

I second that emotion: Effects of emotional contagion and affect at work on leader and follower outcomes[☆]

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Abstract

While affect and emotion have been theoretically linked to leadership for decades, only recently has this relationship come under empirical scrutiny. The current research examines the effects of emotional contagion on follower affect at work and examines the outcomes of follower affect at work in a field setting. Leader positive and negative affect at work related to follower positive affect at work via emotional contagion. Follower positive and negative affect at work related to perceptions of charismatic leadership and organizational citizenship behavior. Follower perceptions of charismatic leadership related to organizational citizenship behavior.

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Charismatic leadership is often associated with outstanding outcomes in terms of follower attitudes and performance, causing the charismatic CEO to be highly sought after and highly paid among top companies (Khurana, 2002; Tosi, Misangyi, Fanelli, Waldman, & Yammarino, 2004). Meta-analytic work strongly supports the link between charismatic leadership and positive outcomes (Lowe, Kroeck, & Sivasubramaniam, 1996), although the mechanisms by which charismatic leaders achieve positive outcomes are less clear. Considering the investment companies put into charismatic leaders, and the potential impact of charismatic leaders on organizational outcomes, it is important to understand how charismatic leaders achieve success and the conditions under which success is more or less likely to occur.

One means by which charismatic leaders achieve outstanding outcomes is through the formulation and articulation of a vision (Conger & Kanungo, 1987), and in particular an inspirational vision (Sosik & Dinger, 2007). Another explanation is that charismatic leaders impact followers' motivation through their self-concepts (Shamir, House, & Arthur, 1993). An additional mechanism by which charismatic leaders impact followers is through the emotional

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attachment that they build with followers (Bass, 1985; Bass & Avolio, 1995; Conger & Kanungo, 1994; Gardner & Avolio, 1998; House, 1977; Shamir et al., 1993, Weber, 1920). While transactional leaders emphasize the rational or exchange basis of a leader–follower relationship, charismatic and transformational leaders emphasize the emotional basis of this relationship (Bass, 1985). The current research examines the impact of affect in charismatic leadership.

Emotional contagion is examined as one way by which leader affect influences follower affect (Cherulnik, Donley, Wiewel, & Miller, 2001; Halverson, 2004; Lewis, 2000; Sy, Côté, & Saavedra, 2005). Follower susceptibility to emotional contagion is examined as a moderator of the impact of leader affect on follower affect. In addition, the relationship among follower affect, attributions of charismatic leadership, and organizational citizenship behaviors are examined. An analysis of these relationships is important for organizational leaders such that they should be aware of the potential effects that their affect can have on follower outcomes. Similarly, the importance of follower susceptibility to emotional contagion and follower affect in general are explored. Insofar as follower affect impacts organizational outcomes, leaders and other organizational members should work to ensure that followers experience positive affect at work. Theoretically, this research highlights the importance of leader and follower affect in charismatic leadership.

1. Theoretical background and hypothesis development

Charismatic and transformational leadership theories, primarily based on the work of Bass (1985), House (1977), and Weber (1920) explain the emotional connection between leaders and followers that results in extraordinary increases in follower performance. House and Shamir (1993) include both of these types of leadership in what they call the neo-charisma paradigm because charisma is a central concept of both charismatic and transformational leadership theories. There are at least three central components of charismatic leadership: attributed charisma, idealized influence, and inspiration motivation (Bass & Avolio, 1994). Attributed charisma is the personal power that charismatic leaders possess. Idealized influence includes leader behavior related to serving as a role model for followers in which a leader stresses values and beliefs, moral behavior, and a strong sense of the collective mission. Inspiration motivation is comprised of those behaviors aimed at adding meaning to followers' work, typically resulting in an increase in follower enthusiasm.

As House, Woycke, and Fodor (1988, p. 101) suggest, "Transactional [exchange] leaders have their primary effects on follower cognitions and abilities. Charismatic leaders have their major effects on the emotions and self-esteem of followers — the affective motivational variables rather than the cognitive variables." Shamir et al.'s (1993) theory of charismatic leadership suggests that charismatic leaders achieve their motivating effects by linking follower self-concepts to organizational goals, so followers internalize the organization's mission and vision. The leader's specific behaviors include increasing the intrinsic value of effort, increasing the value of goal accomplishment, creating follower commitment to goals, expressing high expectations for followers to raise followers' self-esteem, and providing an optimistic vision of the future. As Connelly, Gaddis, and Helton-Fauth (2002) note, one of the major underlying assumptions of Shamir et al.'s (1993) theory is that when leaders are engaging in the described behaviors they are expressing positive emotions to motivate the followers.

For example, when charismatic leaders are crafting and delivering speeches to align followers' goals with the organization's goals, providing high expectations for followers, and conveying an optimistic vision for the future their speeches are infused with positive affect. Positive affect is communicated both through the content of what the leader says, and his or her nonverbal behavior during communication (Ashkanasy & Tse, 2000; Bass, 1985; Gardner & Avolio, 1998), which can result in the spread of that positive affect to followers through emotional contagion. Insofar as an emotional response occurs in followers, the leader's behavior can be conceptualized as an affective event for followers in terms of Affective Events Theory (AET, Weiss & Cropanzano, 1996), which can impact followers' subsequent attitudes and behaviors (Dasborough, 2006).

1.1. Emotional contagion and leadership

Emotional contagion is the automatic and unconscious transfer of emotions between individuals (Hatfield, Cacioppo, & Rapson, 1992) that is thought to occur as a result of individuals' tendency to mimic and synchronize the facial expressions, vocalizations, postures, and movements of others which cues the target to experience the emotion that he or she is mimicking (Chartrand & Bargh, 1999). A long line of research in social psychology has demonstrated that exposure to emotional stimuli can affect one's facial expressions (e.g. Lee & Wagner, 2002) and that exhibiting a

particular facial expression can elicit the corresponding emotion (Adelmann & Zajonc, 1989). In one study, Friedman and Riggio (1981) found that emotional contagion occurred between two individuals who simply sat and faced each other in silence for two-minutes. More recently, emotional contagion has been examined in a leadership context (Cherulnik et al., 2001; Halverson, 2004; Lewis, 2000; Sy et al., 2005).

For example, Sy et al. (2005) manipulated leaders' moods in self-managing work teams and found that the leaders' moods affected their team members' moods and influenced group affective tone. Emotional contagion from leaders to followers should be particularly strong because leaders are highly salient group members (Connelly et al., 2002). In addition, research suggests that persons of lower status have a heightened awareness of their superiors' feelings (Snodgrass, 1985) and attending to one's feelings makes emotional contagion more likely to occur (Hatfield et al., 1992, Hatfield, Cacioppo, & Rapson, 1994). However, laboratory evidence for emotional contagion from leaders to followers (Cherulnik et al., 2001; Halverson, 2004; Lewis, 2000; Sy et al., 2005) may be enhanced by the strength of the laboratory situation and the absence of external influences. Mischel (1973, 1977) argued that strong situations are likely to elicit similar responses from all individuals. However, in weaker situations other factors, such as individual differences, may also impact the extent to which emotional contagion occurs.

1.1.1. Susceptibility to emotional contagion

While all individuals have the potential to send and receive emotions through emotional contagion, some individuals are more susceptible than others to emotional contagion (Hatfield et al., 1992). Susceptible persons tend to pay close attention to others' emotional expressions, are able to read others' emotional expressions, feel that they are similar to or interrelated with other persons, and tend to mimic facial, vocal, and postural expressions. Because of these behaviors, susceptible individuals are more likely to catch others' emotions. Doherty (1997, p. 149) suggests that "Susceptibility is best considered the tendency to automatically mimic and synchronize with the expressions of others and, through afferent feedback from the facial and/or skeletal muscular activity, to experience or "catch" the others' emotions."

