

Examining the Relationship between Teacher Leadership and School Climate

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Abstract

Teacher leadership has recently become the centre of educational research on improving educational practices. The purpose of this study was to examine the relationships between primary school teachers' perceptions of school climate and teacher leadership. The study sample consisted of 259 primary school teachers who participated in an educational conference organized by the Bafra District National Education Directorate in Bafra, Samsun. The Organizational Climate Description Questionnaire-RE and Teacher Leadership Scale were used to gather data. Results suggested that there were negative and significant relationships between restrictive school climate and teacher leadership. Results also revealed that restrictiveness negatively and significantly predicted all three subscales (institutional improvement, professional improvement and collaboration among colleagues) of teacher leadership. On the other hand, a directive school climate was the only positive and significant predictor of teacher leadership based on institutional improvement. Results of this study were discussed in relation to their practical implementation in school settings.

Keywords

Primary School, Principal, School Climate, Teacher, Teacher Leadership, Turkey.

Effective leadership is one of the most important factors in school improvement and student learning. However, the job of running and improving schools has become more complex and difficult (Grubb & Flessa, 2006). Leadership literature clearly indicates that school leadership has been heavily focused on school principals only, instead of focusing on collaborative action, shared understanding and collective responsibility (Harris & Muijs, 2003). Several scholars have already argued that a solitary, principal-centred leadership style poses potential obstacles to improving teaching and learning in schools (Barth, 1990; Gronn, 2009; Harris & Muijs, 2003; Lambert, 1998; Sergiovanni, 2001). Murphy (2005) observes that the great man theory of leadership still prevails in schools.

Harris (2003) notes that the social exchange theory of leadership, which heavily depends on a clear demarcation of roles and responsibilities among members of a school community, continues to reign. On the other hand, Hook (2006) asserts that an increasing expectation for student performance and conflicting demands from schools add significantly to pressure on school administrators. Arguing that administrators have difficulty functioning both as decision-makers and holders of power, Beachum and Dentith (2004) suggest that new models and practices of leadership should be developed that allow for more collaborative and democratic relationships among school community members to facilitate student learning and respond to the diverse needs of students. Harris and Lambert (2003) assert that traditional school leadership

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assigning schools complete responsibility for increasing levels of student learning and building a higher-quality teaching and learning environment negatively impacts school change and renewal processes. Therefore, an understanding of school leadership that views teachers as a leadership resource seems urgently required.

In recent years, teacher leadership has become the centre of educational research on improving educational practices (Beycioğlu & Aslan, 2010; Camburn, Rowan, & Taylor, 2003; Can, 2009a; Cranston, 2000; Frost & Durant, 2003; Frost & Harris, 2003; Harris, 2003, 2005; Harris & Muijs, 2003; Katzenmeyer & Moller, 2009; Leithwood & Jantzi, 1999, 2000; Little, 2003; Mangin, 2007; Zinn, 1997). Katzenmeyer and Moller (2009) claim that the idea of fostering teachers' professional development, which plays a crucial role in improving and sustaining school change and student learning, is among the critical factors that have made the notion of teacher leadership popular. Camburn et al. (2003) suggest that educational reform initiatives, such as site-based management, mentor teacher programs and teacher career ladders, foster debate on different sources of leadership practised by teachers.

Teacher leaders can serve as facilitators of learning and teaching, mentors for their colleagues and experts in their fields. They can also contribute to school improvement by participating actively in decision-making processes, leading teams and making good use of opportunities for taking initiatives (Muijs & Harris, 2007). Fullan (1994) remarks that teacher leaders may play a significant role in building positive relationships among colleagues, facilitating professional learning for both themselves and others and leading change and improvement processes in schools. Katzenmeyer and Moller (2009) further assert that teachers' perceptions of themselves as leaders inspire them to discover their own potential to influence student learning, put less blame on students or external factors for failures, become less resistant to school-wide change, make better use of opportunities to expand their influence, improve their own teaching and practices in their classrooms and influence others to improve their teaching.

A critical question on that point for researchers is what factors might facilitate the development of teacher leadership in schools operated with traditional hierarchical structures. Scholars have recently investigated teachers' perceptions of teacher leadership (Beycioğlu & Aslan, 2012; Can,

2009a), factors supporting teacher leadership (Beauchum & Dentith, 2004; Mangin, 2007), as well as the relationships between teacher leadership and student engagement (Leithwood & Jantzi, 2000), school improvement (Rutledge, 2009) and school effectiveness (Hook, 2006).

