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# Transformational Leadership and Job Performance: The Mediating Role of Work Engagement

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## Abstract

This study proposed that transformational leaders use various behaviors to provoke followers' organizationally beneficial behaviors (e.g., better task performance and helping behaviors) through ignition of followers' work engagement. That is, employees who inspired by transformational leadership are more likely to immerse themselves in the work, and, in turn, this is likely to result in better task performance and helping behaviors. In this study, we adopted a multitemporal and multisource research design to reduce the consideration of common method variance. Hypotheses were tested on a sample of 507 nurses working in 44 teams. The hierarchical linear regression analysis showed that, after controlling for several relevant variables (e.g., leader–member exchange [LMX], role-based self-efficacy, and transactional leadership) and several participants' demographic variables (e.g., gender, age, and education), work engagement still mediates the positive relationship among transformational leadership, job performance, and helping behavior. Strengths, limitations, practical implications, and directions for future research are discussed.

## Keywords

transformational leadership, work engagement, task performance, helping behavior, motivation

## Introduction

To deal with an increasingly complex and fast-changing environment, leaders need organizational members who invest their full attention and energy in achieving the formal job requests documented in the employment contract. Members must also be willing to invest extra effort and exceed formal job expectations. Members must go further, because when tasks are interdependent, job descriptions do not and cannot include all types of behavior needed to perform job requests. For example, the job description cannot specify exactly when and how members ask for help from peers or help others, because this behavior is discretionary (Organ, 1997). Thus, it is important for leaders to understand the antecedent and underlying processes that motivate members to perform their in-role job requests well and make them willing to perform beneficial behavior not included in formal employment contracts.

In the workplace, leaders influence members' behavior, because they are viewed as a representative example of the organization and possess the authority to evaluate members' performance or make decisions pertaining to their promotion. Therefore, leaders' behavior may shape members' behavior. As a prevalent leadership style, all levels of leaders in the organization can exhibit transformational leadership (Fuller et al., 1996; Judge & Piccolo, 2004). Through four behaviors (i.e., idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration), transformational leaders can change members' behaviors, encouraging them to exceed expectations (Bass, 1985). The effectiveness of transformational leadership has been examined in much theoretical and empirical research, which suggests that it enhances and affects members' task performance and helping behavior (e.g., Chun et al., 2016; Dust et al., 2014; G. Wang et al., 2011; W. Zhu et al., 2013). Moreover, the benefits of transformational leadership for members' performance are conveyed through numerous underlying

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mechanisms including self-efficacy (e.g., Hannah et al., 2016) or leader–member exchange (LMX) (Chun et al., 2016; Nohe & Hertel, 2017).

Although prior research examined the underlying processes of the relationships between transformational leadership and beneficial outcomes, few attempted to address how transformational leaders *motivate* their members (Shamir et al., 1993) to help them achieve in-role task requests and exceed expectations (Bass, 1985). Understanding the underlying motivation process is important, because motivation is considered a critical component that molds members' behavior (e.g., Pinder, 2011). Furthermore, prior research highlights the positive relationship between motivation and members' performance (e.g., Cerasoil et al., 2014). However, research examining this motivation process is limited (e.g., Shamir et al., 1993). W. Zhu et al. (2009) suggested work engagement (Kahn, 1990, 1992) as an important but neglected mechanism deserving more attention. Work engagement was proposed as a motivational construct (Kahn, 1990) and describes how employees express themselves physically, cognitively, and emotionally while performing work roles. Moreover, research indicates that enhanced work engagement is related to increased task performance and helping behaviors (Rich et al., 2010). Therefore, in this study, we adopt a motivation perspective and propose an integrated theoretical model, arguing that transformational leaders can enhance members' task performance and helping behaviors by fostering their work engagement.