He also stated that genetics, gender, early experience, and personality characteristics all contribute to individual differences in susceptibility to emotional contagion. Susceptibility encompasses one's likelihood to catch five basic emotions: happiness, love, fear, anger, and sadness. People who are more susceptible would more strongly endorse statements such as, "If someone I'm talking with begins to cry, I get teary-eyed," "Being with a happy person picks me up when I'm feeling down," "When someone smiles warmly at me, I smile back and feel warm inside," and "I get filled with sorrow when people talk about the death of their loved ones." We suggest that emotional contagion from leaders to followers will occur among followers who are more susceptible to emotional contagion.

Hypothesis 1a. The positive relationship between leader positive affect at work and follower positive affect at work will increase as follower susceptibility to emotional contagion increases.

Hypothesis 1b. The positive relationship between leader negative affect at work and follower negative at work affect will increase as follower susceptibility to emotional contagion increases.

1.2. Follower affect and perceptions of charismatic leadership

Further, if followers "catch" their leader's affect, then their subsequent evaluations of their leader and subsequent performance should be influenced by that affect. Research on person perception demonstrates that one's affect at the time a judgment is made can impact his or her perceptions of others. Specifically, individuals perceive others in an affect-congruent manner such that people in good moods perceive others positively, and people in bad moods perceive others negatively (Isen & Baron, 1991). This is thought to occur as a result of the affect-priming principle, which suggests that when an affective state is primed it results in the retrieval of affect-congruent thoughts and memories (Bower, 1981) and through the affect-as-information principle, which suggests that individuals rely on their current affective state when judging a stimulus (Schwarz, 1990). Regardless of the mechanism, a great deal of research has demonstrated that affect influences individuals' impressions of others across a broad range of situations (Isen & Baron, 1991).

Dasborough and Ashkanasy (2002) developed a model specifically relating to the relationship between affect and attributions of leadership. In this model they suggest that follower affect can influence follower attributions of their leader's intentionality. Further, in a laboratory study, Halverson (2004) found that persons in a positive mood tend to

perceive their leaders as more charismatic than persons in a less positive mood and persons in a negative mood tend to perceive their leaders as less charismatic than persons in a less negative mood (Halverson, 2004). Likewise, Dasborough (2006) suggests that follower affect influences follower attitudes about their leader and organizational behavior.

It should be noted that the opposite direction of the affect — attributions of leadership relationship has received support in the literature. That is, leaders who are charismatic elicit more positive affect from followers (Dasborough, 2006; McColl-Kennedy & Anderson, 2002), just as follower positive affect impacts attributions of charismatic leadership. Further, leaders who express positive affect are perceived as more effective and charismatic than those who do not (Gaddis, Connelly, & Mumford, 2004; Lewis, 2000; Newcombe & Ashkanasy, 2002), as the expression of positive affect is one of the specific behavioral indicators of charismatic leadership (Bass, 1985). Although these relationships are complex and intertwined, in the current study we focus on the effects of follower affect on attributions of leadership (Fig. 1).

Hypothesis 2a. Follower positive affect will be positively related to follower perceptions of charismatic leadership.

Hypothesis 2b. Follower negative affect will be negatively related to follower perceptions of charismatic leadership.

1.3. Performance

Job performance can be conceptualized as the extent to which one exhibits behaviors that further the goals of the organization (Rotundo & Sackett, 2002). This includes both formal, prescribed, task related behavior, or core task behaviors, and informal acts of a prosocial nature that benefit coworkers, supervisors, and/or the organization called organizational citizenship behavior (Smith, Organ, & Near, 1983). Although the initial conceptualization of organizational citizenship behavior included behaviors that were not formally recognized or rewarded by the organization, Organ’s reconceptualization of OCB does not require that the behaviors be extra-role (Organ, 1997). Similar, but not identical to OCB, is the concept of contextual performance (Borman & Motowidlo, 1993). Contextual performance includes a set of behaviors that are more likely to be part of one’s rewarded work behaviors, and does not require that these behaviors be discretionary (Motowidlo, 2000). These behaviors include persisting on tasks,

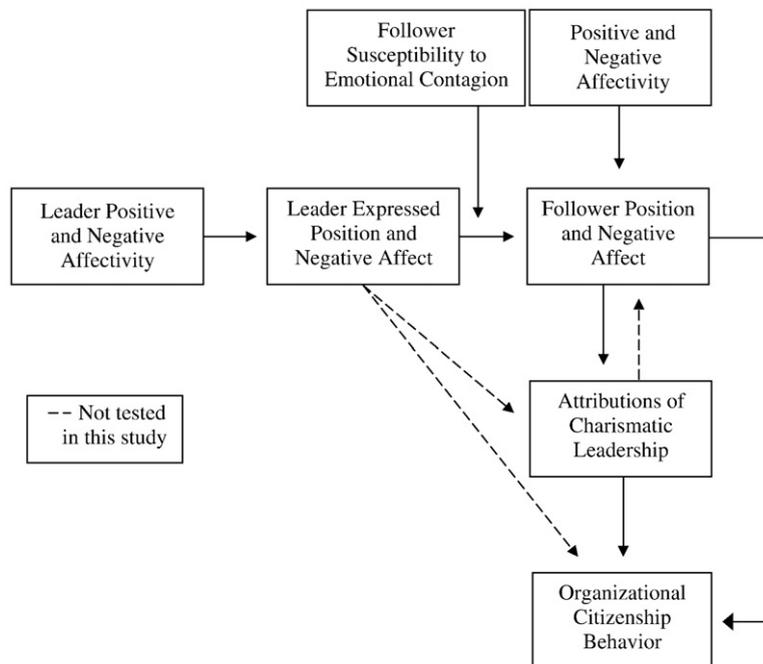


Fig. 1. Proposed model of affect and leadership.

volunteering or helping others, following rules, and supporting the organization. The current research focuses on contextual performance as a type of OCB.

The relationship between affect and OCB has been examined in a leadership context. George and Bettenhausen (1990) found that leader affect was related to work groups' prosocial behavior. However, that study did not examine the mechanism for that relationship. One possibility is that follower affect may have explained the relationship between leader affect and follower OCB given the relationship between affect and helping behavior (Isen & Baron, 1991). George and Brief (1992) describe positive affect as a direct antecedent of organizational spontaneity, and research has demonstrated the relationship between positive affect and organizational citizenship behavior (George, 1991; Lee & Allen, 2002). While the relationship between negative affect at work and OCB has not yet been established, research has linked employee negative affect to counterproductive work behaviors (Lee & Allen, 2002). Considering that employees who experience negative affect at work may want to harm their organization, it is unlikely that they will also engage in behaviors that help their organization, such as OCBs. Therefore, it is expected that negative affect at work will be negatively related to OCB.

Hypothesis 3a. Follower positive affect will be positively related to follower organizational citizenship behavior.

Hypothesis 3b. Follower negative affect will be negatively related to follower organizational citizenship behavior.

