mainstream practices during preschool. It is suggested that teachers are the most effective factor on the success of mainstreaming and the characteristics of teachers affect the success of mainstreaming (Gök & Erbaş, 2011; Sucuoğlu & Kargın, 2006). Therefore, for the relationships between students with SN and their teachers, the knowledge and skills of teachers especially about mainstreaming could be deemed important. Even though no studies in which student-teacher relationships in mainstream preschool classrooms have been examined, there are studies about knowledge levels, attitudes, and needs of teachers regarding mainstreaming.

Firstly, when the studies regarding the knowledge levels of teachers about mainstreaming were examined, teachers indicated that they have inadequate knowledge about mainstreaming practices (Altun & Gülben, 2009; Artan & Uyanık-Balat, 2003; Gök & Erbaş, 2011; Özbaba, 2000; Sucuoğlu, Bakkaloğlu, İşcen Karasu, Demir, & Akalın, 2013; Varlıer, 2004) and during undergraduate studies they only receive an introductory course on special education. This course is not sufficient for mainstreaming practices. Moreover, the fact that preschool teachers have the opportunity to practice teaching only with typically developed students might lead to inadequate knowledge and experience about mainstreaming. This might negatively affect mainstreaming practices. Because of this, it might be suggested that they could have issues handling the problem behaviors of students with SN. Their problem behaviors might increase, thus causing more conflictual student-teacher relationships, because teachers can find their knowledge about classroom and behavior management inadequate, as well as their ability to differentiate teaching methods (Sucuoğlu et al., 2013). As a consequence, the inadequate knowledge levels of teachers about mainstreaming practices might be thought to negatively affect student-teacher relationships.

Secondly, in studies related to the attitudes of teachers about mainstreaming, the research topic is generally about how the attitudes of teachers are regarding mainstreaming, and the factors that affect their attitudes (Akalın, Demir, Sucuoğlu, Bakkaloğlu, & İşcen, 2014; Avcıoğlu, Pınar, & Öztürk, 2005; Dikici-Sığırtmaç, Hoş, & Abbak, 2011; Gök & Erbaş, 2011; Özdemir & Ahmetoğlu, 2012; Sargın & Sünbül, 2002; Seçer, Çeliköz, Sarı, Çetin, & Büyüktaşkapu, 2010). In most of the studies, teacher attitudes about mainstreaming are positive (Çulhaoğlu-İmrak, 2009; Dikici-Sığırtmaç et al., 2010; Sargın & Sünbül, 2002; Seçer et al., 2010; Varlıer, 2004), however their attitudes change due to some factors. Factors such as increased level of impairment (Gök & Erbaş, 2011; Sargın & Sünbül, 2002), having more experience (Avcıoğlu et al., 2005; Özdemir & Ahmetoğlu, 2012), not being content about their income, having a student with special needs in the classroom (Seçer et al., 2010), and not having a teacher's assistant in the classroom (Dikici-Sığırtmaç et al., 2011) negatively affect the attitudes of teachers towards mainstreaming practices. Therefore, teachers' negative attitudes toward mainstreaming practices might negatively affect how they relate to students with SN in their classrooms.

Lastly, studies which examine the needs of teachers about mainstreaming practices show the issues regarding mainstream practices during preschool and the views and suggestions for solutions from the teachers (Altun & Gülben, 2009; Dikici-Sığırtmaç et al., 2011; Varlıer, 2004). Studies investigating the needs of preschool teachers regarding mainstreaming demonstrate that teachers indicate their lack of knowledge and experience the most (Akalın et al., 2014; Artan & Uyanık-Balat, 2003; Gök & Erbaş, 2011; Varlıer, 2004), and that they have the most difficulty in assessing students with SN, identifying instructional goals, and adapting and modifying instruction and activities. They need more support and assistance on these topics and they do not know how to communicate with families (Akalın et al., 2014). Moreover, according to teachers, the fact that the conditions for mainstreaming are not met, such as classroom sizes in the schools being large, and there being insufficient materials and tools in the classrooms, also negatively affect mainstreaming. Schools and classrooms are not prepared for mainstreaming (Akalın et al., 2014; Dikici-Sığırtmaç et al., 2011). This lack of knowledge and experience as well as the needs of preschool teachers might negatively affect the relationships of teachers with their SN students.

The findings related to the second purpose of this study show that the sub-scales of externalization and self-centered for the PBS predict the conflict sub-scale scores. This finding is consistent with the findings of other related studies. Many studies show that problem behaviors are strong predictors of conflictual student-teacher relationships (Doumen et al, 2008; Howes, 2000; Hughes et al., 2001; Jerome, Hamre, & Pianta, 2009). It can be seen that several studies regarding student-teacher relationships focus especially on problem behaviors and conflictual student-teacher relationships (Birch & Ladd, 1998; Ewing & Taylor, 2009; Howes et al., 2011; Ladd & Burgess, 1999).

