



AN INVESTIGATION OF THE ASSOCIATION BETWEEN TEACHER– STUDENT RELATIONS AND SCHOOL ADJUSTMENT COMPETENCIES IN TURKEY

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Abstract:

In this study, the researcher examined the direct and indirect effects of student-teacher relationship, students' social skills, and behavioral orientation on students' academic competency in Turkish first-grade educational settings. For most Turkish children, the entry into first grade is their first formal schooling experience. Understanding how children negotiate this new experience and documenting the relationships that they build with teachers is crucial, considering that early teacher-child relationships have important long term implications for children's school success. The findings suggest that supportive teacher student relationships have a prominent impact on the development of academic and social competency. The implications for early childhood education and research are discussed.

Keywords: student relationship; social skills; behavioral problems; academic competency

1. Introduction

Previous studies clearly indicated that 33% of the development of social and academic competencies in individuals' life is linked to early school experience (Kaytaç, 2005). Unfortunately, for most young children in Turkey, first grade is their first formal school experience. Early teacher-student relationship has developmentally long term implications for children school adjustment competencies. Therefore, it is the key to understand and document how teacher-child dyadic interactions influence their

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psychological, emotional, and academic development in Turkish first-grade classrooms. Unfortunately, early childhood education has not been taken enough attention compared to that in some developing countries including Mexico, Cuba, and Morocco (Kaytaz, 2005). Accordingly, less than 10% of Turkish students have a chance and resources to go to preschool and kindergarten. Furthermore, only few studies examined the significance and the dynamic of early childhood in Turkey. The statistically significant relationship between students' academic and social competency, and teacher-student relationship quality has been thoroughly established in the literature (e.g., Baker, 2006; Hamre & Pianta, 2001, 2007; Murray, Murray, & Waas, 2008; Roorda, Koomen, Spilt, & Oort, 2011). Specifically, the more positive teacher student dyadic interaction the more successful children perform in many aspects of school (e.g., Hamre & Pianta, 2001; Koca, 2010, 2013, 2016a, 2016b; Pianta, 1999; 2001). Moreover, positive, close, and warm student teacher dyadic interaction seem to play a crucial role for children at risk for academic failure, behavioral problems, and grade retention (e.g., Pianta et al., 1995). Therefore, it is very noteworthy to document and understand the predictive role of teacher-student interaction on students' academic and social developments. Findings clearly established that teacher-student relations key to academic and socio-emotional development of school competencies in the pre-school and early school-age years (Pianta & Walsh, 1996; Pianta & Hamre, 2001). Recent studies indicated that children who have a positive and warm relationship with their teachers also develop close peer relations, school adjustment competencies (e.g., motivation, self-regulation, problem solving skills, attention) and exhibit less internalizing and externalizing behavioral problems in classroom settings (e.g., Birch & Ladd, 1997; Baker, 2006; Baker & Morlock, 2008; Elicker, Englund, & Sroufe, 1992; Howes, Hamilton, & Matheson, 1994; Hughes, Cavell, Wilson, 2001; Pianta, 1999). Accordingly, previous studies have found that students with serious behavioral problems are at risk of school failure and for the development of conflictual teacher – student and peer relations in school settings (Baker & Morlock, 2008; Hughes, Luo, Kwok, & Loyd, 2009). Similarly, Hughes and colleagues (2009) examined the longitudinal impact of teacher–student support, effort, engagement on academic success in math and reading. They found that teacher–student relationship quality, engagement, and effortful were significant predictors of students' academic trajectories. In this sense, teacher–student dyadic interactions characterized by high levels of support, closeness, and warmth carry an important consequences out for children's concurrent and future social and academic adjustment in school environment (Hughes, 2011).