This study extends several aspects of the extant transformational leadership literature. First, we address the call of previous research to investigate the processes underlying transformational leadership and beneficial work outcomes (G. Wang et al., 2011). Although researchers have progressed in identifying potential mediators, the motivational aspect (i.e., work engagement) of the influence of transformational leadership still needs attention. Work engagement is worthy of investigation for two reasons. One is that because motivation shapes employees' behavior, it is critical that transformational leaders understand how to enhance members' performance through motivation. The other is that in a dynamic environment, leaders always require and ask that members focus their full attention and energy on their tasks. Thus, work engagement could be a possible mediator that transmits the influence of transformational leadership on members' task performance and helping behavior. Second, unlike prior research (e.g., Breevaart et al., 2016; H. Li et al., 2019), this study attempts to clarify the mediation effect of work engagement and rule out alternate mediating mechanisms. Therefore, LMX and self-efficacy were controlled as possible mediators (Chun et al., 2016; Hannah et al., 2016; Nohe & Hertel, 2017), because they increase members' task performance and helping behavior (e.g., Beauregard, 2012; Chun et al., 2016; Martin et al., 2016; Sitzmann & Yeo, 2013). In addition, transactional leadership (i.e., contingent reward; Podsakoff et al., 1990) was controlled, because it is highly correlated with transformational leadership (Judge & Piccolo, 2004) and might influence members' task performance and helping behavior (G. Wang et al., 2011). Controlling these variables better clarifies the relationship between transformational leadership, task performance, and helping behavior, extending this study beyond previous research (e.g., Breevaart et al., 2016; H. Li et al., 2019). Third, we provide concrete practical implications for human resource managers to design personnel selection and training programs for transformational leaders. Finally, regarding methodology, although previous studies examined the relationship between transformational leadership, work engagement, and outcomes (e.g., Salanova et al., 2011; Song et al., 2012), we followed recommendations (N. Li et al., 2013; Y. Zhu & Akhtar, 2014) to address concerns regarding common method variance (CMV; Podsakoff et al., 2012) by adopting a temporal research design and collecting data from two sources: leaders and members. Moreover, unlike experimental investigations (e.g., Kovjanic et al., 2013), our data were collected from a real working situation; thus, the findings of this study are easier to generalize to other organizations.

## Theory and Hypotheses

### *Work Engagement*

To maintain high levels of productivity and functional effectiveness, organizations must ensure that their employees are focused and invest their full energy into accomplishing tasks. Kahn (1990) proposed the concept of work engagement to assess the extent of an employee's psychological presence or absence at work. Work engagement refers to "the simultaneous employment and expression of a person's 'preferred self' in task behaviors that promote connections to work and to others, personal presence (physical, cognitive, and emotional), and active, full performances" (Kahn, 1990, p. 700). For example, employees who display a high level of work engagement are psychologically present; fully *there*; and employ and present themselves physically, cognitively, and emotionally throughout their role performance. In contrast, disengaged employees demonstrate withdrawal and defensiveness during role performance. Furthermore, engaged employees are attentive, connected, integrated, and focused on their task performance. They are more open to others, willing to make connections with others at work, and more likely to bring their whole selves to execute their work roles (Kahn, 1992). Moreover, work engagement determines the levels of investment employees are willing to endow during work role performance (Kahn, 1990).

Work engagement comprises three components: *psychological meaningfulness, psychological safety*, and *psychological availability*. Psychological meaningfulness refers to how employees perceive the return on their physical, cognitive, and emotional energy investment in work role performance (Kahn, 1990). When employees feel worthwhile,

useful, and valuable in their current work role, they experience meaningfulness (Kahn, 1990). Psychological safety refers to a safe and trusted situation in which employees can freely express themselves without fears of negative outcomes to their self-image, status, or career (Kahn, 1990). When situations are unsafe or risky, such as by being unpredictable or threatening, employees' work engagement suffers. Psychological availability refers to employees' sense of having enough physical, emotional, or psychological resources to effectively deal with a specific situation (Kahn, 1990). In the workplace, employees are confronted with various challenges and demands, and the availability of resources employees possess or can access affects their degree of work engagement in role performance.

## *Transformational Leadership and Work Engagement*

According to Bass (1985), transformational leadership comprises four dimensions. First, *idealized influence* is the degree to which followers realize leaders' value, confidence, belief, power, and ethical or moral orientation; their willingness to identify with these attributes; and a diversion from self-interest to higher collective goals (Antonakis & House, 2002). Second, *inspirational motivation* describes how leaders articulate visions to inspire and motivate subordinates to reach desired goals (Antonakis & House, 2002). Third is *intellectual stimulation*, which refers to leaders who challenge the status quo and underlying assumptions, encourage followers to do so, and are open to new and creative solutions to problems (Antonakis & House, 2002). The final dimension is *individualized consideration*. Here, like mentors or coaches, leaders provide emotional support and consideration for each follower (Antonakis & House, 2002). Through these four dimensions, transformational leaders engage followers and accomplish significant outcomes (Burns, 1978).

