HOKKAIDO UNIVERSITY

Title	Effects of mentoring on work engagement : Work meaningfulness as a mediator
Author(s)	Lin, Ligui; Cai, Xuejing; Yin, Jun
Citation	International Journal of Training and Development, 25(2), 183-199 https://doi.org/10.1111/ijtd.12210
Issue Date	2021-04-20
Doc URL	https://hdl.handle.net/2115/89021
Type	journal article
File Information	Manuscript_IJTD_rv2_2021.1.25 Final.pdf



Hokkaido University Collection of Scholarly and Academic Papers : HUSCAP

Effects of mentoring on work engagement: Work meaningfulness as a mediator

Abstract

This study examined the relationship between career mentoring and work engagement from the mentor perspective, by estimating work meaningfulness as a mediator. The research model used quantitative survey data from 309 employees who mentored their junior colleagues in the on-the-job training programs of Japanese companies. The results demonstrated that career mentoring had an indirect effect on the work engagement of mentors by enhancing the psychological meaningfulness of their work. In addition, learning goal orientation positively influenced career mentoring; this may subsequently facilitate work engagement by increasing the perception of the meaning of work. Learning-oriented individuals who act as mentors find psychological meaningfulness in their work, which in turn enhances their work engagement. By setting acceptable meaningful goals for mentoring programs, practitioners can minimize the negative outcomes of mentoring. The results contribute to the existing literature by examining how mentoring experiences affect the behavior of mentors.

Keywords

career mentoring, work meaningfulness, work engagement, learning goal orientation

---

Introduction

Mentoring is identified as the career development relationship between experienced senior employees (mentors) and less-experienced junior employees (mentees) (Hunt and Michael, 1983; Noe, 1988; Wang, Hu, Hurst and Yang, 2014). The contributions of workplace mentoring to individual growth and organizational development have been explored for over five decades (Allen, Eby, Chao and Bauer, 2017). Early studies have shown that the benefits of mentoring to mentees include monetary rewards and job promotion (Scandura, 1992), but also well-being and psychological empowerment (Spreitzer, Kizilos and Nason, 1997; Wen, Chen, Dong and Shu, 2019). In recognition of these positive outcomes, modern organizations have widely implemented mentoring programs to achieve talent development and skills transfer (Noe, 1988) and have thus cultivated potential mentors (Ragins and Scandura, 1999).

Effective mentoring occurs only when both mentor and mentee benefit from the relationship (Ragins and Verbos, 2007). However, most studies have focused on the influence of mentoring on the career advancement of mentees, while largely overlooking the experiences of mentors (Eby and Robertson, 2020; Ragins and Kram, 2007). Ragins and Scandura (1999) showed that individuals who had acted as mentors gained satisfaction and fulfilment from the mentoring relationship, whereas those who did not were unable to appreciate the potential benefits and assumed that it was not worth their time (Ragins and Scandura, 1999). Other studies have focused on the objective (compensation, promotion) or subjective (job satisfaction) outcomes of mentoring (Allen *et al*., 2017), but few have examined the underlying mechanisms that produce these outcomes (Janssen, van Vuuren and de Jong, 2016). The present study aimed to fill this gap in the literature by examining the effects of mentoring implementation on work meaningfulness as a psychological state that in turn motivates mentors to more fully engage in their work (Janssen *et al*., 2016).

Our research examined work meaningfulness as a consequence of mentoring, based on previous studies showing that serving as a mentor promotes intrinsic satisfaction (Kram, 1988; Chandler, Kram and Yip, 2011). For example, Allen, Poteet, and Burroughs (1997) reported that mentors experience work-related rewards, including supportive network building, self-satisfaction and being a co-learner with mentees. That is, mentoring results in work meaningfulness for mentors by making them feel valuable in their work role and providing satisfaction and motivation, which in turn confers a sense of psychological meaningfulness, increases emotional energy and further motivates work engagement (Kahn, 1990). However, the relationship between mentoring and work meaningfulness has not been investigated, although the perception of meaningful work has been shown to have a positive impact on psychological motivation and work engagement (Salanova and Schaufeli, 2008; May, Gilson and Harter, 2004).

