

**TRANSFORMATIONAL LEADERSHIP, PSYCHOLOGICAL  
CAPITAL AND OTHER RESOURCES OF FOLLOWERS ENABLING  
HIGH FOLLOWER AND TEAM PERFORMANCE**

**SUNU WIDIANTO**

**Graduation Committee:**

**Chairman and Secretary:**

Prof. dr. T. A. J. Toonen, University of Twente

**Supervisor:**

Prof. dr. C. P. M. Wilderom, University of Twente

**Co-Supervisor:**

Dr. P.T. van den Berg, University of Tilburg

**Committee Members:**

Prof. dr. M. Junger, University of Twente

Prof. dr. M. R. Kabir, University of Twente

Prof. dr. J. B. Rijsman, University of Tilburg

Prof. dr. S. N. Khapova, Free University, Amsterdam

Cover design: Aris Firmansyah

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**Transformational Leadership, Psychological Capital and Other Resources  
of Followers Enabling High Follower and Team Performance**

**DISSERTATION**

to obtain  
the degree of doctor at the University of Twente,  
on the authority of the rector magnificus,  
Prof. dr. T. T. M. Palstra,  
on account of the decision of the graduation committee,  
to be publicly defended  
on Thursday, the 26<sup>th</sup> of April, 2018  
at 14.45 hrs.

by

**SUNU WIDIANTO**

born on the 13<sup>th</sup> of April 1983  
in Pontianak, Indonesia

**This PhD dissertation has been approved by**

Prof. dr. C. P. M. Wilderom (Supervisor)

Dr. P.T. van den Berg (Co-supervisor)

No two things have been combined together than knowledge and patience <sup>1</sup>

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<sup>1</sup> This the saying is attributed to the Prophet Muhammad PBUH:  
[http://www.just-post.com/p/flickr\\_14.html](http://www.just-post.com/p/flickr_14.html)



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## **Foreword and Acknowledgements**

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# CHAPTER 1

INTRODUCTION TO THIS  
PH.D. THESIS



## **Chapter 1: Introduction to this Ph.D. Thesis**

This Ph.D. thesis is about determinants of follower and team performance. Its key research question is: How do non-managerial employees make use of existing psychological resources in order to enable high individual and team performance? The reported tests of this thesis' hypotheses derive from combining transformational leadership theory, substitute leadership theory, conservation of resource theory, goal-setting theory and various other (theoretical) insights in the field of Organizational Behavior (O.B).

The core of this thesis is made up of three papers, which have been submitted to international conferences and journals. These three papers (i.e., chapters 2, 3, and 4) each analyze a distinct issue: chapter 2 examines in a longitudinal fashion individual-level mediators between transformational leadership and individual job performance/work engagement. In chapter 3, I examine a group-level mediator between transformational team leadership and high team performance in conjunction with so-called team PsyCap. Chapter 4 examines individual-level mediators between leader and follower's use of emotion and individual job performance. I demonstrate in this thesis that transformational leadership and leader/follower use of emotion contribute - directly and indirectly- to performance.

Across these three chapters, five independent individual and group characteristics were tested: follower support for excellence, individual psychological capital, collective psychological capital, team goal clarity, and individual psychological need satisfaction.

The two main data samples were collected in Indonesia. Two types of research survey designs were used: longitudinal and cross-sectional. In terms of sampling and data collection, two large, survey-based data sets were gathered. The first dataset was gathered in 2015; 220 healthcare professionals who were also part-time students (i.e., nurses and pharmacists) in one large public university. Of these 220 professionals, 151 were involved in the second data wave (i.e., in the longitudinal data set). The sample used in chapter 2 was collected in 2016: through 481 members of 76 nursing teams and their 76 leaders in two public hospitals in Indonesia.

## Research Question per Core Chapter of the Thesis

<p>What roles do the two characteristics, follower felt support for excellence and psychological capital, play between transformational leadership and follower job performance/work engagement?</p>	<p>What roles do the two team characteristics, collective psychological capital and team goal clarity, play between transformational leadership style and team performance?</p>	<p>What role does follower psychological need satisfaction play between leader and follower use of emotion and follower job performance?</p>
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**Figure 1. 1 Main questions addressed by the three core chapters of this Ph.D. thesis**

Prior to data collection, I crafted a set of questions, shown in Figure 1. In chapter 2, I focus on two individual mechanisms (follower felt support for excellence and psychological capital as an *affective* other individual aspect) that are hypothesized to mediate the relationship between transformational leadership behavior and high follower job performance. The specific hypotheses of this chapter were derived from transformational leadership theory, conservation of resource theory and other relevant studies. Chapter 2 reports the testing and results of 4 specific hypotheses: using the longitudinal data set (with approximately 1 year time lag between time 1 and time 2). The results show that the relationship between transformational leadership links on job performance/work engagement is mediated by follower felt support for excellence and psychological capital.

In chapter 3, I report the results after examining the effect of transformational leadership on team performance. Thus, I replaced the two individual mechanisms examined in chapter 2 with two group mechanisms: collective psychological capital and team goal clarity. With those two additional independent variables I tested a moderated mediated model the relationship between transformational leadership and team performance. I found out how collective psychological capital can negatively moderate the relationship between transformational team leadership and goal clarity. I tested the two specific hypotheses of this study with the second dataset: the nurses' sample from the two public hospitals. The key question of this empirical study was also

derived from my literature review of prior team-level studies which focused on how collective psychological capital, as a neutralizer of transformational team leadership -in relation to team goal clarity-, can enhance team performance.

I used several methods to minimize common method bias in this thesis, except in chapter 2, because a longitudinal survey study already overcomes this typical bias associated with self-reports (Griffin, Parker, & Mason, 2010). In chapter 3, I drastically attenuated common method bias by dividing the sample into three groups (through the so-called split sample technique (Rousseau, 1985)). The actual sample size used there was 76 teams (with 428 nurses, including their 76 immediate leaders). In chapter 4, I controlled for common method bias by constructing and using a so-called common latent factor and also by applying Harman's single factor test (see, also, Engelen, Gupta, Strenger, & Brettel, 2015). This factor controlled for all the relationships between the items and the focal latent variables. Moreover, Harman's (1976) single factor test examined whether a single factor, based on a factor analysis with all items, would explain more than fifty percent of the variance. However, this was not the case in the present study; it was only 30 percent of the variance. Hence, common method variance was not a great issue in this study. I provide the evidence of mechanisms which lead to high individual and team performance through the transformational style of leader behavior and use of emotion (of both leaders and followers).

I summarize and conclude my thesis research in chapter 5. Firstly, it reflects on the specific findings of the three empirical studies reported in chapters 2, 3, and 4. Secondly, the practical implications of the key findings of this thesis are offered. Thirdly, a number of suggestions for future research are provided. All the chapters of this thesis, with the exception of the present and last chapters (# 1 and 5), are currently under review at various international journals and conferences. Most of them have already been submitted, accepted and presented at international management conferences, as noted specifically at the start of each chapter.

### **Contributions of this Ph.D. Thesis**

The contribution of this dissertation is summarized in the following points:

- 1) This dissertation aims, by means of the longitudinal study in chapter 2 and the cross-sectional study reported in chapters 3 and 4, to extend the existing literature on transformational leadership, psychological capital and use of emotion theory and practice. I built my studies' assumptions on the findings of literature reviews and meta-analytic and single empirical studies (e.g., Christian, Garza, & Slaughter, 2011; Dawkins, Martin, Scott, & Sanderson, 2015; Fredrickson & Losada, 2005; Gooty, Connelly, Griffith, & Gupta, 2010; Halbesleben, Neveu,



Paustian-Underdahl, & Westman, 2014; Isen & Reeve, 2005; Little, Gooty, & Williams, 2016; Luthans, 2002; Peterson, Luthans, Avolio, Walumbwa, & Zhang, 2011; Wang, Oh, Courtright, & Colbert, 2011). I suggest that individual and team performance can be increased by a supportive transformational leader (of his or her team members), as well as through leaders' and follower' constructive use of their emotions. If followers are not supported when expressing their ability to utilize their emotions at work, they will face unnecessary difficulties on even though to attain high team performance. In addition, when followers feel supported by a transformational leader to strive for excellence, he or she will induce psychological capital, which enhances follower job performance. A high level of *collective* psychological capital in a team seems to act as neutralizer vis-à-vis of transformational leadership in enabling high team performance.

2) The results of this thesis' research also aim to contribute to managerial practice in Indonesia and beyond: as indicated in each of the three core chapters and chapter 5.

3) Given that numerous O.B. theories are generated and applied in countries with a Western culture, this thesis investigates and presents a creative combination of those theories in researching health-care employees in Indonesia where I aim to continue my scholarly work after the completion of this thesis.

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# **CHAPTER 2.**

**TRANSFORMATIONAL  
LEADERSHIP, FOLLOWER FELT  
SUPPORT FOR EXCELLENCE,  
PSYCHOLOGICAL CAPITAL,  
JOB PERFORMANCE AND  
WORK ENGAGEMENT**

**This chapter is accepted and presented at the 77<sup>th</sup> Annual Meeting of the Academy of Management Conference, Atlanta, Georgia, United States (2017).**

**This chapter is submitted as a paper to an international journal in management.**

## **Longitudinal Effects of Transformational Leadership, Follower-felt Support for Excellence, Psychological Capital on Follower Job Performance and Work Engagement**

### **Abstract**

Rooted in conservation of resources (COR) and the self-concept based theory of transformational leadership, this leadership style is hypothesized to rouse follower-felt support for excellence and, through it, follower psychological capital (PsyCap), resulting in both high follower job performance and work engagement. With two-wave survey data of 149 Indonesian health-care professionals, we examined this three-path mediation model. Using structural equation modeling on the change scores, the model was supported. In addition, cross-lagged analysis showed that the effect of transformational leadership on follower job performance was mediated by PsyCap. Both sets of results supported that transformational leadership style and PsyCap can be added as so-called “key” resources in COR “caravans”. Moreover, follower PsyCap is suggested to function as a more parsimonious motivation mechanism in the self-concept based theory of transformational leadership. Given the strengths and limitations of the research, multi-source studies are recommended that would include assessments of the micro behaviors of transformational leaders, in addition to the here and more commonly assessed survey-based perceptions of this style and its follower outcome.

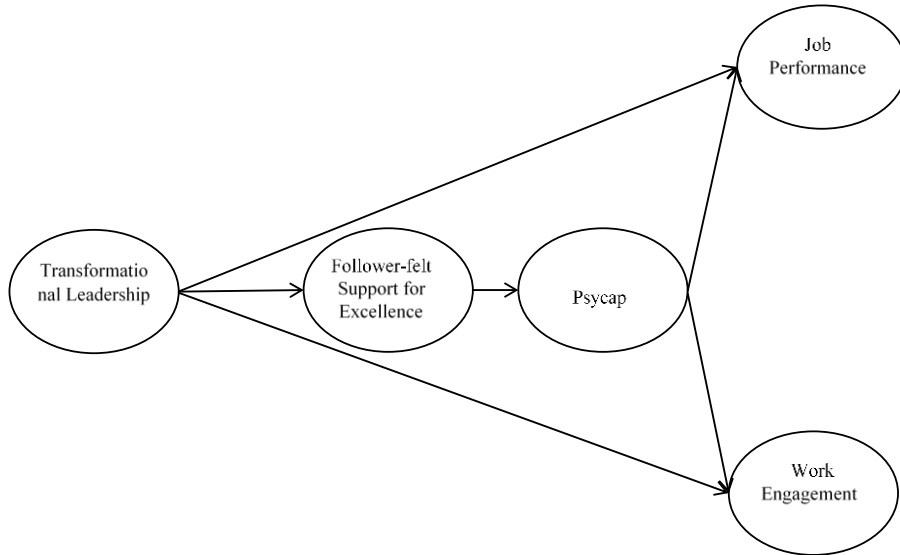
**Keywords: Transformational Leadership, Follower-felt Support for Excellence, Job Performance, Work Engagement, Longitudinal Study**

## Introduction

A growing body of studies shows that employee job performance is associated with their use of available resources (e.g., Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Halbesleben et al., 2014). According to conservation of resource (COR) theory, an individual who obtains or uses a “key” resource is more likely to gain positive resources in the future, thereby generating a resource “gain spiral” that helps that individual to meet goals (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014, p. 1339). A resource might be external or internal to the self and may fluctuate or be long-lasting (Hobfoll, 2001). Based on COR theory, supervisor support is an important social resource (Halbesleben et al., 2014, p. 1338). Such resources can be seen as *psychological* states of employees and related others through which employees attain goals (Halbesleben et al., 2014; Hobfoll, 1989). Much COR research attention has been given to their impact on stress and strain without considering how individuals use and value their resources over time (Halbesleben & Wheeler, 2015). The present longitudinal study focuses on how service employees can gain and utilize available resources at work which may fluctuate from time to time.

Particularly, how a follower can constructively utilize available resources from one’s leader and coworkers with which they can, in turn, optimize their own personal resources over time is what we would want to know. Based on a study of Gooty, Gavin, Johnson, Frazier, and Snow (2009), we suggest that transformational leadership functions as a “key resource” which energizes another key resource: PsyCap. In COR, a “key” social resource is one that generates other resources with which followers can achieve high levels of job performance and work engagement (Halbesleben & Wheeler, 2015; Schmitt, Den Hartog, & Belschak, 2016). It is COR theory that has postulate that the presence of one resource may create additional resources in the future, known as resource caravan. With the self-concept based theory of transformational leadership (Shamir, House, & Arthur, 1993), we will show how this caravan effect can be explained by one additional job-based resource: follower-felt support for excellence. The impact of leaders on the follower-felt support for excellence and in providing personal resources to enable individuals to engaged and perform may have lagged effects on change to occur. That is why our longitudinal survey of COR and self-concept based theory jointly examines *how* transformational leadership can be used as a resource by service employees, resulting in high job performance and work engagement (Tims, Bakker, & Xanthopoulou, 2011) through follower felt support for excellence and PsyCap. Therefore, we designed the three-path mediation model presented in Figure 1.

**Figure 2. 1 The Hypothesized Model.**



Even though some scholars have argued that job performance and work engagement overlap conceptually (Harrison, Newman, & Roth, 2006; Newman & Harrison, 2008), we will treat them as separate phenomena. Work engagement is defined as “the harnessing of organisation members’ selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performance” (Kahn 1990, p. 694). Also Parker and Griffin (2011, p. 64) argued that “engagement and behaviour must be considered as separate constructs, and a straightforward association between them cannot be assumed...” Work engagement does not always translate into job performance. Even though highly engaged employees do not always perform highly, the same psychological states may nonetheless precede both job outcomes (Bakker, Albrecht, & Leiter, 2011; Halbesleben, Harvey, & Bolino, 2009).

By connecting COR theory and transformational leadership theory it becomes more clear which social resources may form a “gain spiral” that stimulates high team performance. A central assumption in the self-concept theory of transformational leadership is that this behavioral style has a strong influence on follower behavior because it ties collective norms and values to follower norms and values as part of the self-concept (Shamir et al., 1993). The theory states, furthermore, that the style of the leader can trigger changes in followers’ self-concepts which includes, for instance, the motivational



mechanisms of self-consistency, enhancement of self-esteem and self-worth and the maintenance of hope (Shamir et al., 1993); these mechanisms are known to be conducive to enhancing follower job performance.

While aiming to contribute to the development of both transformational leadership and COR theory, we focus in this paper on three specific resources a follower may use at work: 1) transformational leadership; 2) follower-felt support for excellence; and 3) PsyCap. In response to calls to understand how employee resources can be more effectively utilized (Ferguson, Carlson, & Kacmar, 2015; Halbesleben et al., 2014), the study integrates key elements from COR, transformational leadership, and PsyCap theory (Hobfoll, 1989; Larson & Luthans, 2006). By longitudinally examining the relationships between transformational leadership, follower-felt support for excellence, PsyCap, job performance and work engagement, the present study expands the scope of both COR and transformational leadership theory. The present study investigates the notion that by increasing follower-felt support for excellence, transformational leaders enhance follower psychological capital and thereby their job performance and work engagement. The behaviours implied by COR and transformational leader theory are dynamic in nature, but most studies examining these theories do not employ a longitudinal design as we do in the present study (Halbesleben et al., 2014). Hence, through this study we increase the knowledge about how employees (in a non-Western country) utilize their available resources. Based on the results of this study, we propose follower PsyCap and transformational leadership can be added to Halbesleben et al.'s (2014) seven other "key" personal resources. Below, we first theorize the links among the five core constructs of this study.

## **Theory and Hypotheses**

### **Transformational Leadership and Follower Job Performance/Work Engagement**

Meta-analytical studies have shown that a transformational leadership style improves follower job performance (Lowe, Kroeck, & Sivasubramaniam, 1996; Wang, Oh, Courtright, & Colbert, 2011). Transformational leadership imbues followers' effort level through the following specific behaviours. First, these leaders advance and express a shared vision and high expectations that motivate and inspire followers to perform well in their jobs: inspirational motivation. Secondly, while serving as role models for their followers, they show so-called idealized-influence behaviour: the leader who walks the talk (Dragoni, Oh, Tesluk, Moore, VanKatwyk, & Hazucha, 2014; Wang et al., 2011). Third, transformational leaders challenge their followers to be innovative and creative; they are positively inclined towards followers' suggestions and ideas: intellectual stimulation. Finally, via so-called individualized-consideration

behaviour, transformational leaders demonstrate genuine attention to the needs of their followers and treat each follower personally, thereby enhancing followers' feelings of trust in and satisfaction with the leader to, in turn, bring out followers' best efforts (Podsakoff, MacKenzie, Moorman, & Fetter, 1990). The leader's transformational style, therefore, can constitute a positive resource for followers (also see Gooty, Connelly, Griffith, & Gupta, 2010). Follower's sense of work meaningfulness and motivation many also be enhanced (Bono & Judge, 2003).