Recent studies also examined dynamic relationship between externalizing and internalizing symptomology and closeness, dependency, and conflict within teacher-

student interactions (Hamre, Pianta, Downer, & Mashburn, 2007; Murray & Murray, 2004). Namely, teachers who perceived a relational conflict and dependency with a particular student in their classrooms tended to report higher levels of student aggression and hyperactivity. In fact, these findings explicitly indicate the key role of teacher-student relationship on children's social and behavioral orientations; however far less is known about the dynamic processes underlying the association between school adjustment competencies and teacher-child relationship. Moreover, a significant research gap is that the majority of the studies were conducted in western culture, and therefore it is crucial to examine this meaningful mechanism in Turkish culture and the current study findings might provide meaningful insight into early childhood research in Turkey. In this sense, the purpose of this study is twofold. First, this study was designed with the intent on deepening the field's understanding of the impacts of teacher-student relationships on understanding first-grade students' social and academic competencies in Turkish educational settings. Second, the researchers intend that the findings of this study will be used to encourage educators to undertake the necessary steps to nurture the development of positive teacher-student relationship in early childhood educational settings in Turkey. Therefore, this study examined the prediction model (Structural Equation Modelling) outlined in the theoretical framework, ultimately answering the following research question: What is the predictive role of student-teacher relationship in the prediction of first-grade Turkish students' academic and social competency?

2. Methods

2.1 Participants

The sample included a group of 24 first grade teachers (12 male, 12 female) and their students from five public schools located in two large school districts in a large urban city in Turkey. A total of 420 (217 female, 203 male) first grade students, ranging in age from 6 to 8 years ($M = 7.09$, $SD = .29$) participated in the study. All participants were born in Turkey and were Turkish-speaking.

The average class size was 30, and the 420 children represented 65% of the students in the classrooms taught by the participating teachers. All teachers had a four year college degree. Their ages ranged from 26 to 55 ($M = 45.34$, $SD = 7.20$) and their teaching experience ranged from 7 to 32 years ($M = 23.12$, $SD = 7.29$). Their teaching experience in first grade ranged from 1 to 15 years ($M = 7.19$, $SD = 4.55$).

2.2 Procedures

Participants voluntarily took part in the current study and they were instructed to rate a questionnaire package including STRS- TUR (Koca, 2010) and SSRS-TUR (Koca, 2010). The researcher assured their confidentiality of their responses in the study. Each participant spent 15 minutes to complete all the measurements.

Structural equation modeling techniques were utilized to examine the relationship between the sub factors of student-teacher relationship, social skills, academic competency, and behavioral problems via *MPlus* (v. 7.0; Muthén & Muthén, 2012). Chi-Square, the root mean square error of approximation (RMSEA, < .05), comparative fit index (CFA, >.90), and the Tucker- Lewis fit index (TLI, >.90) were used to judge model fit (Hu & Bentler, 1999).

2.4 Data Sources

2.4.1 Student-Teacher Relationship Scale - Turkish Version

Student-Teacher Relationship Scale (STRS; Pianta, 2001) is most extensively validated with early elementary samples. The STRS-TUR is a 29-item teacher self-report using a 5-point Likert-type scale. It was developed to assess a teacher's perception about her or his relationship with a particular student in terms of closeness, dependency, and conflict (Pianta, 2001). The STRS-TUR was psychometrically developed and validated (Koca, 2010) and is comprised of three subscales (i.e., conflict, closeness, and dependency). The following alpha coefficients were obtained: .89 (STRS Total scale), .92 (Conflict), .88 (Closeness), .76 (Dependency).

2.4.2 Social Skills Rating System - Turkish Version

The SSRS- TUR was psychometrically validated by Koca (2010), The Social Skills Rating System was designed to assess a teacher's perception of the child's social skills, behavioral and academic orientations (SSRS-T; Gresham & Elliot, 1990). Koca (2010) reported that The SSRS-TUR comprised social skills (30 items), behavioral problems (18 items), and academic competence (9-items) sub-scales. Internal consistency reliabilities (Cronbach's alpha) for the instrument ranged from .81 (Internalizing behavioral problems) to .97 (Academic Competency).