Learning goal orientation has been investigated as a specific characteristic that leads mentors to engage in mentoring (Dweck, 1986; Huang and Luthans, 2015; Rekha and Ganesh, 2019). Previous studies have shown that individual differences are significantly related to the anticipated costs vs. benefits, which affects the willingness to be a mentor (Eby and Lockwood, 2005; Ragins and Scandura, 1999). Godshalk and Sosik (2003) suggested that people tend to concentrate on their work roles when there are clear goals as a reference. In addition, learning-oriented individuals are more likely to be motivated by challenging work and to view overcoming the challenges as a growth opportunity (Dweck, 1986).

Against this background, we empirically investigated how mentoring enhances work meaningfulness and thereby influences work engagement. We also hypothesized that learning goal orientation promotes mentoring practices as a characteristic antecedent. Learning goal orientation was also predicted to not only facilitate mentors perceiving their work as more meaningful, but also to impact mentors' attitudes to work engagement. We investigated the research model by focusing on employees who had experience being mentors in formal mentoring programs in Japan. Specifically, data were collected from 309 full-time employees through an online survey. Our findings extend the existing literature on the mentoring process by highlighting work meaningfulness as a mediator, which links mentoring implementation to work engagement.

The remainder of this article is organized as follows. First, a theoretical background on career mentoring, work engagement, work meaningfulness, and learning goal orientation is provided to generate hypotheses. This is followed by a methods section and then a presentation of our findings. Finally, the theoretical and practical implications of our results are discussed and directions for further research are suggested.

Theoretical background and hypotheses

Career mentoring

The concept of career mentoring was drawn from the three-factor definition of mentoring: career-related mentoring, psychosocial mentoring, and role modeling (Scandura, 1992). Career mentoring has been described as the most important aspect of the mentoring relationship (Haggard, Dougherty, Turban and Wilbanks, 2011). The specific components of career mentoring have been described as follows (Kram, 1988; Scandura and Raggins, 1993). *Coaching* has a critical function in encouraging mentees to acquire technical knowledge and learn the organizational ropes. *Sponsorship* provides essential career-related support allowing mentees' promotion in the workplace. *Protection* refers to the actions of mentors that protect mentees from sudden and harmful situations that impede occupational development. *Visibility and exposure* refer to the opportunities created by mentors that enable mentees to demonstrate

their competence and achievements in the presence of other superiors, while avoiding overprotection. *Challenging tasks assignment* helps mentees acquire management skills and attain accomplishments through vocational training and fulfilment feedback. As such, career mentoring helps newcomers understand the operations of the organization and grooms them for career advancement.

In many companies, mentoring takes place in formal organizational mentoring programs (Allen and O'Brien, 2006; Janssen *et al*., 2016). Organizationally assigned mentoring requires highly capable mentors who are able to establish effective mentoring relationships (Allen, 2007). Allen and Poteet (1999) determined that an ideal mentor should have strong communication skills, patience, and expert knowledge of the organization and the requirements of a formal mentoring program. Mentors with these competencies are more likely to engage in information exchange (i.e., sharing of values, experience; Hunt and Michael, 1983) and to provide mentees with the interactions that lead to successful career-related support (Chandler *et al.*, 2011; Noe, 1988) and to the personal benefits gained from objective and subjective career growth. As such, mentors act as transformational leaders to mentees (Scandura and Schriesheim, 1994).

However, several factors may lead to ineffective mentoring. Hansford, Tennent, and Ehrich (2002) found that mentors may struggle with their mentoring roles, by lacking the time, training skills, and understanding of the goals. For example, in mentoring programs of defined duration, the frequency of interaction will be restricted. As a result, some mentors may be unable to balance the demands of work and mentoring such that work pressures increase. Furthermore, because mentors tend to seek similarity in their mentees to fulfil productivity needs, a mismatch between a mentor and the mentee might lead to less commitment by the mentor to the mentoring relationship (Allen and Eby, 2003), thus reducing its potential through dysfunctional mentoring.