Secondly, the scores of students on social interaction and social acceptance and independence predict the sub-scale scores of closeness, and this finding is consistent with the findings of other related research studies in the literature (Baker, 2006; Birch & Ladd, 1998). It is known that during early childhood there is a positive correlation between social skills and close student-teacher relationships. Social skills are strong predictors of close student-teacher relationships, and students without SN have closer student-teacher relationships as well as higher levels of social skills (Blacher et al., 2009; Eisenhower et al., 2007).

Research studies show that both problem behaviors and social skills are important factors for student-teacher relationships (Birch & Ladd, 1998; Blacher et al., 2009; Doumen et al., 2008; Eisenhower et al., 2007; Howes, Hamilton et al., 1994; Ladd & Burgess, 1999). Problem behaviors have negative impact on both students and the classroom environment (Elliot & Gresham, 1993; Sucuoğlu & Kargın, 2006). Student-teacher relationships are important factors for forming a positive classroom environment (Aydın, 2003). In order to create both a positive classroom environment and form positive student-teacher relationships, the importance of teacher characteristics as well as student characteristics might be emphasized. Student characteristics, especially problem behaviors, are very important for student-teacher relationships (Doumen et al., 2008; Howes, 2000; Howes, Hamilton et al., 1994; Palermo et al., 2007). Problem behaviors are defined as behaviors which prevent a student from effectively functioning in the classroom and endangers both their safety and their peers. Moreover, problem behaviors are also seen as behaviors which negatively affect the learning of new skills, their use, and the social interaction of a student with their environment (Sucuoğlu & Kargın, 2006). When problem behaviors and their negative impacts are taken into account together, it can be suggested that having problem behaviors negatively affect a student's relationships with their teachers.

Another student characteristic which affects student-teacher relationships is student social skills (Birch & Ladd, 1998; Palermo et al., 2007; Pianta & Nimetz, 1991; Pianta et al., 1995). In this regard, social skills are defined as skills which are exhibited for interacting with others, differentiated in terms of setting and situation, and they enable us to predict social results in certain environments (Sucuoğlu & Kargın, 2006). Warger and Rutherford (1996) indicated that individuals with sufficient social skills can easily interact with individuals around them. They can obtain information from individuals around them, leave a positive impression on others after the interaction, easily form and maintain positive relationships with individuals around them, and have high social acceptance in their environment (as cited in Sucuoğlu, 2006). When social skills and their positive impacts are taken into account together, it can be suggested that students who have sufficient social skills have positive relationships with their teachers. As a result, because of the characteristics and impacts of problem behaviors and social skills,

it is plausible to say they are effective factors for student-teacher relationships. Problem behaviors negatively affect whereas social behaviors positively affect these relationships.

Thirdly, it can be seen that teacher experience, classroom size, a student's self-centered scores on the PBS and the social interaction scores from the SSS predict the dependency sub-scale scores of students on the STRS. According to this, when the sub-scale scores of teacher experience, student social interaction, and self-centered increase, the dependency sub-scale scores of students also increase. However, when classroom size increases their dependency sub-scale scores decreases. Studies comparing the student-teacher relationships of students with and without SN show that there is a difference in the dependency of these two groups on teachers. Students with SN have more dependent relationships with their teachers (Blacher et al., 2009; Eisenhower et al., 2007). However in these two studies, the variables predicting the dependency sub-scale scores were not identified. Researchers explained the reasons for this as being 5 items for the dependency sub-scale and a low reliability for this sub-scale (.57) (Blacher et al., 2009; Eisenhower et al., 2007).

Differing from the research studies in the literature, factors predicting the dependency relationship were examined in this study. An increased in experience was positively correlated with dependent student-teacher relationships; however, there were not any studies in which a similar result was found. In Turkey, in a study in which student-teacher relationships were studied in terms of various variables, factors predicting the total scores of student-teacher relationships was examined (Kıldan, 2011). The results of this study showed that the experience factor was the most important factor affecting student-teacher relationships. Increased experience leads to more positive relationships with students. The researcher suggested that increased experience leads to better practice and more positive relationships with students. Studies in which mainstream practices were examined in Turkey show that teachers' negative attitudes increased with an increase in experience (Avcıoğlu et al., 2005). Consequently, teachers' increased experience caused controversial findings in terms of student-teacher relationships and attitudes toward mainstreaming.

In this study the finding that the sub-scale scores for closeness and conflict are positively correlated with the dependency sub-scale scores suggests that they are also effective for predictive factors of dependent relationships. Social interaction scores which are predictors of close student-teacher relationships and self-centered scores, which are predictors of conflictual student-teacher relationships, are also thought to predict dependent student-teacher relationships. In other words, the sub-scales related to both social skills and problem behaviors are also effective for dependent student-teacher relationships.

