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ORIGINAL PAPER

The Moderating Roles of Perceived Task Interdependence and Team Size in Transformational Leadership's Relation to Team Identification: A Dimensional Analysis

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Abstract This study is aimed at investigating perceived task interdependence and team size as contingencies for team leaders' transformational leadership influence on team identification. Data were obtained from a two-phase survey among 234 employees from ten multinational pharmaceutical subsidiaries in South Korea. Each dimension of transformational leadership by team leaders relates positively to team identification. However, the impact of leadership dimensions on team identification is attenuated by distinct moderator(s): charisma by higher perceived task interdependence, individualized consideration by larger team size, and intellectual stimulation by higher perceived task interdependence or larger team size. This study's findings help us develop a more nuanced understanding of how transformational leadership operates. This study illustrates that team leaders' transformational influence on team identification fluctuates, depending on the team structure. Such knowledge may help inform team leader development and team-structuring strategies used by practitioners and may contribute to improving organizational team effectiveness. This is one of the first studies showing evidence that the influence of the dimensions of transformational leadership is contingent upon distinct moderators, thereby contributing to advancing the theory of transformational leadership. Further, this study, by investigating team structure as a contingency of the transformational leadership-team identification relationship, complements previous research that focused on follower characteristics. Additionally, our explicit attention to the team as both the context of leaders' action and the target of employee identification helps us gain a more concrete understanding of team leadership and team development issues, which are particularly salient in the highly competitive pharmaceutical industry.

Keywords Transformational leadership · Team identification · Task interdependence · Team size

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While the trend toward the use of teams and team-based organizations continues, a surprisingly high percentage of teams do not live up to their promise and fail to accomplish their goals (Parisi-Carew, 2011; Tabrizi, 2015). As a fruitful way to increase the likelihood of teams' success, managers are advised to cultivate team members' collective identification with their team (*hereafter* team identification), a sense of "we" and a perceived oneness between themselves and their team (Ashforth & Mael, 1989; Ellemers, De Gilder, & Haslam, 2004). Team identification makes members more likely to embrace their team's interests as their own (Brewer & Gardner, 1996); consequently, they are more willing to put forth extra effort on behalf of their team (Christ, van Dick, Wagner, & Stellmacher, 2003, Riketta & van Dick, 2005; van Knippenberg & van Schie, 2000). In addition, team identification has been found to facilitate effective conflict management in teams (Hinds & Mortensen, 2005; Somech, Desivilya, & Lidogoster, 2009) and to improve the team processes of teams with highly diverse membership (Mitchell, Parker, & Giles, 2011; van der Vegt & Bunderson,

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2005). Because of such positive implications of team identification, scholars have been interested in finding the factors that lead employees to identify with their team (Ashforth, Harrison, & Corley, 2008).

Transformational leadership, a set of leader behaviors that motivate followers to perform beyond expectations toward transcendent goals (Bass & Riggio, 2006; Yukl, 2005), has been highlighted for its role in fostering employees' collective identification (Dvir, Eden, Avolio, & Shamir, 2002; Effelsberg, Solga, & Gurt, 2014; Kark, Shamir, & Chen, 2003; Shamir, Zakay, Breinin, & Popper, 1998), and collective identification has often been considered as a mediator of transformational leaders' relation to more distal outcomes, such as job performance or voice behaviors (e.g., Kark et al., 2003; Liu, Zhu, & Yang, 2010; Paulsen, Maldonado, Callan, & Ayoko, 2009; X.-H. Wang & Howell, 2010). Meanwhile, little research has been conducted on the moderators of transformational leaders' influence on collective identification (see Epitropaki & Martin, 2005 for an exception), hinting at the implicit assumption of transformational leaders' *universal* influence across diverse situations (Bass, 1997). Yet, the question still remains as to the universality of such influence on team identification, as leadership influence in general (Hackman & Wageman, 2007; Podsakoff, MacKenzie, & Bommer, 1996; Vroom & Jago, 1978, 2007) and transformational leadership influence in particular (Den Hartog & Belschak, 2012; Kirkman, Chen, Farh, Chen, & Lowe, 2009; Li, Chiaburu, Kirkman, & Xie, 2013) may be affected by the situational context. It is thus necessary to further investigate the moderators of the transformational leadership-team identification relationship. Without a fuller understanding of this relationship, managers are compelled to expend their scarce resources (e.g., time and attention) in cultivating team identification, when their efforts are redundant with, or negated by, the situational context.

Accordingly, this study examines two moderators of the focal relationship—perceived task interdependence and team size—drawing on substitutes for leadership framework (Kerr & Jermier, 1978). In doing so, we deviate from the prevalent practice of treating transformational leadership as an overarching construct. Thus, we theorize and test its dimensions separately by responding to the urge from van Knippenberg and Sitkin (2013) to test the unexamined assumption that its multiple dimensions, though distinct, all operate contingent upon the same set of moderating factors (p. 2). Our choice of the two structural features as moderators is informed by previous studies, which have demonstrated the relevance of team structure for the transformational leadership process (Kearney, 2008; Kearney & Gebert, 2009; Keller, 2006; Shin & Zhou, 2007) and the critical impact of these variables on team processes (Gully, 2000; Kozlowski & Bell, 2003; Levine & Moreland, 1990; Wageman, Gardner, & Mortensen, 2012). We argue that the two moderators capture the complementary aspects of the leadership context. Perceived task interdependence, or the extent to which the task performance of a team member is determined by the input and resources of other team members (van der Vegt, Emans, & van de Vliert, 1998, p. 127), likely denotes a *task context* within which leaders' task-oriented intervention takes place (Lord & Rowzee, 1979). In contrast, team size, or the number of members in a team, creates a *relational context* within which leaders' relation-oriented intervention takes place, given that a large team size may constrain the capacity of transformational leaders to maintain dyadic relationships with followers (Cogliser & Schriesheim, 2000; Green, Anderson, & Shivers, 1996), through which their influence is, in part, transmitted (Dvir et al., 2002; Wang, Law, Hackett, Wang, & Chen, 2005).

This study makes several contributions to the leadership literature. First, the current study contributes to the field of transformational leadership through its unique focus on each of its behavioral dimensions. We aim to enhance theoretical clarity in the field by theorizing the differential processes by which each dimension may affect team identification and by demonstrating, hence, the distinct contingencies operating for each dimension. Secondly, the present study offers a more nuanced understanding of the leadership process (Lowe, Kroeck, & Sivasubramaniam, 1996; Podsakoff et al., 1996) by identifying the contingencies regarding the transformational leadership-collective identification relationship. Our focus on team structural variables as moderators of the focal relationship complements Epitropaki and Martin's (2005) pioneering study of follower characteristics as contingencies of the relationship. Third, we extend a research stream at the intersection of leadership and team development through our explicit attention to leaders and collective identification in team settings. Although team identification is distinct from organizational identification (i.e., employee identification with an organization as a whole) (van Knippenberg & van Schie, 2000), the indiscriminate investigation of transformational leadership processes for the two has obstructed our understanding of leadership and identification (Ashforth et al., 2008). Our study provides a clearer understanding of and guidance for the role of team leaders in managing teams (Zaccaro, Rittman, & Marks, 2001).