The meta-analysis by Christian, Garza, and Slaughter (2011) showed that transformational leadership is related not only to follower job performance but also to their work engagement. In a healthcare setting, for example, transformational leadership has been related to follower work engagement (Salanova, Lorente, Chambel, & Martínez, 2011). In another study, 61 naval cadets on a ship for 34 days scored higher on work engagement at days when their leader showed more transformational leadership (Breevaart, Bakker, Hetland, Demerouti, Olsen, & Espevik, 2014). Effects of transformational leadership on follower work engagement were also demonstrated by an online experiment with a sample of 190 individuals from diverse backgrounds recruited (Kovjanic, Schuh, & Jonas, 2013). Also the studies by Schmitt et al. (2016) and Ng (2017) show important evidence for the significant relationship between transformational leadership and work engagement. In line with COR theory, we argue that a follower who is highly engaged in one's work is more likely to have utilized the support from a transformational leader (Tims et al., 2011). Hence, we formulate the following hypotheses:

Hypothesis 1a: Transformational leadership has positive effects on follower job performance and work engagement.

Hypothesis 1b: Changes in transformational leadership are positively related to a changes in follower job performance and work engagement.

### **Follower-felt Support as Mediator between Transformational Leadership and Psychological Capital**

In this study, a leader with a transformational style is assumed to be a resource- supplying actor, affecting how followers and their peers interact. This leadership style can be seen as an exceptionally strong source of social support for followers. First, a transformational leader acts as a coach, mentor or role-model to followers: by delivering support and tools to do well in their jobs (Howell & Hall-Merenda, 1999). Secondly, transformational leaders can enhance followers' aspiration levels (Dvir & Shamir, 2003; Ehrhart & Klein, 2001). Thirdly, the transformational style tends to broaden and elevate "followers' goals and provide them with confidence to perform beyond the

expectations specified in the implicit or explicit exchange agreement” (Dvir, Eden, Avolio, & Shamir, 2002, p. 735). Fourthly, transformational leaders synchronize followers’ identities to the collective identities that include shared norms among the peers they work with: through fostering followers’ intrinsic motivation to work hard toward the jointly desired outcomes (Jung, Chow, & Wu, 2003; Shamir et al., 1993). By articulating a vision and mission, transformational leaders help followers to figure out the norms associated with the desired outcomes (Schaubroeck, Lam, & Cha, 2007). More generally, leaders who offer solid support and care to their followers are likely to inculcate the norm of offering those resources to all colleagues (Liao & Chuang, 2007; Wilderom, 1991). Hence, the transformational style of a leader is in effect a setting resource that build a standard of excellence. A transformational leader does this through the mechanisms of vision, role modelling, challenge, acceptance, counseling and friendship with the followers at work (Sosik, Godshalk, & Yammarino, 2004).

When followers emulate their transformational leader’s behaviour, they are using a shared mental model of pursuing excellent work outcomes (Moser & Axtell, 2013, p. 3). Public-sector employees in particular, are expected by such leaders to behave as professionals who reach “professionally sound solutions ... and keep a high quality of task performance” (Kjeldsen, 2012, p. 61). Through social information processing and normative pressures, followers model or demonstrate to their peers the shared perception or norms of excellence (Tucker, Turner, Barling, & McEvoy, 2010). As a consequence, followers are likely to hold each other accountable to their common code of conduct. Thus, workers feel a high level of support from both transformational leader and peer, in the pursuit of shared high-level outcomes (Ten Brummelhuis & Bakker, 2012; Williams, Parker, & Turner, 2010). By investigating if transformational leadership affects followers through their felt support for excellence, we might expand the self-concept theory of transformational leadership. Leader induced changes in followers’ self-concept can thus come about also indirectly, through support obtained from peers supervised by the same leader (Rafferty & Griffin, 2004).

We argue that follower PsyCap is affected by high levels of felt support induced by a transformational leader. Follower-felt support at work can also be induced by colleagues who are led by the same or other transformational leaders, such as peers or fellow team members (Derks, van Duin, Tims, & Bakker, 2015; Halbesleben, 2006; Morris & Venkatesh, 2000). Hobfoll (1988) argued that social support enlarges resource availability for the followers, and can rejuvenate their latently available resources. People gain resources through interactions at work that help them to increase their own psychological capital. Hence, accepting the supporting help of leaders *and* coworkers can be professionally and personally relevant for people at work (Halbesleben & Wheeler, 2015; Ten

Brummelhuis, Ter Hoeven, Bakker, & Peper, 2011).

Follower psychological capital can be seen as another source of follower motivation which may fluctuate over time and is influenced by leader and coworker support. PsyCap is defined as “an individual’s positive psychological state of development characterized by: (a) having confidence (self-efficacy) to take on and put in the necessary effort to succeed in challenging tasks; (b) making a positive attribution (optimism) about succeeding now and in the future; (c) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (d) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success” (Luthans, Youssef, & Avolio, 2007b, p. 3). Gooty et al. (2009) have shown that transformational leadership is related to PsyCap. The dimensions of PsyCap are similar to some work motivation processes of the self-concept based theory, following which transformational leaders motivate their followers by stimulating (a) self-efficacy, (b) internalization of (leader’s) optimism, (c) maintenance of hope and (d) self-consistency. Thus, PsyCap may replace the more complex motivational processes of the self-concept theory of transformational leadership. To summarize, a high level of job support, coming from a transformational team leader as well as from peers might act for followers as a social job resource that yields a high level of PsyCap. Therefore, we state the following hypotheses:

Hypothesis 2a: Follower-felt support for excellence mediates the effect of transformational leadership on follower psychological capital.

Hypothesis 2b: Changes in follower-felt support for excellence mediate the relationship between changes in transformational leadership and changes in follower psychological capital.

### **Psychological Capital as Mediator Between Follower-felt Support and Job Performance/Work Engagement**

We argue that PsyCap is an important mediator in the relationship between follower-felt support and job performance. Followers’ perceptions of their work setting might encourage them to be more committed to meet shared goals (Michel, Kavanagh, & Tracey, 2013). In terms of psychological capital, a high level of social support from various sources in their immediate work environment may contribute to followers’ self-efficacy and optimism (Luthans, Norman, Avolio, & Avey, 2008). This may be due to sharing a similar, service-oriented mental model in which one is able to delineate, elucidate or foresee positive events within the job environment (Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000).

The meta-analysis of Avey, Reichard, Luthans, and Mhatre (2011)

showed that PsyCap has a positive impact on desirable employee attitudes, behaviour and multiple measures of their performance. Also, Peterson, Luthans, Avolio, Walumbwa and Zhang (2011) found in a three-wave longitudinal study in a US financial service organisation that PsyCap affected job performance.

Research has shown that PsyCap is a mediator between a supportive climate and performance (Luthans et al., 2008). Therefore, we suppose that follower-felt support in a service-oriented environment, will elevate PsyCap, which in turn, induces high job performance (Avey et al., 2011; Luthans et al., 2009). Similarly, followers' PsyCap may enhance one's work engagement (Fredrickson, 2001; Grant, Berry, & Carolina, 2011). Self-efficacy seems to be an important condition for job absorption, i.e., if an employee has a high level of efficacy, he or she will be absorbed in the tasks at hand, as reflected in vigorous performance (Luthans et al., 2007b; Salanova, Schaufeli, Xanthopoulou, & Bakker, 2010). Optimism tends to enhance one's psychological availability for a higher level of work engagement, while hope creates a positive job-resource spiral with an effect on work engagement (Kahn, 1990). Finally, resiliency strengthens people's ability to engage in future work that might not be especially difficult (Luthans et al., 2007b; Salanova et al., 2010). Thus, through PsyCap, follower-felt support is likely to elevate followers' work engagement (Hobfoll, 1989; Hobfoll, 2001; Llorens, Schaufeli, Bakker, & Salanova, 2007; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007; Powell & Greenhaus, 2010; Tims et al., 2011; Verleysen, Lambrechts, & van Acker, 2015). Hence, we expect that psychological capital is also a mediator of the relationship between felt support and work engagement. Thus, we state the following hypotheses:

Hypothesis 3a: Psychological capital of followers mediates the effects of follower-felt support for excellence on follower job performance and work engagement.

Hypothesis 3b: Changes in follower psychological capital mediate the relationship between changes in follower-felt support for excellence and changes in follower job performance/work engagement.

### **Psychological Capital as Mediator between Transformational Leadership and Job Performance/Work Engagement**

The effects of transformational leader behaviour on high job performance and work engagement may also occur through intra-psychological mechanisms (Gooty et al., 2009). We assumed that the behaviours of such leaders condition the emergence of PsyCap consisting of self-efficacy, optimism, hope and resilience. Hobfoll (2002) argued that followers with more intra-psychological resources, are more likely to be constantly engaged by goal accomplishment effort and to enjoy their task-based challenges. Likewise,

followers with a higher level of PsyCap enhance their job performance and engagement at work. These arguments are aligned with the idea of a “resource caravan” of COR theory. Transformational leadership is a resource that helps their followers to actually use their available psychological resources (Halbesleben & Wheeler, 2015; Ten Brummelhuis et al., 2011). This idea is supported by cross-sectional field study of Gooty et al. (2009), which showed that PsyCap mediated between transformational leadership and follower in-role performance. Their results are in accordance with the simplified self-concept theory of transformational leadership without the mediating effect of follower-felt support for excellence. In addition, Peterson, et al. (2011) showed, in a longitudinal study, PsyCap affects job performance in a relatively short time period (three months). The present study will test this causal effects of psychological capital on both follower job performance and work engagement over a longer period of time. We formulate therefore the following hypotheses:

Hypothesis 4a: Psychological capital of followers mediates the effects of transformational leadership on followers’ job performance and work engagement.

Hypothesis 4b: Changes in follower psychological capital mediate the relationship between changes in transformational leadership and changes in follower job performance and in work engagement.

## **Methods**

### **Sample and Procedure**

A pilot study preceded the main study whereby the survey scales were administered to seven nurses and pharmacists who met the inclusion criteria. Following these criteria they had to be university graduates of Indonesian schools of nursing and pharmacy (Anderson & Gerbing, 1991). No problems in understanding and answering the questions were met. The original English questionnaires were translated into Indonesian (Bahasa), using the back-translation method.

At time one (T1), the survey was administered to 220 part-time healthcare employees (e.g., 160 nurses, 60 pharmacists) who concomitantly studied at the schools of nursing and pharmacy of a large university in Bandung, Indonesia. They worked in various settings such as hospitals, universities, pharmaceutical companies, and drug stores. Approximately 1 year later, the same survey was administered to the same employees who had participated at time one. The number of respondents whose graduate-student number matched with their numbers at time one was 149. This matched sample was used to test the hypotheses. The mean age of this group was 32.1 years ( $SD = 5.87$ ) and their mean length of work experience in their current jobs was 6.5 years ( $SD = 1.84$ ).

This sample was 73% female.

## Measures

*Transformational leadership.* We measured transformational leadership with a scale consisting of seven items (Carless, Wearing, & Mann, 2000). This scale has been shown to have strong test-retest reliability as well as construct and discriminant validity (Doci & Hofmans, 2015; Harold & Holtz, 2012). An example item is “communicates a clear and positive vision of the future”. The responses were based on the seven-point Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach’s alpha was .95 in the data set at time one.

*Follower-felt support for excellence.* Followers were asked to indicate to what extent they felt individually supported to attain a high level of job performance. Because the nature of their jobs is essentially service oriented, use was made of Mayer, Ehrhart and Schneider’s (2009) nine-item measure of service climate, denoting the degree of individually received support in executing their jobs well. This measure was used because we wanted to include not only the job support gained from their immediate peers but also the support from other departments and facilities or resources in the organisation. Luthans et al. (2008, p. 225) defined follower perceived support “as the overall amount of support received from their immediate peers, other departments, and their supervisor that they view as helped them to successfully perform their work duties”. Previous studies of employee support mainly focused either on support received from immediate supervisors (e.g., Paterson, Luthans, & Jeung, 2014), peers (e.g., Eisenbeiss, van Knippenberg, & Boerner, 2008) or organisational support (e.g., Kurtessis et al., 2015; Luthans et al., 2008). In our equally comprehensive measure, we also integrate the support service employees received from their supervisors, peers and members from other departments they directly work with, but we add the label ‘for excellence’ because the support is explicitly channeled towards doing a great job. One of the items was similar to the items of Mayer et al.’s (2009) scale of transformational leadership and another was similar to the job-performance items. Therefore, these two items were excluded from this measure. The Cronbach’s alpha of the shortened 7-item scale at time one was .92. An example of the set of remaining items is “How do you rate the recognition and awards employees receive for delivering a superior service?” The responses were given on a seven-point Likert scale, ranging from 1 (*poor*) to 7 (*excellent*).

*Psychological capital.* We measured psychological capital with a short version of the questionnaire developed by Luthans et al. (2007a), consisting of twelve items and four dimensions: efficacy, optimism, hope, and resilience. The followers were asked to what extent they agreed with each statement (e.g., “I always look on the bright side of things regarding my job”). The seven-point

Likert scale ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach's alpha at time one was .88.

*Job performance.* We assessed job performance by using the well-established Williams and Anderson (1991) instrument, consisting of five items. A sample item is "I complete assigned duties adequately". The responses were given by the followers on seven-point Likert scales, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach's alpha at time one was .87.

*Work engagement.* The followers filled out a short, nine item version of the Utrecht Work Engagement Scale (Schaufeli, Bakker, & Salanova, 2006). An example item is: "At work, I am bursting with energy". A seven-point Likert scale was used for the responses, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach's alpha at time one was .81.

## Analyses

We conducted confirmatory factor analysis with AMOS 23 to evaluate the measurement model of the focal variables, i.e., to examine if the transformational leadership, follower felt support for excellence, psychological capital, job performance and work engagement were distinct at time one. We used the maximum-likelihood estimation procedures here. The result showed that the expected five-factor model provided the following fit to the data at time one:  $\chi^2 = 4376.87$ ,  $df = 2190$ ,  $p < .001$ ; CFI = .83; RMSEA = .05; SRMR = .09. Based on the basis modification indices, we improved the hypothesized model. The result showed that the fit indices were acceptable:  $\chi^2 = 1187.36$ ,  $df = 1728$ ,  $p < .001$ ; CFI = .93; RMSEA = .05; SRMR = .09 (Hu & Bentler, 1999).

We tested the hypotheses with structural equation modeling (SEM). The hypotheses on the effects were tested with the cross-lagged analyses and the hypotheses on changes with analyses on the data that represent the changes in the variables from T1 to T2. A cross-lagged analysis examines if an independent variable at T1 is related to a dependent variable at T2, controlled for the same dependent variable at T1. And in order to test reversed effects, this was also done the other way around. Reversed effects have been tested for each hypothesized effect. We conducted the cross-lagged analyses with item scores as observed variables and latent variables representing the constructs. Conclusions on causal effects should be taken with care, because the independent variables are not randomized, as in experimental studies. Also, to draw such conclusions the independent and the mediating variables should to be more or less stable during the study, and in our study these variables were not quite stable as indicated by the moderately high correlations between the same variables at T1 and T2 (see, Table 2). The analyses of the change data takes these changes into account and therefore provides additional value above the cross-lagged analyses.



To perform the analyses with the change scores we regressed the T2 item scores on the corresponding T1 item scores and saved the standardized residual scores. Standardized residual scores are more suitable for two-wave longitudinal studies because they control for the impact of the baseline assessment on the second assessment (Kisbu-Sakarya, MacKinnon, & Aiken, 2013; Lipshits-Braziler, Gati, & Tatar, 2015; Salthoouse & Tcuker-Drob, 2008). We entered the standardized residual scores into the structural equation modeling with AMOS. We followed the approach of Kooij, Tims, and Akkermans (2017), by using latent variables determining the standardized residual scores of the respective constructs in the hypothesized model. We did not control for the common latent factor in the longitudinal analyses since longitudinal studies overcome typical rater-bias issues associated with self-reports (Griffin, Parker, & Mason, 2010).

To investigate the mediation effects we used the test of joint significance by MacKinnon, Lockwood, Hoffman, West and Sheets (2002): A mediation effect is present when two conditions are fulfilled: (1) the relationship between the independent variable and the mediator is significant, and (2) the relationship between the mediator and the dependent variable, while controlling for the independent variable, is significant. We extended this test to our longitudinal study by stating that a longitudinal mediation is present, when (1) the independent variable at T1 is related to the mediator at T2, controlled for the mediator at T1, and (2) the mediator at T1 is related to the dependent variable at T2, controlled for the dependent variable at T1 and independent variable at T1. Following the method used by Finkel (1995) unexplained variances of the constructs at T2 were allowed to correlate and the error variances of identical items measured at T1 and T2 were also allowed to correlate.

## **Results**

Table 1 presents the variables' means, standard deviations, internal consistencies and zero-order correlations of the scales in the matched samples. All calculated internal consistencies are high. These results show that the operationalization of the measures of transformational leadership, follower-felt support for excellence, psychological capital, job performance and work engagement are reliable in the work settings in which they were administered. In each correlation matrix, transformational leadership is significantly related to follower-felt support for excellence, psychological capital, job performance and work engagement. Follower-felt support for excellence is significantly related to psychological capital, job performance and work engagement. Psychological capital is strongly related to job performance as well as to work engagement. These results are in accordance with the hypotheses; the results of our tests will be reported next.