The results of the regression analyses showed that another factor predicting the dependency sub-scale was classroom size. Increased classroom size decreased the dependent student-teacher relationship, and teachers' relationships with students were affected by classroom size. In the literature there are studies which examine some of characteristics of the classroom (classroom management, peer relations, and play materials) on student-teacher relationships (Hamre & Pianta, 2005). However there was no study in which the effects of classroom size on student-teacher relationships was examined. A study conducted in Turkey about mainstreaming during early childhood showed that teachers have complaints about large classroom sizes and they suggested that decreasing the classroom size might be useful for mainstream practices (Dikici-Sığırtmaç et al., 2011). Teachers indicated that large classroom sizes negatively affect mainstream practices. In addition to that, teachers expressed that a lack of materials, tools, experts and assistant teachers in the classroom negatively affect mainstreaming, and schools and classrooms are not prepared for mainstreaming (Akalın et al., 2014; Gök & Erbaş, 2011). When these findings are taken into account together, larger classroom sizes leave less time for teachers who are alone in their classrooms to spend with each child, thus making a student with SN idle and affecting the student-teacher relationship about dependency.

When some of the variables related to the teacher (having special education support) and family (mother's level of education) were inserted in the stepwise regression analysis, it was seen that these variables did not predict this relationship as was cited in the literature. When it was examined in line with the studies in the literature, special education support, a teacher variable, was found to not be a predictive factor for student-teacher relationships. Studies showed that being versed in special education (Brown & McIntosh, 2012) and having assistant personnel in the classroom (Robertson et al., 2003) do not predict student-teacher relationships. The

findings of this study are consistent with these results. As was found in this study, the literature has shown that the level of education of the mother, a family variable, does not predict student-teacher relationships (Blacher et al., 2009; Pianta et al., 1997). In another study in which the predictive value of family variables such as parental level of education and income were examined, these family variables were not found to effect student-teacher relationships (Eisenhower et al., 2007). The findings in the literature support the findings of this study.

Even though student gender and having SN were entered into the regression analysis, these variables do not predict student-teacher relationships. This finding is not consistent with the findings of the literature. Literature findings showed that student gender is an effective factor on student-teacher relationships. It is frequently emphasized that boys have more conflict and less closeness with their teachers than girls (Birch & Ladd, 1997; Blacher et al., 2009; Eisenhower et al., 2007; Griggs et al., 2009; Hamre & Pianta, 2001; Kesner, 2000; Murray & Murray, 2004). Having SN was stated as a predictive factor of relationships in the international literature (Blacher et al., 2009; Eisenhower et al., 2007). In this study the findings showed that having SN is not a predictive factor on student-teacher relationships. When the findings were examined it was seen that there were differences in the sub-scale scores of students with and without SN for conflict and closeness. The conflict sub-scale scores and problem behaviors of students with SN are higher than their peers without SN. However, their closeness sub-scale scores and social skills level were lower. Stepwise regression analysis showed that having SN does not predict the sub-scale scores of the STRS (Conflict-Closeness-Dependency), rather than having SN, having problem behaviors and the social skills of the students predicted these scores.

All data collected in this study related to students, families, student-teacher relationships, social skills and problem behaviors of students are based on the perception of teachers who had volunteered for this study. The findings should be reviewed with caution since data related especially to student-teacher relationships are only based on the perception of teachers who volunteered for the study, and data related to the students' perceptions of their relationships with teachers was not collected. In future research studies, different assessment methods (e.g., observation, interview, etc.) can be used to evaluate student-teacher relationships from the student point of view as well as from teachers.

In future research studies, in order to examine the correlation among items from the dependency sub-scale of the STRS, which was used to evaluate student-teacher relationships, and the correlation of this sub-scale with other sub-scales, data can be collected from more students and validity and reliability studies can be performed again by collecting data from students aged 4 to 9 as in the development of the original scale. Moreover, inter-cultural studies regarding student-teacher relationships can be conducted, and how the magnitude of dependency is perceived in Turkish culture and other cultures can be examined by showing inter-cultural differences. In future studies, student-teacher relationships can be longitudinally evaluated, and intervention programs can be developed and implemented to improve relationships. There is also a need for longitudinal studies in which the effects of attachment characteristics of mother-baby interactions on student-teacher relationships are examined. Lastly, in-service educational programs can be offered to preschool teachers about how to use programs to improve and support positive student-teacher relationships, especially for teachers who are working in mainstream preschool classrooms in order for them to have positive relationships with their students with SN. Programs can be offered that offer practices to decrease problem behaviors and increase the social skills of students with SN.

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