Theoretical Development

Transformational Leadership and Team Identification

Before we delve into discussing the relationship between transformational leadership and team identification, we believe it is necessary to clarify our conceptualization of these constructs in terms of their level of analysis, given that they have been conceptualized as both individual- and group-level constructs in previous studies. Team identification refers to the

extent to which employees perceive oneness with or belongingness to a team (Ashforth & Mael, 1989) and, as such, reflects the extent to which the individual's self-concept incorporates his or her team (Pratt, 1998). This construct is thus basically a psychological process located at the individual level (Kark et al., 2003; Shamir, Zakay, Breinin, & Popper, 2000). Further, team identification entails a subjective claim or acceptance by the individual, whose identity is at stake (Ashmore, Deaux, & McLaughlin-Volpe, 2004; Brickson, 2013; Dutton, Dukerich, & Harquail, 1994), and therefore, individuals in the same team may develop varying degrees of identification with their team. For these reasons, team identification has been frequently conceived and assessed at the individual level of analysis (e.g., Chen, Zhu, & Zhou, 2015; Morrison, Wheeler-Smith, & Kamdar, 2011; van der Vegt, van de Vliert, & Oosterhof, 2003), and we follow this practice. Transformational leadership has both individual- and group-level components (Yammarino & Bass, 1990). Accordingly, researchers have investigated the construct at the individual level (e.g., Jiao, Richards, & Zhang, 2011; Liang & Chi, 2013), group level (e.g., Jiang, Gu, & Wang, 2015; Wu, Tsui, & Kinicki, 2010), or both at the individual and the group levels (e.g., Chi & Pan, 2012; Hamstra, Van Yperen, Wisse, & Sassenberg, 2014). In the current study, we view it as an individual-level construct, given that we are interested in understanding leaders' influence on the individual phenomenon of team identification.

According to social identity theory, the self-concept consists of a personal identity comprising unique characteristics, such as abilities and interests, and a collective identity comprising salient group classifications (Tajfel & Turner, 1986). Central to our current discussion is the *dynamic* nature of the self-concept: it is dynamic in that the salience (i.e., active use) of specific self-concepts is contingent in a given situation and the cues therein; that is, only a situationally relevant and meaningful portion of the self-concept governs individuals' behaviors in the present moment (Hogg & Terry, 2000). In addition, individuals' self-concepts may change over time as they learn about themselves through their own experiences and reflections, as well as through validation by other people (Baumeister, 1998; Bem, 1972).

Considering that the self-concept can be influenced by the situational context, we argue that transformational leadership, by inducing a sense of belonging to a collective, likely makes followers' collective identity more salient (Lord, Brown, & Freiberg, 1999; Shamir, House, & Arthur, 1993; van Knippenberg, van Knippenberg, De Cremer, & Hogg, 2004). Multiple studies have indeed supported this argument, including those concerning team identification (Cicero & Pierro, 2007; Dvir et al., 2002; Kark et al., 2003; Paulsen et al., 2009; Shamir et al., 2000; Walumbwa, Avolio, & Zhu, 2008). Generally speaking, scholars have recognized that transformational leaders can foster collective identification through two broad sets of strategies: by emphasizing a collective sense of mission and vision to directly mobilize a collective identity, or by providing individualized support and validation to facilitate the development of followers' collective identity. Below, we discuss how either strategy of enhancing a collective identity is related to one or more dimensions of transformational leadership in its three-dimensional structure—charisma, intellectual stimulation, and individualized consideration. We rely on this three-dimensional structure because, as discussed in an influential review by van Knippenberg and Sitkin (2013), it provides enhanced conceptual clarity by forming a single charisma dimension out of idealized influence and inspirational motivation, of which the distinctions are blurry for their respective emphasis on such strongly overlapped concepts as collective vision, mission, and a collective sense of purpose. Several scale validation studies have repeatedly found support for this three-dimensional structure (Avolio, Bass, & Jung, 1999; Bycio, Hackett, & Allen, 1995; Carless, 1998; Hinkin, Tracey, & Enz, 1997); thus, it has been frequently utilized in previous research (e.g., Bono & Judge, 2004; Cho & Dansereau, 2010; Oreg & Berson, 2011; Waldman, Siegel, & Javidan, 2006).

The first strategy involves transformational leaders building a collective vision by engaging in group-directed behaviors (i.e., leaders' target of influence is a whole group rather than individual members), such as charisma (Wu et al., 2010). Charisma refers to leaders' emphasizing the importance of having a collective sense of mission and producing superior performance through collective efforts (Bass & Riggio, 2006; Shamir et al., 1993). Leaders articulate a compelling vision and shared values for their collective (Bass & Riggio, 2006). Moreover, they project their personal commitment to the collective mission and values (Conger & Kanungo, 1987; Shamir et al., 1993), oftentimes by demonstrating their willingness to make self-sacrifice on behalf of their beliefs (Choi & Mai-Dalton, 1999; De Cremer & van Knippenberg, 2004; Yorges, Weiss, & Strickland, 1999). Lastly, leaders further energize employees by convincing them of their collective ability to accomplish their tasks, and thus by communicating their high expectations of collective success (De Cremer & van Knippenberg, 2004; Shamir et al., 1993).

Taken together, charisma enhances the meaning and value of the tasks faced by a collective. In doing so, transformational leaders can activate employees' collective identity, as employees, inherently driven to pursue a positive self-concept (Reid & Hogg, 2005), come to base their self-esteem partially on their group membership (Howell & Shamir, 2005; Shamir et al., 1993). In support of the effectiveness of this first strategy, a positive link between the group-directed behaviors by transformational leaders and team identification has been

shown (X.-H. Wang & Howell, 2012). It is noteworthy that transformational leaders' efforts to directly mobilize a collective identity may be effective, even in the absence of interpersonal bonds among group members, because depersonalized belonging, i.e., a sense of community based on the perception of a common identity (Brewer, 1981), can be nurtured through charisma (Hogg, 2001; Mael & Ashforth, 2001). Based on the theoretical arguments and empirical evidence presented above, we predict the following hypothesis.

Hypothesis 1 Team leaders' charisma is positively related to team identification.

The second strategy involves transformational leaders providing support and validation to employees by engaging in individual-directed behaviors (i.e., leaders' target of influence is individual members within a group), such as intellectual stimulation and individualized consideration (Wu et al., 2010). This second strategy has received comparatively less scholarly attention than the first strategy. Yet, it appears to be particularly applicable to team leaders who need to maintain more direct and frequent interaction with their followers (Antonakis & Atwater, 2002; Shamir, 1995). Although individual-directed behaviors have often been linked to personal identification with a leader (Cho & Dansereau, 2010; Kark & Shamir, 2002; X.-H. Wang & Howell, 2012), this does not exclude the possibility of an association between these behaviors and collective identification, as identification with a leader may develop into employees' identification with a collective under the supervision of the leader (Sluss & Ashforth, 2007; Sluss, Ployhart, Cobb, & Ashforth, 2012).

Intellectual stimulation involves leaders expressing their expectation for followers to question currently held assumptions and encouraging novel ways to solve problems (Bass & Riggio, 2006). When followers are stimulated to reformulate issues and problems on their own, they are more apt to gain confidence that they can take on new roles within the team and contribute to its goals (Strauss, Griffin, & Rafferty, 2009). Employees will experience increased confidence as they perceive their leader to facilitate their original efforts, continue experimenting, and find more effective ways to do their jobs (MacKenzie, Podsakoff, & Rich, 2001; Scott & Bruce, 1994). Through individualized consideration, leaders focus on employees' individual growth with coaching and support, acknowledging employees' different needs, abilities, and aspirations, and helping them develop their strengths (Bass & Riggio, 2006). Such individualized attention to each employee's development appears to boost his or her self-efficacy and autonomy (Bono & Judge, 2003; Dvir et al., 2002; Piccolo & Colquitt, 2006).