Members' choice regarding when to be fully present and engaged at work is shaped by internal (e.g., meaningful goals and safety feelings) and external (e.g., availability of resources) factors (Kahn, 1992). Through these factors, leaders may influence how followers choose to be present (not necessarily physically present) and engaged. In work teams, transformational leaders provide holistic and challenging but attainable goals, and encourage followers to look beyond their self-interests to achieve collective goals. Transformational leaders infuse these holistic and collective goals with moral purpose and commitment (House & Shamir, 1993; Shamir et al., 1993), and convince members that these goals are more meaningful to pursue than their personal ones. Thus, they deserve the investment of additional energy. Moreover, to emphasize the importance of goals, similar to role models (House & Shamir, 1993), transformational leaders invest their full resources in attaining these goals. House and Shamir (1993) added that transformational leaders increase the intrinsic value of goal accomplishment and foster followers' commitment, attaching a sense of meaningfulness to goals. Thus, both idealized influence and inspirational motivation might make members believe that collective goals are meaningful (i.e., psychological meaningfulness) and attainable, and more willing to present themselves physically, cognitively, and emotionally at work.

Although transformational leaders may successfully divert followers from self-serving to holistic and challenging goals, some difficulties might arise during this process. For followers, challenging and holistic goals imply high risk; thus, unforeseen failures may occur during work role performance. This unsafe feeling and unpredictability of outcomes hinder members' desire to strive for these goals, unless leaders create a safe and supportive environment (Kahn, 1990) in which they can express themselves without fears of negative consequences. Transformational leaders pay personal attention to each member, try to understand their needs, and provide emotional support when they are frustrated at work. These supportive gestures enhance members' feelings of safety and encourage them to present their preferred self when working on tasks. For example, earlier research contended that transformational leadership could increase perceived supervisor support (Liaw et al., 2010). Thus, individualized consideration might make members feel psychological safety and, in turn, increase their willingness to fully present themselves at work (i.e., to be engaged at work).

Transformational leaders not only comfort members when dealing with challenging goals but also enhance members' problem-solving abilities. That is, transformational leaders use intellectual stimulation to encourage members to question the status quo and approaches, and invite their opinions or solutions to improve productivity and conserve resources (e.g., energy). As such, transformational leaders encourage members to effectively use their intelligence or experience, view problems from various angles (Bass, 1985; House & Shamir, 1993), master the problem-solving process, and determine the best solution to improve efficiency. This implies that leaders can offer enough resources (e.g., physical, emotional, or psychological) to members to try new solutions to task-related problems. This might result in psychological availability and enhance members' work engagement.

Thus, this study assumes that transformational leaders provide holistic and collective goals for followers and convince them that these goals are meaningful. Furthermore, acts of individualized consideration support members who fear possible negative outcomes if they present their genuine selves at work. Moreover, the provision of tangible and intangible resources enhances members' desire to be psychologically present at work. In short, this study expects that through the abovementioned four behaviors, transformational leaders can stimulate their members into becoming more engaged in their takes. Prior research (e.g., Chua & Ayoko, 2019; Ghadi et al., 2013; Vila-Vázquez et al., 2018;

W. Zhu et al., 2009) suggests that transformational leaders enhance members' work engagement through these four dimensions. Therefore, this study proposes the following:

**Hypothesis 1 (H1):** Transformational leadership is positively related to work engagement.

### *Work Engagement, Task Performance, and Helping Behaviors*

Kahn (1990, 1992) argued that once members believe that goals are meaningful and important, their environment is safe, threats of possible negative consequences are absent when they express themselves, and resources will be available when needed, they are more willing to be psychologically present and more inclined to invest their energies into performing their designated work roles. Engaged members concentrate their physical efforts on pursuing desirable goals, and remain focused on tasks and emotionally connected to the role (Ashforth & Humphrey, 1995; Kahn, 1990). Specifically, engaged members deploy themselves to the work role and devote their physical energies to behaviors that directly contribute to accomplishing organizational goals for extended periods (Kahn, 1990, 1992). To achieve organizational goals, they also devote their cognitive energies to behaviors that require vigilance, attention, and concentration (Kahn, 1990). Moreover, the investment of emotional energy promotes emotional connections with coworkers, facilitates the attainment of organizational goals (Ashforth & Humphrey, 1995), and results in better performance. Therefore, engaged members perform better, because they invest more physical energy with greater intensity for a longer period, cognitive energy with greater attention and focus on goal-related behaviors, and emotional energy to connect with work roles.

Role theory (Katz & Kahn, 1978) suggests that work roles comprise task and social roles. Social roles often require extra-role behaviors from members, which are not written in a formal contract but are good for the organization (Van Dyne et al., 1995). Although these behaviors do not link directly to organizational rewards, they benefit the whole team, as they enable members to work more smoothly and effectively together (Organ, 1988). To the extent that engaged members should be more willing to invest their energies and step outside formally defined role behaviors, their wider array of work behaviors (including extra-role behaviors) is more likely to contribute to achieving organizational goals (Rich et al., 2010). Moreover, Van Dyne et al. (1995) suggest that members with high job involvement perform more helping behaviors.