**Table 2. 1 Correlations, Means, Standard Deviations, and Cronbach's Alphas in the Matched Sample (N = 149)<sup>a</sup>.**

Variables <sup>b</sup>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
Time 1												
1. Transformational leadership	5.37	1.22	<b>.95</b>									
2. Follower-felt support for excellence	5.10	1.00	.66**	<b>.92</b>								
3. Psychological capital	5.50	.74	.25**	.36**	<b>.88</b>							
4. Work engagement	5.09	.92	.20*	.19*	.49**	<b>.81</b>						
5. Job performance	5.84	.68	.25**	.38**	.66**	.32**	<b>.87</b>					
Time 2												
6. Transformational leadership	5.36	1.23	.63**	.50**	.13	.17*	.12	<b>.96</b>				
7. Follower-felt support for excellence	5.24	.96	.43**	.56**	.23**	.18*	.22**	.55**	<b>.93</b>			
8. Psychological capital	5.43	.76	.27**	.20*	.51**	.32**	.37**	.31**	.45**	<b>.90</b>		
9. Work engagement	5.26	.84	.25**	.16*	.25**	.44**	.20*	.35**	.41**	.62**	<b>.83</b>	
10. Job performance	5.85	.72	.31**	.29**	.41**	.14	.48**	.33**	.52**	.70**	.39**	<b>.90</b>

<sup>a</sup> On the diagonal, the internal consistency coefficient or Cronbach's alphas are reported in bold.

<sup>b</sup> Followers' ratings. \*  $p < .05$ . \*\*  $p < .01$ .

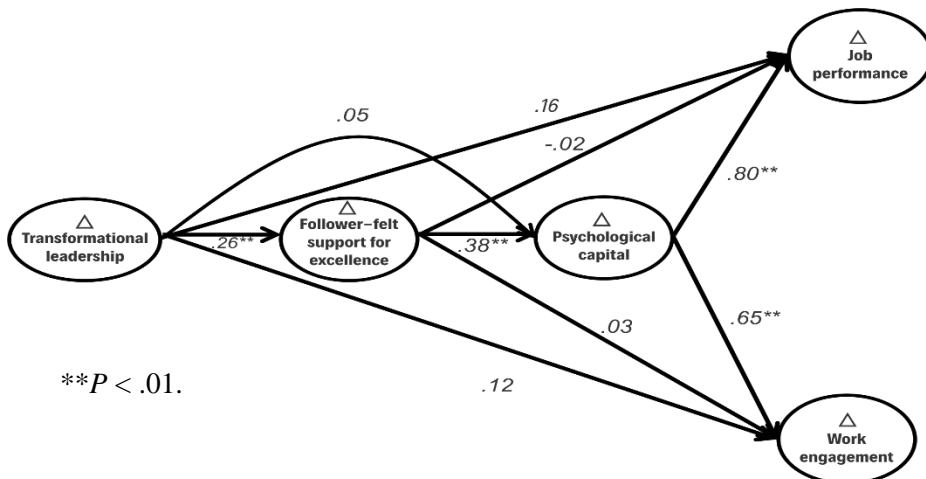
## Testing the Hypotheses

Hypothesis 1a that transformational leadership has positive effects on follower job performance and work engagement was tested by the model with paths from transformational leadership at T1 to job performance and work engagement at T2, controlled for job performance and work engagement at T1, respectively. The paths from transformational leadership at T1 to both job performance and work engagement at T2 were significant ( $\beta = .21, p < .01$  and  $\beta = .20, p < .05$ , respectively). Therefore, both parts of hypothesis 1a were supported by the lagged data. The results of the fit test were:  $\chi^2 = 942, df = 525, p < .001, CFI = .88, RMSEA = .07$ , showing that the fit was adequate, but that the model would need some improvement.

We tested the reversed effects of job performance and work engagement on transformational leadership. The results showed that job performance and work engagement measured at T1 were not significantly related to transformational leadership at T2 controlled for this variable at T1 ( $\beta = -.09, ns$ , and  $\beta = .04, ns$ , respectively), indicating that no reversed effects could be found.

With the change scores we tested hypothesis 1b stating that changes in transformational leadership are related to changes in job performance and work engagement. The fit statistics of this model were: ( $\chi^2 = 352, df = 181, p < .001, CFI = .89, RMSEA = .08$ ). The results showed that the model had a moderate fit. The paths from changes in transformational leadership to changes in job performance and work engagement were significant ( $\beta = .16, p < .05$  and  $\beta = .19, p < .05$ ). Therefore, hypothesis 1b is supported.

**Figure 2. 2 The standardized path coefficients of linkages between the key variables examined with the change data (N = 149).**



Hypothesis 2a, stating that follower-felt support for excellence mediates the effect of transformational leadership on follower psychological capital, was tested in the two steps, as described before. The path from transformational leadership at T1 to follower-felt support at T2, controlled for follower-felt support at T1, was not significant ( $\beta = .05$ , *ns*). The fit statistics were:  $\chi^2 = 548$ ,  $df = 186$ ,  $p < .001$ , CFI = .87, RMSEA = .11. Also, the path from follower-felt support at T1 to PsyCap at T2, controlled for PsyCap at T1 and transformational leadership at T1, was not significant ( $\beta = -.14$ , *ns*). The fit statistics of this model are:  $\chi^2 = 1417$ ,  $df = 659$ ,  $p < .001$ , CFI = .80, RMSEA = .09. Thus, hypothesis 2a is not supported by the data.

Also, we tested the reversed effects of PsyCap on follower-felt support, and of follower-felt support on transformational leadership. PsyCap at T1 was not significantly related to follower-felt support at T2, controlled for support at T1 ( $\beta = .01$ , *ns*), but follower-felt support at T1 was significantly related to transformational leadership at T2, controlled for this leadership style at T1 ( $\beta = .20$ ,  $p < .05$ ). These results indicate that PsyCap did not affect follower-felt support, but that support did affect transformational leadership.

Hypothesis 2b was tested with the change scores. Support was obtained for the hypothesis that changes in follower-felt support for excellence mediates the relationship between changes in transformational leadership and changes in psychological capital. Transformational-leadership change was significantly related to changes in follower-felt support for excellence ( $\beta = .46$ ,  $p < .01$ ). In turn, changes in follower-felt support for excellence were significantly related to psychological-capital changes, after controlling for changes in transformational leadership ( $\beta = .30$ ,  $p < .01$ ). The fit statistics of the model were:  $\chi^2 = 1359$ ,  $df = 283$ ,  $p < .001$ , CFI = .94, RMSEA = .05, indicating a good fit.

Hypothesis 3a states that psychological capital mediates the effects of follower-felt support for excellence on job performance and work engagement. The path from follower-felt support at T1 to PsyCap at T2, controlled for PsyCap at T1, was not significant ( $\beta = .03$ , *ns*). The fit statistics are:  $\chi^2 = 907$ ,  $df = 431$ ,  $p < .001$ , CFI = .81, RMSEA = .09. The path from PsyCap at T1 to job performance at T2, controlled for job performance at T1 and for follower-felt support at T1, was significant ( $\beta = .26$ ,  $p < .05$ ). However, the path from PsyCap at T1, to work engagement at T2, controlled for work engagement at T1 and for follower-felt support at T1 was not significant ( $\beta = -.14$ , *ns*). The fit statistics were:  $\chi^2 = 1738$ ,  $df = 994$ ,  $p < .001$ , CFI = .82, RMSEA = .07. These results showed that Hypothesis 3a was not supported.

As indicated before, the reversed effect of PsyCap on follower-felt

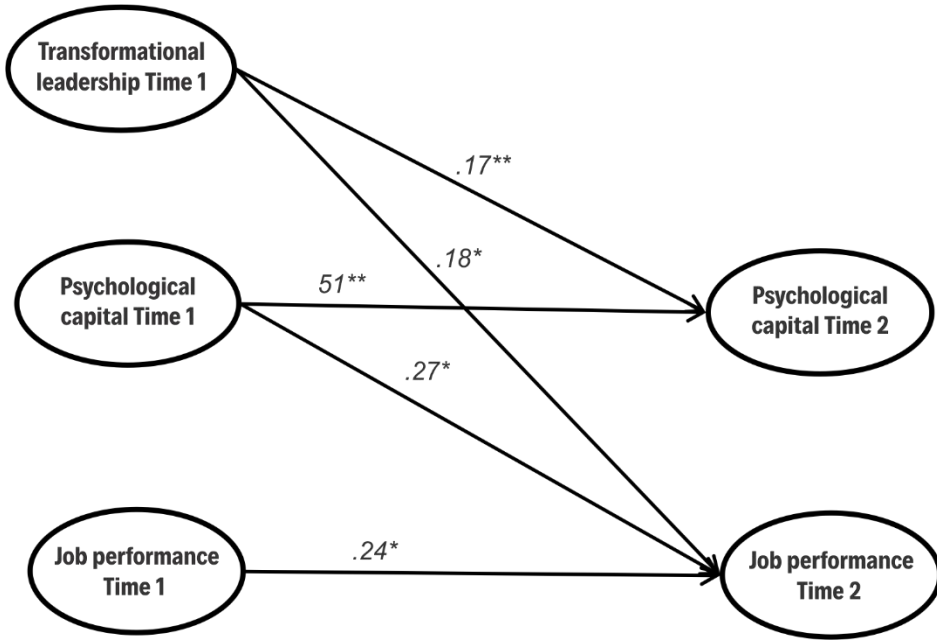
support was not significant. Also, the relationships between job performance and work engagement at T1, on the one hand, and PsyCap at T2, on the other hand, controlled for PsyCap at T1 were not significant ( $\beta = -.07$ , *ns*, and  $\beta = .18$ , *ns*, respectively), indicating no reversed effects.

Hypothesis 3b was supported by the change data. Changes in follower-felt support for excellence were significantly related to psychological-capital changes ( $\beta = .34$ ,  $p < .01$ ) while psychological-capital changes were significantly related to both job-performance and work-engagement changes ( $\beta = .63$ ,  $p < .01$ ; and  $\beta = .44$ ,  $p < .01$ , respectively). The fit statistics of the model were:  $\chi^2 = 1698$ ,  $df = 448$ ,  $p < .001$ , CFI = .84, RMSEA = .07.

Hypothesis 4a, stating that psychological capital mediates the effect of transformational leadership on job performance and work engagement, was tested through cross-lagged panel analysis. The coefficient of the path from transformational leadership at T1 to psychological capital T2, controlled by psychological capital at T1, was significant ( $\beta = .17$ ,  $p < .01$ ;  $\chi^2 = 1738$ ,  $df = 994$ ,  $p < .001$ , CFI = .82, RMSEA = .07). Also, the path from psychological capital (T1) to job performance (T2), controlled by job performance (T1) and transformational leadership (T1) was significant ( $\beta = .26$ ,  $p < .05$ ). However, the path from psychological capital (T1) to work engagement (T2), controlled by work engagement (T1) and transformational leadership (T1) was not significant ( $\beta = -.05$ , *ns*). The fit statistics of the model with both job performance and work engagement as dependent variables were:  $\chi^2 = 1692$ ,  $df = 985$ ,  $p < .001$ , CFI = .85, RMSEA = .07. The model without work engagement had a good fit:  $\chi^2 = 564$ ,  $df = 355$ ,  $p < .001$ , CFI = .93, RMSEA = .06. These results showed that PsyCap mediated the effects of transformational leadership on job performance but not its effect on work engagement. The standardized path coefficients among the latent variables of this model are presented in Figure 3. In addition to effects of job performance and work engagement on PsyCap, the effect of PsyCap on transformational leadership was not significant ( $\beta = -.04$ , *ns*).

Hypothesis 4b states that changes in psychological capital mediates the relationship between changes in transformational leadership and changes in job performance and work engagement. Changes in transformational leadership were significantly related to psychological-capital changes ( $\beta = .21$ ,  $p < .01$ ), while psychological-capital changes were significantly related to both job-performance and work-engagement changes ( $\beta = .63$ ,  $p < .01$ ; and  $\beta = .42$ ,  $p < .01$ , respectively). The fit statistics of the model were:  $\chi^2 = 1627$ ,  $df = 446$ ,  $p < .001$ , CFI = .87, RMSEA = .07. These results showed that Hypothesis 4b was supported.

**Figure 2. 3 The Standardized Path Coefficients of the Test Showing That Psychological Capital Mediates the Relationship between Transformational Leadership and Job Performance (N = 149).**



\* $P < .05$ . \*\* $P < .01$ .

### Three-path Mediation Model

The entire hypothesized model was tested with the change scores. The fit statistics of the model were:  $\chi^2 = 1581$ ,  $df = 677$ ,  $p < .05$ , CFI = .86, RMSEA = .06. By excluding one item of work engagement, we improved the hypothesized model. The results indicate that the model fit meets the criteria ( $\chi^2 = 1.469$ ,  $df = 671$ ,  $p < .00$ , CFI = .90, RMSEA = .06). The standardized path coefficients are presented in Figure 2. Because follower-felt support for excellence mediates the effect of transformational leadership on psychological capital, the first two conditions of Taylor, MacKinnon, and Tein (2008) are fulfilled. Also, psychological capital was significantly related to job performance and work-engagement, after controlling for transformational leadership and

follower-felt support for excellence ( $\beta = .80, p < .01$ ; and  $\beta = .65, p < .01$ , respectively). Thus, the change data supported the modified three-path mediation model: the relationship between changes in transformational leadership and changes in job performance and work engagement were mediated in a series, first by changes in follower-felt support for excellence, and then by changes in psychological capital. The indirect effects of changes in transformational leadership on both in changes job performance and work engagement were significant ( $\beta = .07, p < .05$  and  $\beta = .05, p < .05$ , respectively).

## Discussion

The present study shows that the relationship between changes in transformational-leadership and changes in follower job performance and work engagement can be explained by the mediation of changes in follower-felt support for excellence and changes in psychological capital in a series or ‘caravan’. The present study shows that changes in followers’ felt support and psychological capital, mediate between transformational leadership and follower job performance and engagement, and that they do so in series, or ‘caravan’ fashion. These results suggest both causal and reversed causal relationships among the variables. The results of cross-lagged analyses supported only the effects of transformational leadership on psychological capital, follower job performance and work engagement, and the effect of psychological capital on job performance. Unexpectedly, follower-felt support showed to have a reversed effect on transformational leadership. This suggests that followers who feel supported by their leaders tend to attribute more transformational behaviors to their leaders (Dvir & Shamir, 2003). These results lead to a new model with a causal chain extending from follower feelings of support, to their perceptions of transformational leadership, to psychological capital and finally to follower job performance. In light of the emerging followership models, this slightly ordered model should be tested longitudinally in the future.

This study extends COR theory by showing how service employees can gain individual resources at work. The results support the idea of a “chainlike” resource caravan; the transformational leadership style of managers is shown here as a “key” resource for followers, and one that also facilitates followers making use of their own resources at work (Halbesleben et al., 2014, p. 1338). The tested model shows that the transformational leadership style can raise follower psychological capital. This particular chain reaction is shown to lead to high job performance. The results suggest a reciprocal exchange between leaders and followers, because follower-felt support showed to affect transformational leadership. By viewing transformational leadership style as a *social* resource that generates positive *personal* and *performance* ripple-effects, our results link COR theory to transformational leadership theory. Thanks to transformational leadership, “standards and cultural norms are internalized into the self-concept

in the form of evaluative standards” (Shamir et al., 1993, p. 580) which in turn affect one’s level of PsyCap. Thus, following this theory, transformational leaders have a clear impact on follower work outcomes because their behaviours stimulate follower self-efficacy, optimism, hope and resilience.

Our findings answer the call for longitudinal studies of psychological capital with a longer time period than a few months. A prior study by Peterson et al. (2011) had a time interval of three months. They found psychological capital and job performance reciprocally related. We showed that with the longer time interval, of one year, PsyCap has an effect on follower job performance, but our cross-lagged analyses did not show any significant reverse effects. Cross-lagged analysis did not support the effect of psychological capital on work engagement. However, this effect may take more time than the one-year time lag of this study. The limited time lag may also explain why transformational leadership did not affect follower-felt support. We become conscious of our own work norms and accompanying feelings, only after they have been regularly repeatedly expressed by ourselves and by our immediate colleagues (Jung et al., 2003). Hence, when a new leader is appointed or after a current adopts the transformational leadership style, it may take some time before a follower is aware of a significantly higher level of felt support for excellence.

### **Strengths and Limitations of this Study**

The current study has several methodological strengths that increase the confidence in the results: 1) the longitudinal research design makes cautious conclusions on causal relationships possible and helps to curb biases typically associated with self-report type of data in a cross-sectional design (Griffin et al., 2010); 2) the respondents work in a variety of work settings; 3) the response rate in the main sample at T1 is nearly 100 percent and there is thus no self-selection bias involved at T1.

This study has also several limitations. First, all data were collected with one questionnaire, filled out by follower type of respondents only. Similar future research should rely on multiple sources of data. Secondly, our study investigates the changes after one year. How the mechanisms work over a longer period of time is of interest in future research using latent growth analysis. Selig and Preacher (2009), for example, advised to test longitudinal mediation in a study with at least three data waves and to measure the independent variable, the mediator and the dependent variable at three consecutive points in time. Thirdly, the study’s work settings are not under the control of the researchers, which makes firm conclusions about causality between the variables impossible. For example, our findings may apply only to health-care settings with a highly educated labor force. Also, the students in the sample may have raised their performance and psychological capital due to the graduate training program in



which they were enlisted. To control for unknown organizational factors, we need to examine this paper's mediation model among nurses in a single organization, such as a hospital (Oh, 2014).

Fourth, these Indonesian findings may not be generalizable to Western settings. People in South-East Asian cultures, including people in Indonesia, place comparatively higher importance on the value of attending to others, fitting-in, and harmonious interactions (Oh, Guay, Kim, Harold, Lee, Heo, & Shin, 2014; Selmer & Leon, 2003). Accordingly, Indonesians often show strong connectedness with group members at school and at work. Therefore, replications with non-Asian samples are called for.