Taken together, leaders' intellectual stimulation and individualized consideration, commonly endorsing each employee's unique strengths and autonomy, likely help employees understand how to behave and what to expect from their immediate social environment, thereby enhancing employees' confidence in their role as a team member (Parker, Williams, & Turner, 2006). By helping their employees view themselves as competent and independent members of their team, team leaders make team membership a more important part of employees' self-concept. Indeed, reducing subjective uncertainty about oneself and one's role in social settings is a crucial motive for collective identification (Hogg & Terry, 2000). Prior research provides support for the effectiveness of the second strategy. Sluss et al. (2012) reported that new employees tend to develop organizational identification if they are able to establish a solid relationship with their supervisor first, thereby underscoring the role of a dyadic relationship between a leader and a follower in promoting employees' collective identification. Moreover, a study by L. G. E. Smith, Amiot, Callan, Terry, and Smith (2012) showed that team leaders who provide positive and reinforcing feedback about the appropriateness or validity of employees' workplace actions are found to facilitate team identification among newcomers. Similarly, supportive behaviors by unit leaders (e.g., showing sensitivity to followers' needs and feelings, giving them autonomy) were found to be positively associated with followers' unit identification (Shamir et al., 1998). Based on the discussion up to this point, we predict a positive association between transformational leaders' individual-directed behaviors and team identification:

Hypothesis 2a Team leaders' intellectual stimulation is positively related to team identification.

Hypothesis 2b Team leaders' individualized consideration is positively related to team identification.

As discussed earlier, we still expect the relationship between each dimension and team identification to fluctuate, depending on the leadership situations. We draw on substitutes for leadership theory, which postulates that leadership dynamics are influenced by the follower, task, and organizational characteristics (Howell, Bowen, Dorfman, Kerr, & Podsakoff, 2007; Kerr & Jermier, 1978). This theory proposes different conceptualizations of how leadership processes are affected by situational variables (Dionne, Yammarino, Howell, & Villa, 2005). Our focus in this paper lies in the moderation conceptualization that specific situational variables can act as substitutes, neutralizers, or enhancers for the impact of leader behaviors on employee outcomes.

The Moderating Role of Perceived Task Interdependence for Charisma

We first examine perceived task interdependence as attenuating the impact of the first strategy that transformational leaders use to directly mobilize a collective identity though their charisma. Consistent with previous studies (e.g., van der Vegt &

van de Vliert, 2005; van der Vegt et al., 2003), we view perceived task interdependence as an individual-level variable because individuals within a single team may perceive varying degrees of task interdependence, depending on the division of labor among team members, which may lead them to occupy different jobs with differentiated tasks (Bishop & Scott, 2000; Glynn, Kazanjian, & Drazin, 2010; van der Vegt, Emans, & van de Vliert, 2001). Our interest lies in examining how such team members' perceptions of the task environment may moderate the transformational leadership process.

From a substitutes for leadership perspective, employees' perception of high task interdependence is likely to *substitute* the influence of charisma on team identification (Kerr & Jermier, 1978). Psychological ownership theory postulates that a target likely becomes a part of an individual's identity, as the individual comes to know more about the target and invests his or her energy, time, and attention in it (Pierce, Kostova, & Dirks, 2001). Individuals with high task interdependence engage in frequent and extended interactions with other team members to obtain critical resources from them. These frequent and extended interactions between team members result in greater familiarity with one another, including each other's relative capabilities, as well as teams' collective capabilities (Courtright, Thurgood, Stewart, & Pierotti, 2015; Sargent & Sue-Chan, 2001). Further, the coordination of activities among team members in highly interdependent teams tends to make work processes more complex for their members (Courtright et al., 2015; Janz, Colquitt, & Noe, 1997), which necessarily requires individuals to put forth more time and effort into the work process than if they were part of less interdependent teams. As a result of the increased familiarity with one's team and investment in it, the team becomes a more salient part of its members' identity. In line with this reasoning, prior research has demonstrated that with increased task interdependence, individuals perceive greater felt responsibility and a sense of burden sharing for a team (Kiggundu, 1983; Pearce & Gregersen, 1991; van der Vegt et al., 1998), which are the quintessential characteristics of collective identification (Ashforth & Mael, 1989). As such, task interdependence, in and of itself, creates the context that enhances individuals' sense of interconnectivity between them and their team. Hence, for individuals perceiving a higher level of task interdependence, the activation of team identity may depend less on the efforts of their leaders providing explicit messages to mobilize a collective identity.

Several empirical works provide indirect support for the proposed substitution of perceived task interdependence for transformational leadership. A meta-analysis by Podsakoff et al. (1996) demonstrated that the influence of transformational leaders' charisma was most often attenuated by situational characteristics, such as group cohesiveness. Other studies suggest that transformational leadership influence on employee outcomes decreases when the team context facilitates team member interactions, as in the context of face-to-face teams, compared to virtual teams (Joshi, Lazarova, & Liao, 2009; Purvanova & Bono, 2009). Similarly, transformational leadership influence on team identification was weaker among teams with less diverse composition, where low diversity may facilitate work-related interactions among team members (Kearney & Gebert, 2009). On the grounds of the preceding logic, we propose the following.

Hypothesis 3 Perceived task interdependence moderates the positive relationship between team leaders' charisma and team identification, such that this relationship is weaker (vs. stronger) when perceived task interdependence is higher (vs. lower).

The Moderating Role of Team Size for Intellectual Stimulation and Individualized Consideration

Team size has been noted for its potentially negative impact on team identification, as affiliation among team members tends to be challenging, and teams' distinctiveness relative to other teams may be diluted in large settings (Brewer, 1991; Levine & Moreland, 1990; K. G. Smith, Smith, Olian, Sims, et al., 1994). In the current study, we shift our focus to the moderating role of team size for the transformational leadership process. We posit that a large team size attenuates the impact of the second strategy (i.e., providing individualized support and validation via intellectual stimulation and individualized consideration) that transformational leaders utilize to promote team identification. From a substitutes for leadership perspective, when employees are members of larger teams, the influence of transformational leaders is likely to be *neutralized* (Kerr & Jermier, 1978).

The second strategy requires transformational leaders to make frequent dyadic interactions through which they convey individualized support and validation. However, prior research suggests that a large team size puts a constraint on leaders to pay individualized attention to their employees. Cogliser and Schriesheim (2000) argued that the capacity of a leader to spend extra time sharing information and other resources for employee development can be constrained as team size increases. Indicative of this constraint are study findings that a supervisor with more subordinates tends to exhibit less coaching-style (vs. coercive) behaviors toward deficient employees (Goodstadt & Kipnis, 1970) and less considerate behaviors toward subordinates (Ford, 1981). Consequently, leaders of larger teams have a harder time developing quality relationships with their employees (Green et al., 1996). Further, in support of our argument that team size attenuates leadership influence, O'Connell, Doverspike, and Cober (2002) found that team leadership is positively associated with team performance in small, but not large teams. Based on the above discussion, we propose the following hypotheses:

Hypothesis 4a Team size moderates the positive relationship between team leaders' intellectual stimulation and team identification, such that this relationship is weaker (vs. stronger) when the team size is larger (vs. smaller).

Hypothesis 4b Team size moderates the positive relationship between team leaders' individualized consideration and team identification, such that this relationship is weaker (vs. stronger) when the team size is larger (vs. smaller).

Method

Sample and Procedure

Questionnaire surveys were administered at two points in time to employees from ten multinational pharmaceutical subsidiaries in South Korea, which ranged from 80 to 650 employees in size. In highly competitive environments, such as the pharmaceutical industry in this study, issues of leadership and teams as vehicles for motivation are particularly prominent, given that organizations in these environments depend on teams for rapid innovation (Ancona & Bresman, 2007). Following the recommendation to take procedural controls in order to minimize potential common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), measurement of the perceptual variables was separated by a 1-month interval: leadership and task interdependence were measured at time 1, while team identification was measured at time 2. Team size was collected at time 2 with other demographic information. The paper-based time 1 questionnaire collected respondents' email addresses, to which a link to an online questionnaire was sent at time 2. We checked whether sample attrition was random in our data (Rogelberg & Stanton, 2007). The average age and average company tenure of the respondents in the final sample were similar to the industry averages (Song, 2010), except for the slightly higher ratio of female employees in the sample (65%) than the industry average (55%) (Hong, 2010). A wave analysis between early versus late respondents (Rogelberg & Stanton, 2007) revealed no difference in the ratings of team identification. Further, a logistic regression procedure, which determines whether the variables of interest measured at time 1 could predict the response (or nonresponse) at time 2 (Goodman & Blum, 1996), indicated an absence of nonrandom sampling on any variable.