Essentially, earlier studies demonstrated that engaged members are more likely to obtain a higher rating for task performance (e.g., Owen et al., 2015; Rich et al., 2010) and are more willing to help their peers (e.g., Demerouti et al., 2015; Rich et al., 2010). Therefore, this study proposes the following:

**Hypothesis 2a (H2a):** Work engagement is positively related to task performance.
**Hypothesis 2b (H2b):** Work engagement is positively related to helping behaviors.

### *The Mediating Role of Work Engagement*

Transformational leadership theory suggests that exceptional leaders have an extraordinary influence on their followers (Shamir et al., 1993). Such leaders transform followers' needs, values, and preferences from self-interest goals to collective-interest goals. Furthermore, they are more likely to engage followers in being committed to these goals, willing to make personal sacrifices for the interest of collective goals, and eventually perform beyond the call of duty. Prior research supports the positive relationship between transformational leadership and members' task performance and helping behavior (e.g., Chun et al., 2016; Dust et al., 2014; G. Wang et al., 2011; W. Zhu et al., 2013). This study suggests that work engagement underlies this positive influence. Specifically, transformational leaders enhance members' work engagement through articulating a meaningful goal, offering a safe and supportive environment, and providing accessible resources. These engaged members are then more willing to invest their physical, cognitive, and emotional energies in performing their work roles. Moreover, because of a wider variety of work behaviors, engaged members are more likely to help their peers. In summary, this study proposes that work engagement will mediate the positive relationship between transformational leadership, task performance, and helping behavior:

**Hypothesis 3a (H3a):** Work engagement mediates the positive relationship between transformational leadership and task performance.
**Hypothesis 3b (H3b):** Work engagement mediates the positive relationship between transformational leadership and helping behaviors.

## Method

### *Sample and Procedure*

Data were collected from two hospitals in Taiwan. To reduce concerns pertaining to CMV (Podsakoff et al., 2012), we collected data from leaders and members, and adopted a multitemporal research design with three-wave data collection points spaced 3 months apart.

Before administering the surveys, we contacted the head nurses and explained the aims of the study. After obtaining their approval, we visited and showed them how to administer the three-wave questionnaires. In the first wave, nurses rated

the transformational leadership of head nurses and their demographic information (e.g., gender, age, and education). In the second wave, nurses were asked to report their work engagement. In the final wave, nurses' task performance and helping behaviors were assessed by their head nurses. The questionnaires were completed during nurses' morning meetings and returned to us in a sealed envelope. To match each wave of questionnaires, we assigned each nurse and head nurse an identification number written on the questionnaire.

In total, 566 nurses participated in the three-wave data collection; however, after eliminating invalid questionnaires (e.g., missing data), the final sample size was 507 nurses working in 44 teams. Of the participants, 98.9% were female, the average age was 31.43 ($SD = 7.17$) years, and nearly all participants have a junior college diploma (99.1%). In addition, the average work experience was 8.32 ($SD = 6.69$) years and average tenure in the current ward was 3.89 ($SD = 3.03$) years. The average team size was 13 (ranging from 2 to 41). Furthermore, all head nurses are female and have a junior college diploma. Their average age was 41.4 ($SD = 6.91$) years and average work experience 18.58 ($SD = 5.39$) years.

### Measures

All measures were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

*Transformational leadership.* In this study, nurses were instructed to rate their perceptions of head nurses' transformational leadership on a 14-item transformational leadership scale (Podsakoff et al., 1990). This scale was also adopted in other studies (MacKenzie et al., 2001). The overall alpha coefficient was .94.

*Work engagement.* Nurses completed an 18-item work engagement scale (Rich et al., 2010). This scale has been adopted in earlier studies (Alfes et al., 2013). We used the scale to measure nurses' work engagement. The overall alpha coefficient was .93.

*Task performance.* Head nurses were asked to report each nurse's task performance on a three-item scale (Farh et al., 1991). The scale has been adopted in previous work (A. C. Wang et al., 2013). The alpha coefficient was .90.

*Helping behaviors.* Head nurses were asked to rate nurses' helping behaviors on a four-item scale (Van Dyne & LePine, 1998), which Chen et al. (2015) adopted in their study. The alpha coefficient was .93.