Although relationships between teacher leadership and varied related factors have already been investigated, the number of studies focusing on the relationships between teacher leadership and school climate is quite limited (Xie, 2008). A qualitative study conducted by Muijs and Harris (2007) showed that teacher leadership could flourish in schools with supportive school administrators, shared vision, active participation in decision-making processes, effective communication and a high level of trust among school community members. York-Barr and Duke (2004) discovered that roles and relationships among colleagues in schools, along with other factors such as school culture, structure and context, influenced the development of teacher leadership in schools. Boles (1992, as cited in Harris & Muijs, 2003) also found that strong communicative and administrative skills were crucial elements for developing teacher leadership. It was clear from the teacher leadership literature that teacher-principal interaction may well influence whether or not teachers take leadership roles (Barth, 1990; Mangin, 2007; York-Barr & Duke, 2004). Katzenmeyer and Moller (2009) also argue that complementary relationships between school administrators' and teachers' visions and conceptions of their school mission may well contribute to the development of teacher leadership. In this regard, it is possible that there may be significant relationships between teacher leadership and school climate.

As stated by Katzenmeyer and Moller (2009), a great deal of research effort has been exerted on examining principals' behaviours or leadership styles. However, more studies on teachers' leadership behaviours are needed to better understand their contribution to school improvement. Furthermore, Katzenmeyer and Moller emphasize the importance of conducting more research on teacher leadership to change organizational norms, structures, politics and practices to make better use of teacher leadership. In the light of the explanations above, the present study investigated the relationships between teachers' perceptions of leadership behaviours and school climate. Although several studies have been conducted in the Turkish educational context to

examine teachers' perceptions of their leadership behaviours (Aslan, 2011; Beycioğlu, 2009; Beycioğlu & Aslan, 2012; Can, 2009a, 2009b; Kılınc & Receptoğlu, 2013; Kölükçü, 2011; Yiğit, Doğan, & Uğurlu, 2013), investigate school principals' roles and strategies for developing teacher leadership within schools (Can, 2006), determine the required skills and dispositions of teacher leaders (Can, 2007) and determine the effects of teacher leadership on the development of school leadership capacity (Özçetin, 2013), the number of studies investigating the relationship between teacher leadership and organizational variables remains extremely small. Since teachers' leadership skills and dispositions have been regarded as crucial for sustainable school improvement and higher levels of student achievement (Danielson, 2006; Frost & Harris, 2003; Harris & Lambert, 2003; Harris & Muijs, 2005; Katzenmeyer & Moller, 2009; Sergiovanni, 1996, 2007; York-Barr & Duke, 2004), this study can contribute to clarifying the organizational characteristics that promote the development of teacher leadership. Guided by earlier research (Hoy & Clover, 1986; Hoy, Tarter, & Kottkamp, 1991; Kavgacı, 2010; Kottkamp, Mulhern, & Hoy, 1987; Sezgin & Kılınc, 2011), the current study measured the dimensions of school climate based on supportiveness, restrictiveness, directiveness and intimacy as separate factors. It is therefore expected that the findings of this study will contribute to a better understanding of the predictors of teacher leadership and help determine the types of school climates in which teacher leadership flourishes or fails. It is also expected that the study may provide some important implications for policy-makers and researchers engaging in fostering teacher leadership in schools.

Teacher Leadership

A recent model of leadership is one in which teachers, both as learners and teachers, contribute to the policies, vision and mission of school and take the initiative in and outside of the classroom to improve educational practices (Katzenmeyer & Moller, 2009). Although Childs-Bowen, Moller and Scrivner (2000) state that teacher leadership is a complex phenomenon to define, it is here reasonable to state that the primary focus of teacher leadership is to develop a high-quality teaching and learning environment in school settings (Harris & Muijs, 2005). Katzenmeyer and Moller (2009) define teacher leadership as teachers' leading in and outside of their classrooms, their contributions to

a community of learners and positive influence on improving educational practices. York-Barr and Duke (2004) state that teacher leadership reflects the notion that teachers' knowledge, skills and expertise can be effectively used to increase school improvement and student learning. According to Childs-Bowen et al. (2000), teacher leaders are perceived as potential sources for ensuring student success in schools where teacher leadership is supported. In line with these explanations, Beycioğlu and Aslan (2010) suggest that teacher leadership centres upon three potential components: institutional improvement, professional improvement and collaboration among colleagues. *Institutional improvement* means that teachers can contribute effectively to the improvement of the learning and teaching environment in a school setting and assume additional leadership roles, such as team leader or school representative. Teacher leaders help their colleagues design, implement and evaluate teaching practices effectively (Harrison & Killion, 2007), which potentially increases a school's capacity to improve student learning and achievement (Harris & Lambert, 2003). *Professional improvement* is primarily associated with teacher efforts to help improve colleagues' teaching skills. Teacher leaders are expected to design innovative classroom practices that best serve the diverse learning needs of students (Katzenmeyer & Moller, 2009). Thus, professional improvement is regarded as one of the primary responsibilities of teacher leaders. As asserted by Gronn (2000), school improvement depends heavily on teacher leaders who continuously improve their teaching skills and enlarge their professional knowledge. *Collaboration among colleagues* is related to working with others to improve student learning and achievement. Harris and Lambert (2003) argue that one of the most crucial characteristics of a school culture amenable to teacher leadership is that it nurtures and promotes collaborative working relationships that facilitate teachers' sharing professional experiences and knowledge. Murphy (2005) categorizes teacher leadership into three components: instructional, relational and enabling. In this sense, teacher leaders are expected to be occupied with high-quality instructional outcomes, building more positive and sincere relationships among school community members and creating suitable learning conditions for both themselves and others. Beycioğlu (2009) affirms that teacher leadership is based on teachers operating collectively to improve school effectiveness by sharing authority. He further suggests that teacher leaders should