In total, 234 questionnaires matched across time were collected, resulting in a response rate of 46%. The demographic characteristics of this final sample of respondents were as follows: average age was 33.56 years (SD = 5.02), average organizational tenure was 4.15 years (SD = 4.07), and average full-time experience was 8.07 years (SD = 4.82). Respondents had either undergraduate (72.5%) or graduate (22.7%) degrees. Approximately 33% of the respondents were male. We were informed from the contact individuals of the ten companies that the participants were assigned to only one stable team, although we could not exclude the possibility that some could be members of less stable, ad hoc teams. The respondents were employed in four functional units: marketing (13.7%), sales (23.2%), medical research (23.2%), and administrative support (37.3%).

Measures

We used the available, validated Korean versions of English measures or translated English measures into Korean following Brislin's (1980) translation-back translation procedure. Respondents rated each item on a seven-point scale (1: *strongly disagree*, 7: *strongly agree*), unless indicated otherwise.

Team Identification Three items from Mael and Ashforth's (1992) six-item organizational identification scale were used (α = 0.93). These items were the following: "When I talk about my team, I usually say 'we' rather than 'they'"; "My team's successes are my successes"; and "When someone praises my team, it feels like a personal compliment." The three excluded items were irrelevant to team identification due to their reliance on external social comparisons (Sluss et al., 2012).

Transformational Leadership Transformational leadership was measured by the 16 items of the Multifactor Leadership Questionnaire (MLQ) Form 5X Short (Bass & Avolio, 1995; Shin & Zhou, 2003 for Korean measure). The scale for charisma included eight items: four items for *behavioral* idealized influence (e.g., "emphasizes the importance of having a collective sense of mission") and four items for inspirational motivation (e.g., "articulates a compelling vision of the future") (overall α = 0.91). Consistent with previous studies (e.g., Hoffman, Bynum, Piccolo, & Sutton, 2011; Wang & Walumbwa, 2007), the four items for *attributed* idealized influence were excluded, as these items were criticized for representing leadership impact and overlapping with leadership effectiveness perception (van Knippenberg & Sitkin, 2013; Yukl, 2005). Intellectual stimulation (e.g., "gets me to look at problems from many different angles") (α = 0.89) and individualized consideration (e.g., "spends time teaching and coaching") (α = 0.86) were each measured by four items. Leaders' behaviors were rated on a five-point scale (0: *not at all*, 4: *frequently, if not always*).

Perceived Task Interdependence Perceived task interdependence was measured using four items from the scale of van der Vegt et al. (2001), which asked the extent to which team members depended on each other for the completion of their own job (e.g., "I depend on my colleagues for the completion of my work") (α = 0.78).

Team Size We operationalize team size as the number of team members. Respondents self-reported the size of their team.

Control Variables To avoid confounding effects in our analyses, several variables that prior studies have demonstrated to be potential predictors of collective identification were controlled, including age, gender (male = 0, female = 1), and organizational tenure (years) (Kreiner & Ashforth, 2004). Attraction to team members was also controlled to account for interpersonal attraction-based team identification (George & Chattopadhyay, 2005), using the three-item liking scale (Wayne & Liden, 1995) (α = 0.90). Goal interdependence was controlled using a two-item scale (van der Vegt et al., 2001) (α = 0.80), as shared group goals and group feedback may enhance team identification (Sherif, 1966; van der Vegt et al., 2003). Lastly, a set of nine dummy variables representing organizational membership were used to control for potential between-subsidiary differences.

Data Analysis Strategy

Level of Analysis To empirically validate the level of analysis of the study variables, we calculated the intermember agreement (r_{wg}) and intraclass correlation coefficients (ICC1 and ICC2) (LeBreton & Senter, 2008). The within-team agreement on charisma ratings indicated high within-team agreement (r_{wg} = 0.86). The ICC1 and ICC2 values were 0.28 and 0.35, respectively, and the F value for ANOVA was significant, indicating significant between-team variance for charisma, $F(159, 58) = 1.53$, $p = 0.03$. Although the above statistics suggest a certain degree of team-level effects, we decided to use charisma as an individual-level variable, based on the ICC2 value falling far below the conventionally acceptable level of 0.70 (Bliese, 2000) and the conceptual reasons discussed earlier. Previous studies that found comparable aggregation statistics to our study also utilized individual-level transformational leadership (e.g., Liang & Chi, 2013; Vecchio, Justin, & Pearce, 2008). For the same reasons, intellectual stimulation (ICC1 = 0.39, ICC2 = 0.46, r_{wg} = 0.83) and individualized consideration (ICC1 = 0.24, ICC2 = 0.30, r_{wg} = 0.69) were analyzed at the individual level.[1] Our data also provided support for the individual-level conceptualization of perceived task interdependence, in terms of aggregation statistics (ICC1 = 0.18, ICC2 = 0.23, r_{wg} = 0.65) and nonsignificant between-team variance ($F(159, 58) = 1.42$, $p = 0.06$).

[1] Since charisma has often been conceptualized as a team-level variable, as opposed to the use of individual-level variables of intellectual stimulation and individualized consideration (Cho & Dansereau, 2010; Wu et al., 2010), we examined whether an individual-level conceptualization of charisma affected our findings by conducting multilevel analyses using a team-level, aggregated variable. The significance tests remained unchanged, although the interpretation should be modified to reflect an appropriate level of analysis.

Hypotheses Testing Approach Our dataset is only partially clustered, as 94 out of 234 of the respondents were nested in 35 out of 160 identified teams, while the rest were either a sole respondent from his or her team (n = 125) or missing in his or her team membership (n = 15). Since multilevel analyses may provide more accurate estimates than regression analyses for partially nested datasets (Baldwin, Bauer, Stice, & Rohde, 2011), we examined whether our dataset warranted the use of a multilevel analysis through a null analysis of variance (Bliese, 2000). The analyses revealed that only 6% of the variance in team identification was attributable to between-team differences, which was not statistically significant in terms of a Wald Z test (Wald $Z = 0.56$, $p = 0.58$). Moreover, the average number of cases per team (1.4 members per team) was well below the recommended minimum number of cases per group required for a multilevel analysis (Hofmann, 1997). Consequently, we chose to use and report the regression analyses in the "Results" section. Note that this choice did not affect our results in any major way: when we repeated hypotheses testing through the multilevel analyses using HLM (ver. 6.08) (Bryk & Raudenbush, 1992), the findings were generally consistent with the reported regression analyses, with the only discrepancy being that Hypothesis 2a (the main effect of intellectual stimulation) was supported only in the regression analysis.

Results

Confirmatory Factor Analysis

We conducted a confirmatory factor analysis (CFA) using Mplus 6.11 (Muthén & Muthén, 2011) to examine the discriminant validity of our seven variables with 28 items: team identification, charisma, intellectual stimulation, individualized consideration, perceived task interdependence, attraction to team members, and goal interdependence. Overall, the hypothesized seven-factor model demonstrated a reasonably good fit to the data: ML χ^2 (325) = 582.24, χ^2/df = 1.79, RMSEA = 0.06, TLI = 0.93, CFI = 0.94, SRMR = 0.05. Several alternative measurement models were examined, including one modeling three dimensions of transformational leadership as one factor (i.e., model 3 of Table 1), but these models showed an unsatisfactory and/or a poorer fit to the data than the hypothesized seven-factor model (see Table 1). Thus, we treated the seven variables of our study as being distinct in subsequent analyses.