Charismatic leadership has also been conceptually and empirically linked to organizational citizenship behavior (Deluga, 1995; Koh, Steers, & Terborg, 1995). Charismatic leaders are thought to appeal to followers' higher order needs, foster follower dedication to organizational goals, and increase follower self-confidence and self-expectations. These behaviors cause followers to, "do more than they are expected to do," (Yukl, 1989), "perform above and beyond the call of duty," (Bass, 1985), take on greater responsibility, perform beyond expectations, and assume leadership roles themselves (Bass & Avolio, 1994). Theory suggests that charismatic leaders will impact organizational citizenship behavior in particular. For example, Bass (1990) argued that when the criteria for the evaluation of performance is ambiguous the leaders' expected influence in defining expectations is more important.

Shamir et al.'s (1993) theory suggests that charismatic leaders are able to motivate followers to exert extra effort by engaging their self-concepts and aligning their goals with the organization's goals. When extrinsic motivation is low, followers of charismatic leaders are more likely to attribute their behavior to internal motivation because their self-concepts have been engaged. In addition, setting high expectations for followers can encourage them to expend extra effort (Shamir et al., 1993). In a large field sample, Sosik (2005) found that leader values and charismatic behavior impacted follower extra effort and organizational citizenship behavior. Koh et al. (1995) found that teachers' perceptions of their principals' charismatic leadership behavior predicted organizational citizenship behavior. Therefore, it is expected that follower attributions of charismatic leadership will relate to their engagement in OCBs.

Hypothesis 4. Follower perceptions of charismatic leadership will relate positively to follower organizational citizenship behavior.

2. Methods

2.1. Sample

Principals from a large public school district were contacted by telephone and asked if they would like to receive information about this study. Sixty-six principals expressed interest in receiving additional information by e-mail. They were sent an e-mail containing information about the study and the web-links for the principal and teacher surveys. The e-mail requested that following the completion of their own survey, principals would forward an e-mail asking their teachers to complete a survey. Twenty-one principals completed the online survey (response rate of 33%). Data for which there was corresponding teacher data were only available for 16 of the principals, three of who were men (19%) and 13 of who were women (81%). There were two Black (13%), three Hispanic (19%), and 12 White (75%) principals.

One hundred twenty-six teachers, from 21 schools, responded. Only data from 112 teachers from 16 of the schools were usable because the others lacked the corresponding principal data. Among the usable sample, 19 were men (17%), 91 were women (81%), and two people failed to respond (2%). There were four Asian (4%), 11 Black (10%), 14 Hispanic (13%), 80 White (71%), and six teachers who indicated "other" as their race (5%). Tenure ranged from teachers in their first year to 30 years ($M=5.58$, $SD=5.66$). Groups ranged in size from 1 to 18 ($M=6.69$, $SD=5.34$).

Because education is a very specific industry, it is important to justify the use of principals as organizational leaders, and specifically charismatic leaders. Although principals engage in a great deal of administrative duties, they also work to inspire teachers and the community through the use of inspirational visions. Research has used the principal role, and formulating a new vision for a school, as a setting for creating leadership visions (Strange & Mumford, 2005). As, Bess and Goldman (2001, p. 432) said

Charismatic leadership is an antidote to discouragement and disengagement, and it seems to have surfaced in many of the least privileged schools, inspiring and energizing teachers and students alike. In the 1980s, Blumberg and Greenfield (1986) and Lightfoot (1983) published widely read volumes of case studies that described how charismatic leaders reestablished educational values in difficult schools. The implied leadership model uses charisma as its frame of reference: strong personalities inspire staff (and sometimes students), resulting in improved school climate, conflict resolution, and better outcomes.

Further, previous research has demonstrated the transformational leader behaviors of school principals (Koh et al., 1995). Based on these previous studies, the examination of charismatic leader behavior from school principals appears to be justified.

2.2. Procedure

This study used a survey methodology. Teachers completed measures of trait positive and negative affect (affectivity), susceptibility to emotional contagion, and positive and negative affect at work. Teachers also rated their principal on charismatic leadership and self-reported organizational citizenship behavior. Principals completed the same measures of trait affect and affect at work as the teachers did. In addition, they completed a Big 5 personality measure for use as a control variable. Meta-analytic work has linked leader neuroticism and extraversion to follower perceptions of charismatic leadership (Bono & Judge, 2004). Therefore, these scales were included as control variables to reduce the effects of leader personality characteristics on follower perceptions, and focus more closely on the variables of interest.

The other method of employing statistical control was to examine the interaction between teachers' susceptibility to emotional contagion and principal positive affect. By examining the moderated effect, rather than a main effect, there would be stronger evidence that principal affect is influencing teacher affect *through* emotional contagion. That is, if the relationship between principal affect and teacher affect is stronger as susceptibility to emotional contagion increases, it lends support to the idea that emotional contagion is explaining that relationship. Further, data were gathered on the participating schools and the rest of the school district to ensure that the schools that participated in this study were representative of the district as a whole.

2.3. Measures

2.3.1. Job Affect Scale (JAS)

The JAS (Brief, Burke, George, Roberson, & Webster, 1988) consists of 20 items describing positive and negative affect, based on the framework provided by Watson & Tellegen (1985). There are four subscales to the JAS representing high and low positive and negative affect. This four factor model has been supported by factor-analytic work (Burke, Brief, George, Roberson, & Webster, 1989). The high positive and high negative subscales were used and participants are asked to indicate how they feel "while at work."

2.3.2. Positive and Negative Affectivity Scale (PANAS)

This 20-item scale measures trait positive and negative affectivity (Watson, Clark, & Tellegen, 1988), indicating how one feels most of the time. Each item on the scale indicates a positive or negative affective trait. The positive and negative scales reflect two distinct scales rather than a single bipolar continuum. Both the positive and negative subscales were used. In this case the descriptor asked the participants to describe how they feel "in general." The scale has demonstrated high levels of reliability and validity (Watson et al., 1988).

2.3.3. Multifactor Leadership Questionnaire (MLQ-5X/short form)

Bass and Avolio's (1995) measure of charismatic leadership was used in this study. Followers rate their leader on: Idealized Influence, Inspiration Motivation, and Attributed Charisma. Ratings are made on a Likert Scale anchored

with 0 = not at all and 4 = frequently, if not always. An example of the question for Idealized Influence is, “Talks about his most important values and beliefs.” An example of an item from Inspiration Motivation is, “Expresses confidence that goals will be achieved.” An example of Attributed Charisma is, “Acts in ways to build your trust.” The scale has demonstrated high levels of reliability and validity as a leadership questionnaire (Bass & Avolio, 1995). Although these three factors are conceptually unique, they are expected to be part of an overall construct of charisma (Bass, 1988). Recent examinations of the properties of the Multifactor Leadership Questionnaire (MLQ 5X) have generally grouped all of the charisma items (idealized influence, attributed charisma, and inspiration motivation) into one factor of charisma (Avolio, Bass, & Jung, 1999; Carless, 1998).

To test this model, a confirmatory factor analysis was conducted using the AMOS 5.0 statistics program. Several error variances were allowed to correlate after an examination of the modification indices. Three goodness-of-fit indices were used based on predicted versus observed covariances, based on the comparison of the given model with an alternative model, and based on predicted versus observed covariances but penalizing for lack of parsimony (Jaccard & Wan, 1996). Based on these indices, the hypothesized model was found to be acceptable. The overall chi-square test for the model was not significant, $\chi^2(38)=50.88, p>.05$, indicating a good fit of the model. A measure of residual fit, the root-mean-square error of approximation (RMSEA), was .05. RMSEA values less than .05 indicate a good fit, while values between .05 and .08 indicate moderate fit (Browne & Cudeck, 1993; Hu & Bentler, 1995). The comparative fit index (CFI) was .99 and values over .95 indicate a good fit (Arbuckle, 1997; Hu & Bentler, 1999). Together, the indices suggest a good fit of the model. In addition, all of the items had acceptable factor loadings (Fig. 2; Table 1).