make themselves effective both in and outside of the classroom by extending their influence over the school via both formal and informal relationships. Grant (2006) also emphasizes that moving from traditional leadership styles to teacher leadership requires teachers to shift roles from being followers to being change agents. In such new leadership roles, they can operate in various school processes, either formally or informally. Harris and Muijs (2003, p. 40) summarized teacher leadership as follows: (1) the leadership of other teachers through coaching, mentoring and leading working groups, (2) the leadership of developmental tasks that are central to improved learning and teaching and (3) the leadership of pedagogy through the development and modelling of effective forms of teaching.

Cranston (2000) also suggests that teacher leaders will contribute to building a better vision for schools, cultivate hope and sincerity, and build a community of learners and teachers to improve student learning. Day and Harris (2003) also refer to a set of roles that teacher leaders can play, such as brokering roles associated with implementing school improvement practices in the classroom; participative leadership roles, which involve participating in and committing to school change and improvement processes; mediating roles related to providing required resources, information and expertise and finally, organizer roles facilitating interpersonal relationships among colleagues to create a positive school climate and culture for learning. Taking a different approach to the benefits of teacher leaders, Little (2000) argued that teacher leaders may also efficiently operate in evaluating and praising student learning and success. Lieberman and Miller (2005) also specify that teacher leaders assume a variety of roles such as researcher, mentor, scholar and developer; and in these roles, have the power to change their schools and professions. In this regard, the presence and sustainability of teachers assuming classroom-wide and school-wide leadership roles may play a key role in improving school effectiveness to improve student success.

School Climate

School climate reflects teachers' and administrators' collective perceptions of the school work environment (Hoy & Clover, 1986). The school climate is closely associated with social dynamics prevailing in school settings (Uline & Tschannen-Moran, 2008). Hoy et al. (1991) claim that as one of the potential components of school effectiveness

and educational reform initiatives, school climate involves a number of intra-school characteristics distinguishing one school from another and influencing the behaviours of school members. Hoy and Clover (1986) suggest that school climate is based on teachers' and administrators' perceptions of a number of measurable properties of the school environment. Maloy and Seldin (1983, p. 65) define climate as 'the atmosphere of a school setting experienced and felt by school community members when walking in the corridors, sitting in the classrooms or standing on the playgrounds'. Marshall (2004) asserts that school climate is a powerful and multi-dimensional organizational concept significantly affecting both school members (including administrators, teachers, students, parents and other staff) and the educational environment itself. Haynes, Emmons, and Ben-Avie (1997) further asserts that school climate denotes to the quality and sustainability of interactions and communication patterns among school community members, which have a deep impact on students' improvement in various areas of development (cognitive, social and psychological). School climate also heavily depends on norms, goals, values, interpersonal relationships, teaching and learning experiences and organisational structures (Cohen, McCabe, Michelli, & Pickeral, 2009). Çalık and Kurt (2010) argue that climate is of vital importance for schools in that it results from organisational practices and impacts both the attitudes and behaviours of each school community member. Therefore, one could argue that school climate depends heavily on the specific characteristics of a school and its environment, which are deeply affected by school administrators' leadership styles and also impacted by organisational behaviours, norms and values (Hoy & Clover, 1986).

Previous research on school climate focused primarily on defining and measuring the dimensions of school climate (Halpin & Croft, 1963; Hoy & Clover, 1986; Hoy et al., 1991; Kottkamp et al., 1987). Scholars have also attempted to investigate teachers' perceptions of school climate (Günbayı, 2007; Schlaffer, 2006; Sutherland, 1994), and the relationships between school climate and school disorder (Gottfredson, Gottfredson, Payne, & Gottfredson, 2005; Welsh, 2000), student achievement (MacNeil, Prater, & Busch, 2009; Uline & Tschannen-Moran, 2008), school effectiveness (Maloy & Seldin, 1983; Wei, 2003), faculty trust in colleagues (Hoy, Smith, & Sweetland, 2002; Tarter, Sabo, & Hoy, 1995), organizational health

(Hoy & Hannum, 1997; Hoy, Tarter, & Bliss, 1990), organizational citizenship (DiPaola & Tschannen-Moran, 2001), organizational commitment (Turan, 2002), school leadership (Griffith, 1999; Kelley & Daugherty, 2005; Shaw, 2009), professional development (Crocker, 2007), student performance (Nichols, 2007; Thomasson, 2006), job satisfaction (Schulte, Ostroff, & Kinicki, 2006) and teacher burnout (Grayson & Alvarez, 2008).