Descriptive Statistics and Intercorrelations

Table 2 presents the means, standard deviations, and correlations for the study variables. Consistent with our expectation, team identification was positively related to each of the three

Table 1 Measurement models

	Model	χ^2	*df*	$\Delta\chi^2$ from model 1	RMSEA	TLI	CFI	SRMR
Model 1	Seven factors: charisma, IC, IS, team identification, task interdependence, goal interdependence, and attraction to team members	582.24	325		0.06	0.93	0.94	0.05
Model 2	Six factors: model 1 + IC and IS combined into one factor	590.19	326	7.95***	0.06	0.93	0.94	0.05
Model 3	Five factors: model 2 + charisma, and IC/IS combined into one factor	662.66	328	80.42***	0.07	0.91	0.92	0.06
Model 4	Four factors: model 3 + task and goal interdependence combined into one factor	736.89	329	154.65***	0.08	0.89	0.90	0.06
Model 5	Four factors: model 3 + team identification and attraction to team members combined into one factor	1054.31	329	472.07***	0.10	0.80	0.83	0.08
Model 6	Four factors: model 3 + charisma/IC/IS and attraction to team members combined into one factor	1057.00	331	474.76***	0.10	0.80	0.83	0.08
Model 7	Three factors: model 4 + charisma/IC/IS and task/goal interdependence combined into one factor	1044.87	335	462.63***	0.10	0.81	0.83	0.09
Model 8	Two factors: model 7 + charisma/IC/IS/task/goal interdependence and attraction to team members into one factor	1450.40	340	868.16***	0.12	0.71	0.74	0.10
Model 9	One factor: all variables combined into one factor	1913.22	346	1330.98***	0.14	0.59	0.63	0.12

Note. $n = 222$

RMSEA root mean square error of approximation, *TLI* Tucker-Lewis index, *CFI* comparative fit index, *SRMR* standardized root mean square residual

***$p < 0.001$

dimensions: charisma ($r = 0.38$, $p < 0.001$), intellectual stimulation ($r = 0.36$, $p < 0.001$), and individualized consideration ($r = 0.32$, $p < 0.001$). Team identification was positively associated with perceived task interdependence ($r = 0.22$, $p = 0.001$) but was unrelated to team size ($r = -0.12$, ns).

Hypothesis Testing

We tested the hypotheses using moderated multiple regression analyses with centered variables (Aiken & West, 1991). We ran three sets of regression analyses by entering only one

Table 2 Descriptive statistics and correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Age	33.56	5.02																			
2. Gender	0.67	0.47	−0.30***																		
3. Org. tenure	4.15	4.07	0.47***	0.02																	
4. Attraction to team members	5.30	1.18	−0.03	−0.25***	0.01																
5. Goal interdependence	5.07	1.34	0.06	−0.15*	0.09	0.44***															
6. Company 1	0.09	0.28	−0.00	0.19**	−0.02	−0.08	−0.07														
7. Company 2	0.17	0.37	−0.98**	0.03	0.02	0.03	0.01	−0.14*													
8. Company 3	0.14	0.34	0.11	0.07	0.25***	−0.04	0.05	−0.12	−0.18**												
9. Company 4	0.07	0.25	0.10	−0.06	0.14*	−0.03	−0.05	−0.08	−0.12	−0.11											
10. Company 5	0.09	0.29	−0.03	−0.07	0.03	0.01	0.03	−0.10	−0.14*	−0.13	−0.09										
11. Company 6	0.13	0.34	0.04	0.15*	0.05	0.02	−0.00	−0.12	−0.18**	−0.16*	−0.11	−0.12									
12. Company 7	0.06	0.24	−0.05	−0.01	−0.15*	−0.16*	−0.11	−0.08	−0.11	−0.10	−0.07	−0.08	−0.10								
13. Company 8	0.03	0.18	−0.10	0.00	−0.05	0.02	0.03	−0.06	−0.09	−0.08	−0.05	−0.06	−0.07	−0.05							
14. Company 9	0.14	0.35	−0.07	−0.14*	−0.08	0.11	−0.04	−0.12	−0.18**	−0.16*	−0.11	−0.13	−0.16*	−0.10	−0.08						
15. Charisma	2.77	0.73	−0.10	−0.17*	−0.11	0.35***	0.45***	−0.18**	0.08	−0.02	−0.15*	0.07	0.08	−0.16*	0.03	0.07					
16. Intellectual stimulation	2.67	0.71	−0.12	−0.22**	−0.13	0.40***	0.40***	−0.15*	−0.01	−0.06	−0.04	0.02	0.13*	−0.14*	0.04	0.06	0.76***				
17. Individualized consideration	2.44	0.82	−0.20**	−0.21**	−0.12	0.38***	0.38***	−0.19**	0.01	0.01	−0.10	0.02	0.07	−0.12	0.11	0.06	0.68***	0.79***			
18. Task interdependence	4.39	1.15	0.15*	−0.10	0.11	0.30***	0.45***	0.03	0.03	0.07	0.18**	−0.04	0.05	−0.11	−0.01	−0.22**	0.21**	0.21**	0.23**		
19. Team size	7.28	5.48	−0.14*	0.25***	−0.07	−0.01	−0.13*	0.33***	0.09	−0.09	0.07	−0.07	0.06	−0.12	−0.02	−0.13	−0.05	−0.11	−0.10	−0.07	
20. Team identification	5.47	1.26	0.09	−0.16*	0.14*	0.46***	0.42***	−0.08	0.03	0.06	−0.08	0.07	0.07	−0.12	0.02	−0.06	0.38***	0.36***	0.32***	0.22**	−0.12

Note. Max $N = 234$

SD standard deviation

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

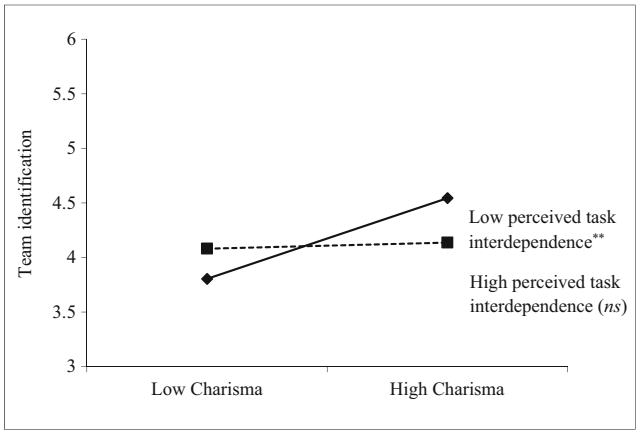
dimension of transformational leadership in each set of regression analyses due to high correlations among its three dimensions (r = 0.68~0.79) (see Table 3). Hypotheses 1 and 2 posit that team identification would be predicted by each dimension. Model 1 shows that charisma significantly predicted team identification, B = 0.30, $t(186)$ = 2.46, p = 0.01, thus providing support for Hypothesis 1. Similarly, team identification was predicted by intellectual stimulation (model 3: B = 0.26, $t(186)$ = 2.00, p = 0.05) and individualized consideration (model 5: B = 0.22, $t(186)$ = 2.04, p = 0.04). Therefore, we conclude that Hypotheses 2a and 2b were also supported.

Hypothesis 3 predicted that the relationship between charisma and team identification would be weaker as perceived task interdependence increased. On the basis of Table 3's model 2, the interaction term of charisma and perceived task interdependence was a significant predictor of team identification, B = −0.19, $t(184)$ = −2.10, p = 0.04. The plot in panel a of Fig. 1 shows that the relationship between charisma and team identification is weaker under high (1SD above the mean) perceived task interdependence conditions (B = 0.04, $t(184)$ = 0.23, p = 0.82) than under low (1SD below the mean) perceived task interdependence conditions (B = 0.52, $t(184)$ = 3.17, p = 0.002), thus supporting Hypothesis 3.