2.3.4. Organizational citizenship behavior

A 15-item measure of contextual performance, as described by Borman and Motowidlo (1993), was adapted from Motowidlo and Van Scotter (1994). One item was eliminated from the original questionnaire because it applied

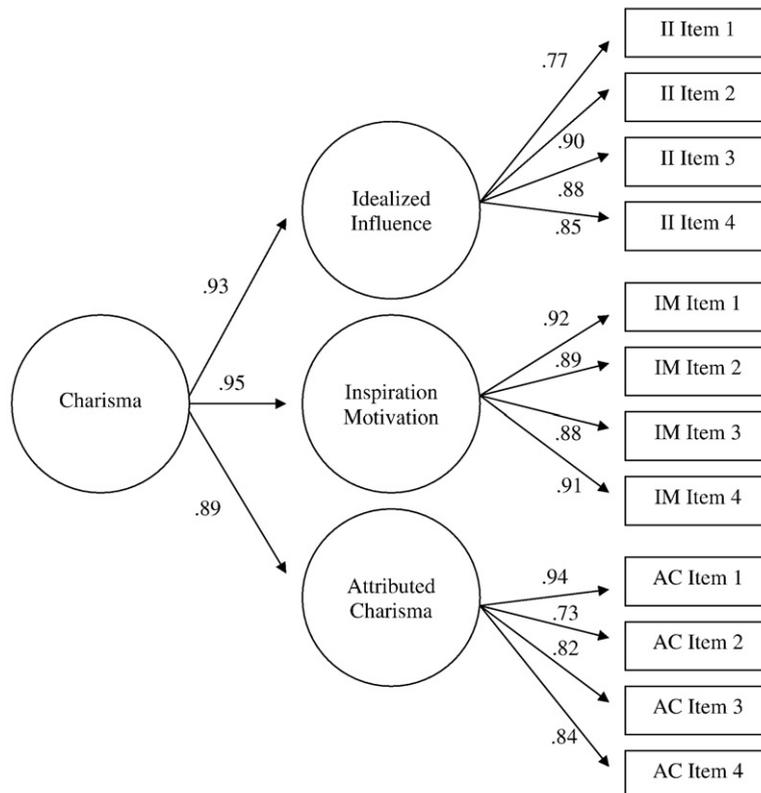


Fig. 2. Confirmatory factor analysis for the charisma subscale of the MLQ.

Table 1
Intercorrelations between teacher variables and principal variables

| | <i>a</i> | <i>M</i> | <i>SD</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------------|----------|----------|-----------|--------|--------|--------|--------|------|-------|------|------|-----|----|
| <i>Teacher variables</i> | | | | | | | | | | | | | |
| 1. Positive affect at work | .85 | 3.54 | .84 | – | | | | | | | | | |
| 2. Negative affect at work | .87 | 1.63 | .60 | –.28** | – | | | | | | | | |
| 3. Positive affectivity | .92 | 3.78 | .77 | .80** | –.24** | – | | | | | | | |
| 4. Negative affectivity | .92 | 1.85 | .74 | –.20** | .28** | –.26** | – | | | | | | |
| 5. Susceptibility to EC | .79 | 2.58 | .44 | .03 | –.02 | .01 | .10 | – | | | | | |
| 6. Charismatic leadership | .96 | 3.71 | 1.08 | .34** | –.35** | .37** | –.19* | .06 | – | | | | |
| 7. OCB | .90 | 4.21 | .56 | .47** | –.23* | .44** | –.16* | .18* | .31** | | | | |
| <i>Principal variables</i> | | | | | | | | | | | | | |
| 1. Positive affect at work | .84 | 4.08 | .53 | – | | | | | | | | | |
| 2. Negative affect at work | .70 | 1.54 | .38 | .05 | – | | | | | | | | |
| 3. Positive affectivity | .87 | 4.25 | .42 | .74** | –.09 | – | | | | | | | |
| 4. Negative affectivity | .87 | 1.31 | .30 | –.24 | .43 | –.24 | – | | | | | | |
| 5. Extroversion | .84 | 3.49 | .65 | .49 | –.29 | .58* | –.22 | – | | | | | |
| 6. Agreeableness | .78 | 4.38 | .48 | .22 | .13 | .47 | .09 | .08 | – | | | | |
| 7. Conscientiousness | .76 | 3.93 | .51 | –.29 | –.13 | .01 | .34 | –.07 | .11 | – | | | |
| 8. Emotional stability | .87 | 3.81 | .64 | .59* | –.23 | .70** | –.76** | .59* | .20 | –.39 | – | | |
| 9. Openness to experience | .38 | 4.17 | .32 | .09 | .01 | .15 | –.10 | .25 | –.42 | .19 | .07 | – | |
| 10. Turnover | – | 3.71 | 2.20 | –.58* | .09 | –.43 | –.15 | –.36 | .14 | .00 | –.20 | .10 | – |

For teachers, $n = 126$. For principals, $n = 16$. $a =$ Cronbach's α . * $p < .05$, ** $p < .01$.

primarily to a military sample. The scale is scored on a 1 (*Not at all likely*) to 5 (*Extremely likely*) scale and includes the following sample items: “While performing your job, how likely would you (a) comply with instructions even when supervisors are not present, (b) cooperate with others in the team, (c) persist in overcoming obstacles to complete a task.” The scale has demonstrated appropriate levels of validity and reliability (Borman & Motowidlo, 1993).

2.3.5. Susceptibility to emotional contagion

Doherty's (1997) emotional contagion scale was used to measure individual differences in susceptibility to emotional contagion. The items referring to love were not included resulting in 12 items measuring susceptibility to happiness, anger, and sadness. Sample items include, “Being with a happy person picks me up when I am feeling down,” and “I tense when I hear an angry quarrel.” Responses were recorded on a scale ranging from 1 (*Never*) to 4 (*Always*). The scale was designed and found to be a unidimensional scale, and has a high level of internal consistency, and test–retest reliability (Doherty, 1997). Convergent and discriminant validity have also been demonstrated (Doherty, 1997).

2.4. Personality

The personality test used was the 50-item measure of the Big Five personality dimensions from the online International Personality Item Pool (IPIP, 2001). This scale measures extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience. The response format of the Big Five was a Likert-type scale ranging from 1–5, anchored with Very Inaccurate and Very Accurate. The IPIP Big 5 has demonstrated high levels of validity and reliability in past research (Goldberg, 1999; Lim & Ployhart, 2006).

3. Results

3.1. Data examination

3.1.1. Self-report data

Because all of the teacher variables were self-report, there is some concern over common method variance. This is particularly problematic for the teacher variables, because we examine the relationships between them (e.g., positive

affect at work and OCB). To address this concern a confirmatory factor analysis was conducted for all of the teacher variables. Items from each scale were summed so there would only be 3 measured variables to represent each latent variable, or construct. This is commonly done in large CFAs such as this. All of the variables were randomly grouped, except for the charismatic leadership measure. The variables for this measure were grouped by facet of the scale (idealized influence, inspiration motivation, attributed charisma).