Haynes et al. (1997) claim that research on school climate is of vital importance to enquiry into factors related to student success and learning as well as to school staff support for students' capacity to learn. They further assert that contextual factors, such as school setting and the quality of relationships among school members, are potential factors in student engagement and achievement. Hoy (2003) suggests that school climate is affected by various factors such as the physical dimensions of a school, the demographical and cultural backgrounds of school community members, the quality of relationships among school community members and shared norms, values and beliefs prevailing in schools that overall impact student achievement.

Positive and negative school climates have various effects on both relationships among colleagues and teacher-student relationships and on overall school performance (Çalık & Kurt, 2010). A study conducted by Welsh (2000) concludes that school climate contributes greatly to a deeper understanding of school violence and student disorder. Another study (DiPaola & Tschannen-Moran, 2001) shows that school climate predicts organizational citizenship. Findings from the same study also suggest that teachers' organizational citizenship behaviours increase in school climates fostering teacher collegiality and professionalism. Turan (2002) also notes positive and significant relationships among factors related to positive school climate, such as supportive leader behaviour and engaged teacher behaviour with teacher commitment. These findings suggest that in positive school climates, teachers are more committed to their schools.

A healthy school climate includes favourable relationships among school members. In such schools, the academic emphasis within a positive learning environment is considered to be crucial for improving student learning and achievement (Sweetland & Hoy, 2000). Hoy et al. (1990) state that collaborative and supportive relationships in healthy school climates lead to a positive mental mood and effective engagement with one's responsibilities. Kottkamp et al. (1987) further

emphasize that teachers in open and positive school climates have more opportunities and facilities to work and engage with their colleagues. Deal and Peterson (1999) argue that schools must ensure a positive learning climate for both students and other staff to improve student engagement. In line with this, findings of a number of studies confirmed positive relationships between higher student achievement and positive school climate (MacNeil et al., 2009; Tschannen-Moran, Parish, & DiPaola, 2006; Uline & Tschannen-Moran, 2008). On the other hand, closed and negative school climates have been characterized by routine workloads, low job engagement and satisfaction, and principals' lack of leadership skills (Kottkamp et al., 1987). Welsh (2000) notes that an unhealthy school climate inhibits the creativity of all school members to a great extent and results in teachers' and administrators' low job satisfaction, isolation, aggression and detention.

There have been a number of potential attempts in the literature to measure and assess school climate. Halpin and Croft (1963) were the first who attempted to assess and bring conceptual explanations to the organizational climate construct. In their pioneering study "The Organizational Climate of Schools," they developed the "Organizational Climate Description Questionnaire (OCDQ)," which investigates teacher and principal behaviours in two dimensions and under eight subscales. The eight subscales of this questionnaire include aloofness, production emphasis, trust and consideration at the administrative level and disengagement, hindrance, esprit, and intimacy at the teacher level under two extreme dimensions labelled open and closed climates, respectively. Upon realizing that the OCDQ had some serious limitations, such as not having been updated for years, a highly limited scope that excluded students from the analysis of school climate and low reliability of subscales, Hoy et al. (1991) decided that the OCDQ needed major revision, and thus developed a revised version of the OCDQ for elementary schools. Therefore, the revised form of the OCDQ (OCDQ-RE) was created. It is composed of 42 items marked on a rating scale from 1 (rarely occurs) to 4 (very frequently occurs) under six subscales (supportive, directive and restrictive behaviours for elementary school principals; and collegial, intimate and disengaged teacher behaviours for school teachers). It is necessary here to note that a preliminary version of this scale was presented in Hoy and Clover's (1986) study entitled as 'Elementary School Climate: A Revision of the OCDQ'. In another study, Kottkamp

et al. (1987) also revised the OCDQ and produced “The Rutgers Organizational Climate Description Questionnaire For Secondary Schools (OCDQ-RS),” which used 34 items to measure principals’ behaviours as supportive and directive and teacher behaviours as engaged, frustrated and intimate. This study, however, used the Turkish form of the OCDQ-RE that included 25 items under 4 factors (Kavgacı, 2010) and measured the dimensions of school climate using supportiveness, restrictiveness, directiveness and intimacy as separate factors. The *supportiveness* dimension of school climate denotes a concern for teachers. In such climates, school principals put an importance on teachers’ voices, the abilities of school members are acknowledged and constructive criticism is welcomed. *Restrictiveness* refers to a school environment in which teachers’ workloads are large and filled with routine work, committee requirements and other demands. Therefore, teachers employed in schools with restrictive school climates have difficulty focusing on teaching and learning. A *directive school climate* is associated with close supervision, rigid monitoring and over-controlling of teachers’ work. *Intimacy* is a school climate quality in which strong collegial and congenial relationships are nurtured among school members. Teachers working in such schools are close friends and support each other (Hoy & Clover, 1986; Hoy et al., 1991; Kottkamp et al. 1987; Sweetland & Hoy, 2000). In this sense, the purpose of this study was to answer the following questions:

1. Are there significant correlations between the components of teacher leadership and the subscales of school climate?
2. Are the dimensions of school climate significant predictors of the subscales of teacher leadership?