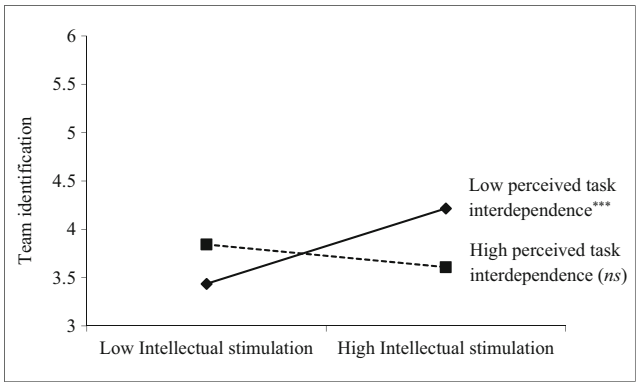
Hypothesis 4a predicted that the relationship between intellectual stimulation and team identification would be weaker as team size increased. Model 4 in Table 3 indicates that the interaction term of intellectual stimulation and team size significantly predicted team identification (B = −0.06, $t(184)$ = −2.92, p = 0.004). The plot in panel a of Fig. 2 shows that the relationship between intellectual stimulation and team identification is weaker in larger teams (B = −0.12, $t(184)$ = −1.01, p = 0.31) than in smaller teams (B = 0.51, $t(184)$ = 4.90, p < 0.001), thereby providing support for Hypothesis 4a. Hypothesis 4b predicted that the relationship between individualized consideration and team identification would be weaker as team size increased. Model 6 in Table 3 indicates that the interaction term of individualized consideration and team size significantly predicted team identification (B = −0.03, $t(184)$ = −1.99, p = 0.048). The form of the interaction plotted in panel b of Fig. 2 shows that the relationship between individualized consideration and team identification is weaker in larger teams (B = 0.06, $t(184)$ = 0.45, p = 0.66) than in smaller teams (B = 0.38, $t(184)$ = 2.74, p = 0.007), thus providing support for Hypothesis 4b.

Model 4 of Table 3 indicates that the interaction term of intellectual stimulation and task interdependence is also, though unexpectedly, a significant predictor of team identification (B = −0.31, $t(184)$ = −3.29, p = 0.001). The plot of this interaction effect, shown in panel b of Fig. 1, suggests that the relationship between intellectual stimulation and team identification is significant and positive under low perceived task interdependence conditions (B = 0.56, $t(184)$ = 3.57, p < 0.001) but not under high perceived task interdependence conditions (B = −0.17, $t(184)$ = −0.96, p = 0.34).[2]

(a) Charisma dimension



(b) Intellectual stimulation dimension



** p < .01 *** p < .001; *ns* = non significant.

Fig. 1 Moderating effect of perceived task interdependence on the relationships between **a** charisma and team identification and **b** between intellectual stimulation and team identification

Discussion

Transformational leadership has been known to be a critical antecedent of team identification (Dvir et al., 2002; Kark et al., 2003; Kearney & Gebert, 2009; Lord et al., 1999; Shamir et al., 1993). Drawing on the substitutes for leadership theory

[2] Further, we examined a joint effect of task interdependence and team size on the relationship between transformational leadership and team identification, upon the suggestion by an anonymous reviewer. There was no significant three-way interaction among any dimension of transformational leadership and the two moderators. This lack of a significant joint effect may be attributed to the fact that either large team size or high task interdependence creates a sufficient structural condition under which transformational leadership influence becomes insignificant, as shown in the interaction plots. This nonfinding may also suggest that there is no synergistic effect between the two strategies used by transformational leaders to promote team identification. For instance, once team identification is enhanced by charisma (under low task interdependence), it may not matter whether individualized consideration is effective (in small teams) or not (in large teams).

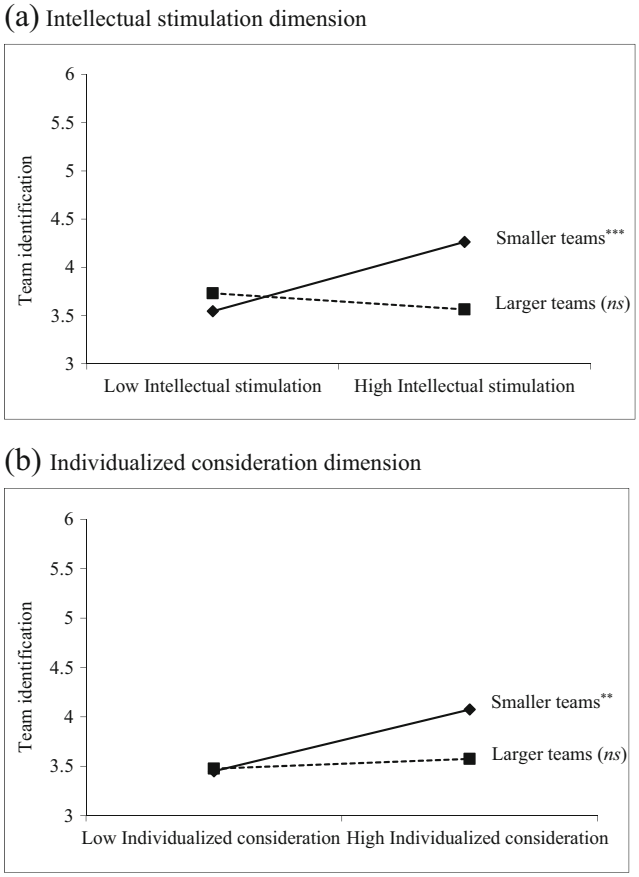
Table 3 Results of regression analyses for team identification