The same methods were used for this model as were used for the CFA of the MLQ variables. The hypothesized model was found to be acceptable. Although the initial fit of the model was quite good, modification indices indicated that some of the error variances were correlated. Four error terms were allowed to correlate. The overall chi-square test for the model was not significant, $\chi^2(164)=192.83, p=.06$, indicating a good fit of the model. A measure of residual fit, the root-mean-square error of approximation (RMSEA), was .04, and values below .05 indicate a good fit (Browne & Cudeck, 1993; Hu & Bentler, 1995). The comparative fit index (CFI) was .98 also indicating a good fit, which is indicated by values over .95 (Arbuckle, 1997; Hu & Bentler, 1999). In addition, all of the items had acceptable factor loadings (Fig. 3). All of the variables were correlated with each other, but the CFA provides evidence that the factors measured are unique, and not simply a product of common method variance.

3.1.2. Response bias

In addition to the concerns addressed above, there is also concern over self-selection into the study. To address this concern the schools from which data were collected were compared to those schools that did not participate. Data were collected on all of the schools in the district in terms of turnover, the number of new teachers, economic ratings of the area around the school, and an overall rating of the school. These data were collected from the teacher assignment file from the school district (Fuller, 2006). There were no differences between the schools that participated and the district as a whole on turnover $t(263)=-1.54, p>.05$, number of novice teachers $t(264)=-1.14, p>.05$, economic rating of the area around the school $t(265)=-1.55, p>.05$, or the overall rating of the school $t(264)=-1.00, p>.05$.

3.1.3. Level of analysis

Because the teachers in the sample were nested within schools it is necessary to determine the appropriate level of analysis for the data. Theoretically, the individual difference variables (affectivity, susceptibility to

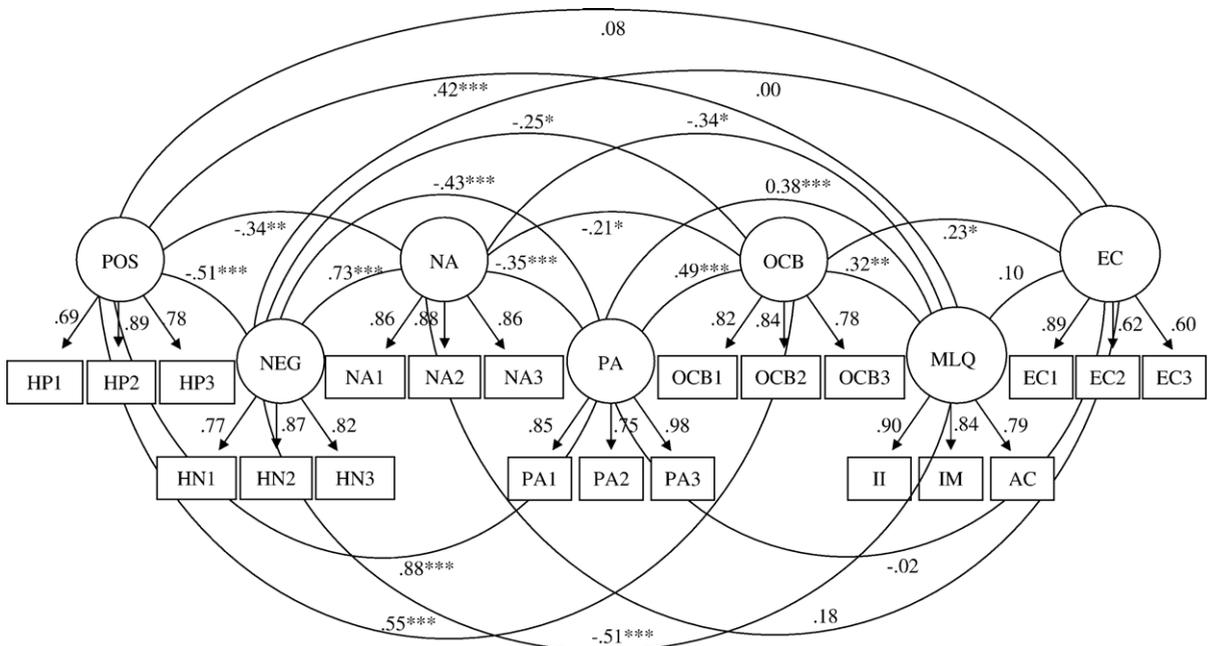


Fig. 3. Confirmatory factor analysis of teacher variables.

emotional contagion) should all be conceptualized as within group variables, meaning that differences between individuals within a school should be greater than differences between schools. There should be greater differences between schools than within in terms of attributions of charismatic leadership, because each school shares a single leader who may express similar behaviors across teachers (Shamir, Zakay, Breinin, & Popper, 1998). Organizational research has demonstrated that charismatic/transformational leadership can occur at both the group (Avolio, Zhu, Koh, & Bhatia, 2004) and individual (Yammarino, Spangler, & Dubinsky, 1998) levels. Similarly, research suggests that OCB can be considered a group-level phenomenon as a norm of such behavior can develop (Ehrhart, 2004). Positive and negative affect have also been demonstrated at the group level, in terms of group affective tone (George, 1990) although there is also evidence that there is significant variation within groups as well (George & James, 1993; Yammarino & Markham, 1992).

Within and between analysis (WABA), developed by Dansereau, Alutto, & Yammarino (1984), was used to determine the appropriate level of analysis for the data (Table 2). First, WABA I tests the level at which each variable should be examined. As expected, all of the individual difference variables had stronger individual difference (within) effects than group (between) effects. However, positive and negative affect at work, attributions of charismatic leadership, and OCB also had stronger within effects than between effects. Second, the WABA II procedure was followed to examine the level of analysis among pairs of variables to determine whether the covariation is stronger within or between schools. The WABA II results indicated that all of the hypothesized relationships could be conceptualized as within school variables.

However, there were three important relationships for which there were significant between school differences. There was greater between school variation than within school variation for the relationships between positive and

Table 2
WABA results of teacher variables

| | WABA 1 | | | | WABA 2 | | | | t-tests | |
|---------|--------|-----|------------------|---------|--------|------|-------------------|--------|---------|----------|
| | B | W | E ratio | F ratio | B | W | A test | Z test | B | W |
| HP and | .51 | .86 | .60 ^a | .54 | | | | | | |
| HN | .40 | .93 | .41 ^b | 1.13 | -.46 | -.23 | .24 | 1.01 | 2.28* | 2.52* |
| MLQ | .55 | .83 | .66 ^a | .43 | .63 | .27 | .40 ^a | 1.80* | 3.53** | 2.91** |
| OCB | .36 | .93 | .39 ^b | 1.25 | .24 | .52 | -.31 ^a | -1.33 | 1.07 | 6.19*** |
| EC | .51 | .86 | .60 ^a | .54 | .76 | .54 | .29 ^a | 1.50 | 5.03*** | 6.52*** |
| PA | .45 | .89 | .52 ^b | .74 | .80 | .80 | .16 | .67 | 5.72*** | 13.57*** |
| NA | .46 | .89 | .52 ^b | .69 | -.38 | -.14 | .24 | .99 | 1.80 | 1.52 |
| HN and | | | | | | | | | | |
| MLQ | | | | | -.65 | -.28 | .42 ^a | 1.91* | 3.70** | 2.92** |
| OCB | | | | | -.28 | -.22 | .06 | .26 | 1.27 | 2.27* |
| EC | | | | | -.43 | -.44 | -.01 | -.05 | 2.08 | 5.01*** |
| PA | | | | | -.54 | -.18 | .39 ^a | 1.64 | 2.80* | 1.90 |
| NA | | | | | .30 | .28 | .02 | .09 | 1.38 | 2.98** |
| MLQ and | | | | | | | | | | |
| OCB | | | | | .35 | .31 | .04 | .17 | 1.60 | 3.27** |
| EC | | | | | .53 | .28 | .27 ^a | 1.18 | 2.71* | 2.95** |
| PA | | | | | .51 | .33 | .20 | .86 | 2.60* | 3.58*** |
| NA | | | | | -.57 | -.06 | .54 ^b | 2.27* | 2.99** | .62 |
| OCB and | | | | | | | | | | |
| EC | | | | | .24 | .49 | -.27 ^a | -1.12 | 1.10 | 5.72*** |
| PA | | | | | .35 | .46 | -.11 | -.51 | 1.61 | 5.22*** |
| NA | | | | | -.03 | -.18 | -.15 | -.58 | .16 | 1.91 |
| EC and | | | | | | | | | | |
| PA | | | | | .84 | .69 | .23 | 1.46 | 6.76*** | 9.74*** |
| NA | | | | | -.65 | -.48 | .21 | 1.00 | 3.75** | 5.59*** |
| PA and | | | | | | | | | | |
| NA | | | | | -.37 | -.22 | .16 | .67 | 1.78 | 2.34* |