3. Results

Assumption testing focusing on normality, linearity, multicollinearity, and outliers led to the removal of 31 multivariate outlier cases (less than 5%) leaving about 370 cases.

A confirmatory factor analysis was employed through *Mplus* version 7 on the 71 variables of the STRS-TUR and SSRS-TUR. Maximum likelihood estimation (MLE) was

employed to estimate all models because it is consistent and efficient. The baseline model that tests the hypothesis that all variables are uncorrelated was not statistically accepted, $\chi^2 (3655, N = 420) = 33673.95, p < .001$. The hypothesized model was tested but was a poor fit to the data, $\chi^2 (3525, N = 420) = 9919.21, p < .001$, comparative fit index (CFI) = .78 and Root Mean Square Error of Approximation (RMSEA) = .067. Although a chi-square test showed a significant improvement in fit between the baseline and the hypothesized model, post hoc model modifications were applied and tested to develop a more parsimonious model with good fit. After testing a CFA, a large class of omnibus tests used for determining overall model fit. After modifications, the factors of hyperactivity and dependency were dropped because there were not enough indicators (i.e., 38 indicators were dropped because of low factor loadings, high factor cross loadings, or correlated errors). After modifications, the final CFA model was an excellent fit to the data, $\chi^2 (384, N = 370) = 622.40, p < .0001$, CFI = .97, and RMSEA = .038. Together, the final measurement (CFA) model included 7 factors: cooperation, self-control, conflict, closeness, and internalizing, externalizing, and academic competency. According to CFA standardized model parameter estimates, there were not any irregularities (i.e., Heywood cases, negative error variances, or standardized loadings > 1). Factor loadings ranged from .43 to .97.

3.1 Structural Model Analysis

Because of the results of the CFA, some of the factors were redefined, allocating them at different places in the model than originally hypothesized. These changes might be resulted from cultural influences on the definition of the study constructs because this data were collected in Turkish educational settings. Turkish culture is more collectivistic as compared to American sample in which the STRS and the SSRS were developed (see Figure 1 for the final SEM Model). After the final CFA model, the researchers tested the SEM model using M-plus version 7, $\chi^2 (385, N = 420) = 635.56, p < .0001$, RMSEA = .039 (.034, .045), and CFI = .97

The final structural path explained approximately 65% of the variance in academic competency, 44% of the variance in externalizing behavior problems, and 49% of the variance in internalizing behavior problems. The structural path leading from cooperation to academic competency positive estimates ($\beta = 0.667, p < 0.001$; however, the internalizing behavioral problems had a negative regression academic competency ($\beta = -0.192, p = 0.001$). The structural path leading from conflict to internalizing behavioral problems had a positive regression ($\beta = 0.270, p < 0.000$); however to self-control ($\beta = -0.335, p < 0.000$) and cooperation ($\beta = -0.303, p < 0.000$) had a positive regression. For externalizing behavioral problems, closeness ($\beta = -0.145, p < 0.05$) and cooperation ($\beta = -0.533, p < 0.000$) had significant negative regressions. On the other

hand, conflict had a positive regression on externalizing behavioral problems ($\beta = 0.361$, $p < 0.000$). For regression on Closeness, self-control ($\beta = 0.468$, $p < 0.000$) and cooperation ($\beta = 0.564$, $p < 0.000$) had positive estimates. However, as contrast to literature, the study was not able to find any significant indirect effect of externalizing behavioral problems. In addition, the results also showed that there was a statistically significant indirect effect of self-control ($\beta = 0.058$, $p < 0.000$) and cooperation ($\beta = 0.064$, $p < 0.000$) and teacher–student relationship quality via internalizing behavioral problems on academic competency.