COR theorizing must be furthered now with intervention types of field research, coupled with multi-source data, examining how leaders' transformational style and/or psychological capital is trainable so that it may boost follower job performance and work engagement. How transformational leaders and their followers behave more precisely is still unknown. Micro-behavioural study of those behaviours must complement survey assessments (Halbesleben & Wheeler, 2015).

### **Practical Implications and Future Research**

We find that transformational team leaders boost service employees' PsyCap and also enhance both job performance. Hence, HRM efforts must use this leadership style as a requirement in recruiting and promoting service team leaders. In addition, their followers' performance is enhanced when they have a high level of psychological capital. Also, we establish that changes in the examined variables (transformational leader behaviour, follower-felt support for excellence, psychological capital and job performance/work engagement) form a "psychological chain" or caravan for operational service providers. Service workers, clients and their organisations are likely thus to benefit if their leaders are trained to increase all the elements of this chain by through adopting a transformational style.

Related concepts, e.g. from goal-setting theory, might be incorporated as well, in order to reveal for instance whether (work-floor teams of) employees with a relatively high level of PsyCap might have higher levels of job-goal specificity, which then may affect their (team) performance and engagement (see, e.g., Luthans, Avey, Avolio, Norman, & Combs, 2006a; Newman, Ucbasaran, Zhu, & Hirst, 2014).

According to COR theory, personal and job resources thrive in so-called caravans, i.e., the presence of one resource may generate additional resources in the future (e.g., Halbesleben & Wheeler, 2015). Given the "contagious" nature

of positive personal resources (Fredrickson, 2001; Luthans, Avey, Avolio, Norman, & Combs, 2006b), it is also likely that elevating one dimension of psychological capital may elevate another, creating a ripple effect, whereby followers will then perform at a higher level. Moreover, prior research on resource loss (Demerouti, Bakker, & Bulters, 2004; Orqvist & Wincent, 2010) and gain spirals (Hakanen, Perhoniemi, & Toppinen-Tanner, 2008; Weigl, Hornung, Parker, Petru, Glaser, & Angerer, 2009) enable reciprocal causality assumptions. Thus, future longitudinal studies should look at how reciprocal causality between performance/engagement and psychological capital (and including their antecedents) might occur during a longer period of time in various work contexts.

In answering one of COR theory's leading questions—'How do individuals utilize resources available to them?'—we establish that psychological capital and transformational leadership can be added to Halbesleben et al.'s (2014) seven other "key" personal resources. Future longitudinal research on the links and overlap among those "key" variables in various types of jobs or work contexts is highly recommended. What is especially intriguing about COR-based research is that it allows integration of different theoretical perspectives. In the fairly fragmented, broad landscape of Organizational Psychology we need more work with this potentially unifying framework.

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# CHAPTER 3.

TRANSFORMATIONAL  
LEADERSHIP, TEAM  
PSYCHOLOGICAL CAPITAL,  
TEAM GOAL CLARITY AND  
TEAM PERFORMANCE

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## **Collective Psychological Capital as a Neutralizer in the Relationships between Transformational Leadership, Team Goal Clarity and Team Performance**

### **Abstract**

This team-level study investigated how team psychological capital (PsyCap) and transformational team leadership are related to team goal clarity and performance. We surveyed 427 nurses from 76 teams in two Indonesian hospitals to assess transformational leadership, PsyCap and team goal clarity. All of their direct leaders rated these teams' performance. As hypothesized, team PsyCap was directly related to team performance. Moreover, the results supported the hypothesized model in which team goal clarity mediates the relationship between transformational leadership and team performance while team PsyCap moderates the relationship between transformational leadership and team goal clarity. When collective PsyCap is low, transformational leadership is related to team goal clarity and this clarity is a mediator. When team PsyCap is high, these variables are unrelated. These results show that team PsyCap is a neutralizer between transformational team leadership and goal clarity: they suggest that teams with low levels of team PsyCap need a transformational leader, to set clear goals and thereby perform well, while teams with a high level of team PsyCap do not need such a leader. In the Discussion, we relate the findings to the importance of team PsyCap is of importance to highly performing (self-managed) teams.

**Keywords: Collective/Team Psychological Capital, Transformational Leadership, Team Goal Clarity, Team Performance, Moderated Mediation Model**

### **Introduction**

Many behavioral researchers have become intrigued by psychological capital (PsyCap), especially after PsyCap was found to be related to job performance (Avey, Reichard, Luthans, & Mhatre, 2011; Gooty, Gavin, Johnson, Frazier, & Snow, 2009; Luthans, Avolio, Walumbwa, & Li, 2005; Peterson, Luthans, Avolio, Walumbwa, & Zhang, 2011). PsyCap is defined as a "positive psychological state of development characterized by: having confidence (efficacy) to take on and put in the necessary effort to succeed in challenging tasks; making a positive attribution (optimism) about succeeding now and in the future; persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and when beset by problems and

adversity, sustaining and bouncing back and even beyond (resilience) to attain success” (Luthans, Youssef, & Avolio, 2007b, p. 3).

Albeit PsyCap is a predictor of *individual* job performance, a few empirical studies have linked *team* performance directly to *collective or team* psychological capital (e.g., Rego et al., 2017). As team motivation is more complex than the motivation of an individual employee (e.g., Bandura, 1997), the predictors of highly performing *individuals with a high* level of PsyCap may not be identical to the predictors of highly performing *teams* with a high level of PsyCap. Even though transformational leadership has been shown to predict *individual* PsyCap (Gooty et al., 2009), we will show that this style has a more complex relationship with *collective* PsyCap and high team performance.

According to the goal-setting theory, team members’ perception about the clarity of their team’s goals is related to team performance and how they may play a role in the link between transformational leadership and team-level PsyCap (Dawkins, Martin, Scott, & Sanderson, 2015). Newman Ucbasaran, Zhue and Hirst (2014, p. 131) called for this research at the individual level: “We call for researchers to investigate whether individuals high in psychological capital set higher goals for themselves and strive harder to achieve those goals, therefore performing at higher levels than those low in psychological capital”. We will empirically examine this PsyCap-Goal-Performance linkage at the team level of organizing, and add transformational leadership as a predictor of goal clarity (Newman et al., 2014).

Since the positive impact of team PsyCap on a number of valuable outcomes (Dawkins et al., 2015; Mathe-Soulek, Scott-Halsell, Kim, & Krawczyk, 2014; West, Patema, & Caesten, 2009), positive collective PsyCap represent an important team resource in the work team. In team work settings, transformational leadership (Bass, 1985) may strengthen team by helping their team to clearly specify shared goals and consequently improve their performance (Shamir, House, & Arthur, 1993). In terms of Kerr and Jermier's (1978) substitute for leadership theory, high team PsyCap is considered here to be a neutralizing type of moderator variable: one that acts as a “suppressor” or counteracts “the effectiveness of something else” (Kerr and Jermier, 1978, p. 395). Team PsyCap will be hypothesized and shown “to reduce the impact of leader behavior upon subordinate attitudes and performance” (Kerr and Jermier, 1978, p. 395). When team PsyCap is low, a boost in motivation through transformational leadership and team goal clarity is assumed to lead to high team performance. In contrast, when team PsyCap is already high there is not much team performance to gain from such a leader. Thus, high PsyCap teams do not need transformational leadership in order to thrive.

A first contribution of this study then is to examine PsyCap empirically at the team level: We empirically establish a direct relationship between collective PsyCap and team performance. Secondly, we show that collective PsyCap moderates the relationship between transformational team leadership and team goal clarity and can be considered as a neutralizer of transformational leadership. We thereby establish for the first time team PsyCap as a moderator variable. Thirdly, regarding teams scoring low on PsyCap, we show that team goal clarity can act as a mediator in the relation between transformational leadership and team performance. This idea was inspired by prior PsyCap and goal-setting theorizing (Luthans, Avey, Avolio, Norman, & Combs, 2006). Thus, this study aims to extend psychological capital theory, by investigating a model in which PsyCap moderates the relationship between transformational leadership and team goal clarity, which in turn mediates the relationship between transformational leadership and team performance.

## **Theory and Hypotheses**

### ***Team Psychological Capital and Team Performance***

According to (Avey, Luthans, Smith, & Palmer, 2010) individuals with a high level of PsyCap have more psychological resources at hand to pursue their goals. Stajkovic and Luthans (2001) and (Luthans, Avey, Avolio, & Peterson, 2010) showed that individual PsyCap significantly improves short-term goal setting as well as the desire to actively engage in behaviors that promote goal achievement to reach the desired performance levels. Both studies led to the finding that high PsyCap employees can perform better than those with a low level of PsyCap (Luthans, Norman, Avolio, & Avey, 2008; Fred Luthans, Avolio, Avey, & Norman, 2007). A meta-analysis by Avey et al. (2011) demonstrated also *how* PsyCap directs people's attitudes when they strive towards desirable goals. Their findings pertain to individual level employees. At the team level, both similar and more complex effects of team PsyCap are likely to happen in parallel. In the below, we specify and underpin those team PsyCap expectations.

A team's collective PsyCap may affect team performance in a direct way (Luthans Avolio, Avey, & Norman, 2007a; Stajkovic, 2006). Defined as the collectively shared beliefs of a team's psychological state, PsyCap can be characterized by efficacy, optimism, hope and resilience to achieve shared team goals. Bandura (1997) suggested that collective efficacy beliefs act as a group motivation. Due to the fact that team members have to rely to some extent on others to perform their tasks, high collective efficacy groups are known to be resilient when trying to overcome problems during task execution (Bandura, 2000). Groups with a high level of collective efficacy tend to have built a shared mental frame that prompts them to pursue their goals persistently which, in turn,

is likely to enhance team performance; This is because a team's shared mental model will help team coordination and guide members' actions to obtain shared goals (Burke, Stagl, Salas, Pierce, & Kendall, 2006). Such a frame can make them hopeful and optimistic that they will reach their goals (Luthans et al., 2007). Thus, individuals behave in groups as a consequence of social influence mechanisms (Avey et al., 2010).

Social influences occur through social contagion which can be defined as “the process of communicating and exchanging information among members of a collective, resulting in a shared perception regarding some aspect pertinent to the team” (Dawkins, Martin, Scott, & Sanderson, 2015, p. 929). This process will affect how group members interpret the events happening to them which, in turn, may guide their behavior as well as their team's level of performance (Campion, Medsker, & Higgs, 1993). A high level of shared cognition and affection within teams tends to strengthen group identification which, in turn, can impact desirable collective outcomes (e.g., Astakhova and Porter, 2015; Kessler and Hollbach, 2005). Indeed, PsyCap is a *cognitive and affective processing system* (CAPS) involving “dynamic processes that activate the adaptive encoding of cognitive categories, expectancies, goals, values, affects and self-regulatory plans” (Avey et al., 2010, p. 10). Although CAPS was initially defined at the individual level, more studies have shown that CAPS also works at the team level (Erdem & Ozen, 2003; Webber, 2008). CAPS is likely to be activated via interaction in the team, yielding in turn, shared perceptions or norms for team members which act as guides for their behavior. Moreover, team-level capability beliefs can come from individual team members who, through interpersonal interactions, may affect collective or team states (Peterson and Zhang, 2011).

To date, few empirical studies have investigated the association between collective PsyCap and team performance (Peterson & Zhang, 2011). In terms of a direct effect, Rego et al. (2017) reported a direct link that was only marginally significant. They examined this in a sample of eighty two teams, employing the split-sample technique. According to them, members in a state of high team PsyCap use and further develop their skills and competencies optimally. Such a state enables them to set challenging team goals and persevere in obtaining them while, at the same time, being cooperative or helpful in overcoming barriers or embracing new opportunities with collective grit (see also, Duckworth, Peterson, Matthews, & Kelly, 2007). Mathe-Souleik et al. (2014) showed an indirect effect between team PsyCap as a group “asset” and team performance. West, Patema, and Caesten, (2009) earlier research found team positivity (e.g., efficacy, optimism and resilience) beneficial for desirable outcomes (i.e., team satisfaction, team cohesion, cooperation and coordination). Similarly, Schaubroeck, Lam, and Cha, (2007) found a high degree of team collectivity is necessary for team performance. Peterson and Zhang, (2011) showed that teams

with a high level of collective PsyCap reflect enhanced business unit performance. We therefore formulated the following hypothesis:

Hypothesis 1: Team PsyCap is positively related to team performance.

### **Team PsyCap is a Moderator of the Relationship between Transformational Team Leadership and Team Goal Clarity**

Transformational leadership is also known to induce PsyCap (Gooty et al., 2009). This effect might be different at the team level, i.e., high team PsyCap may emerge without any interference from a leader. Therefore, a team's interaction and coordination does not always depend on "how well it is led" (Bandura, 1997, p. 478). Hence, a high level of team PsyCap may compensate for a leader's influence on a team. Team PsyCap may be an independent resource for performance and might even diminish the need for team leadership (Breevaart, Bakker, Demerouti, & Derks, 2015; Li, Chiaburu, Kirkman, & Xie, 2013). High team PsyCap may thus operate as a *neutralizer* for this leadership style. Such neutralizers are "characteristics which make it effectively impossible for relationship- and/or task-oriented leadership to make a difference" (Kerr and Jermier, 1978, p. 395). A neutralizing variable creates in effect an influence vacuum, thereby lessening a leader's influence on team members' attitudes and behaviors (Dionne, Yammarino, Atwater, & James, 2002; Kerr & Jermier, 1978). The leader's behavior may become particularly less relevant if the collective PsyCap is high enough so that it is directly associated with team performance. Thus, collective PsyCap can function as a team asset that is reflected in members' motivational levels, which is likely to be linked to team performance, making leadership less influential. Similarly, we suppose that team PsyCap will neutralize the positive relationship between transformational leadership behavior and goal-setting (Newman et al., 2014).

This neutralization effect may be the reason why some leaderless or semi-autonomous groups in organizations perform at a high level (Tosi & Banning, 1998). Prior leadership approaches proposed that some team conditions may indeed moderate the effect of leadership on desirable work outcomes (Dionne et al., 2002; Keller, 2006; Kerr & Jermier, 1978; Podsakoff, Mackenzie, & Bommer, 1997). When followers work under particularly high levels of team interdependence and cohesiveness, leadership becomes redundant (Li et al., 2013). In such formal groups, leadership has no added value, not only because of the shared commitment to a mental model that evolved within the group but also because of the so-called transformational qualities of the team members themselves (Bass and Riggio, 2006).

In the present study, we suggest that collective PsyCap acts as a vital team resource. People with a high level of PsyCap are already goal-directed and

they usually persevere if obstacles come their way. Peterson and Zhang (2011, p 143) suggest that a ‘team’s shared belief in its collective ability to perform certain tasks (task-specific efficacy), its expectations regarding the likelihood of positive outcome (optimism), its focus on jointly setting goals, pursuing goals and overcoming obstacles to goal attainment (hope), and its ability to bounce back from setbacks, conflict, or failure (resilience) will propel the team to more actively engage in their work and proactively interact with each other toward the successful completion of team goals’. According to the shared mental model perspective, a team may assign the leadership role adaptively and transfer it to one or more team members thereby allowing the team to capitalize its own potential (Burke et al., 2006). Moreover, a shared mental model contains information and resources which enable the optimizing of goal accomplishment (Burke et al., 2006; Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000).

Where there is a low level of team PsyCap, transformational leaders have an effect on team goal clarity for the following reasons. First, team leaders with such a style articulate a clear vision and set clear goals (Podsakoff, MacKenzie, Moorman, & Fetter, 1990) while fostering the team’s acceptance of these goals (Podsakoff et al., 1990). Secondly, he or she does that by matching the self-interests of the members to those of the team’s shared goals (e.g., Bono & Judge, 2003; Podsakoff et al., 1990). Thirdly, transformational leaders are able to support the fact that followers “understand the ends to which they are working: the leader formulates clear goals and facilitates the achievement of these” (Nielsen, Randall, Yarker, & Brenner, 2008, p. 18) so that any ambiguity in members’ sense of team goals is ameliorated (Nemanich & Keller, 2007). Williams, Parker, and Turner (2010) found that transformational leadership encourages team self-management through a positive group atmosphere and thereby promotes greater collective self-management. Hence, we hypothesize that the relationship between transformational leadership and team goal clarity is moderated by collective PsyCap.

Hypothesis 2: Team PsyCap moderates the relationship between transformational team leadership and team goal clarity.

### **Team Goal Clarity as a Mediator Between Transformational Team Leadership and Team Performance**

Many studies have confirmed the link between team performance and transformational leadership, including two meta-analyses: one by Wang, Oh, Courtright, and Colbert (2011) and the other by Judge and Piccolo (2004). Also, recent studies have shown that transformational leadership is positively linked to team performance. Braun, Peus, Weisweiler, and Frey, (2013), for example, investigated 39 academic teams with 360 employees, and Wang and Howell

(2012) conducted a survey among 60 leaders and 200 team members in a large, multi-industry Canadian company. Both studies found that transformational leadership style was significantly related to team performance. As to how transformational team leadership helps in clarifying goals to ensure team performance, has not been extensively investigated yet. We will examine whether team goal clarity mediates this linkage.

Goal clarity has been widely examined at the individual level (Sonnentag & Volmer, 2010). However, based on the goal-setting theory, we propose here that goal clarity is useful in explaining transformational leadership's effect on team performance (Sawyer, 1992). When all members within a team know clearly what they have to do, they interact and communicate more effectively which, in turn, enhances team performance. In other words, team goal clarity offers useful cues for all team members which, in turn, promotes high team performance (Hu & Liden, 2011). Thus, team performance should be high when team members have a mutual understanding about the team goals. A meta-analysis has already shown that when the level of team goal ambiguity is high, it will lead to poor team performance (Tubre & Collins, 2000).