$n = 124$. * $p < .05$, ** $p < .01$, *** $p < .001$.

^a 15 degrees.

^b 30 degrees.

Table 3

Hierarchical linear model for the moderating effect of principal affect at work on the relationship between teacher susceptibility to emotional contagion and positive affect at work

| | γ | t |
|--|----------|---------|
| <i>Teacher control variables</i> | | |
| Positive affectivity | .83 | 7.12*** |
| Negative affectivity | .18 | 1.32 |
| <i>Principal control variables</i> | | |
| Extroversion | -.26 | -2.78* |
| Principal positive affectivity | -.31 | -1.60 |
| Principal negative affectivity | .16 | 0.86 |
| <i>For teacher susceptibility to emotional contagion</i> | | |
| Principal positive affect at work | .11 | 2.57* |
| Principal negative affect at work | -.08 | -2.12* |

Teacher $n = 112$, principal $n = 16$. * $p < .05$, ** $p < .01$, *** $p < .001$.

negative affect and attributions of charismatic leadership, although there was significant within school effects as well. Also, there was greater between school variation for the relationship between positive affect at work and susceptibility to emotional contagion. Because this relationship was one that was intended to be tested at the group level, additional steps were taken to justify the aggregation of teacher positive and negative affect at work, including the calculation of ICC(1) and ICC(2) statistics (Bliese, 2000).

The ICC(1) statistic represents the amount of variance in the individuals' responses that can be explained by their membership in their group. The ICC(1) for positive affect was .19, meaning that 19% of the variance is between schools. Values over .12 are acceptable (James, 1982). In addition, a one-way ANOVA was performed to determine the significance of the ICC(1) and it was statistically significant ($p < .05$). The ICC(1) for negative affect was .07, and the ANOVA was not statistically significant. Next, the ICC(2) values were examined. The ICC(2) for positive affect was .80 and values greater than .70 are acceptable (Klein et al., 2000). The ICC(2) for negative affect was .68, slightly below the acceptable level of agreement. Finally r_{wg} was examined as an additional index of agreement (James, Demaree, & Wolf, 1984). The r_{wg} values for positive affect ranged from .72 to .92 with a mean of .88, where values over .70 are acceptable (George, 1990; Nunnally, 1978). The r_{wg} value for negative affect ranged from .74 to .96 with a mean of .88. These indices suggest that it is justifiable to aggregate positive affect to the group level, although negative affect received less support for aggregation.

3.1.4. Plan of analysis

Hierarchical Linear Modeling (HLM) was conducted using the HLM 5 statistical program to examine Hypothesis 1a, that principal positive affect would impact teacher positive affect for teachers high in susceptibility to emotional contagion. The WABA 2 analysis and the agreement indices provide justification for examining this relationship at the aggregate level. Although the data set only included 16 principals, Bryk and Raudenbush (1992, p. 267) suggest that 10 is the minimum number of level 2 variables that are necessary for HLM analysis. In all cases, the non-robust standard error analysis was used because of the small number of level 2 units (principals). The robust standard error analysis assumes that the standard errors are consistent even when HLM assumptions are violated (Raudenbush, Bryk, Cheong, & Congdon, 2000). This assumption is particularly problematic when there is a small sample of level 2 participants.

Principal extraversion and affectivity were used as control variables for all of the principal analyses. We expected to include principal emotional stability as an additional control variable, but given the high and significant correlation between emotional stability and principal positive affect at work (as well as positive and negative affectivity) it was excluded from the analysis (Table 1). While there was some support for examining the data at an aggregate level, greater support was generated for the examination of the data at the individual level. Therefore, other than the cross-level interaction between principal affect at work and teacher susceptibility to emotional contagion, the other hypothesized relationships were examined with correlational analyses and, finally, structural equation modeling to test the overall model.

3.2. Test of hypotheses

Intercorrelations between the principal and teacher variables are presented in Table 1. Hypotheses 1a and 1b examined the interaction between leader affect and work and follower susceptibility to emotional contagion as a predictor of follower positive and negative affect at work. Hypothesis 1a was supported (Table 3) such that as principal positive affect at work increased, so did the relationship between teacher susceptibility to emotional contagion and teacher positive affect at work. Although not hypothesized, the interaction between principal negative affect at work and teacher susceptibility to emotional contagion was also significant. Fig. 4 displays this relationship using median splits for principal positive and negative affect at work and teacher susceptibility to emotional contagion. Although there was less support for the aggregation of teacher negative affect at work to the group level, Hypothesis 1b was tested. There was no effect for the interaction between principal negative affect at work, teacher susceptibility to emotional contagion, and teacher negative affect at work ($p > .05$).

Further, because data were gathered on school characteristics, it was possible to examine the relationship between principal positive and negative affect and teacher turnover at the end of the year. Based on the fact that data for the current study were collected 6–9 months before the turnover occurred (since most if not all teachers turnover during the summer months), there is greater support for the notion that principal positive affect led to teacher turnover, rather than turnover leading to principal affect. There was a statistically significant relationship between principal positive affect at work and teacher turnover the following year, although there was no relationship between principal negative affect at work and turnover (Table 1). Principals who reported greater positive affect at work had lower levels of turnover the following summer.

Hypotheses 2a, 2b and 3a, 3b suggest that teacher positive and negative affect at work would be related to attributions of charismatic leadership and organizational citizenship behavior. Based on the correlational data, both hypotheses were supported. Teacher positive affect at work was positively related to attributions of charismatic leadership and OCB. Teacher negative affect at work was negatively related to attributions of charismatic leadership and OCB. In line with Hypothesis 4, attributions of charismatic leadership were positively related to OCB.