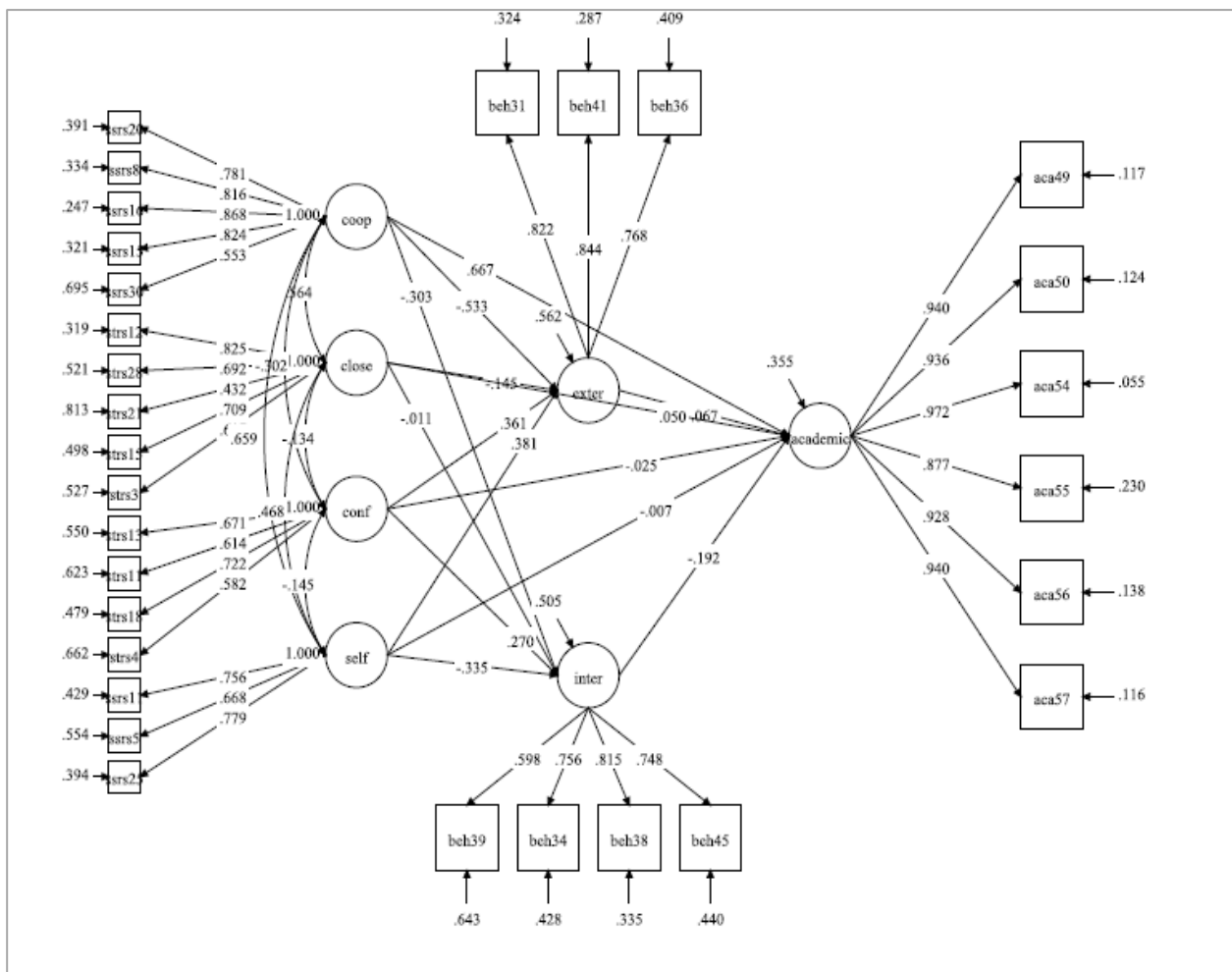


Figure 1: Final Structural Model

4. Discussion

An extensive research documents the link between the quality of students' relationship with teachers and children's concurrent and future academic and social outcomes (e.g., Hamre & Pianta, 2007; Murray, Murray, & Waas, 2008). In fact, children who experience warm, close, and supportive relationship with their teachers have more successful and have more positive attitudes toward school (Murray, Murray, & Waas, 2008), are more

academically and socially engaged in academic tasks (Hughes & Kwok, 2007). Furthermore, students with high quality of teacher-student interaction enjoy higher levels of peer acceptance (Hughes, Cavell, & Willson, 2001), and are less likely to engage in classroom disruptive behaviors (Baker, 2006).