In summary, effective mentors engage in mentoring to obtain personal growth and make their organizations more creative and productive (Scandura, 1998), whereas mentors who lack mentoring skills or are less motivated may have a negative effect on future mentoring relationships for all concerned (Allen and Poteet, 1999; Hunt and Michael, 1983; Noe, 1988). Researchers and organizational practitioners can have a positive impact by considering the mentoring experience from a mentor's viewpoint. In this study, our review of the literature on career mentoring and work engagement led to the development of five hypotheses, described below.

Work engagement

Work engagement is defined as a positive, fulfilling, work-related state of mind. Its underlying

concepts are vigour, dedication, and absorption (Schaufeli, Bakker and Salanova, 2006; Bakker and Demerouti, 2008). Specifically, vigor is characterized by mental resilience and a sense of power with respect to one's work; dedication refers to employees' involvement in their work and their experience of a sense of significance, enthusiasm and challenge; and absorption describes a full sense of work investment despite the demands of time and other difficulties. Thus, engaged employees tend to work with a high level of energy, involvement, and enthusiasm that together improve job performance and the workplace overall (e.g., greater creativity; less turnover) (Bakker and Demerouti, 2008; Bakker, Schaufeli, Leiterc and Tarisd, 2008).

Previous research on work engagement has shown that job resources (e.g., autonomy, supervisory coaching, performance feedback) and personal resources (e.g., optimism, self-efficacy, self-esteem) are the main drivers of work engagement, as they foster personal growth, learning, and development (Bakker *et al*., 2008). In turn, a resourceful work environment provides opportunities for employee development, such as by leader-member exchange (LMX) and other positive reciprocal relationships (Breevaart, Bakker, Demerouti and van den Heuvel, 2015). However, career mentoring relationships have stronger effects on career-related outcomes (e.g., salary progress, promotion) than LMX relationships, because mentoring can serve as a developmental tool employed by mentors to produce desired long-term outcomes (Scandura and Schriesheim, 1994; Chao, Walz and Gardner, 1992). Graen and Uhl Bien (1995) argued that transformational leadership should be the essential nature of LMX. This is consistent with the above discussed transformational leadership role of mentors in mentoring relationships, in which the exchange of information benefits both mentee and mentor. Previous studies have reported that mentoring may enhance the mentor's organizationally related self-esteem and personal learning (e.g., respect and trust; Kram and Isabella, 1985; Rekha and Ganesh, 2019), which is positively related to personal resources (Kram, 1988).

While mentoring implementation can have a positive impact on work engagement, by driving both job and personal resources, the direct relationship between mentoring implementation and work engagement has yet to be explored. Therefore, our first hypothesis is as follows:

H1. *Career mentoring has a positive effect on work engagement*.

Work meaningfulness

Work meaningfulness is a positive psychological condition that confers meaningfulness, safety, and availability in the workplace and thus significantly predicts work engagement (May, Gilson and Harter, 2004; Steger, Dik and Duffy, 2012; Kahn, 1990). Steger *et al*. (2012)

defined work meaningfulness as experiencing positive meaning in work, sensing that work is a key avenue for making meaning and perceiving that work may lead to a greater good. Individuals find meaning in their work based on experiences such as those identifying their presence and sense of belonging (where do I belong?), their relationships (who am I?), and their contributions (what value am I?) (Guevara and Ord, 1996). As such, work meaningfulness makes people feel that they are worthwhile, useful and valuable, which in turn facilitates work engagement (Kahn, 1990).