### Control Variables

Prior research indicated that transformational leadership influences follower behaviors through several mechanisms (e.g., LMX and self-efficacy). Therefore, we controlled for participants' LMX (Chun et al., 2016; Nohe & Hertel, 2017) and role-based self-efficacy (Hannah et al., 2016). We used Scandura and Graen's (1984) seven-item scale to measure LMX (the alpha coefficient was .94). To measure role-based self-efficacy, we adopted the seven-item scale developed by Parker et al. (2006) (the alpha coefficient was .92). In addition, for two reasons, we also controlled for transactional leadership, which following prior research (Podsakoff et al., 1990), we defined as contingent reward. The first reason is that transactional leadership is highly associated with transformational leadership (Judge & Piccolo, 2004). Second, it influences members' task performance and helping behavior (G. Wang et al., 2011). We adopted a five-item contingent reward scale (Podsakoff et al., 1990) to measure transactional leadership (the alpha coefficient was .90). Furthermore, consistent with prior research (e.g., Chun et al., 2016; Dust et al., 2014; W. Zhu et al., 2013), we controlled several demographic variables (e.g., age, gender, and education). We also controlled for nurses' work experience and tenure in the current ward, because these variables might influence task performance and helping behavior (Bauer & Green, 1996; Duchon et al., 1986; Ng & Feldman, 2010).

### Analysis

Given the nested structure of our data and the potential consideration of nonindependence (Bliese & Hanges, 2004), we conducted a multilevel path analysis (Kaplan, 1998) in Mplus 7.4 (Muthén & Muthén, 1998–2012) to test the hypotheses. We then separately calculated the intraclass correlation coefficient (e.g., ICC1; Bryk & Raudenbush, 1992) for task performance and helping behavior. According to the results, the coefficient of ICC1 for task performance was 0.31, and 0.32 for helping behavior, both larger than the recommended cutoff point of 0.12. This supports the appropriateness of using multilevel modeling to test the hypotheses (Bliese, 2000).

## Results

Table 1 presents the mean values, standard deviations, and correlations between the variables employed in this study. In addition, the alpha coefficients are shown on the diagonal.

Before testing the hypotheses, we conducted a series of confirmatory factor analyses (CFA) to ensure the discriminant validity of the measures. In addition, because Table 1 indicates that some control variables (such as LMX and transactional leadership) have high correlations with the main variables (such as transformational leadership), we included these variables in CFA. Table 2 shows that the two-factor model, in which transformational leadership, LMX, role-based self-efficacy, transactional leadership, and work engagement were combined into one factor (reported by nurses) and task performance and helping behavior into another (both reported by head nurses), is better than the null model ($\Delta\chi^2 = 5{,}293.38$; $df = 1$; $p < .001$). Finally, the seven-factor baseline model is better than the two-factor

**Table 1.** Descriptive Statistics and Intercorrelations Matrix of the Study Variables ($n = 507$).

| Variables | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Gender | 1.01 | 0.11 | | | | | | | | | | | | |
| 2. Age | 30.90 | 7.03 | –.03 | | | | | | | | | | | |
| 3. Education | 2.57 | 0.072 | .07 | .04 | | | | | | | | | | |
| 4. Work experience | 7.94 | 6.48 | –.04 | .91*** | .01 | | | | | | | | | |
| 5. Tenure in the current ward | 3.90 | 3.06 | –.01 | .31*** | .05 | .38*** | | | | | | | | |
| 6. Transformational leadership | 3.57 | 0.60 | –.01 | –.13*** | –.03 | –.08 | –.04 | (.94) | | | | | | |
| 7. Transactional leadership | 3.57 | 0.67 | –.01 | –.11* | .01 | –.07 | –.03 | .83*** | (.90) | | | | | |
| 8. Leader–member exchange | 3.49 | 0.68 | .01 | –.08 | –.01 | –.05 | –.02 | .83*** | .82*** | (.94) | | | | |
| 9. Role-based self-efficacy | 2.98 | 0.61 | .04 | .11* | .08 | .12* | .10* | .19*** | .18*** | .28*** | (.92) | | | |
| 10. Work engagement | 3.47 | 0.46 | –.04 | .15** | .07 | .18*** | .04 | .22*** | .19*** | .18*** | .25*** | (.93) | | |
| 11. Task performance | 3.14 | 0.54 | .05 | .30*** | .09 | .30*** | –.02 | –.01 | –.04 | –.01 | .07 | .18*** | (.90) | |
| 12. Helping behavior | 3.21 | 0.56 | .08 | .31*** | .06 | .28*** | –.07 | –.04 | –.05 | –.03 | .04 | .16*** | .89*** | (.93) |

*Note.* Cronbach's alphas appear across the diagonal in parentheses.
*$p < .05$. **$p < .01$. ***$p < .001$.