As argued before, transformational leaders set clear team goals. When transformational leaders articulate shared team goals, they are also convinced that the team will actually achieve these goals while encouraging them to work well together to achieve them (Wang & Howell, 2012). At the individual level, transformational leadership is known to be associated with employee goal clarity (Moynihan, Pandey, & Wright, 2012). At the organizational level, Wright, Moynihan, and Pandey (2018) showed that transformational leadership is positively related to organizational goal clarity. But, to the best of our knowledge, there is no evidence for a significant relationship between transformational leadership and team goal clarity. In order to achieve the desired outcomes, team leaders should help team members by clarifying team goals (Peralta, Lopes, Gilson, Lourenço, & Pais, 2015). Hence, we propose that the relationship between transformational leadership and team performance is mediated by team goal clarity.

Hypothesis 3: Team goal clarity mediates the relationship between transformational team leadership and team performance.

While team goal clarity is supposed to mediate the relationship between transformational leadership and team performance, collective PsyCap moderates the relationship between transformational leadership and team goal clarity. The proposed moderated mediation model is presented in Figure 1 and will also be tested as a whole.

## Methods

### Sample and Procedures

The survey data for this study were gathered from 76 nurse teams, including their immediate supervisors, working in various units in two public hospitals in Surakarta (Indonesia), a city with approximately 500,000 inhabitants. Initially, the researcher's team, along with the human resource office staff of each hospital, had a meeting with each head of the nursing units: to get access and permission to administer the survey on site. After obtaining the approvals and the lists of names of the team members, we handed out the surveys to both the work-floor nurses and their immediate supervisors. The original English-language questionnaire was translated into Bahasa Indonesia, using the back-translation method. The surveys were distributed along with a sealable envelope; we ensured confidentiality of the data (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Each responding nurse or supervisor had to return her or his questionnaire to the hospital's human resource office. Upon handing in their envelopes, each respondent was presented with a small token of appreciation.

The response rates were high. Of the 100 team leaders, 76 returned their survey and of their 481 members, 427 complied. The mean age of the nurses in the sample was 34 years ( $SD = 8.58$ ); their mean tenure in their current jobs was 6.5 years ( $SD = 6.84$ ); in terms of their gender, 60% were women. The mean age of their supervisors was 43 years ( $SD = 5.50$ ); 40% of these leaders consisted of women while the mean tenure in their current jobs was 4 years and 7 months ( $SD = 4.93$ ).

### Measures

*Transformational leadership style.* We measured transformational leadership with a scale consisting of seven items (Carless, Wearing, & Mann, 2000). This measure has been shown to have strong test-retest reliability as well as construct and discriminant validity. We asked the nurses to assess their immediate supervisors in terms of this style. An example of an item of this scale is "communicates a clear and positive vision of the future". The responses to the items were given on a seven-point Likert answering scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach's alpha was .95

*Collective PsyCap.* We measured collective PsyCap with a short version of the scale used by (Walumbwa, Hartnell, & Oke, 2010) which was originally developed by Luthans et al. (2007a). It consists of eight items and four dimensions: efficacy, optimism, hope, and resilience. These items are focused on individual behaviors. However, we used the Dawkins et al. (2015, p. 931) definition of collective psychological capital: "agreement among team members



in regard to the team's shared (team referent) of psychological capital." This so-called referent shift consensus model (see, also, Dawkins et al., 2015) is much more appropriate for a team-level study. The followers were asked to what extent they agreed with each statement (e.g., "Members of this unit are optimistic about what will happen to them in the future as it pertains to work"). The seven-point Likert scales ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach's alpha was .91

*Team goal clarity.* We measured team goal clarity with a four-item scale (Lee, Bobko, Earley, & Locke, 1991). We asked the nurses to assess the clarity of their team's goals. A sample item is "In this team, all of the team members understand what they are actually supposed to do in their jobs". The Cronbach's alpha was .90

*Team performance.* We assessed team performance by using the well-established Williams and Anderson (1991) instrument consisting of five items. We asked the supervisors to assess their team. A sample item is "My team completes assigned duties adequately". The responses were based on a seven-point Likert answering scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach's alpha was .93

## **Analytic procedures**

We conducted an exploratory factor analysis with principal components and a so-called varimax rotation. This showed that all the items loaded higher than .50 on the intended four factors at the team level. Before testing the hypotheses with structural equation modelling, the scores of transformational leadership, collective PsyCap and team goal clarity were aggregated to this work-unit level. To justify the aggregation, we calculated interclass correlation coefficients (ICC1 and ICC2) and *rwg*. The ICC1 should be at least .08 to permit aggregation (LeBreton and Senter, 2008). The ICC1 values in this study were .13 for transformational leadership, .10 for collective PsyCap and .10 for team goal clarity. ICC2 is the reliability of the group mean that is generated when individual scores are aggregated. Aggregation is allowed when the ICC2 values are higher than .60 (Ostroff and Schmitt, 1993). In this study the ICC2s of transformational leadership, collective PsyCap and team goal clarity were .45, .38, and .38, respectively. Therefore, even though the ICC1s were high enough, the ICC2s of all the values were lower than the criterion. However, because the *rwg* of the three core independent variables was high, namely transformational leadership .92, collective PsyCap .95, and team goal clarity .90, the aggregation of these scores was still acceptable (Chen and Bliese, 2002).

In order to control for self-perception bias (Rego et al., 2017; Wilderom et al., 2012), the members of each of the entire set of 76 teams

were split into three equal subsample groups (the so-called random split-data method). Then, in order to test the hypotheses, transformational leadership was represented by the responses from the first group; collective PsyCap was reflected by the survey measured with data from the second group; team goal clarity was derived from the third group only while team performance was assessed from the leaders' ratings.

The hypotheses were tested with regression analyses using team size as a control variable. The results are presented in Table 2. To test the moderated mediation model, we followed the procedure illustrated by Morgan-Lopez and MacKinnon (2006): A moderated mediation model is enacted when the interaction between two variables is related to the mediator, which in turn, is related to the dependent variable. In the first step, we tested the direct link between transformational leadership and team goal clarity and in the second step, we entered collective PsyCap and the interaction term into the model to test if collective PsyCap moderated the relationship between transformational leadership and team goal clarity. Lastly, we entered these variables into the regression to predict team performance. To test the model as a whole, we employed structural equation modeling with AMOS 23, as demonstrated by Preacher et al. (2007).

**Table 3.1 Variable means, Standard deviations, Bivariate Correlations and Cronbach's alphas**

Variables	<i>M</i>	<i>Sd</i>	1	2	3	4
1 Transformational Leadership	5.57	0.87	<b>.95<sup>a</sup></b>			
2 Team Psychological Capital	5.32	0.64	.12	<b>.91</b>		
3 Team Goal Clarity	5.67	0.81	.24*	.00	<b>.90</b>	
4 Team Performance <sup>b</sup>	5.80	0.81	-.02	.31**	.30**	<b>.93</b>

<sup>a</sup>Cronbach's alphas are reported in bold: on the diagonal.

<sup>b</sup>Rated by the team leaders.

\* $p < .05$ , \*\* $p < .01$ .

## Results

Table 1 presents the means, standard deviations, correlations and Cronbach's alpha reliabilities of the scales in the surveys. The internal consistencies of the scales were high, ranging from .90 to .95. The correlation between transformational leadership and team goal clarity was significant ( $r = .24, p < .05$ ). The correlation between transformational leadership and team performance (as rated by the team leaders) was not significant ( $r = -.02$ ). Also, the correlation between transformational leadership and collective PsyCap was not significant ( $r = .12$ ). Collective PsyCap was not significantly related to team goal clarity ( $r = .00$ ) but was significantly related to team performance (rated by the team leaders) ( $r = .31, p < .01$ ). Finally, team goal clarity was significantly related to team performance ( $r = .30, p < .01$ ).

### Testing the Hypotheses

Hypothesis 1 stated that collective PsyCap is positively related to team performance. The results in Table 2 show that this relationship was positive and significant when controlling for transformational leadership, team goal clarity and team size ( $\beta = .33, p < .01$ ). Therefore, hypothesis 1 was supported.

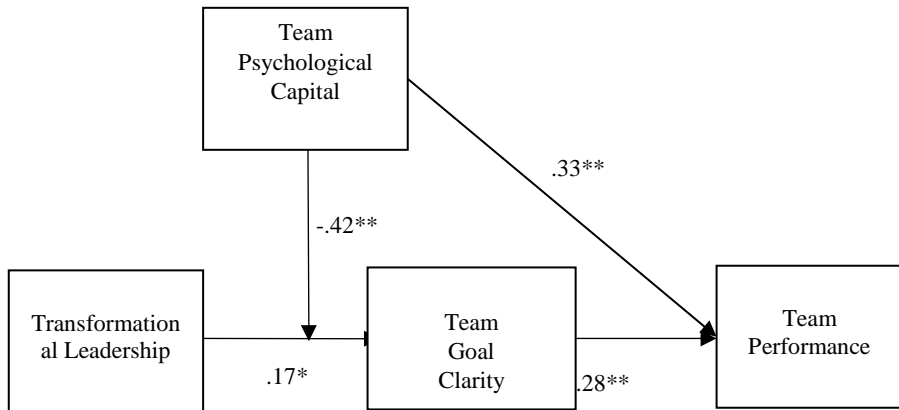
Hypothesis 2 stated that collective PsyCap moderates the relationship between transformational leadership and team goal clarity. The interaction between collective PsyCap and transformational leadership, which was entered into the second step to predict team goal clarity, was negative and significant ( $\beta = -.42, p < .01$ ). This result showed that hypothesis 2 was supported. To get more insight into this moderation we plotted the regression lines for high and low collective PsyCap (one standard deviation above and below the mean) in Figure 2. The figure shows that when collective PsyCap is low, this relationship is strong, and when collective PsyCap is high, the relationship is weak and nearly absent. This indicates a neutralizing effect of collective PsyCap on the relationship between transformational leadership and team goal clarity.

Hypothesis 3, which predicted team goal clarity mediates the relationship between transformational leadership and team performance, was also supported. The results of step 1 in predicting team goal clarity showed that transformational leadership was positively and significantly related to team goal clarity ( $\beta = .25, p < .05$ ) and team goal clarity was positively and significantly related to team performance ( $\beta = .32, p < .01$ ).

In the final step, we tested the whole moderated mediation model. The results indicated that this model fitted the data and met the fit criteria ( $\chi^2 = .013, p < .81, df = 1, CFI = 1.0, RMSEA = .00, SRMR = .00$  (Hu & Bentler, 1999)). Thus, the moderated mediation model was supported: The relationship between

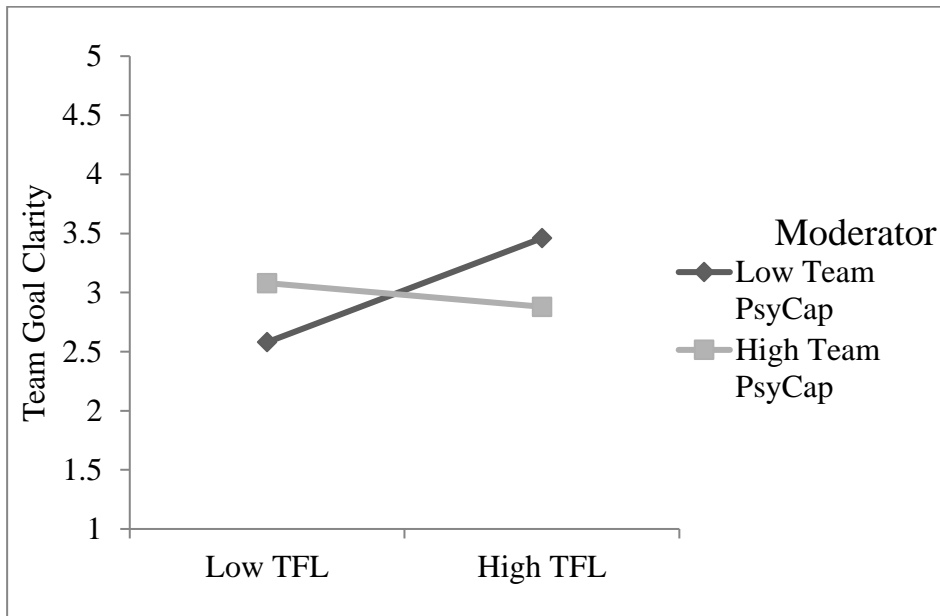
transformational leadership and team performance was (negatively) moderated by collective PsyCap and was mediated by team goal clarity (see, Figure 1). In addition, collective PsyCap was related to team performance.

**Figure 3. 1 The Standardized Path Coefficients of the Hypothesized and Significant Linkages among this Study’s Key Variables**



$*p < 0.1$   $**p < 0.01$

**Figure 3. 2 Interaction Effect between Transformational Leadership (TFL) and Team Psychological Capital (PsyCap)**



**Table 3. 2 Results of Regression Analyses on Team Goal Clarity And Team Performance**

	Team Goal Clarity		Team Performance
	1	2	
<i>Control Variable</i>			
Team Size	.03	.00	-.04
<i>Independent Variables</i>			
Transformational Leadership (TFL)	.25*	.17	-.14
Team PsyCap (TPC)	-.03	-.02	.33**
Team Goal Clarity			.32**
<i>Interaction</i>			
TFL X TPC		-.42**	
R <sup>2</sup>	.06	.23**	.20**
ΔR <sup>2</sup>		.17**	

\* $P < .05$ , \*\* $P < .01$ .

## Discussion

A direct association between collective PsyCap and team performance (H1) is unveiled as is the empirical evidence for PsyCap as a negative moderator (H2). Additionally, team goal clarity mediates the relationship between transformational leadership and team performance (H3) and, collective PsyCap negatively moderates the link between team transformational leadership and goal clarity. This means that PsyCap is not a substitute for the transformational leadership style; collective PsyCap neutralizes this style. Hence, the tested model demonstrates the different roles of transformational leadership and collective PsyCap vis-à-vis team goal clarity and team performance. These findings point to the potentially performative impact of high collective PsyCap within teams which is in line with the West et al. (2009) study. Teams with high levels of PsyCap adapt easily in terms of their shared mental models (Burke et al., 2006); those team states make up for the lack of transformational leaders. Only teams with a low level of collective PsyCap will make good use of the transformational leadership style of a leader; he or she will ensure clear team goals and this, in turn is likely to contribute to high team performance. In other words, high team PsyCap can neutralize transformational team leadership or compensate for the absence of a team leader with such a style.

By adding team PsyCap to the list of already known ‘neutralizers’ of leadership, the results of our study extend the Kerr and Jermier (1978) substitute for the leadership theory. A high level of collective PsyCap within a team makes it difficult for a formal leader to make a difference (Kerr & Jermier, 1978). The findings are also in line with Dionne et al. (2002) who suggested that the joint effects of such neutralizers and leader behavior will enhance team effectiveness. They found professionalism acts as a neutralizer of LMX vis-à-vis outcome. LMX is more important when professionalism is high. Our results show that high PsyCap neutralizes the function of a leader, i.e., team members do not need a leader when they have high ability, experience and knowledge; professional orientation; need for independence; unambiguous and routine tasks; and intrinsically satisfying and explicit goals (Kerr & Jermier, 1978).

Those characteristics are in line with our study’s context: nursing teams in the professional healthcare sector. A high level of skills and experience are required from a nurse to perform the job well. Moreover, effective nurses have to be professionally oriented and intrinsically motivated (Gagne & Deci, 2005). Hence, when a nursing team has a high level of collective PsyCap, it is more likely that it does not need a leader with a transformational style, in part because the members tend to know quite clearly what they have to do. This may explain the lack of a direct significant relationship between transformational leadership and team performance in the present study, despite meta-analytical support for this link (Lowe, Kroeck, & Sivasubramaniam, 1996).

This implies that highly performing nursing teams might feel they are better off when they are working in self-organized units or leaderless teams (Weisman, Gordon, Cassard, Bergner, & Wong, 1993). The added advantage of having managers in nursing teams with a high level of PsyCap can thus be contested. Also, we now understand better why teams with a high level of collective PsyCap, which are supervised in a traditional way, do not respond well to such supervision. Due to their high level of team efficacy, resilience, optimism and hope, they can perform their own job activities independently and function to a large extent as a self-managed work team.

In effect, the study supports the idea that the joint affective and cognitive elements in collective PsyCap attenuate the relationship between transformational leadership and team performance. According to the social cognitive perspective, team members do not only interact and communicate with each other but also learn, permeate, and emulate how their team should behave. The results suggest that when a team has developed a high degree of cognitive and affective elements that are highly goal-directed, the effects of a transformational leader will be neutralized by these internal forces. In other words, a team that is high in collective psychological capital should be more goal-directed, motivated and effective in obtaining success (Peterson & Zhang, 2011).

### **Practical Implications**

In our effort to understand how collective PsyCap may relate to team performance, we show that the team transformational leadership and goal clarity variables are of practical use. We find that teams with a high level of collective PsyCap neutralize the influence of a transformational leader because they already have very clear goals for themselves that help them to reach states of high team performance. Organizational teams with a relatively low level of PsyCap are shown here to benefit from a transformational team leader who will then enhance the team's level of goal clarity which in turn will help them to perform well.