Method

Research Design

This study was designed with a correlational research model to empirically examine the relationship between the dimensions of school climate and the components of teacher leadership. The subscales of school climate (supportiveness, directiveness, restrictiveness and intimacy) were independent, whereas the components of teacher leadership (institutional improvement, professional improvement and collaboration among colleagues) were the dependent variables of the study.

Procedure and Participants

A questionnaire with three parts was used to gather data in this study. The first part elicited personal data related to such demographic variables of participants as gender, branch, age and total teaching experience. The second part of the questionnaire included the Teacher Leadership Scale developed by Beycioğlu and Aslan (2012) to determine primary school teachers’ perceptions of teacher leadership and the third part, which measured primary school teachers’ perceptions of the dimensions of school climate, comprised the OCDR-RE developed by Hoy et al. (1991) and adapted for Turkish users by Kavgacı (2010). The researcher distributed the questionnaires to primary school teachers. Necessary instructions and explanations were printed at the beginning of the questionnaire, and teachers were asked to complete the questionnaires voluntarily. Each participant completed the questionnaire in about 8–10 minutes.

Respondents for this study were 259 primary school teachers participating in an educational conference organized by the Samsun, Bafra District National Education Directorate on education and teachers in the 21st century, held on 19 June 2013. It was planned for approximately 500 teachers employed in primary schools located in Bafra, Samsun, who had participated in a related educational conference. Therefore, the sample in this study consisted of 259 primary school teachers participating in this educational activity, who responded to the items of the questionnaire voluntarily and anonymously.

Out of these 259 teachers, 98 (37.8%) were male and 161 (62.2%) were female. The sample comprised of 114 classroom teachers (44%) and 145 (56%) teachers who specialized in specific subjects. Most of the participants ($n = 106$; 42.1%) were between the ages of 31–40, while only 26 teachers were 51 years old or over. Approximately one fourth of the participants ($n = 66$; 25.5%) had been employed as teachers for 21 years or more. The sample also included 31 teachers with a total of 1–5 years of teaching experience.

Instruments

Organizational Climate Description Questionnaire-RE (OCDQ-RE): The OCDQ-RE consists of 42 items in six subscales. The items were scored on a rating scale from 1 (never) to 4 (always). Results of factor analysis yielded a four-factor structure (supportiveness, restrictiveness,

directiveness and intimacy). The total variance explained by these four subscales was 56%. Each separate factor made a different contribution to the total variance. The percentages of variances explained by supportiveness, restrictiveness, directiveness and intimacy were 20.10, 15.15, 10.20 and 10.20, respectively (Kavgacı, 2010). Out of the 42 items, 17 were excluded from the scale because of low corrected item-total correlations. The remaining 25 items of the scale had different item-total correlations varying from .44 to .74, and the Cronbach's Alpha coefficient was .85. The Alpha coefficients of reliability were .90 for the supportiveness compliance factor, .80 for the restrictiveness factor, .96 for the directiveness factor; and .83 for the intimacy factor (Kavgacı, 2010). The Turkish form of the OCDQ-RE comprised 25 items under 4 factors. As the OCDQ-RE was adapted for Turkish users, we needed to test the factor analysis results from Kavgacı (2010) to determine whether the same factor structure was produced. Therefore, the present study conducted Confirmatory Factor Analysis (CFA) to test the validity of the four-factor structure of this adapted scale. CFA results demonstrated that the goodness of fit indices indicated a good model fit ($X^2/sd = 1.75$; RMSEA = .05; CFI = .94; GFI = .87). This study also conducted reliability analysis for the scale and Alpha coefficients were calculated for each of the subscales of the OCDQ-RE. The supportiveness component with eight items had item-total correlations ranging from .74 to .80, and Alpha for this component was .93. Item-total correlations of the restrictiveness component consisting of four items ranged from .48 to .72, and Alpha for this component was .81. The directiveness component of the scale had five items with item-total correlations from .54 to .70, and Alpha was .84 for this component. The intimacy component with 8 items had item-total correlations from .32 to .77, and Alpha was .87 for the intimacy component.

Teacher Leadership Scale (TCS): This scale was answered on a rating scale from 1 (never) to 5 (always) and was developed by Beycioğlu and Aslan (2010). The scale measures both the perceptions and expectations of teachers under the same three components (institutional improvement, professional improvement and collaboration among colleagues). Consistent with the purposes of the current study, only the perception part of the scale was taken into consideration. The scale consists of 25 items, 9 in institutional improvement, 11 in professional improvement and 5 in collaboration among colleagues. Items of

the scale explained 57.23% of the total variance, and item-total correlations ranged from .47 to .92. The Alpha coefficients of reliability were .87 for both the institutional improvement and professional improvement subscales and .92 for the collaboration among colleagues subscale (Beycioğlu & Aslan, 2010). In this study, the Alpha coefficients for each of the subscales of TLS were calculated. The institutional improvement component had item-total correlations ranging from .40 to .74, and Alpha for this component was .87. Item-total correlations of the professional improvement component ranged from .70 to .84 and Alpha for this component was .95. The collaboration among colleagues component had item-total correlations ranging from .63 to .77, and Alpha for this component was .88.