As previous studies indicated (e.g., Hughes, 2011; Murray & Murray, 2004, based on the structural equation model, the dimensions of teacher-student relationship quality (i.e., closeness and conflict), students' social skills (cooperation and self-control), and students' classroom behavior problems (i.e., internalizing and externalizing) were significant predictors for students' academic competency. The current study showed that there was a significant and negative correlation between students' academic competencies and social skills and relational conflict. Namely, recent research findings showed that externalizing and internalizing behavioral problems were significantly correlated with teacher-student relationship quality and academic success (Baker, 2006; Baker, Grant, & Morlock, 2008). Moreover, children with high relational conflictual within the teacher-student dyadic interactions tended to be perceived by their teachers as less academically competent and lower level of social skills. However, antisocial and aggressive behaviors in Turkish first-grade educational settings were not significantly related to academic competency via teacher-student relationship quality.

A growing body of research explicitly showed that teacher-student relationships have a crucial role in helping them develop social and academic skills needed in school settings. In fact, the degree to which students develop pro-social skills and academic competencies in their school lives key to successful school adjustment, school readiness, positive peer interaction, and close teacher-student dyadic interaction (Baker, 2006; Hanish, Martin, Fabes, & Reiser, 2007; Pianta, 1999; Pianta & Stuhlman, 2004). Accordingly, the current study showed that Turkish first-grade students' academic competencies and social skills were significantly linked to teacher-student relationship quality. Furthermore, the findings pointed out the significance of dynamic mechanism underlying the association between relationship quality and students' behavioral and social orientations and the impact of the process on academic skills.

The current study has several significant limitations. Although teachers' perceptions are very important to understand and the document the mechanism described above, teacher-student relationship has a dyadic nature. Therefore, it is crucial to describe and scrutinize children's perceptions on this association between the study variables. In addition, it is difficult to generalize the research findings to the population due to the nature and the number of the research participants. However, the study results provided useful research insight to understand and document the impact of teacher-student interaction and behavioral and social orientations on academic competency in Turkish educational settings. Aforementioned, the significance of the

relationship quality on the study variables is well established in western research communities, findings of study provided initial evidence on the significance of teacher–student relationship quality on school adjustment competencies in Turkey. Therefore, future research might focus the different dimensions of the teacher–child interactions and examine the effects on school adjustment competencies. Finally, the study results might be helpful for the development of intervention and prevention programs that target at students at risk of failure in Turkey.

References

1. Baker, J. A. (2006). Contributions of teacher-child relationships to positive school adjustment during elementary school. *Journal of School Psychology, 44*, 211-229.
2. Baker, J. A., Grant, S., & Morlock, L. (2008). The teacher-student relationship as a developmental context for children with internalizing or externalizing behavior problems. *School Psychology Quarterly, 23*(1), 3.
3. Birch, S. H., & Ladd, G. W. (1997). The teacher-child relationship and children's early school adjustment. *Journal of School Psychology, 35*, 61-79.
4. Birch, S. H., & Ladd, G. W. (1998). Children's interpersonal behaviors and the teacher-child relationship. *Developmental Psychology, 34*, 934-946.
5. Campbell, S.B. (1994). Hard-to-manage preschool boys: Externalizing behavior, social competence, and family context at two-year-follow-up. *Journal of Abnormal Child Psychology, 22*, 147-166.
6. Gresham, F. M., & Elliot, S. N. (1990). The Social Skills Rating System. Circle Pines, MN: American Guidance Systems.
7. Hamre, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development, 72*(2), 625-638.
8. Hamre, B. K., & Pianta, R. C. (2007). Learning opportunities in preschool and early elementary classrooms. In R. Pianta, M. Cox, & K. Snow (Eds.), *School readiness & the transition to kindergarten in the era of accountability* (pp. 49–84). Baltimore, MD: Brookes.
9. Howes, C.; Hamilton, C.E.; Matheson, C.C. (1994). Children's relationships with peers: Differential association with aspects of the teacher-child relationship. *Child Development, 65*, 253-263.
10. Hughes, J. N., Luo, W., Kwok, O. M., & Loyd, L. K. (2008). Teacher-student support, effortful engagement, and achievement: A 3-year longitudinal study. *Journal of educational psychology, 100*(1), 1.