Moreover, just like individual PsyCap, team PsyCap is potentially trainable (Dawkins et al., 2015; Luthans et al., 2006). Organizations are advised to start blending collective PsyCap into their team training or building efforts. The collective PsyCap construct should also be integrated into managerial type training programs. This would clearly be to the advantage of organizations, teams and effective leaders alike. Whenever a team reaches a high level of collective PsyCap, its team leader can step back and delegate more or encourage members to engage in different tasks. The team leaders of high-performing, knowledge-intensive teams are not merely managers; they also tend to be involved as super specialists (Day, Gronn, & Salas, 2006). We speculate that the

here established team PsyCap effect on high team performance may explain, in part, how this is possible. Collective PsyCap, as a kind of substitute for transformational team leadership, is also opening up avenues for coaching teams into becoming highly performing self-managing teams. In particular, health care teams may be most effective when leadership is shared among members (Salas, Zajac, & Marlow, 2018).

### **Strengths, Limitations and Future Research**

In terms of the strengths and limitation of the present survey study, our curbing of common-method bias, through making use of different data sources and the random split procedure, is a strong feature of its research design. Secondly, including two hospitals in this study means that the team findings may not be due to one particular organizational culture; one is a regional public hospital, the other is an orthopedic public hospital. Yet, national culture may have played a role here. Hence, future research must try to replicate the reported findings in or across different nations, ideally with longitudinal measures.

We need more empirical evidence of predictors of high collective PsyCap or how it emerges, and especially how leaders and/or others, perhaps jointly, build up such a collective resource at work. This can be done, ideally, by means of cross-level types of research designs, including links between individual and collective PsyCap and transformational leadership and other effective leadership behaviors (of e.g., authentic leadership, servant leadership). Such examinations should not only shed light on the predictors of collective PsyCap but also on its direct and indirect effects on various team and individual outcomes.

We linked a relatively new variable, collective or team PsyCap, with a set of three older variables. The study adds to the existing knowledge by showing that collective PsyCap is directly related to team performance and, that PsyCap is also found to neutralize the relationship between transformational team leadership style and team goal clarity. These results may even offer an explanation for the reason why some studies, including the present study, did not find a direct association between this leadership style and team performance.

Intervention-type studies are required that show how organizations can build collective PsyCap, over time, and what else they must do to sustain a state of high team performance. An interesting related research question is: how should team leaders and coaches handle the possible ebb and flow of collective PsyCap so that its potential can also lead to continuous improvement within teams? Future research should not only focus on how the transformational leadership style can affect team performance, but also on how collective PsyCap may function as a thriving force within self-managed teams. Given that both



collective PsyCap and transformational leadership style have been shown to make a difference in terms of team goal clarity and team performance (Dawkins et al., 2015; Newman et al., 2014), multi-level research on the effects of pairing both collective and individual PsyCap to transformational leadership and performance over time is needed as well. Given the widespread criticism of the superfluous hierarchical management layers, it is important to know when managers are needed and when they are not. More precise determination of the conditions under which teams and their members thrive should be the focus of future research. Examining the exact conditions under which leaderless teams and their members flourish (i.e., reach a state of high PsyCap), while saving or enriching other people's lives, is of course of great human and managerial interest.

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# **CHAPTER 4.**

**FOLLOWER/LEADER USE OF  
EMOTIONS, PSYCHOLOGICAL  
NEED SATISFACTION AND  
PERFORMANCE**

**This chapter has been submitted to the ILA 20th Global Conference in West Palm Beach, Florida, United States (2018).**

## **Abstract**

Drawing on the self-determination theory as well as broaden-and-build and EI theorizing, we assessed leader and followers' use of own emotions in combination with follower psychological need satisfaction and job performance. Part-time working health-care students enrolled in an MSc program at an Indonesian university were surveyed (N = 220). Through structural equation modelling (Amos), the hypothesized mediation model was tested. Both leader and follower use of emotion were indirectly related to follower job performance, via the mediation of follower psychological need satisfaction. In addition, follower use of emotion appeared to be directly related to follower performance. These findings suggest that followers' skilled use of their own emotions is more important for their own performance than their leader's skilled use of own emotions. Yet, in order to reach positive follower job outcomes, both leaders *and* followers may need to become well skilled in using their emotions in goal directed ways. The theoretical implications of the findings are sketched in the Discussion section. It includes practical implications for training and developing leaders *and* followers: *in order to improve their own and the organization's health and well-being*. The strengths and limitations of this study's research design are delineated as are future-research questions.

**Keywords:** Use of own emotions of leaders *and* followers, Follower psychological need satisfaction, Follower job performance

## Introduction

In the last two decades, emotions in organization have gained a lot of attention (e.g., Ashkanasy, Humphrey, & Huy, 2017; Ashkanasy & Humphrey, 2011). There is increasing evidence on how affects and emotions determine the process of leading as well as leader and follower outcomes (Gooty, Connelly, Griffith, & Gupta, 2010). Leaders who are able to use their emotions well to influence followers' feeling, behaving and thinking are seen as more effective (Venus, Stam, & van Knippenberg, 2013), and there is evidence of leaders' emotional intelligence in objective unit performance (e.g., Wilderom, Hur, Wiersma, van den Berg, & Lee, 2015). Given the increasing number of studies, debates and reviews on emotions-at-work (e.g., Antonakis, Ashkanasy, & Dasborough, 2009; Ashkanasy et al., 2017; Ashkanasy & Humphrey, 2011; Gooty et al., 2010; van Knippenberg, van Knippenberg, van Kleef, & Damen, 2008), the study of leadership and emotions have almost become a saturated topic area. Many empirical studies have illuminated questions like how leadership style affects follower emotion and performance (McCull-Kennedy & Anderson, 2002); the impact of the contagion process between leaders and followers (Sy & Choi, 2013); the impact of leader emotion on unit performance (Barsade, 2002); and the impact of leader surface and deep acting on follower moods and emotions (Humphrey, Pollack, & Hawver, 2008). Yet, the emotion-at-work literature has mainly been concerned with *leaders'* abilities to display and process emotions and the effects on their followers (Little, Gooty, & Williams, 2016).

Obviously, leader's emotions cannot be the central, sole factor in followers' performance, nor in achieving organizational, unit or job-type goals. Followers' behaviors may play an even more important role (McCull-Kennedy & Anderson, 2002). Followers' perceptions of their own emotions and the emotional support they receive from their leader are likely to influence followers' job performance. Furthermore, followers' perceptions of their leaders' use of emotions, and followers' own motivation to perform well, are perhaps even more prominent factors. Indeed, Damen, Van Knippenberg, and Van Knippenberg (2008) demonstrated that similarity or the emotion shared between a leader and followers affect follower outcomes. However, the literature is still fairly scant on *how* follower perceptions of leader behavior evoke follower emotions (Gooty et al., 2010) and how these then, combined with how followers utilize their own emotions *in order to reach psychological satisfaction*, may affect follower job performance in turn.

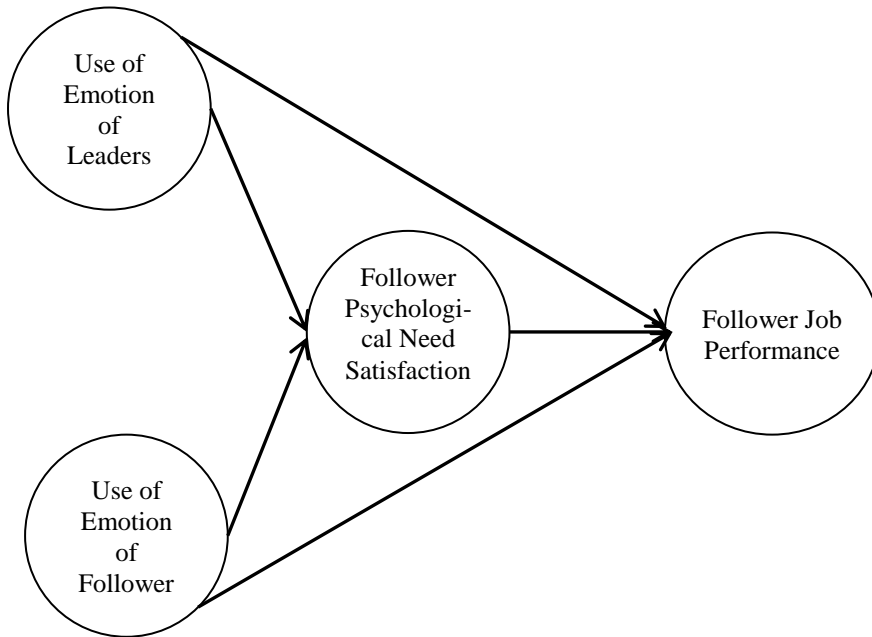
Moreover, despite the vast amount of studies showing that satisfying three basic psychological needs does affect follower job performance (Cerasoli, Nicklin, & Nassreelgrawi, 2016), few studies have shown the underlying emotional mechanisms in this relationship; it was even neglected in the context of the self-determination theory (SDT). One reason for the paucity of studies examining the effects of emotion in this frame might be that emotion is assumed to play a very distal role (Vandercammen, Hofmans, & Theuns, 2014a). Conventionally, emotion is not part of the motivation-generative mechanisms (Vandercammen, Hofmans, & Theuns, 2014b). Consequently, studies using self-determination type concepts have dominantly focused on emotion *as a consequence* of either need satisfaction or motivation (Vandercammen et al., 2014a).

This study's aim is to contribute to the leadership and emotion literature in three ways. We extend the research on emotion-in-leadership by integrating the broaden-and-build theory with the self-determination theory. The self-determination theory illustrates that psychological need satisfaction is a predictor of emotion and motivation. However, little is known about how leader and/or follower use of emotions may induce fulfilment of psychological need satisfaction.

In light of the recently emerging followership literature, the present study meets the lack of studies on *how followers utilize their own emotion to meet their own psychological needs as a condition for high job performance*. Emotion and psychological need satisfaction studies have also been dominantly tested in Western countries. This paper presents an empirical field study carried out in a non-Western country.

Thus, given the job-performance importance of meeting people's three basic psychological needs, we started this study because we were intrigued by the relative added importance of followers' own use of emotions as an antecedent of intrinsic need satisfaction, as illustrated in figure 1. We will show in this paper that satisfaction of follower needs is related not only to the leader's use of emotions but also to their own use of emotions. In addition to most leadership-and-emotion theorizing that assumes a leader's prominence has emotional effects on the followers, we suggest that the followers themselves can affect their own job performance: through similar, good use, of their own emotions, especially in conjunction with meeting their three basic needs (for autonomy, competence and relatedness).

**Figure 4. 1 The Hypothesized Model of this Field Study**



### **Theory and Hypotheses**

Mayer and Salovey (1997) proposed that emotional intelligence comprises the ability to perceive, understand, regulate, and use emotions. The emotional intelligence model of Mayer and Salovey (1997) is based on a functional view of emotion, stressing the delivery of information to guide emotion regulation and behavior. We assume in this research that the ability to use one's emotions provides crucial information for coping with issues in goal-directed situations. There are two main EI models available in the literature: (a) an ability model (b) and a so-called mixed model (traits and abilities) (Joseph & Newman, 2010). Thus in the present study, we use the ability model which conceives emotional intelligence as "the ability to carry out accurate reasoning about emotions and the ability to use emotions and emotional knowledge to enhance thought" (Mayer, Roberts, & Barsade, 2008, p. 511). In addition, many scholars have found that it is more worthwhile studying ability models (Daus & Ashkanasy, 2005). The emotional intelligence mixed model has received more

criticism, because it appears “to define EI by exclusion as any desirable characteristic not represented by cognitive ability” (Joseph & Newman, 2010, p. 55). The ability-based model proposes that emotional intelligence can be broken down into four sub elements: emotion perception, emotion understanding, and emotion facilitation (i.e., use of emotions) and emotion regulation (Mayer & Salovey, 1997). A lot of research has been done on emotion regulation, but not so much on ‘use of emotions.’

Use of emotion refers “to the ability of individuals to make use of their emotions by directing them towards constructive activities and personal performance” (Wong & Law, 2002, p. 246). Such use entails flexible planning, creative thinking, redirected attention and motivation (Salovey & Mayer, 1990), which probably requires positive emotion (Fredrickson, 2001). According to the broaden and build theory, people who are able to channel their emotions well will move in positive and productive directions (Fredrickson & Losada, 2005). Therefore, individuals who are highly capable of utilizing their own emotions seem to be capable of motivating themselves better (Law, Wong, & Song, 2004). The broaden and build theory assumes, furthermore, that positive emotion is needed for human flourishing, which is characterized by satisfying individual needs (Fredrickson & Losada, 2005).

The self-determination theory has identified three areas of individual need satisfaction: autonomy, competence and relatedness (Deci & Ryan, 1985). According to Vandercammen et al. (2014a), the need for autonomy covers people’s behavior that satisfies their own interest, to freely choose and initiate their own behavior. For instance, when followers have the freedom to choose how to execute a task, this type of need is met. The competence need focuses on how people are experiencing feelings of being capable and effective. Thus, a challenging task may lead to satisfying this type of need. Finally, the relatedness need refers to establishing mutual respect, and feeling connected to and accepted by others. Pleasant relationships with both peers and leaders will fulfil this third type of need. The integration of the self-determination theory, broaden and build theory and emotional intelligence theory will shed light on how the abilities of both leaders and followers to utilize their emotion constructively will impact follower psychological need satisfaction which, in turn, is assumed will lift follower job performance.

### **Leader and follower use of emotion, follower need satisfaction and job performance**

Recently, the role of psychological need satisfaction has been increasingly attracting the attention of researchers (Chiniara & Bentein, 2016; Vandercammen et al., 2014a). In the present study, we propose that both leader and follower emotions enhance followers’ job performance through the

mediating effect of psychological need satisfaction. Several studies have already shown that fulfilment of employees' basic psychological needs by the organization relates positively to their job performance (Baard, Deci, & Ryan, 2004; Gagne & Deci, 2005). The Leroy et al. (2015) survey study in small-to-medium enterprises showed similar results: that the three basic psychological needs are linked to employee or follower performance. A recent study in a large company that designs and produces high technology products investigated the effects of satisfying the three intrinsic needs on job performance (Chiniara et al. 2016). It was shown that follower psychological need satisfaction mediates the relationship between servant leadership and job performance. Servant leadership is known to provide followers with emotional support, feedback and resources and recognizes and contributes to fulfilling the psychological needs of the follower (Chiniara et al. 2016).

According to the broaden and build theory, people's momentary experiences of the good and bad feelings will be associated with flourishing (Fredrickson, 2001). In particular, positive emotion can enhance the flourishing or elevation of health and well-being. In addition, "experiencing positive emotions opens and broadens minds—people become more open to others and see more action possibilities—and builds intellectual, relational, and psychological resources" (Verleysen, Lambrechts, & Van Acker, 2014, p. 6). Therefore, the present study suggests that not only leaders' ability to use positive emotions, but also followers' good use of emotions, could affect followers' personal growth, reflected in fulfilling their psychological needs. Consequently, when leaders and their followers have an equally high capability to utilize their own emotion, they are more likely to be resourceful, implying followers have the chance to pursue their goals at a higher level and achieve high job performance.

Other empirical research has suggested that leader-follower similarity in terms of affect (or: positive affect-congruence) will help followers to interpret leaders' messages which, in turn, will lead to higher job performance (Damen et al., 2008). In addition, some studies have found that people will perform at a higher level in organizations when they experience similar positive emotions, but not when they experience similar negative emotions (Barsade, Ward, Turner, & Sonnenfeld, 2000; Bauer & Green, 1996). Therefore, we propose that, when both leaders and followers use their emotions in a constructive or positive way, this will increase followers' job performance. A leader's capability to use emotions effectively will thus be beneficial for followers' growth and encourage them to face challenging situations. For instance, when leaders give positive feedback, based on their genuine emotions, they are likely to increase followers' feelings of competence and confidence as a job resource which, in turn will inspire them towards higher performance (Damen et al., 2008). Along a similar



vein, when employees are able to use their own emotions in a constructive way, they will feel more competent and confident to handle stressful situations at work, which will affect their level of job performance (Chiniara & Bentein, 2016). Leader and follower capability to use positive emotions can also lead to fulfilment of the need for autonomy and relatedness due to experiencing freedom of expression and being connected to each other.

Next, we review literature on how leaders and followers may use their emotions in order to enhance follower intrinsic satisfaction which, in turn, is assumed to increase follower job performance.

### **Follower need satisfaction mediates between leaders' use of emotions and job performance**

Leader emotions are known key sources for follower emotions: an essential part of the leadership process (Fisk & Friesen, 2012). Emotional leader expressions are seen to work through emotional contagion. This involves the regular transferring of moods and emotions from leaders to followers (Kelly & Barsade, 2001; Newcombe & Ashkanasy, 2002). At this affective level, followers see their leaders as a source of either encouragement or nuisance (Newcombe & Ashkanasy, 2002). Based on this emotional contagion principle (Hatfield, Cacioppo, & Rapson, 1994), leaders can transmit positive emotions to their followers during social interaction. Positive leader emotions are contagious vis-à-vis followers given that leaders' positions come with power in the organizational hierarchy, which amplifies how followers feel about their task performance at work (Sy & Choi, 2013). Leaders who are highly enthusiastic and positively energetic are more likely to induce or maintain a positive emotional environment for their followers which, in turn, helps them to thrive (Barsade, 2002; Haver, Akerjordet, & Furunes, 2013). Thus, leaders who are able to convey and display positive emotions effectively to their followers are seen as effective leaders and have influence on follower behavior (Connelly & Ruark, 2010). Followers' frequent exposure to positive leader emotions will build the followers' reservoir of positive resources and enhances their well-being (Tugade & Fredrickson, 2007). Similarly, leaders who display negative feelings or emotions will influence their followers negatively (Newcombe & Ashkanasy, 2002; Sy, Côté, & Saavedra, 2005). Leaders who are not able to curb their negative emotions will be perceived as abusive by their followers (Zhang & Bednall, 2016). Consequently, when leaders react negatively and irrationally when facing challenges at work, they are more likely to foster frustration, dissatisfaction among their followers which, in turn, creates a negative organizational culture or climate (Dasborough, 2006). Leaders who show frequent negative emotions tend to fail to inspire followers' confidence which could result in less follower effort to perform tasks, less follower job satisfaction and negative evaluations of leader's effectiveness (Connelly & Ruark, 2010).