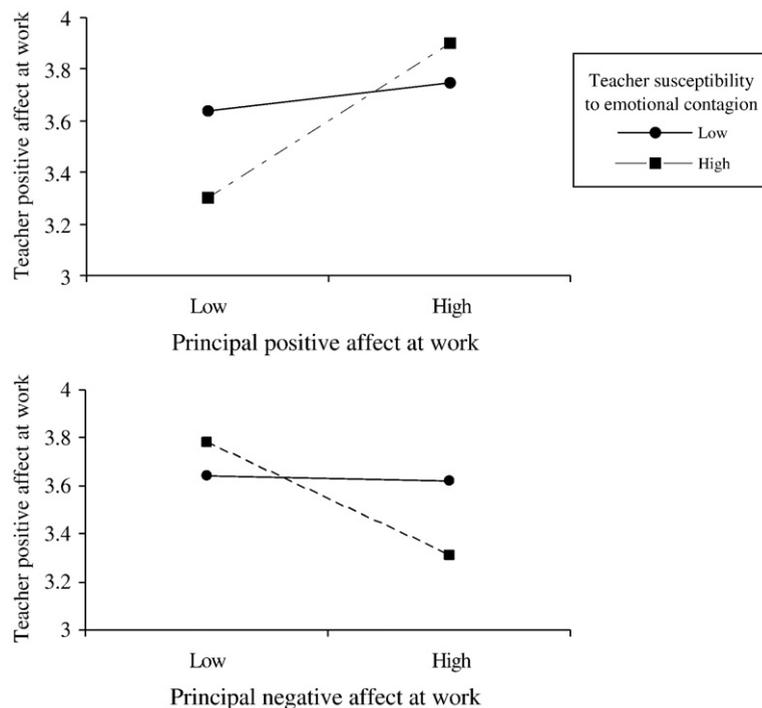


Fig. 4. Relationship between principal affect at work, teacher susceptibility to emotional contagion, and teacher positive affect at work.

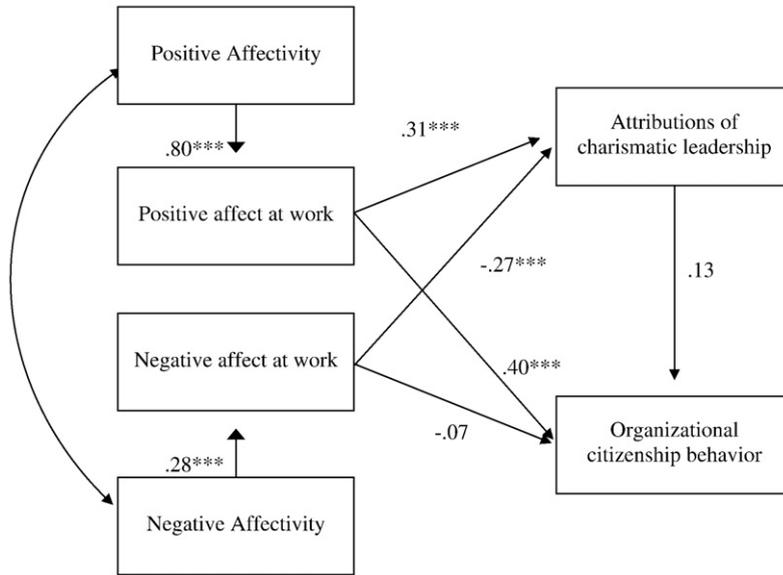


Fig. 5. Relationship among teacher variables.

3.2.1. Structural equation modeling

Finally, to test all of the teacher hypotheses at once, structural equation modeling was conducted using the AMOS 5.0 statistics program. The model included teacher positive and negative affectivity as covariates. Teacher positive and negative affect at work were expected to relate to MLQ and OCB and MLQ was expected to relate to OCB. The fit indices indicate that the model (Fig. 5) was a good fit to the data. The overall chi-square test for the model was not significant, $\chi^2(7)=11.09, p>.05$, indicating a good fit of the model. The root-mean-square error of approximation (RMSEA), was $.07$, and although values below $.05$ represent a good fit of the model, values between $.05$ and $.08$

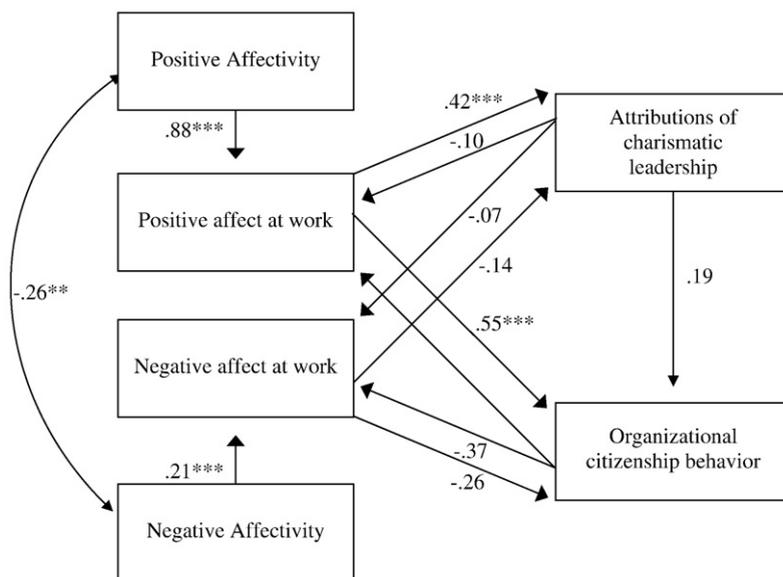


Fig. 6. Test of alternative model of relationship among teacher variables.

suggest a moderate fit (Browne & Cudeck, 1993; Hu & Bentler, 1995). The comparative fit index (CFI) was .98 also indicating a good fit (Arbuckle, 1997; Hu & Bentler, 1999). As expected, positive and negative affect at work predicted MLQ ratings. Positive affect at work predicted OCB, although negative affect at work did not. Also, MLQ did not predict OCB when examined in the overall model.

3.2.2. *Exploratory analysis*

In addition to the hypothesized model, one additional model was explored to test the directionality of the relationship between positive and negative affect at work and MLQ ratings. Previous research has supported the idea that affect predicts leadership ratings (Dasborough, 2006; Halverson, 2004) and that leadership ratings can predict affect (McCull-Kennedy & Anderson, 2002). To explore this possibility two additional paths were added to the model from MLQ to positive and negative affect at work. Neither path was statistically significant. The fit indices remained similar, although the previously significant link between negative affect at work and charismatic leadership became non-significant (Fig. 6). Therefore, the model supports the hypothesis that affect at work impacts MLQ ratings, rather than the reverse. However, it should be noted that non-recursive models, such as this one where a reciprocal relationship is tested, should be interpreted carefully (Bentler & Raykov, 2000).

4. Discussion

The current study highlights the importance of emotional contagion and affect at work in a leadership context. Both leader and follower affect related to important outcomes for the principals and teachers in this study. First, leader positive affect at work was related to follower turnover at the end of the year. Second, there was a relationship between leader affect, follower affect, and follower susceptibility to emotional contagion. The positive relationship between leader positive affect at work and follower positive affect at work increased as follower susceptibility to emotional contagion increased. Also, the negative relationship between leader negative affect at work and follower positive affect at work increased as follower susceptibility to emotional contagion increased. Third, follower positive and negative affect at work were linked to attributions of charismatic leadership and OCB. The findings from this research are important to leadership from both a theoretical and practical position.

4.1. *Leader affect*

This study provides evidence of the importance of leader affect at work and emotional contagion in terms of organizational outcomes. In addition to the relationship between leader positive affect and follower turnover, leader positive and negative affect at work were related to follower positive affect at work for followers who were more susceptible to emotional contagion. Contrary to expectations, this study did not find any relationship between principal affect at work and follower negative affect at work. It is possible that the lack of within school agreement, the small sample size, restriction of range, or social desirability in responding contributed to the null finding. While previous theory (e.g., Bass, 1985) and laboratory research (Cherulnik et al., 2001; Halverson, 2004; Lewis, 2000; Sy et al., 2005) has linked leader affect to follower affect, this is the first study to extend this relationship to a field setting, adding to the generalizability of this effect.