11. Hughes, J. N. (2011). Longitudinal effects of teacher and student perceptions of teacher-student relationship qualities on academic adjustment. *The Elementary School Journal*, 112(1), 38.
12. Hughes, J., & Kwok, O. M. (2007). Influence of student-teacher and parent-teacher relationships on lower achieving readers' engagement and achievement in the primary grades. *Journal of educational psychology*, 99(1), 39.
13. Kaytaz, M. (2005). *Türkiye'de Okulöncesi Eğitiminin Fayda-Maliyet Analizi*. İstanbul, AÇEV.
14. Koca, F. 2010. "An Examination of the Psychometric Properties of the Student-Teacher Relationship Scale (STRS) in Turkish First-grade Settings." Unpublished master thesis, Purdue University.
15. Koca, F. (2016). Motivation to Learn and Teacher–Student Relationship. *Journal of International Education and Leadership Volume*, 6(2), 1-20.
16. Koca, F. (2016). Assessing Child-Teacher Relationships. *Uluslararası Alan Eğitimi Dergisi*, 2(1).
17. Koca, F., & Yeter, I. H. (2013, March). The Examination of Teacher-Student Relations in Turkish First-Grade Educational Settings. In *Society for Information Technology & Teacher Education International Conference* (Vol. 2013, No. 1, pp. 2175-2183).
18. Koca, F. (2016). An examination of the effects of children's gender and behavioral problems on the quality of teacher–children relationships. *Journal of Human Sciences*, 13(3), 4808-4817.
19. Ladd, G. W., Birch, S. H. & Buhs, E. S. (1999). Children's social and scholastic lives in kindergarten: Related spheres of influence? *Child Development*, 70, 1373–1400.
20. Murray, C., & Murray, K. M. (2004). Child level correlates of teacher–student relationships: An examination of demographic characteristics, academic orientations, and behavioral orientations. *Psychology in the Schools*, 41(7), 751-762.
21. Pianta, R. C. (1999). *Enhancing relationships between children and teachers*. Washington, DC: American Psychological Association.
22. Pianta, R.C, & Hamre, B. K. (2001). *Students, teachers, and relationship support (STARS)*. Odessa, FL: Psychological Assessment Resources, Inc.
23. Pianta, R. C., & Steinberg, M. (1992). Teacher-child relationships and the process of adjusting to school. In Pianta, R. C. (Ed.), *Beyond the parent: The role of other adults in children's lives*. New Directions for Child Development, No.57. San Francisco: Jossey-Bass.
24. Pianta, R. C., Steinberg, M. S., & Rollins, K. B. (1995). The first two years of school: Teacher-child relationships and deflections in children's classroom adjustment. *Development and Psychopathology*, 7, 295-312.

25. Pianta, R., & D. Walsh. 1996. *High-risk children in schools: Constructing sustaining relationships*. New York: Routledge.
26. Pederson, E., Faucher, T.A., & Eaton, W.W. (1978). A new perspective on the effects of first teachers on children's subsequent adult status. *Harvard Educational Review, 48*, 1-31.
27. Roorda, D. L., Koomen, H. M., Spilt, J. L., & Oort, F. J. (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.

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