Data Analysis

Before analysing the research data, missing or wrong data were examined. In the next part, research problems were analysed in a systematic order. Arithmetic mean and standard deviation scores were computed to determine primary school teachers' perceptions of the subscales of teacher leadership and school climate. Pearson correlation coefficients were computed to examine the relationships between the subscales for teacher leadership and school climate. Standard multiple regression analysis was then performed to predict dependent variables (components of teacher leadership) by the independent variables (components of school climate). Beta (β) coefficient and results of a t-test were used to interpret the results of regression analysis.

Results

Correlations between Variables

The means, standard deviations and correlation coefficients among variables for all primary school teachers participating in the study are given in Table 1.

As for the correlations in Table 1, although there were negative relationships between restrictiveness and institutional improvement ($r = -.89, p < .01$) and between professional improvement ($r = -.56, p < .01$) and collaboration among colleagues ($r = -.66, p < .01$), positive correlations were found between supportiveness and professional improvement ($r = .18, p < .01$), directiveness and institutional improvement ($r = .22, p < .01$) and between professional improvement

Table 1
Means, Standard Deviations, and Correlations among Variables for All Teachers

Variables	\bar{X}	S	1	2	3	4	5	6	7
1. Supportiveness	2.27	.75	-	.37**	-.20	.05	.12	.18**	.11
2. Directiveness	1.80	.84		-	-.21	.24**	.22**	.15*	.17**
3. Restrictiveness	2.70	.72			-	-.09	-.89**	-.56**	-.66**
4. Intimacy	2.71	.62				-	.16*	.13*	.10
5. II.	3.37	.77.					-	.61**	.69**
6. PI.	4.02	.90						-	.69**
7. CAC.	3.80	.87							-

II = Institutional Improvement
 PI = Professional Improvement
 CAC = Collaboration among Colleagues
 Notes: * $p < .05$; ** $p < .01$

($r = .15, p < .05$) and collaboration among colleagues ($r = .17, p < .01$). Results also showed that intimacy was positively correlated with institutional improvement ($r = .16, p < .05$) and professional improvement ($r = .13, p < .05$). However, supportiveness was not significantly associated with institutional improvement ($r = .12, p > .05$) and collaboration among colleagues ($r = .11, p > .05$).

Institutional improvement

Table 2 reveals the results of multiple linear regression analysis for the variables predicting the institutional improvement component of teacher leadership.

Table 2
Results of Regression Analysis for Variables Predicting Institutional Improvement

Variables	B	SE	β	t	p
Constant	4.48	.27		16.45	.00
Supportiveness	-.06	.06	-.06	-.95	.35
Directiveness	.17	.07	.16	2.48	.02
Intimacy	-.07	.08	-.05	-.82	.42
Restrictiveness	-.79	.05	-.88	-15.39	.00

Notes: $R = .91$; $R^2 = .82$; $F(4, 254) = 67.24$; $p < .05$

In institutional improvement, a multiple R of .91 explained 82 percent of the total variance. A review of t-tests for significance of regression coefficients demonstrated that restrictiveness ($\beta = -.88, p < .05$) and directiveness ($\beta = .16, p < .05$) were the significant predictors of teacher leadership based on institutional improvement. Furthermore, results revealed that directiveness predicted institutional improvement positively, although restrictiveness predicted it negatively. The supportiveness ($\beta = -.06, p > .05$) and intimacy ($\beta = -.05, p > .05$) components of school climate did not significantly predict the institutional improvement dimension of teacher leadership. These findings illustrated

that directive and restrictive school climates were important variables in explaining the institutional improvement component of teacher leadership.

Professional improvement

Table 3 shows the results of multiple linear regression analysis for variables predicting the professional improvement component of teacher leadership.

Table 3
Results of Regression Analysis for Variables Predicting Professional Improvement

Variables	B	SE	β	t	p
Constant	4.09	.76		5.42	.00
Supportiveness	.23	.18	.15	1.32	.19
Directiveness	.18	.19	.12	.94	.35
Intimacy	.01	.22	.00	.03	.98
Restrictiveness	-.68	.14	-.51	-4.73	.00

Notes: $R = .60$; $R^2 = .36$; $F(4, 254) = 8.36$; $p < .05$

In Table 3, a multiple R of .60 accounted for 36 percent of the variance in professional improvement scores. Restrictiveness was the only negative and significant predictor of professional improvement ($\beta = -.51, p < .05$). Nevertheless, the supportiveness ($\beta = .15, p > .05$), directiveness ($\beta = .12, p > .05$) and intimacy ($\beta = .00, p > .05$) subscales of school climate made no significant contributions to teacher leadership predicated on professional improvement. Findings revealed that a restrictive school climate was an important and negative variable in predicting the professional improvement component of teacher leadership.

Collaboration among Colleagues

Table 4 mirrors the results of multiple linear regression analysis for variables predicting the collaboration among colleagues component of teacher leadership.