	Transformational leadership dimension																	
	Charisma						Intellectual stimulation						Individualized consideration					
	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	B	SE	Beta	*B*	SE	Beta	*B*	SE	Beta	*B*	SE	Beta	*B*	SE	Beta	*B*	SE	Beta
Age	0.01	0.02	0.02	0.01	0.02	0.04	0.01	0.02	0.03	0.01	0.02	0.05	0.01	0.02	0.06	0.01	0.02	0.06
Gender	−0.17	0.19	−0.07	−0.14	0.19	−0.05	−0.15	0.19	−0.06	−0.11	0.18	−0.04	−0.14	0.19	−0.06	−0.13	0.19	−0.05
Organizational tenure	0.03	0.02	0.11	0.03	0.02	0.11	0.03	0.02	0.10	0.03	0.02	0.09	0.02	0.02	0.08	0.02	0.02	0.08
Attraction to team members	0.30	0.08	0.29***	0.33	0.08	0.31***	0.29	0.08	0.28***	0.28	0.07	0.27***	0.29	0.08	0.28***	0.28	0.08	0.27***
Goal interdependence	0.19	0.07	0.21**	0.18	0.07	0.19*	0.21	0.07	0.23**	0.22	0.07	0.24**	0.22	0.07	0.24**	0.22	0.07	0.24**
Company 1	0.11	0.41	0.03	0.08	0.40	0.02	0.07	0.41	0.02	0.12	0.39	0.03	0.16	0.41	0.04	0.19	0.41	0.04
Company 2	0.12	0.36	0.04	0.19	0.36	0.06	0.17	0.36	0.06	0.37	0.35	0.12	0.24	0.37	0.08	0.33	0.37	0.11
Company 3	0.11	0.38	0.03	0.14	0.37	0.04	0.13	0.38	0.04	0.14	0.36	0.04	0.18	0.38	0.05	0.19	0.38	0.05
Company 4	−0.10	0.42	−0.02	−0.20	0.42	−0.05	−0.20	0.42	−0.04	−0.18	0.40	−0.04	−0.07	0.42	−0.02	−0.09	0.42	−0.02
Company 5	0.54	0.41	0.12	0.57	0.40	0.12	0.59	0.41	0.13	0.60	0.39	0.13	0.66	0.41	0.14	0.70	0.41	0.15
Company 6	0.20	0.37	0.06	0.20	0.36	0.06	0.19	0.37	0.06	0.28	0.36	0.08	0.28	0.37	0.08	0.32	0.37	0.09
Company 7	0.17	0.42	0.03	0.23	0.42	0.05	0.19	0.42	0.04	0.37	0.41	0.07	0.23	0.43	0.04	0.31	0.43	0.06
Company 8	0.19	0.53	0.03	0.22	0.52	0.03	0.17	0.53	0.02	0.26	0.51	0.04	0.18	0.53	0.03	0.24	0.53	0.03
Company 9	−0.17	0.37	−0.05	−0.13	0.36	−0.04	−0.13	0.37	−0.03	0.03	0.35	0.01	−0.04	0.37	−0.01	0.03	0.37	0.01
Transformational leadership[a]	*0.30*	*0.12*	*0.18**	0.28	0.12	0.16*	*0.26*	*0.13*	*0.15**	0.20	0.12	0.11	*0.22*	*0.11*	*0.15**	0.22	0.11	0.15*
Task interdependence	−0.03	0.08	−0.03	−0.03	0.08	−0.03	−0.02	0.08	−0.02	−0.05	0.07	−0.05	−0.03	0.08	−0.03	−0.02	0.08	−0.02
Team size	−0.02	0.02	−0.08	−0.02	0.02	−0.08	−0.01	0.02	−0.06	−0.02	0.02	−0.11	−0.01	0.02	−0.07	−0.02	0.02	−0.10
TFL × task interdependence				*−0.19*	*0.09*	*−0.13**				−0.31	0.09	−0.21**				−0.04	0.08	−0.04
TFL × team size				−0.03	0.02	−0.09				*−0.06*	*0.02*	*−0.18***				*−0.03*	*0.01*	*−0.13**
R^2			0.34			0.36			0.32			0.38			0.32			0.33
ΔR^2			0.34 ***			0.02*			0.32***			0.06***			0.32***			0.02
Adjusted R^2			0.28			0.30			0.25			0.31			0.26			0.26

Notes. $n = 204$. Italics represents the hypothesized relationship

*$p < 0.05$; **$p < 0.01$; ***$p < 0.01$

[a] Only one dimension of transformational leadership was entered in each set of regression analyses due to high correlations among three dimensions



$^{**}p < .01$ $^{***}p < .001$; *ns* = non significant.

Fig. 2 Moderating effect of perceived task interdependence on the relationships between **a** intellectual stimulation and team identification and **b** between individual consideration and team identification

(Kerr & Jermier, 1978), we advance the current research by examining how the relation of team leaders' transformational leadership to team identification is contingent upon two team structural variables: perceived task interdependence and team size. An analysis of two-phased survey data among employees from multinational pharmaceutical subsidiaries in South Korea provided support for our propositions.

Theoretical Implications

First, this study contributes to the field of transformational leadership by identifying the contingencies associated with transformational leadership processes. Specifically, a unique contribution of this study lies in its investigation of the distinct moderators for each dimension of transformational leadership. In van Knippenberg and Sitkin's (2013) rather strong critique of the field, they lamented that the current perspective leaves the unanswered question of how the distinct dimensions of transformational leadership are contingent upon the same moderating factors; moreover, they called for further research efforts to specify whether and how each dimension has distinct contingencies in order to improve theoretical clarity in the field. Our findings underscore the virtue of their argument by establishing distinct moderators for each dimension, such as perceived task interdependence for charisma, team size for individualized consideration, and perceived task interdependence or team size for intellectual stimulation. Our findings thus highlight the shortcomings of the common practice of utilizing the aggregated transformational leadership construct, based on the untested assumption that a moderator influences relationships equally across all dimensions. Ultimately, our findings, according to van Knippenberg and Sitkin (2013), may undermine the validity of transformational leadership as a unitary construct, in that multiple dimensions do not share the same set of moderators. Further research is necessary to collect additional evidence to answer the question of whether multiple dimensions of transformational leadership, despite their high intercorrelations, represent distinct constructs that need to be examined as such rather than as part of a global measure of transformational leadership.

Second, this study contributes to the transformational leadership literature by identifying team structural variables that affect team leaders' transformational influence. Our finding of the attenuating role of perceived task interdependence on the relationship between transformational leaders' group-directed behavior (i.e., charisma) and team identification sheds light on the conditions under which transformational leaders' efforts to directly mobilize a collective identity are more or less essential in teams. Our finding supports the view that such transformational influence may be redundant with and substituted by task characteristics that innately promote group cohesion (Podsakoff et al., 1996), whereas transformational leadership becomes more crucial in a team setting, where member interactions could be limited by the team design (Joshi et al., 2009; Purvanova & Bono, 2009) or team composition (Kearney & Gebert, 2009). We wish to note that the above finding, however, could be at odds with the meta-analytical study of Burke et al. (2006), which showed that the relationship between task-focused or person-focused leadership behaviors and team effectiveness was greater under higher (vs. lower) task interdependence conditions. Yet, as the authors recognized, their finding was only suggestive because a small sample size prohibited a formal moderation test. Similarly, transformational leadership influence was greater for team knowledge sharing under higher (vs. lower) team interdependence in the study of Jiang et al. (2015). However, their team-level investigation is not directly comparable to the present individual-level investigation unless homologous relationships among the constructs across levels are established (Kozlowski & Klein,

2000). Further, as the authors acknowledged, their outcome—knowledge sharing—is structurally limited by low team interdependence, even with team leaders' encouragement, whereas team identification may not face such a limitation.

This study also demonstrated the attenuating role of team size in the relationship between transformational leaders' individual-directed behaviors (i.e., intellectual stimulation, individualized consideration) and team identification. This finding suggests that transformational leaders' ability to influence employee attitudes through dyadic relationships may be limited in large teams. It is notable that team size had a nonsignificant, direct association with team identification in our analyses, which is consistent with some prior studies (e.g., Solansky, 2011; van der Vegt et al., 2003). Instead, large team size appeared to affect team identification in terms of impeding transformational leadership influence. Our investigation calls for more scholarly attention to team size in examining leadership processes. Given that team size has rarely been investigated as a leadership context, future research needs to look closely into how leadership processes, especially relational processes (Cunliffe & Eriksen, 2011; Uhl-Bien, 2006), may differ between large and small teams. We should note that our finding could be divergent from that reported in Cha, Kim, Lee, and Bachrach (2015), where the relationship between transformational leadership and team work quality was greater in larger (vs. smaller) teams. The different pattern of interactions might be attributed to the nature of the outcome variables in the two studies. For example, team work quality necessarily involves behavioral coordination among team members, while team identification refers to any given individual's attachment to the team. While leaders' capacity to build relationships with all members *separately* to develop team identification is constrained in large teams, transformational leaders in large teams might be able to use structural means (i.e., organizing work, obtaining external resources, etc.) to influence teamwork quality.

Our analyses indicate that contrary to our expectation, the impact of intellectual stimulation depends on task interdependence, as well as on the hypothesized moderator, team size. This finding may suggest that intellectual stimulation is not a purely individual-directed behavior conveyed through dyadic relationships, as argued in prior studies (e.g., X.-H. Wang & Howell, 2010; X.-H. Wang & Howell, 2012; Wu et al., 2010). Instead, intellectual stimulation may also exert influence toward a group as a whole, as in the case when leaders urge employees to question the status quo and explore creative methods of accomplishing the collective's mission (Bass, 1985).