Work meaningfulness may be influenced by altruism and learning (Warneken and Tomasello, 2009; Washington and Cox, 2016). Previous studies have shown that mentors gain an intrinsic satisfaction from mentoring by learning with mentees (Allen *et al*., 1997), coaching the mentees, or assigning them challenging tasks that contributes to career development and goal achievement (Cox, 2000; Washington and Cox, 2016). These same aspects motivate the mentors themselves (Hu, Wang, Yang and Wu, 2014), because mentors not only provide, but also receive learning within mentoring relationships (Rekha and Ganesh, 2019).

Furthermore, several studies have shown that the perception of work meaningfulness significantly enhances work engagement (May *et al*., 2004; Woods and Sofat, 2013; Salanova and Schaufeli, 2008). Woods and Sofat (2013) found that a sense of meaningfulness is a psychological state that reveals the extent to which an individual positively feels that his/her work is worthwhile or important. May *et al*. (2004) found that psychological meaningfulness is the strongest predictor of work engagement. Conversely, dysfunctional mentoring will prevent employees from experiencing the positive feelings generated by mentoring relationships (Scandura, 1998). Our second hypothesis, aimed at a better understanding of the mentoring experience (Janssen *et al*., 2016; Eby and Robertson, 2020), follows:

H2a. *Career mentoring has a positive effect on work meaningfulness*.

H2b. *Career mentoring has an indirect effect on work engagement through work meaningfulness.*

Learning goal orientation

Goal orientation can be subdivided into learning goal orientation and performance goal orientation (Dweck and Leggett, 1988; Dweck, 1986). Learning goal orientation is defined as the desire to develop competence by acquiring new skills and mastering new situations. Performance goal orientation consists of two dimensions (Vande Walle, 1997): to demonstrate one's own competence and have it favorably judged, and to avoid negative judgments about one's own competence and having others cast doubt on it. Vande Walle (1997) reported that a

learning goal orientation results in the pursuance of more adaptive responses to challenging tasks, whereas a performance goal orientation is maladaptive and can lead to decreased interest in those tasks. Learning goal orientation may promote job performance (Vande Walle, Brown, Cron and Slocum Jr., 1999), increase competence and self-improvement (i.e., job-seeking intensity), and maintain motivation (i.e., engagement; Pintrich, 2000) when difficulties are encountered (Creed, King, Hood, and McKenzie., 2009). Furthermore, it can assist performance-oriented goals such that the necessary efforts are committed to learning situations (Vande Walle *et al*., 1999) and then the desired personal development is achieved (Vande Walle, 1997). It also predisposes people to believe that their abilities are malleable through effort and experience (Klein, Noe and Wang, 2006), which can provide the motivation to treat challenging tasks or obstacles as learning opportunities that lead to growth and success (Vande Walle *et al*., 1999).

Previous mentoring research has investigated the relationship between learning goal orientation to mentees' functioning and career-related outcomes (Godshalk and Sosik, 2003), but little is known about the impact of learning goal orientation on the mentor's side. Career mentoring requires that mentors engage in information exchange (Mullen, 1994), which promotes the development of their interpersonal skills (Noe, 1988) and knowledge but also forces them to overcome the challenges of time limits or dissimilarities with mentees. In this context, a learning goal orientation is a dispositional antecedent that requires mentors to treat these difficulties as learning cues (Allen *et al*., 1997) and developmental possibilities (Matsuo, 2019), in turn motivating them to adaptively analyze and vary their strategies to effectively overcome the obstacles (Dweck, 1986; Dweck and Leggett, 1988). Similarly, Rekha and Ganesh (2019) identified that learning goal orientation is a prerequisite for mentors to gain mutual benefits from engaging in mentoring relationships. These observations together with H1 and H2 lead to the following hypotheses:

H3. *Learning goal orientation has a positive effect on career mentoring*.

H4. *Learning goal orientation has a positive effect on work engagement*.

H5a. *Learning goal orientation has an indirect effect on work engagement through career mentoring*.