The findings also suggest that the likelihood that emotional contagion will occur depends on followers' susceptibility to emotional contagion. Although previous laboratory research has found direct relationships of leader affect on follower affect, regardless of susceptibility, it is possible that the strength of the laboratory situation creates an environment where emotional contagion is particularly likely to occur. Indeed, Mischel (1973, 1977) argues that strong situations are likely to elicit similar responses from all individuals. However, in weaker, more complex environments, susceptibility to emotional contagion may be a requirement for emotional contagion to occur.

4.2. *Follower affect*

The current research also builds upon the growing body of literature on affect at work. This study found that follower positive and negative affect at work were related to perceptions of charismatic leadership and organizational citizenship behavior. The link between follower affect at work and attributions of charismatic leadership can be explained in terms of research demonstrating that individuals tend to perceive others in an affect-congruent manner

(Isen & Baron, 1991). The relationship between positive affect at work and organizational citizenship behavior is also supported by previous research (George, 1991; Lee & Allen, 2002). Finally, followers' perceptions of their leader's charisma were related to their self-reported OCB. Theory asserts that charismatic leaders are able to encourage followers to perform beyond expectations (Bass, 1985), which may involve the performance of organizational citizenship behavior.

However, when these relationships were all examined simultaneously using structural equation modeling, follower positive affect proved to be the most important predictor of attributions of charismatic leadership and OCB. Both positive and negative affect predicted attributions of charismatic leadership, but only positive affect at work related to OCB. Although previous research has demonstrated the relationship between positive affect and OCB, the relationship had not been demonstrated for negative affect. Similarly, the relationship between attributions of charismatic leadership and OCB, which has been demonstrated previously (Koh et al., 1995) did not hold when examining follower positive affect at work, attributions of charismatic leadership, and OCB simultaneously. It is possible that previous findings linking charismatic leadership to OCB can be accounted for by follower positive affect. Future research should continue to examine these relationships.

It is important to note that the directions of the relationship examined in this study cannot be proven. Indeed, research has demonstrated that follower attitudes about their leader can impact their emotions (McCull-Kennedy & Anderson, 2002). Although the opposite directionality of the relationship between follower affect and attributions of charismatic leadership was tested with structural equation modeling, this study cannot prove that the effects work one way or the other. It is most likely that the relationship between follower affect and attitudes is reciprocal, such that follower affect influences attitudes, and those attitudes impact subsequent affect.

4.3. Implications

This research has important practical and theoretical implications. Theoretically, this study adds to the small, but growing research on the role of affect and emotional contagion in charismatic leadership and adds to that research by examining the moderator of follower susceptibility to emotional contagion. In addition, this study adds to work on Affective Events Theory (AET, Weiss & Cropanzano, 1996), and in particular, the inclusion of leader behavior as an affective event (Dasborough, 2006). When a leader expresses positive or negative affect in front of followers, the interaction may serve as an affective event which can impact follower affect, attitudes, and behavior.

Practically, this research not only examines the importance of leader expressed affect on follower outcomes, but also highlights the importance of follower affect as it relates to attitudes and performance outcomes. Leaders should be advised of the potential effects of their expressed affect and organizations should be made aware of the impact that their employees' affect can have on outcomes. Because followers can pass their affect on to others with whom they work (e.g., Barsade, 2002), leader affect may have a cascading effect on organizations. Therefore, leader affect may have the potential to influence organizational effectiveness, through its impact on follower affect.

Further, the effectiveness of charismatic leaders may depend upon the situations in which they are leading and the types of followers that they are leading. For example, charismatic leaders might be more effective in industries where the expression of positive affect is required, or those industries high in emotional labor. Emotional labor is the, "management of feeling to create a publicly observable facial and bodily display," (Hochschild, 1983). Such industries include human resource management, healthcare, and sales (see Grandey, 2000 for a review). In industries high in emotional labor leaders would be expected to express positive emotions, making emotional contagion more likely to occur. Indeed, charismatic leaders have proved to be effective in the healthcare industry (e.g., Avolio et al., 2004), sales (Yammarino et al., 1998), and human resource management (Zhu, Chew, & Spangler, 2005).

Conversely, in highly negative situations, having the ability to control negative emotions would also be important for leadership success. Previous research suggests that emotional intelligence and the ability to regulate one's emotions are important for leadership success (Wong & Law, 2002). This may explain, in part, why charismatic leaders are particularly successful in crisis situations (Pillai, 1996). Charismatic leaders might be less successful in non-emotionally charged settings. In addition, a charismatic leaders' success might depend on the type of followers that he or she leads. Followers who are susceptible to emotional contagion might also be more susceptible to the effects of charismatic leaders. Although susceptibility is an individual difference, there are differences by industry. For example, Doherty, Orimoto, Singelis, Hatfield, & Hebb (1995) found that individuals in the medical industry were more susceptible to emotional contagion than those in the military industry.

Doherty et al. (1995) also found differences in gender, such that women were more susceptible to emotional contagion than men. This may suggest that charismatic leaders would be more effective at influencing female followers' emotions than male followers' emotions. Finally, this study has practical implications for the importance of follower affect in organizations. Regardless of leaders' ability to impact followers' emotions through emotional contagion, leaders should be cognizant of other factors influencing followers' emotions. Given the potential effects of follower affect at work on their attitudes and work behaviors, leaders should find ways to increase follower positive affect and decrease follower negative affect at work. In addition to practical implications of these findings, researchers should consider the industry, gender makeup and susceptibility in general of their sample when examining emotional contagion.

4.4. Limitations

There is some concern over the generalizability of the sample used in this study. While other research has supported the role of principals as leaders (Bess & Goldman, 2001; Koh et al., 1995; Strange & Mumford, 2005), education is a very specific industry that requires a great deal of emotional labor (Hargreaves, 2000). The same source data of the teacher variables also raises concern, although the confirmatory factor analysis supported the independence of the constructs. In particular, the fact that the teachers self-reported OCB could introduce bias. However, district rules did not allow for the collection of performance data on the teachers for this study. Also, longitudinal analysis of affect at work would be preferable to data collected at a single point in time. Another potential limitation stems from the fact that only data from sixteen principals were able to be used in the final analyses. This may have limited statistical power, resulting in the lack of significant findings between principal negative affect at work and follower negative affect at work.

The worth of this sample size can be appreciated though, when reflecting on its impact in terms of leadership theory development. That is, the present study had sixteen different organizational leaders with followers from these sixteen respective organizations. Future research should seek to replicate these findings using a larger sample of leaders across more diverse industry populations. Also, the data were taken at a single point in time, rather than over an extended period of interactions between leaders and followers, except for the turnover data. Future research might use an experienced sampling methodology to more clearly elucidate the emotional contagion process.

4.5. Conclusion

Despite these limitations, this study examines an important leadership phenomenon, emotional contagion, in a field setting. Leader positive and negative affect were related to follower positive affect through emotional contagion. In addition, this study adds to the growing body of research on affect at work, demonstrating that follower positive and negative affect at work were related to perceptions of charismatic leadership and organizational citizenship behaviors. Finally, follower perceptions of charismatic leadership were related to organizational citizenship behavior. These findings have important implications for leadership theory and practice.

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