Third, we extended a research stream at the intersection of leadership and team development (Burke et al., 2006; Keller, 2006; Morgeson, DeRue, & Karam, 2010; Wageman, 2001) through our explicit attention to leaders and collective identification in team settings. Although previous studies have often investigated team leaders' transformational influence on team identification (Cicero & Pierro, 2007), organizational identification (Liu et al., 2010), or both (Shamir et al., 1998) without explicit differentiation, these processes should be clearly distinguished, as team identification is separate from organizational identification (Ashforth & Johnson, 2001; Riketta, 2005; Riketta & van Dick, 2005; Ullrich, Wieseke, Christ, Schulze, & Van Dick, 2007). For instance, team leaders' efforts to directly promote organizational identification could backfire on employees' team identification because their actions may shift the attention of employees away from their team (Shamir et al., 1998). Our finding of structural contingencies underscores the notion that team leaders should consider both direct intervention and structural intervention in managing their teams (Hackman, 2002; Wageman, 2001). Further, our finding highlights that, once team structural features are set, team leaders need to be attuned to the situation (House, 1971; Vroom & Jago, 1978, 2007).

Limitations and Future Research Directions

The contributions of this study should be interpreted in light of some limitations. Although our research question dictates that self-assessments would be most accurate for the majority of our key variables, in particular team identification, single-source data are susceptible to common source bias. To reduce this concern, we adopted a procedural remedy by putting a time interval between the measurement of the independent and dependent variables (Podsakoff et al., 2003). Furthermore, the test for moderation effects is not likely to be an artifact of common source bias (Evans, 1985; Siemsen, Roth, & Oliveira, 2010). Another limitation related to our study design is that causal relationships among our study variables cannot be ascertained. The use of multimethod approaches (e.g., experiments) could help further establish causality.

In addition, our argument for the moderation effect of team size was based on the idea that dyadic relationships between leaders and employees would develop more efficiently in smaller versus larger teams. Still, we did not directly measure the quality of such relationships in this study. Future studies, including a measure such as leader-member exchange (Graen & Uhl-Bien, 1995) or relational identification (Sluss et al., 2012), would allow for a more direct investigation of our argument. We theorized team identification, transformational leadership, and task interdependence as individual-level constructs; hence, the findings from this study should be interpreted as such. Future research that examines these as group-level constructs would be helpful in clarifying, for

instance, whether the relationships among the constructs are comparable across two levels of analyses.

The sample in this study is composed of employees from a single industry within one country. While this has the advantage of homogenizing the work, organization, and industry context for the study, it may threaten the generalizability of the findings. For one, Korean employees with a high level of collectivistic values might exhibit a strongly positive effect of transformational leadership on team identification (Schaubroeck, Lam, & Cha, 2007). However, such bias would make the detection of interaction effects harder, not easier, with this sample. Still, further replication using culturally diverse samples could help establish the generalizability of the findings. Our results may not be generalized to the leaders and organizational units at different hierarchical levels, considering the implications of hierarchical level on both leadership and identification processes (Ullrich et al., 2007; Waldman & Yammarino, 1999). Future study on the situational contingencies of executive leadership processes leading to organizational identification will further enrich our understanding of transformational leadership.

There are several research avenues for expanding the current study. First, future research needs to continue exploring the dimensional aspects of transformational leadership. One may investigate the interaction among three dimensions to clarify the configuration of transformational leadership (van Knippenberg & Sitkin, 2013). As a way of circumventing the practical obstacle of high correlations among the dimensions, one may examine the cross-level interaction between group-level charisma and individual-level individualized consideration, for instance. Further, it may be interesting to examine the interplay between each dimension and organizational context. For example, it might be that individual-directed behaviors (intellectual stimulation and individual consideration) are more effective when work tasks are assigned on an individual basis, and the culture of the organization is more individualistic. In contrast, charisma, as a group-focused dimension, may be more effective in team-based organizations, and when the culture of the organization is more collectivistic.

Second, while our investigation was conducted in the context of rather established teams, future studies may assess the interaction between transformational leadership and team structure across the stages of team development. Required leader behaviors and their effectiveness may change over the course of team development (Hackman & Wageman, 2005; Kozlowski, Gully, Salas, & Cannon-Bowers, 1996). For instance, transformational leadership may be essential in invoking a collective identity in highly interdependent teams at the early stages of team development (Lord & Rowzee, 1979), while its importance may diminish once interdependent task routines are established among team members. Therefore, a longitudinal research endeavor would provide an in-depth understanding of the dynamic interaction between leadership and team structure. Third, future research may investigate other structural variables that create a task or relational context for leader intervention. For instance, while extant team research focuses on teams with relatively stable membership and clear tasks, teams with fluid structures that "vary in duration, have a constantly shifting membership, and pursue moving targets" (Edmondson, 2012, p. 74) are increasingly common. It would be important and interesting to examine the effectiveness of transformational leaders in the context of this new type of team structure. Moreover, further investigation on other relational context variables is warranted, as dyadic variables such as leader-follower trait similarity (Bauer & Green, 1996; Zhang, Wang, & Shi, 2012) and leader characteristics such as prototypicality (van Knippenberg, 2011) can affect leader-follower relationship building.

Practical Implications

Team leaders need to facilitate the development of strong team identification among their team members in order to enhance team performance. Consistent with the previous findings in the leadership literature, our results once again highlight that team leaders can build highly identified, cohesive teams through transformational leadership. One way organizational leaders can use this insight is by developing team leaders through formal and informal programs. Selection criteria for team leaders may include transformational leadership qualities. In addition, considering that the leadership style and behaviors of senior leaders tend to cascade downward to junior leaders (Bass, Waldman, Avolio, & Bebb, 1987; Dong, Hui, & Loi, 2012; Waldman & Yammarino, 1999), organizational leaders may model the desired behaviors for team leaders.

Moreover, our results argue for more attention from team leaders who strive to promote team identification toward the opportunities and challenges inherent in team structures. First, team leaders need to recognize that their charisma could be redundant and have no effect on team identification in highly interdependent teams, as indicated by our simple slope analyses. Therefore, team leaders may wish to engage in charisma to promote team identification only when tasks are less interdependent among members (e.g., sales team members are responsible for their own territories), but informal knowledge sharing and mentoring facilitated by team identification would still contribute to improving team functioning. On the other hand, in a highly interdependently designed team setting, once team leaders allocate team tasks to establish task interdependence and make sure that this allocation is understood by their employees at the beginning of a team cycle, they may then channel their energy to other areas of team management in order to avoid any redundant efforts.

Second, team leaders also need to consider their team size. Our simple slope analyses indicate that team leaders' intellectual stimulation or individualized consideration was not

related to team identification in larger teams beyond the size of eight, which is largely consistent with Hackman's (2002, p. 119) suggestion of six being the maximum team size for a team to function effectively. Therefore, team leaders in such team settings should be aware that their individual-directed behaviors would only consume their time and energy with little success. In this regard, the average team size in the USA of 15 (Thompson, 2013) may need to be reduced. Third, team leaders may consider task interdependence and team size simultaneously in deciding which of the two strategies to use to promote team identification. For instance, in a larger team, they may resort mainly to the first strategy and engage in charisma to increase team identification.

Conclusion

The question of whether transformational leadership influence on collective identification can *always* be sustained has rarely been raised. With an explicit focus on the team as both the location of leaders and the target of employee identification, our study demonstrated that team leaders' charismatic influence is not sustained in the presence of structural substitutes, such as task interdependence, whereas their influence through intellectual stimulation and individualized consideration is negated by neutralizers of leadership, such as large team size. Understanding such contingencies for specific leader behavioral dimensions can contribute to increasing the effectiveness of team leaders.

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