Furthermore, a goal-oriented disposition is a major predictor not only of intrinsic satisfaction in the workplace (Duda and Nicholls, 1992) but also of intrinsic interest in understanding a situation and the task domain (Pintrich, 2000; Dweck, 1986). Hence, a learning goal orientation can have positive effects on psychological meaning. Based on our hypotheses that work meaningfulness promotes work engagement, we further hypothesized

that:

H5b. *Learning goal orientation has an indirect effect on work engagement through work meaningfulness*.

In addition to the defined goals, mentors may encounter opportunities that positively influence their sense of meaningful work (May *et al*., 2004). However, a variety of issues (e.g., lack of time and technical skills, mismatching with mentees, personal traits) may arise within the mentoring relationship that disrupt the mentor's confidence or commitment, both of which are crucial for the effectiveness of his or her actions (Cox, 2000). Accordingly, mentors with high learning goal orientation are more likely to develop the psychological capital (i.e., psychological strength) that is needed for the creative aspects of the engagement (Macey and Schneider, 2008) and associated with a future willingness to be a mentor (Eby and Lockwood, 2005; Ragins and Scandura, 1999). Thus, our final hypothesis is:

H5c. *Learning goal orientation has an indirect effect on work engagement through career mentoring, and thus on work meaningfulness*.

These five hypotheses were combined to obtain a conceptual framework of the study, shown in Figure 1.

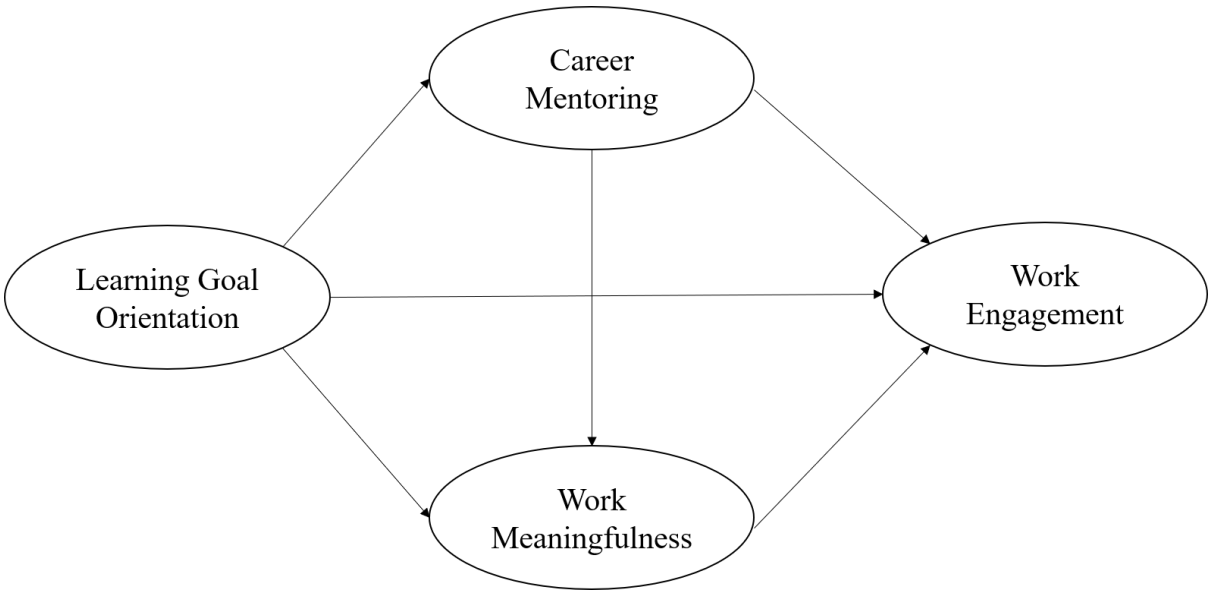


Figure 1 Research model

Method

Samples and data collection

An online questionnaire survey was conducted via a well-known Internet research company in Japan. Questionnaires were distributed to full-time employees working in various types of organizations in Japan, who had participated as mentors in an on-the-job training program for full-time newcomers. Of the 723 distributed questionnaires, 309 employees completed theirs (42.7% response rate).