**Table 2.** Confirmatory Factor Analysis.

| Fit index | Factors | $\chi^2$ | *df* | $\Delta\chi^2$ (*df*) | RMSEA | SRMR | NNFI | CFI | AIC |
|---|---|---|---|---|---|---|---|---|---|
| Null model | One factor | 11,610.35 | 1,595 | | 0.12 | 0.18 | 0.36 | 0.39 | 45,929.34 |
| Baseline model | Seven-factor model | 3,166.87 | 1,567 | 6,578.55(27)*** | 0.05 | 0.06 | 0.9 | 0.9 | 34,545.63 |
| Alternative model | Two-factor model[a] | 9,745.42 | 1,594 | 5,293.38(1)*** | 0.11 | 0.16 | 0.48 | 0.5 | 43,097.24 |

[a]Two factors: transformational leadership, LMX, role-based self-efficacy, transactional leadership, and work engagement were combined into one factor, and task performance and helping behavior were combined into the other. RMSEA = root mean square error of approximation; SRMR = standardized root mean squared error; NNFI = non-normed fit index; CFI = comparative fit index; AIC = Akaike information criterion.
***$p < .001$.

model ($\Delta\chi^2 = 6{,}578.55$; $df = 27$; $p < .001$). As such, the results of the CFA provide support for the discriminant validity of our measures.

Hypothesis 1 postulated that transformational leadership has a positive relationship with work engagement. The results are provided in Table 3. After controlling for several variables in Model 1, the results significantly relate transformational leadership with work engagement (unstandardized $b = .18$, $SE = .06$; $p < .01$), supporting Hypothesis 1.

In Hypotheses 2a and 2b, we proposed that work engagement is positively related to followers' task performance and helping behavior. For task performance, the results in Table 3 are shown in Model 2. Similarly, after controlling several variables, work engagement was significantly and positively related to task performance (unstandardized $b = .23$, $SE = .07$; $p < .001$). For helping behavior, the results are provided in Model 3, and work engagement was significantly related to helping behavior (unstandardized $b = .24$, $SE = .07$; $p < .001$). Therefore, both Hypotheses 2a and 2b were supported.

In Hypothesis 3a, we postulated that work engagement mediates the relationship between transformational leadership and task performance. The results are provided in Table 3. In model 2, the results indicated that the relationship between transformational leadership and task performance was not significant (unstandardized $b = .12$, $SE = .08$; *ns*), but work engagement was significantly related to task performance (unstandardized $b = .23$, $SE = .07$; $p < .001$). Thus, Hypothesis 3a was supported.

In Hypothesis 3b, we predicted that work engagement mediates the relationship between transformational leadership and helping behavior. The results are reported in Table 3. Similarly, the results showed that transformational leadership was not significantly related to helping behavior (unstandardized $b = .10$, $SE = .07$; *ns*), although work engagement was significantly related to helping behavior (unstandardized $b = .24$, $SE = .07$; $p < .001$). As such, Hypothesis 3b was supported.

We also conducted the Sobel test to analyze the mediation effect. The results of the Sobel test on helping behavior and task performance were both significant ($p < .05$). In addition, Preacher and Hayes (2004) suggest conducting a bootstrapping analysis as a supportive test for the mediating effect of work engagement. The results of the bootstrapping test show that the relationships between transformational leadership, work engagement, helping behavior, and task performance are all significant (for task performance, $ab = .04$, 95% confidence interval [CI] = [0.01, 0.08], $p < .05$; for helping behavior, $ab = .04$, 95% CI = [0.01, 0.09], $p < .05$). Thus, Hypotheses 3a and 3b were supported.

**Table 3.** Multilevel Structural Equation Modeling of the Meditation Effect ($n = 507$).

| | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| | Work engagement | Task performance | Helping behavior |
| Control variables | | | |
| Gender | −0.14 (0.15) | 0.29 (0.13)* | 0.38 (0.15)** |
| Age | 0.00 (0.01) | 0.00 (0.01) | 0.01 (0.01) |
| Education | 0.05 (0.03) | 0.03 (0.04) | 0.03 (0.03) |
| Work experience | 0.01 (0.01) | 0.02 (0.01) | 0.01 (0.01) |
| Tenure in the current ward | −0.01 (0.01) | −0.02 (0.01) | −0.02 (0.01)* |
| Role-based self-efficacy | 0.15 (0.03)*** | −0.02 (0.05) | −0.02 (0.06) |
| Leader–member exchange | −0.07 (0.04) | −0.02 (0.06) | −0.01 (0.06) |
| Transactional leadership | 0.08 (0.05) | −0.07 (0.07) | −0.06 (0.07) |
| Independent variable | | | |
| Transformational leadership | 0.18 (0.06)** | 0.12 (0.08) | 0.10 (0.07) |
| Mediator | | | |
| Work engagement | | 0.23 (0.07)*** | 0.24(0.07)*** |

*$p < .05$. **$p < .01$. ***$p < .001$.