There is mounting evidence that leaders can use their emotions to affect followers' thoughts, feelings, behaviors and level of satisfaction (van Knippenberg et al., 2008; Venus et al., 2013). Leaders' use of emotions may deliver information consciously and unconsciously which affects followers' judgment, attitudes, behaviors, and intrinsic satisfaction. Hence, when a leader uses his or her emotions well, he or she is more likely to show his or her work passions which, in turn, through contagion arouses followers' motivation to achieve the goals envisioned by the leader (Hatfield et al., 1994; Shamir, House, & Arthur, 1993). A study in a simulated managerial situation demonstrated, for instance, that positive affects significantly affected followers' intrinsic motivation (Kraiger, Billings, & Isen, 1989). Another example, using daily diary-type surveys, showed that followers' positive and negative affects significantly influence their intrinsic satisfaction need (Vandercammen et al., 2014a). Hence, we formulate the following hypothesis:

Hypothesis 1: Follower psychological need satisfaction mediates the relationship between the leader's use of emotion and follower job performance.

**Follower need satisfaction mediates between follower use of emotion and job performance**

Beside the importance of a leader's use of own emotions, followers' use of their own emotion is also crucial for followers' fulfilment of intrinsic needs at work. According to the broaden and build theory, human flourishing is optimized by *goodness* which can be indexed by happiness, superior functioning and satisfaction (Fredrickson & Losada, 2005). This implies that when an individual utilizes own emotions in a positive way, he or she is more likely to experience psychological satisfaction. Positive affect is particularly crucial according to this theory and required for follower satisfaction of intrinsic psychological needs to emerge in any circumstance. Isen and Reeve (2005) found that followers will experience interest, enjoyment and a sense of satisfaction, because they have a positive attitude towards their tasks. However, we suggest that follower psychological need satisfaction does not always arise from enjoyable tasks or jobs. Healthcare professionals, for example, have to deal frequently with adverse and emergency working environments. Thus, in order to be an effective nurse, one must display genuine or authentic, compassionate emotions towards patients (Bulmer Smith, Profetto-McGrath, & Cummings, 2009). Albeit nurses do not always have an enjoyable work environment, they can nevertheless satisfy their need for autonomy, competence and relatedness when they serve their patients well, including feelings of work fulfilment. This is in line with the self-determination theory that assumes that one's immediate

work environment plays an important role in opportunities to satisfy the three key human needs (Deci & Ryan, 2002).

According to the self-determination theory, there are two categories of human motivation: self-determined motivation and nonself-determined motivation (Gagne & Deci, 2005). Self-determined motivation is associated with behavior that arises from either enjoyment (intrinsic motivation) or choice (self-determined extrinsic motivation). Nonself-determined motivation relates to employee behaviors that are caused by motivation that is controlled by others (Philippe & Vallerand, 2008). Thus, nonself-determined motivation “involves acting with a sense of pressure, a sense of having to engage in the actions” (Gagne & Deci, 2005, p. 334). Following the self-determination theory, self-determined motivation is more strongly related to job performance than non-self-determined motivation, because it satisfies *intrinsic* needs. We suppose that employees who are capable of utilizing their own emotions in a positive direction have more self-determined motivation, which is more likely to satisfy their psychological needs and therefore more likely to increase their job performance. This is in line with the conclusion of an empirical study by Isen and Reeve (2005, p. 321): “affect may play a more central role in understanding people’s intrinsic motivational process than is currently recognized by self-determination theory.” Thus:

Hypothesis 2: Followers’ psychological need satisfaction mediates the relationship between their use of emotions and job performance.

## Methods

A pilot study preceded the main, cross-sectional survey. The content validity of the survey scales was examined: with seven nurses and a pharmacist who met the inclusion criteria for participants, i.e., they had to be university graduates of the schools of nursing and pharmacy (Anderson & Gerbing, 1991). We used Anderson and Gerbing’s (1991) item-sort task; it showed that nearly all items were sorted in the right way. The results of this pilot study were also used to modify some items in order to fit the healthcare context in Indonesia. The original English questionnaire version had been translated into Indonesian (Bahasa), using the back-translation method.

The main study involved 220 healthcare employees who were concomitantly students at the schools of nursing and pharmacy of a large university in Bandung, Indonesia. As well as being part-time students, they were employed in various work settings such as hospitals, universities, pharmaceutical companies, and drugstores. The mean age of these respondents was 28.9 years (SD = 4.75); their mean work experience in their current positions was 3.2 years

(SD = 1.84); the gender of the main sample entailed 67.7 percent women and 32.3 percent men.

## Measures

Use of emotion (by leaders and followers). We measured use of emotion by both the leaders and the followers, with a scale consisting of four items (Wong & Law, 2002). We used Wong and Law's scale since the authors define this construct in the context of the *ability model* (see, Joseph & Newman, 2010) and it has strong test-retest reliability as well as construct and discriminant validity (Law, Wong, Emily Huang, & Li, 2008; Law et al., 2004; Shi & Wang, 2007). We asked the followers to assess their leaders and themselves. Item examples are: "My supervisor always tells him- or herself- he or she is a competent person" and "I always tell myself I am a competent person", for leader- and self-ratings, respectively. The responses were from a seven-point Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach's alphas of use of emotion by leaders and followers were .90 and .77, respectively.

Follower intrinsic need satisfaction. To measure intrinsic need satisfaction, we employed the often used nine-item scale (Deci et al., 2001). Participants were asked to indicate to what extent they agreed with the statements about satisfying three types of need. Their responses were also collected using seven-point Likert scales, ranging from 1 (*poor*) to 7 (*excellent*). The subscale 'Satisfaction of Autonomy Needs' consists of three items. A sample item is "I am free to express my ideas and opinions on the job". The subscale 'Satisfaction of Competence Needs' has three items; for example "I have been able to learn interesting new skills on my job". The subscale 'Satisfaction of Relatedness Needs' consists of four items. A sample item is "I really like the people I work with". The Cronbach's alpha of the overall or comprehensive scale was .80

*Follower job performance.* We measured follower job performance by using William and Anderson's (1991) well-established instrument consisting of four items. A sample item is "I complete assigned duties adequately". The responses were again from the seven-point Likert scales, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach's alpha was .92.

A factor analysis with principal-axis factoring and varimax rotation was conducted on the data with the sample of 220 followers, yielding a four-factor structure (see, Table 1).

**Table 4. 1 Item Loadings on the Four Distinct Factors**

Items	Factors			
	1	2	3	4
1. I adequately complete assigned duties	.27	<b>.82</b>	.07	.16
2. I fulfil responsibilities specified in my job description	.20	<b>.84</b>	.12	.20
3. I perform tasks that are expected of me	.24	<b>.80</b>	.08	.23
4. I meet the formal performance requirements of the/my job	.25	<b>.83</b>	.06	.16
5. I always set goals for myself and then try my best to achieve them	.22	.29	.00	<b>.60</b>
6. I always tell myself I am a competent person	.02	.05	.10	<b>.74</b>
7. I am a self-motivated person	.23	.20	.00	<b>.82</b>
8. I would always encourage myself to try to do my best	.32	.32	.01	<b>.64</b>
9. I really like the people I work with	<b>.59</b>	.13	.17	.22
10. I get along with people at work	<b>.62</b>	.38	.02	.11
11. I pretty much keep to myself when I am at work	<b>.55</b>	.30	.20	.26
12. I am free to express my ideas and opinions on the job	<b>.67</b>	.11	.07	.27
13. I consider the people I work with to be my friends	<b>.60</b>	.42	.06	.04
14. I have been able to learn interesting new skills on my job	<b>.71</b>	.08	.19	.09
15. My feelings are taken into consideration at work	<b>.83</b>	.10	.05	.01
16. People at work care about me	<b>.66</b>	.18	.13	.04
17. I feel like I can pretty much be myself at work	<b>.58</b>	.28	.19	.15
My Supervisor...				
18. always set goals for him- or her-self and then try his or her best to achieve them	.18	.07	<b>.84</b>	.05
19. always tells him- or herself he or she is a competent person	.10	.15	<b>.81</b>	.08
20. is a self-motivated person	.19	.05	<b>.92</b>	.01
21. always encourage him- or her-self to try to do his or her best	.19	.04	<b>.84</b>	.01
Percentage of Variance Explained				
	<b>20</b>	<b>36</b>	<b>50</b>	<b>61</b>

## Analyses

We conducted confirmatory factor analysis with AMOS 22 to evaluate the measurement model of the focal variables, i.e., to test if the measurements were distinct for: leaders' and followers' emotions; follower intrinsic need satisfaction; and follower job performance. The result showed that the expected four-factor model has a good fit with the data:  $\chi^2 = 293.90$ ,  $df = 197$ ,  $p < .000$ ; CFI = .96; RMSEA = .05; SRMR = .05 (Hu & Bentler, 1999).

To test the two hypothesized mediations, we used Baron and Kenny's (1986) three conditions for mediation (see, also, Mathieu & Taylor, 2006). Accordingly, mediation is present when: (a) a significant relationship exists between the independent and the dependent variable; (b) a significant relationship exists between the independent variable and the mediator; and (c) a significant relationship exists between the mediator and the dependent variable while holding the independent variable constant. A full mediating effect will exist if the independent variable has no significant relationship with the dependent variable when the mediator is added to the analysis.

In order to minimize common method variance, we constructed a common latent factor (see, also, Engelen, Gupta, Strenger, & Brettel, 2015). This factor controlled for all the relationships between the items and the focal latent variables. An extra method was added to address common method variance: Harman's (1976) single factor test examined whether a single factor, based on a factor analysis with all items, would explain more than fifty percent of the variance. That would indicate a serious common method problem. However, this was not the case in the present study; it was only 30 percent of the variance.

## Results

Table 2 presents the means, standard deviations, internal consistencies and correlations of all variables used in this study. The internal consistencies of the scales were all above .70, ranging from .77 to .92. These results show that the questionnaires of use of emotion by the leaders and followers, intrinsic need satisfaction, and job performance are reliable measurements in the work settings to which they had been applied. Use of emotion by the leaders was significantly related to intrinsic need satisfaction ( $r = .39$ ), and use of emotion by the followers was significantly related to intrinsic need satisfaction ( $r = .45$ ). Intrinsic need satisfaction was strongly related to job performance ( $r = .54$ ). These results are in accordance with Hypotheses 1 and 2.

**Table 4. 2 Means, Standard Deviations, Bivariate Correlations and Internal Consistency Coefficients<sup>a</sup>**

<b>Variables</b>	<b>N</b>	<b>M</b>	<b>Sd</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1. Use of Emotion of Leaders	220	5.60	1.13	<b>.90<sup>a</sup></b>			
2. Use of Emotion of Followers	220	5.70	.80	.16*	.77		
3. Follower Psychological Need Satisfaction	220	5.40	.72	.39**	.45**	<b>.80</b>	
4. Follower Job Performance	220	5.83	.72	.22**	.49**	.54**	<b>.92</b>

<sup>a</sup>The Internal Consistency Coefficients or Cronbach's Alphas are Reported In Bold on the Diagonal. \* $p < 0.05$  \*\* $p < 0.01$

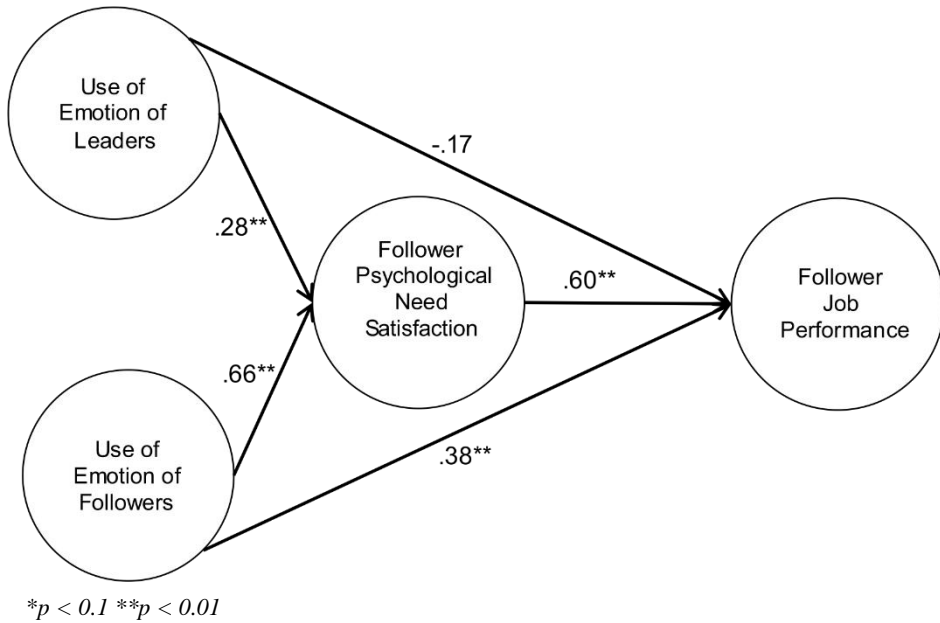
### Testing the Hypotheses

While testing our model, we controlled for a common latent factor. The results indicate that the hypothesized model fits the data and meets the fit criteria ( $\chi^2 = 326.28$   $df = 163$ ,  $p < .00$ , CFI = .94, RMSEA = .06). The standardized path coefficients presented in Figure 2 show that use of emotion by the leader was significantly related to follower psychological need satisfaction ( $\beta = .28$ ,  $p < .01$ ), which was in turn related to job performance ( $\beta = .60$ ,  $p < .01$ ). Thus, hypothesis 1 is supported. Also, the findings show that the direct relationship between use of emotion by the leader and follower job performance was not significant ( $\beta = -.17$ , *ns*).

Furthermore, follower use of emotion was also significantly related to follower intrinsic need satisfaction ( $\beta = .66$ ,  $p < .01$ ) which, in turn, was also significantly associated with follower job performance ( $\beta = .60$ ,  $p < .01$ ). Thus, hypothesis 2 is supported. Use of emotions by the followers was also directly related to their job performance ( $\beta = .38$ ,  $p < .01$ ).

In addition, we calculated the indirect effects of the relationship between follower use of emotion and job performance. The results show that the indirect effects of use of emotions by the leaders and followers, on job performance, were significant ( $\beta = .16$ ,  $p < .02$ ;  $\beta = .39$ ,  $p < .01$ , respectively). Thus, the relationship between use of emotions by the leaders and followers and job performance was consistently mediated by the mediator variable: psychological need satisfaction.

**Figure 4. 2 The Standardized Path Coefficients of the Links in this Study’s Tested Model**



**Discussion**

The present study is one of the few that examines the relationship between use of emotion by the leader and his or her followers simultaneously. It does so together with the three well-known psychological need satisfaction measures of followers. Based on self-determination, broaden-and-build and emotional intelligence theorizing, we find a significant association between the degree of follower satisfaction with the three basic psychological needs (autonomy, competence and relatedness) and follower job performance. Follower need satisfaction is found to mediate the relationship between the use of follower emotion and job performance. Follower psychological need satisfaction mediates also the relationship between leaders’ use of emotion and follower job performance. Thus, both hypotheses of this study are supported. Moreover, follower job performance is found to be directly related to follower use of own emotions. Hence, we establish that for desirable follower outcomes, not only leader emotion should be taken into account but also followers’ use of own emotions themselves (Isen & Reeve, 2005; Sy & Choi, 2013).



Even though prior evidence shows follower job performance to be related to psychological need satisfaction, and we replicated this effect, the present study also examines emotion types of predictors of follower psychological need satisfaction which have been rarely examined before. This study assessed one particular human skill that is part of Wong and Long's EI assessment. Both leaders' and followers' skilled use of emotion is indeed found to be related to follower psychological need satisfaction. Further research should also examine the three other Wong and Law dimensions. Research with those dimensions is potentially impactful because they represent skills that both leaders and followers need to display for desirable work outcomes. Future independent assessment of each of EI's dimensions may be potentially integrated with the broaden-and-build theory, because most of the survey items in EI's operationalization tap socially appropriate or constructive behaviors.

The broaden-and-build theory is fundamentally focused on positive emotions. In the present study this is reflected by the perceived capability of leaders and followers to constructively use their own emotions at work. Eberly and Fong (2013) find that leaders who can express positive emotions are more effective than those who express negative emotions. Moreover, the cognitive and emotional reactions to leaders' expressions of positive and negative emotions is known to be linked to followers' job performance (Gooty et al, 2010). Gooty et al. (2010) suggest that both leaders' and followers' ability to manage their emotions at work is critical within organizations. Our results support that insight: the higher the level of leaders' *and* followers' use of own emotions, the higher the level of follower job performance, especially when followers satisfy, in that process, their own intrinsic psychological needs. Given that our sample is situated in a professional healthcare setting, it is plausible that when a healthcare professional on the work floor is capable of using his or her emotions constructively, he or she is behaving more independently, competently and with positive relationships while performing his or her tasks well. We report a direct significant association between use of emotion by followers and followers' job performance whereas use of emotion by the leaders is indirectly related. In the context of the emerging theory of followership (Uhl-Bien, Riggion, Lowe, & Carsten, 2014), the current study shows that when a follower is able to use his or her emotions constructively, he or she is more likely to enhance own job performance independently. Consequently, a follower may not need to have a high level of psychological need satisfaction before her or she performs at a high level. For example, the performance of a nurse in the hospital relies more on this follower's ability to use his or her emotion than his or her leader's use of emotion. So, a nurse's serving of patients seems to depend less on the leader than his or her own use of emotions. Meanwhile, the effects of a leader are the use of emotion on follower job performance which goes through the leader's ability to satisfy followers' psychological needs.