Table 4
Results of Regression Analysis for Variables Predicting Collaboration among Colleagues

Variables	B	SE	β	t	p
Constant	4.14	.58		7.15	.00
Supportiveness	.04	.13	.03	.28	.78
Directiveness	.24	.15	.18	1.62	.11
Intimacy	.01	.17	.00	.04	.97
Restrictiveness	-.69	.11	-.62	-6.30	.00

Notes: $R = .69$; $R^2 = .47$; $F(4, 254) = 13.11$; $p < .00$

As can be seen from Table 4, the regression analysis produced a multiple R of .69 that explained 47 percent of the variance. Restrictiveness made the only significant contribution to the equation of collaboration among colleagues ($\beta = -.62$, $p < .05$). However, the supportiveness ($\beta = .03$, $p > .05$), directiveness ($\beta = .18$, $p > .05$) and intimacy ($\beta = .00$, $p > .05$) subscales of school climate did not significantly predict the collaboration among colleagues dimension of teacher leadership. This finding showed that restrictive school climate was a potentially powerful predictor of collaboration processes among teachers.

Discussion

This study using the supportiveness, directiveness, restrictiveness and intimacy components of school climate as predictors of teacher leadership has supported the argument that school climate is a significant predictor of teacher leadership. This finding is consistent with Xie's (2008) research findings suggesting that school climate is important for explaining teacher leadership. Findings of the current study were also consistent with the findings of Aslan (2011), who indicated that teachers' leadership behaviours related to communication and interaction among colleagues increase when students perceive the classroom climate to be satisfying. Results also revealed that restrictiveness was negatively and significantly correlated with all three components of teacher leadership. On the other hand, directiveness was positively and significantly associated with all subscales of teacher leadership. Furthermore, supportiveness was positively and significantly related to professional improvement, while intimacy was positively and significantly correlated with both institutional improvement and professional improvement. Results also indicated that restrictive school climate was a significant predictor of all three components of teacher leadership. Restrictiveness negatively and significantly predicted institutional improvement, professional improvement and collaboration

among colleagues. Furthermore, directiveness was the only component of school climate that was a positive and significant predictor of teacher leadership based on institutional improvement.

These results suggest that restrictiveness is negatively and significantly related to institutional improvement, professional improvement and collaboration among colleagues. Therefore, in schools with restrictive school climates, teachers are less likely to contribute to the institutional improvement of their schools or their own professional improvement. Furthermore, it is less possible for teachers to collaborate with and help each other in restrictive school climates. This finding is consistent with the findings of Can (2009a), who reported that teachers' leadership behaviours were hampered by factors such as a lack of a strong school culture supporting leadership behaviours in teachers and a lack of democratic collaboration and trust among colleagues. As teachers experience a heavy and unnecessary workload in restrictive school climates (Hoy et al., 1991), they may not find enough time to address their own professional development, assume school-wide leadership roles or work with colleagues to improve the teaching and learning environment in their schools. This is also consistent with the argument that school principals in restrictive climates create unnecessary routines and duties for teachers (Hoy & Clover, 1986). Since teacher leadership is based partly on informal relationships among colleagues (Beycioğlu & Aslan, 2012; Katzenmeyer & Moller, 2009), teachers may be unwilling to assume school leadership roles in such school climates. Muijs and Harris (2007) further state that teacher leadership may be a key to improving teaching and learning in schools if teachers are praised as decision-makers, field experts, team leaders, initiators or mentors. Thus, it is more likely that in restrictive school climates teachers stay isolated in their classrooms with their leadership skills untapped.

This study revealed that directiveness was positively and significantly correlated with all three components of teacher leadership. This finding suggests that teachers assume leadership behaviours more frequently for both institutional and professional development and for collaborating with colleagues in directive school climates. This finding is not surprising because in Turkey, the Ministry of National Education (MoNE) has a very highly centralized structure, and principals often play a key role in monitoring and controlling teachers and their activities. Therefore, teachers

probably think that they cannot demonstrate any leadership behaviours unless their school principal supports this. Evidence from a range of studies conducted in the Turkish educational context suggests that school principals' support was an important factor in teachers taking on leadership roles and behaviours (Can, 2009a; Kılınc, 2013). This finding is also in line with the argument that school principals still hold key positions in school leadership processes, and their support plays a significant role in cultivating teacher leadership in schools (Deal & Peterson, 1999). Buckner and McDowelle (2000) note that upon considering the potential power of teacher leadership over student learning, school principals may facilitate the development of teacher leadership by creating healthy school atmospheres for teachers to sustain their professional improvement. Zinn (1997) further claims that school principals' support has been the primary source of teacher leadership. Thus, in directive climates, teachers who feel supported by their school principals in assuming leadership roles may be more eager to lead both within and outside of their classrooms.