## Discussion

This study addressed the influence of transformational leadership on followers' task performance and helping behavior by investigating work engagement as one possible underlying mechanism. Specifically, we propose that transformational leaders exhibit various behaviors to nurture and enhance the psychological states that contribute to members' work engagement. Members fully involved in their current tasks psychologically and physically are more likely to receive higher performance ratings and more willing to help others achieve goals. Therefore, transformational leaders can enhance followers' performance and foster their helping behaviors, because they induce members' work engagement and enable them to exceed expectations. Our findings support these statements and are consistent with earlier research on transformational leadership (e.g., Breevaart et al., 2016; H. Li et al., 2019; Salanova et al., 2011; Song et al., 2012) that examine work engagement as the process underlying the effect of transformational leadership on members' behaviors. However, unlike prior research, this study adopted a more rigorous research design to examine these relationships. Specifically, after controlling several relevant variables and adopting a multitemporal and multisource research design, work engagement still mediates the relationship between transformational leadership and employees' task performance and helping behavior.

### *Theoretical Implications*

The findings of this study make several contributions in terms of expanding previous models of transformational leadership to more prominently explicate the role of motivation in members' beneficial behaviors. The first contribution of this study is that we echo other researchers' appeals (G. Wang et al., 2011) to examine the process underlying the influence of transformational leadership on desirable outcomes. In this study, we argue that transformational leaders could change member behaviors through developing employee work engagement. Transformational leaders offer meaningful goals and switch member concerns from their self-interests to collective goals. They also provide a safe and supportive environment that encourages followers to invest their energy in current tasks. Moreover, transformational leaders provide useful resources members can easily access. When followers are motivated to be engaged at work, they stay focused on their current role and tasks and invest their full energy in behaviors that directly or indirectly contribute to achieving organizational goals. Our findings reveal that after controlling for LMX, role-based self-efficacy, and transactional leadership, work engagement fully mediated the positive relationship between transformational leadership and members' task performance and helping behaviors. Thus, these findings indicate that work engagement is a meaningful and insightful motivation mechanism and worthy of more attention in future research on transformational and other types of leadership.

The second contribution of this study is that we expand previous transformational leadership research (e.g., Salanova et al., 2011; Song et al., 2012; W. Zhu et al., 2009) by including transactional leadership as an important control variable, which is generally highly correlated with transformational leadership (G. Wang et al., 2011). Bass (1998) argues that "transformational leadership styles build on the transactional base in contributing the extra effort and performance of followers" (p. 5), and true transformational leaders should exhibit both types of leadership behaviors. Thus, it is reasonable to consider transactional leadership as a control variable when examining the relationship between transformational leadership and members' outcomes. Our results are consistent with this argument, and reveal the augmentation effect of

transformational leadership on transactional leadership in predicting members' work engagement. That is, compared with transactional leadership, which emphasizes the equity between efforts and rewards, transformational leadership—which emphasizes the inspirational vision and collective goal—could motivate employees to invest more of their energy in becoming fully engaged in their current tasks. These results also indicate the augmentation effect of transformational leadership on employees' performance (e.g., G. Wang et al., 2011) and motivation over transactional leadership. Therefore, when examining transformational leadership, future research should consider transactional leadership as a control variable. Moreover, our results coincide with the idea of Lowe et al. (1996), namely, that lower level leaders are more likely to be perceived as transformational leaders than higher level leaders. Lower level leaders (i.e., head nurses) who interact with members (i.e., nurses) daily have more opportunities to showcase transformational leadership behaviors and thus have a greater influence on work unit outcomes (Lowe et al., 1996).

The third contribution of this study is that after controlling several variables that positively affect employees' task performance and helping behavior, our results reveal that engaged members are more likely to be rated for higher task performance and helping behavior than disengaged members. That is, engaged employees are more likely to invest their full physical, cognitive, and emotional energies in overcoming the difficulties of assigned tasks and to accomplish them. Moreover, because engaged employees possess a wider range of work behavior, they are more likely to willingly offer their assistance to and help peers when requested. These findings are consistent with the statement that motivation shapes employees' behavior (Pinder, 2011).