## Practical Implications

The findings of this study provide several important implications for practice. Perhaps most remarkably, it is important for practitioners to understand better that, and how, employees are affected by their leaders' use of emotions; through this ability, leaders can elevate their followers' degree of psychological need satisfaction, which can enhance follower job performance. Thus, in addition to focusing on reward and punishment, some leaders must be made aware that supporting their followers through their own (positive) emotions is important. In addition to focusing on performance- or task-based transactional exchanges (e.g., a promotion based on productive output), organizations should encourage leaders to cope better with their work-related emotions, because indirectly they seem to affect the level of follower job performance. Therefore, HRM units in organizations need to start training programs to equip more leaders with skills such as emotional intelligence (see, e.g., Kotsou, Nelis, Grégoire, & Mikolajczak, 2011; Wilderom et al., 2015). Also, followers should be trained to be skilled in managing their own emotions better at work. This is because our results suggest that followers' skill to use emotions constructively at work affects both follower job performance and psychological needs satisfaction. Furthermore, given the emotional contagion in work units (Barsade, 2002), when more organizations take emotional skills more seriously, in the ways revealed by this study (through the use-of-emotion skill of their employees), they are more likely to benefit from this enhanced skill level. By implication, our study suggests that when both leaders and followers become more capable to make constructive use of their own emotions, they can enhance many stakeholders' quality of life.

## Strengths, Limitations and Future Research

The present study addresses *how* follower perceptions of their emotions and leader's use of emotion affect follower job performance. Given the perceptual nature of the concepts, it is correct to assume that the here employed self-report type strategy is appropriate (Dasborough & Ashkanasy, 2002; Gerstner & Day, 1997; Martinko & Gardner, 1987). Yet, since the followers in this study self-reported each of the key variables, the measured relationships cannot be seen as free from common-method bias even though we avoided leading questions when deploying each of the scales (Podsakoff et al., 2003). As proposed by Podsakoff, MacKenzie, Lee, and Podsakoff (2003) in those situations, there are statistical strategies that can be used to attenuate common-method bias. Harman's single factor as well as the common latent factor test suggest the effect of common bias was not entirely eliminated here (Fisk & Friesen, 2012). Therefore, future research should separate the collection of predictor and criterion data across time and/or raters, for instance through daily

diary surveying or longitudinal and quasi-experimental, multi-source research designs. At the same time, it would be useful to examine the other three emotional intelligence dimensions of Wong and Law's EI construct; it would complement other emotion-at-work studies, showing that sharpening one's skills of this nature may be a key to higher employee, team or organizational performance.

From a theoretical perspective, future research should investigate more mechanisms, like psychological need satisfaction, which are used by leaders and have an emotional impact on follower use of emotion and outcomes. Whereas the use of emotion concept focuses on how people constructively use their own emotions to improve performance, emotion-regulation studies emphasize use of emotion after psychological distress (Wong & Law, 2002). It would be fruitful for future studies to examine how leaders and followers effectively *regulate* their negative emotions *and* use all their other emotions constructively to improve desirable outcomes. Such further, more integrated studies should examine how a leader and the followers, who are skilled at making use of their emotions, are better at regulating their emotions, and how a leader's use of emotion may facilitate this process among his or her followers. Furthermore, it might be interesting to investigate how leaders who are skilled in the use of emotions deal with followers who are not skilled in making use of their emotions. Those leaders could reach those followers through enabling their satisfaction of their psychological needs.

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# **CHAPTER 5.**

## **THESIS' SUMMARY AND DISCUSSION**



## **Chapter 5: Thesis' Summary and Discussion**

How do non-managerial employees make use of existing psychological resources in order to enable high individual and team performance? This Ph.D. thesis reveals various answers to this question: by integrating several theoretical ideas and empirical results. In the below, I reflect on this thesis' contributions to both theory and practice. Also, I sketch some future research implications of the obtained results.

In the first study (chapter 2), I developed a theoretical model which explicates why and how followers use available psychological resources to enhance their job performance. Employing a longitudinal study design, the empirical analyses enable an extension of the conservation of resource theory. I examined how the 3 factors, transformational leadership, follower felt support for excellence and psychological capital, may lead to job performance and work engagement. I tested the hypotheses in professional healthcare settings and analyzed the results with two statistical methods: the change score residual method and cross-lagged regression. The outcomes of the change score method demonstrate that the relation between transformational leadership and job performance/work engagement is mediated by a hypothesized sequence the variables: transformational leadership affects follower felt support for excellence, which in turn is linked to psychological capital which subsequently influences job performance and work engagement. The cross-lagged regression results show that transformational leadership is directly linked to job performance, which also offers support for psychological capital as a mediator variable without reverse effects in the model. The two different statistical methods provide distinct results; the role of transformational leadership and psychological capital are crucial for obtaining the desired outcomes at work. The change score residual method assumes that the key variables in the study change over time whereas in the cross-lagged analysis, the independent variable (e.g., transformational leadership) is assumed to be stable. My interpretation of these results is that the non-significant effects on follower-felt support for excellence on work engagement might be due to the fact that the effect of psychological capital on work engagement may require more time than the one year time lag of this very study. Furthermore, exploratory analyses of the frequently assumed direct association between job performance and work engagement did not show a significant link; from experience we know that many followers who are very engaged at work may not actually contribute to what is considered to be real-life output or desired rewarded performance at work (Parker & Griffin, 2011).

In chapter 3, collective psychological capital acted, as hypothesized, as a moderating variable between transformational leadership and team goal clarity: with a subsequent effect on team performance. The chapter 3 model was tested with a sample of 76 nursing teams in two hospitals in a large city in Indonesia.

All the hypotheses are supported, as well as the overall, moderated mediation model; Transformational leadership is found to be positively associated with team goal clarity, but given the neutralizing effect of collective psychological capital on the role of transformational team leadership, this study extends both psychological capital and transformational leadership: it shows that collective psychological capital can compensate for transformational team leadership. Future studies should examine how such high levels of collective psychological capital team can emerge or in what ways different or internal transformational team leader should precede such a team state.

Chapter 4 integrates theories on emotion, leadership and psychological need satisfaction. In this third empirical study, I examine how leaders and followers use their emotions constructively and how that behavior may be linked to follower job performance. Derived from emotional intelligence and self-determination theory. I hypothesize how the use of emotion by leaders and followers is associated with follower psychological need satisfaction which, in turn, enhances follower job performance. The results show that emotion utilization by both leaders and followers is beneficial for followers' satisfaction or fulfilment of their perceptions of autonomy, competence, and relatedness. This outcome is in line with Isen and Reeve (2005) who show that positive follower affect is linked to their degree of satisfaction with these three basic human psychological needs.

All in all, the results of the three empirical studies show that transformational (team) leaders, use of emotions and a number of moderating and mediating mechanism at the individual and team level (such as PsyCap) play important roles in obtaining both high individual and team performance.

### **The Practical Implications of the Results of this Thesis**

The three empirical studies in chapters 2, 3 and 4 offer insightful practical implications. My empirical studies were conducted at either the individual or team level. Hence they have implications at both levels of organizing. Most of the hypotheses, derived from rigorous theorizing and prior empirical analyses, are supported thus the practical implications of the findings are likely to apply beyond the Indonesian health context. The results reported in chapter 2 show that transformational leadership is crucial for the creation or maintenance of follower felt-support for excellence. If this norm is perceived to be upheld by one's peers, follower's psychological capital will be enhanced, resulting in a higher level of follower job performance. In my second study I show that a high level of collective psychological capital may act as a neutralizer for the role of transformational leadership in attaining high team performance. Collective psychological capital negatively moderated the relationship between transformational leadership and team goal clarity which in turn, is significantly

linked to team performance. The results imply that (members of) teams (in Indonesia healthcare organizations) perform well if they have a high level of psychological capital. If their level of collective PsyCap is not high and they have a team leader with transformational style, that team leader is likely to induce high individual follower performance (Gooty, Gavin, Johnson, Frazier, & Snow, 2009). Even though individual employees in a team may perform at a high level, their entire team may not (yet) do likewise. Through clarifying team goals transformational leaders can contribute to high team performance. Next to enhancing the level of team goal clarity, there are more mechanisms through which transformational team leaders can lift the level of performance: see, e.g. the PhD thesis of Hydar Abdul Shahib in 2018 who examined various sets of affective, behavioral and cognitive type of mechanisms. Besides the importance of transformational leadership and (collective and individual) psychological capital, leaders' and followers' constructive use of own emotions appears to be related to followers' degree of satisfaction with the fulfilling of their three basic psychological needs through which followers achieve high job performance. Thus, organizations should consider facilitating such emotion training, not only for leaders but also for their followers, if they wish to make their followers perform at a significantly higher level. Thus, my last study suggests that fulfilling employees' psychological need for autonomy, competence as well as relatedness, is a key to high employee performance.

### **Suggestions for Future Research**

What would more and better scholarly attention to transformational leadership, team mechanisms, and team and follower performance entail? I already suggested in the three chapters various opportunities for future research. Much more longitudinal and multilevel O.B. type studies would need to be carried out including, in my view, the variables: leaders and followers' (team and individual) emotional intelligence, leader-follower need satisfaction, leader-member emotion congruence etc. Those studies will help illuminate how leader-follower relations evolve in terms of abilities, needs and behaviors (as mediating and/or moderating variables), and how they may enhance individual/team performance at all the relevant levels of organizational analysis. Future research should thus also examine how emotions play their specific roles in leader member exchange (Zhang, Wang, & Shi, 2012), perhaps even as predictors of collective psychological capital (Dawkins, Martin, Scott, & Sanderson, 2015; Newman, Ucbasaran, Zhue, & Hirst, 2014). Such new must also include the circumstances in which constructive use of emotions may have negative effects at work: emotion regulation is an intriguing construct which should be utilized further in developing new hypotheses aiming to predict high levels of work performance.

Furthermore, the tested models in studies 1, 2, and 3 (reported in this thesis' chapters 2, 3, and 4) should be examined in other sectors such, for instance as R&D teams, sales teams or startup companies. I also recommend examining these types of studied mechanisms in quasi-experimental research designs or in daily longitudinal surveys (Bono, Glomb, & Koch, 2013; Breevaart et al., 2014): in order to establish a level of causality among the key variables. Further integration of theorizing with ideas desired leadership from the literature on emotional intelligence, social contagion, conservation of resources and followership will offer fruitful advances in the O.B. literature.



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## Summary in Dutch

De hoofdvraag van deze doctoraat studie is: Hoe maken niet-leidinggevende werknemers gebruik van bestaande psychologische bronnen om een hoge individuele of team prestatie te bewerkstelligen? In een poging deze vraag te beantwoorden heb ik bestaande Organization-Behavioral theorieën, inclusief the Conservation of Resource Theory (COR), transformational leadership theory, goal-setting theory, substitute for leadership theory en gerelateerde inzichten gecombineerd, en uiteengezet in de theoretische delen van dit proefschrift. Dit boek als geheel bestaat uit een verzameling van drie empirische hoofdstukken plus een initieel en concluderend hoofdstuk wat ik hieronder samenvat.

Het doel van de eerste empirische studie (tweede hoofdstuk) is om te onderzoeken hoe transformationeel leiderschap van invloed is op twee mediator variabelen in een verzameling (i.c. follower-felt support for excellence en psychological capital) met de daaropvolgende verhoging van de werkprestatie en werkverbondenheid. Gebaseerd op COR en de zelf-concept gebaseerde theorie van transformationeel leiderschap, beargumenteer ik eerst dat een transformationele leadershipsstijl zich gedraagt als een ‘essentiële’ bron waar andere bronnen voor medewerkers uit voortkomen, zoals de follower-felt support for excellence en de persoonlijke bron, psychological capital (PycCap) wat leidt tot een hogere werkbetrokkenheid en werkprestaties. De steekproef voor deze studie omvat 147 part time werkende MSc-studenten in een grote universiteit in Bandung Indonesië. Gebruik makend van een longitudinale studie met een pauze van een jaar tussen tijdstip 1 en tijdstip 2, onderzocht ik een zgn. three-path mediatie model door twee longitudinale statistische analyses toe te passen: change residual score analysis en cross-lagged analysis. De resultaten laten zien dat transformationeel leiderschap invloed heeft op de follower-felt support for excellence wat vervolgens de PsyCap beïnvloedt en uiteindelijk de werkprestaties en de werkbetrokkenheid verbetert. Middels de meer strikte cross-lagged analysis vond ik dat transformationeel leiderschap van directe invloed is op PsyCap, wat op zijn beurt van invloed is op de werkprestaties. Beide set van resultaten laten zien dat zowel de transformationele leadershipsstijl als medewerker PsyCap toegevoegd kunnen worden als ‘essentiële’ bron in de COR theorie terwijl de PsyCap van de medewerkers een meer omvattend motivationeel mechanisme lijkt te zijn dan de overige mechanismen (zoals hoop, zelfwerkzaamheid, evenwichtigheid, eigenwaarde) binnen de op het zelfconcept gebaseerde theorie van transformationeel leiderschap.

De doelstelling van de tweede empirische studie is om de impact te toetsen van transformationeel leiderschap op team prestaties door mediatie van de duidelijkheid van team doelen en het negatieve moderatie effect van team

PsyCap. Gebaseerd op de substitute for leadership theory en de goal setting theory opperde ik dat de impact van transformationeel leiderschap op team prestaties afgezwakt kan worden door team PsyCap, en gefaciliteerd zal worden door de duidelijkheid van doelen. Voor deze studie werden 427 Indonesische verplegers uit 76 ziekenhuisteamen schriftelijk ondervraagd. De team prestaties werden beoordeeld door al hun directe leiders. De gegevens zijn gebruikt om het moderated-mediation model te testen. Structural equation modelling ondersteunde de resultaten van het complete hypothetische model: de duidelijkheid van team doelstellingen beïnvloedt de relatie tussen transformationeel leiderschap en team prestaties terwijl team PsyCap de relatie tussen transformationeel leiderschap en de duidelijkheid van team doelen modereert. Deze resultaten suggereren dat als het PsyCap niveau binnen een team laag ligt, ze transformationeel leiderschap nodig hebben om de doelstellingen te verduidelijken teneinde goed te presteren. Een team met een hoge PsyCap zal een neutraliserend effect hebben op de impact van transformationeel leiderschap op de duidelijkheid van team doelen. Met andere woorden, wanneer teams een hoge PsyCap hebben lijkt transformationeel leiderschap niet meer vereist voor hoge teamprestaties.

Het doel van de derde empirische studie is om de impact te weten te komen van het gebruik van emoties van zowel leidinggevend als medewerkers op de werkprestaties van medewerkers. Door met name ook uit self-determination theorie te putten, opperde ik dat medewerkers' gebruik van eigen emoties meer impact zullen hebben op die werkprestaties dan die van hun leidinggevend, en dat dit zo werkt via de bevrediging van drie psychologische behoeften van medewerkers: autonomie, bekwaamheid, en verbondenheid. Om dit te testen heb ik 220 part-time MSc studenten schriftelijk ondervraagd. Zij studeerden aan een grote universiteit in Bandung, Indonesië. Daarna heb ik structural equation modelling gebruikt om het hypothetische model te toetsen. Om 'same-source bias' te checken heb ik de zgn. single factor en latent factor van Harman toegepast. De resultaten laten zien dat het gebruik van emoties door zowel leiders als hun medewerkers cruciaal blijken te zijn voor het bevredigen van de psychologische behoeften van medewerkers waardoor die medewerkers beter kunnen presteren op het werk. De resultaten laten ook zien dat wanneer medewerkers hun eigen emoties gebruiken dit ook van directe invloed is op de eigen werk prestaties.

Derhalve biedt dit proefschrift nieuwe theoretische bijdragen aan het vakgebied OB. Ten eerste, blijken transformationeel leiderschap en psychologisch kapitaal essentiële bronnen te zijn voor de werkprestaties van medewerkers. Ten tweede geldt dat, hoewel weinig empirische studies PsyCap op team niveau hebben onderzocht, mijn studie de eerste is die heeft vastgesteld dat PsyCap een negatief moderatie effect heeft op de relatie tussen transformationeel leiderschap en de duidelijkheid van de team doelstellingen, en

vervolgens op de team werkprestatie. Ten derde hebben uiteenlopende studies onderzocht hoe leider emoties van invloed zijn op de werkprestaties van hun medewerkers; desalniettemin, toont mijn derde empirische studie (hoofdstuk 4 hier) aan dat het niet alleen de indirecte invloed van de leider is die de psychologische behoeften van zijn of haar medewerkers bevredigt, maar meer hoe die medewerkers zelf op constructieve wijze met hun emoties omgaan tijdens het uitvoeren van hun werk.

**Author Profile**

Sunu Widiyanto was born in Pontianak, Indonesia, on the 13<sup>th</sup> of April 1983. Prior to joining the full-time Ph.D. program in Change Management and Organizational Behaviour at the University of Twente (fac. BMS), he was a member of the Faculty of Economics and Business, Padjadjaran University, Indonesia. Sunu has worked there also as a management consultant at the Centre for Management and Business Studies at Padjadjaran University, particularly on topics like middle management leadership development and organizational culture. He has received a Bachelor (BSc) degree in Management from Gadjah Mada University in 2006 and a Master (MSc) degree in Management from that same university.

His current research interests include leadership, followership, psychological capital, emotion at work, and especially longitudinal and multi-level study of Organizational Behavior/HRM. During his PhD-studies Sunu has presented his work at various leading international conferences in the area of Management, such as the (US) Academy of Management and the British Academy of Management.