Another finding of this study was that supportiveness was positively and significantly correlated with professional improvement, while intimacy was positively and significantly related to both institutional and professional improvement. This finding denotes that in supportive and intimate climates, teachers tend to spend more time and effort on institutional and professional development. This is in line with the findings of a study conducted by Muijs and Harris (2007), which proved that supportive school administrators, shared vision, active participation in decision-making processes, effective communication and a high level of trust among school community members positively affected teacher leadership. As noted by Hoy et al. (1991), in supportive school climates, teachers' unique abilities and expertise in their fields are praised and school principals support teachers both individually and professionally. Hoy and Clover (1986) also argue that intimate school climates are characterized by close and sincere relationships among colleagues, strong support of teachers for each other and a sense of effective collegiality and congeniality among school community members. It thus appears that in supportive and intimate school climates, teachers try their best to contribute both to the institutional improvement of their schools as well as their professional improvement. As also stressed by Katzenmeyer and Moller (2009), teachers tend to develop their teaching skills and

improve the quality of classroom instruction in schools where healthy and positive relationships among teachers and principals flourish.

Results revealed that institutional improvement, professional improvement and collaboration among colleagues were negatively and significantly predicted by restrictiveness, which implies a school environment in which teachers are overwhelmed by a trivial workload (Hoy et al., 1991). This suggests that in schools with restrictive climates, teachers are less likely to assume leadership behaviours at either administrative and classroom levels. Teacher leadership means a role shift for teachers from followership to leadership, and teacher leaders are expected to function effectively in varied school processes such as decision-making on instructional issues, leading teams or participating in advisory boards (Grant, 2006). However, teachers are unlikely to be leaders in restrictive school climates. Consistent with these research findings, DiPaola and Tschannen-Moran (2001) argue that school principals with restrictive leadership styles restrain teachers' professional behaviours. Hoy et al. (1991) suggest that school principals' restrictive behaviours result in teachers being occupied by committee requirements, daily tasks and other unnecessary demands. On the other hand, scholars have already highlighted the importance of time in the development of teacher leadership (Barth, 2001; Harris & Muijs, 2003). Furthermore, Curci (2012) proved that time was one of the most important factors impacting the development of teacher leadership according to the perceptions of school principals and teachers. Therefore, it is reasonable here to conclude that teachers in restrictive school climates may not find enough time to assume leadership roles in and outside of their classrooms. Hoy and Clover (1986) also assert that school principals control and monitor all aspects of school life, which probably inhibits leadership behaviours in teachers. This is, however, incompatible with an understanding of teacher leadership that assumes that each school community member can contribute to student success and engagement (Katzenmeyer & Moller, 2009).

Results also indicated that directiveness was the only positive and significant predictor of teacher leadership based on institutional improvement. Therefore, teachers employed in a school with a directive climate are more likely to contribute to the institutional improvement of the school. This finding may also denote that teachers sometimes need to be directed to take school-wide leadership

roles. This finding is also predictable given that the Turkish National Education System's centralized structure assigns almost all administrative responsibility to school principals. Therefore, according to their job descriptions, teachers in the Turkish National Education System may not accept leadership roles. In other words, it may become necessary for teachers that their potential leadership roles be approved and directed by school principals. As stated by Haynes et al. (1997), the school principal's role in guiding the direction of a school is of crucial importance to creating a school environment in which every member of school makes efforts towards school improvement.

Conclusion and Implications

The present study concludes that school climate is a significant predictor of teacher leadership. Teachers working in restrictive school climates are less likely to assume leadership roles, while teachers in directive school climates are more eager to contribute to the institutional improvement of their schools. Upon considering that school climate depends on the quality of interactions among school community members, we can argue that school-based policies and practices are needed to create a healthier and less-restrictive school climate that promotes teacher leadership. Therefore, this study supports the hypothesis that teachers would not assume leadership roles in a restrictive school climate. These findings also suggest that teachers may need to be directed to function as teacher-leaders.

The present study investigated primary school teachers' perceptions of the relationships between teacher leadership and school climate. However, the number of studies examining the

relationships between teacher leadership and school climate or organizational constructs is small, which constitutes a potential obstacle to evaluating the findings of present study in detail. This suggests that more research is required on the relationships between teacher leadership and other organizational variables. Researchers should focus more on examining and determining the various types of school cultures and climates in which teacher leadership flourishes and improves. Furthermore, future studies should investigate the relationships between teacher leadership and other such potential organizational variables as organizational commitment, organizational citizenship, organizational socialization and organizational health; and examine such personal qualities as psychological hardiness, coping with stress and resistance to change. Further studies should also use other research methods, such as observations or interviews, to determine teachers' perceptions of teacher leadership. This study concentrated on correlations and predictive relationships among teacher leadership and school climate using multiple regression analysis to predict teacher leadership according to teachers' perceptions of school climate. Therefore, future studies should focus on and investigate the causal relations between teacher leadership and school climate by performing structural equation modelling. Further studies should also employ qualitative or mixed research methods to study the contextual factors that support or inhibit teacher leadership in different samples. The results of this study can be used by school principals to create school environments amenable to cultivating teacher leadership. Results from the present study may also be helpful for policy makers dedicating time and effort to facilitating teacher leadership that can positively impact student learning.

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