## *Practical Implications*

For practitioners, the findings of this study provide concrete implications for personnel selection and leadership training. The results suggest that lower level transformational leaders (i.e., ward head nurses) can influence members' (i.e., nurses) performance by enhancing their work engagement. That is, during day-to-day interaction, lower level transformational leaders, who have more contact with members, might have more opportunities to instill in members the organization's vision and collective goals. Moreover, in daily interaction, they can also offer emotional support when members feel frustration or help them overcome difficult tasks with new solutions immediately. Thus, through day-to-day interactions and these behaviors, lower level transformational leaders can increase members' engagement in their tasks. This result is consistent with prior research (Lowe et al., 1996), but may contradict traditional practices. In general, the selection process for hiring a lower level manager focuses on technical expertise and is less concerned with interpersonal ability. Lowe et al. (1996) recommend that human resources include interview questions on transformational leadership experiences. For instance, open-ended questions should focus on the manager's experience of providing subordinates with intellectual stimulation when they encounter difficult tasks or soothing them when they feel frustrated and confused. These interview questions may help practitioners select the right candidate with the potential to be a transformational leader.

For leadership training, research highlights that transformational leadership skills can be learned and developed through training programs (Barling et al., 1996). Through these programs, leaders may enhance their coaching skills including how to set unit goals, communicate with members about these goals, motivate members to achieve goals, invent new methods for problem-solving, and cheer up members when they experience setbacks. Moreover, according to our findings, trained transformational leaders are likely to elevate members' level of work engagement and engage in organizationally beneficial behaviors that directly or indirectly enhance organizational effectiveness.

## *Strengths, Limitations, and Future Research*

An important methodological strength of this study is that unlike prior research that adopted cross-sectional research designs (e.g., N. Li et al., 2013; Salanova et al., 2011; Song et al., 2012; Y. Zhu & Akhtar, 2014), we used a multitemporal data collection design to test our theoretical model. Moreover, our data came from two sources, which may reduce concerns regarding CMV (Podsakoff et al., 2012). The second strength of this study was that unlike prior research (Breevaart et al., 2016; H. Li et al., 2019), we ruled out the possible influences of LMX, role-based self-efficacy, and transactional leadership. Controlling for these variables improves the predictive validity of our theoretical model, which proposed that work engagement mediates the relationship between transformational leadership and followers' behavior.

Despite the strengths, our study is not without limitations. First, we only considered two outcomes. It is important for future research to examine beneficial outcomes. For example, transformational leaders encourage members to challenge the status quo and provide a safe, supportive, and resourceful environment. Thus, engaged followers may be more likely to engage in creative behaviors. In addition, because engaged followers focus their full attention on current tasks, they may be better able to find hidden problems and be more courageous in voicing issues than their disengaged counterparts. Thus, we encourage future researchers to examine various outcomes that may be influenced by work engagement.

The second limitation is the scope of the generalizability of our findings. Although the generalizability of our findings might be better than previous experimental investigations (e.g., Kovjanic et al., 2013) in a real work situation, we only

collected data from one profession, namely, medical staff. This may hinder the validity of our findings when generalizing to other occupational groups and industries. Thus, researchers should be cautious when applying our findings to the effectiveness of transformational leadership in other occupational groups and industries. In addition, because our participants are mostly female, the explanation of our findings should be generalized with caution to other occupations and industries that may not have an unbalanced male–female ratio. Thus, we encourage future researchers to replicate our study and collect data from different occupations and industries.

The third limitation is the research design of our theoretical model. Although we adopted a multitemporal, multisource approach to reduce concerns related to CMV and controlled several variables that might influence members' task performance and helping behavior, our findings should be interpreted with caution. That is, potential contextual variables might impact these variables (e.g., a change in organizational structure or policy). For instance, the performance evaluation policy may change during the sampling period, which could influence how leaders evaluate their members. Thus, we encourage future researchers to consider the potential influence of contextual variables and to reduce them. In addition, we recommend that future studies collect data on these variables at all time points and adopt a longitudinal research design. This would ensure causality among these variables.

Although previous research (Fuller et al., 1996; Judge & Piccolo, 2004) considered transformational leadership a universal leadership style evident in all levels of leaders and that the effectiveness of transformational leadership should not be affected by the hierarchical order of leaders in the organization, we should not overlook possible higher level factors that influence transformational leadership, especially for lower level managers. For instance, as discussed, transformational leaders need sufficient resources to support subordinates and create a safe environment. If lower level transformational leaders develop a good exchange relationship with their supervisors, compared with those who do not, they are more likely to receive tangible and intangible resources from these supervisors (Herdman et al., 2017). Therefore, they will be more capable of supporting their followers and cultivating an environment that motivates members to engage in their tasks. In other words, the positive relationship between transformational leadership and work engagement may be mitigated by a lower exchange relationship between leaders and their supervisors. Thus, future research could consider the contingent effect of relational factors among leaders, such as leaders' LMX, which might influence lower level relationships.

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