Among the respondents, 64.4% were male. The respondents worked in private firms (89.6%) and government sectors (10.4%) located in most prefectures in Japan. The age distribution was as follows: 20–29 (18.8%), 30–39 (29.8%), 40–49 (30.4%), 50–59 (16.6%), 60 years and older (4.5%). Their positions were as follows: no title (44%), responsible official (32%), section manager (12.9%), vice director (1.9%), general manager or higher (8.4%) and others (0.6%). Their occupations consisted of sales (24.3%), human resources (4.2%), general affairs (9.4%), financial/accounting (2.9%), cooperate planning (4.2%), information technology (5.5%), engineer (16.5), technology development (7.8%), production (9.4%), purchasing /procurement (0.3%), internal auditing (0.6%), and others (14.9%).

Measures

Back translation

The survey adapted the measures used in research conducted in English. However, because Japanese was the native language of all participants, all items used in the questionnaires were presented in Japanese and then back translated as a quality control method to ensure a precise and comparable transfer of the meaning across the two languages (Ozolins, 2009). We translated the survey items from English to Japanese, and then a bilingual language professional was asked to translate the Japanese items back to English. Any discrepancy between the translations was resolved by discussion.

Career mentoring (CM)

Career mentoring by the mentors was assessed using a 6-item scale (Scandura and Ragins 1993). A sample item was “I take a personal interest in junior employees’ careers.” Each item measured career mentoring on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Learning goal orientation (LGO)

Six items derived from the goal orientation scale of Vande Walle (1997) were used to assess learning goal orientation. An example is the following: “I often read materials related to

my work to improve my ability." Each item measured learning goal orientation on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Work meaningfulness (WM)

Work meaningfulness was evaluation using a 4-item scale, selected from a 4-item meaningfulness through work assessment developed by Steger *et al*. (2012). An example is: "I have found a meaningful career." Each item measured work meaningfulness on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Work engagement (WE)

A 9-item scale derived from Schaufeli *et al*. (2006) was used to assess work engagement, for example, using the statement: "At my work, I feel bursting with energy." Each item measured work engagement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Control variable

Mentoring research has identified several dispositional (e.g., locus of control, self-esteem, affectivity, altruism) and demographic (e.g., sex, age, race, ethnicity) characteristics relevant at the individual level (Young and Perrewé, 2000). However, there has been little discussion of the effects of the organizational context on mentoring relationships (Chandler *et al*., 2011). The survey conducted in this study addressed the organizational position, position tenure, and sex of the mentors as control variables in the analyses of the relationship between mentoring and career outcomes for mentors.

Validation in measures

Before the proposed hypotheses were tested, the recommended reliability coefficient, Cronbach's alpha, was used to test the internal consistency of the constructs (Cronbach, 1951; Nunnally, 1978). Cronbach's alpha for the latter was 0.70, and the values for CM, LGO, WM and WE were 0.83, 0.87, 0.82 and 0.90 respectively. Subsequently, the composite reliability (CR) and average variance extracted (Fornell and Larcker, 1981) were determined, yielding values of 0.7 and 0.5 respectively. Thus, all scales indicated acceptable internal consistency and reliability.

Confirmatory factor analysis (CFA) was adopted to evaluate the convergent validity of the model constructs with four factors (CM, LGO, WM and WE). The result showed that all items were significant for the respective constructs ($p < 0.001$). The goodness-of-fit indexes for the model were as follows: $\chi^2 = 393.63$ ($df = 269$, $p < 0.001$), $\chi^2/df = 1.46$, comparative fit index

(CFI) = 0.92, root mean square error of approximation (RMSEA) = 0.04, and standardized root mean square residual (SRMR) = 0.05. The overall measurement model was therefore appropriate for fitting the data (Hooper, Coughlan and Mullen, 2008).

Assessment of common method bias

The data were collected from self-reported questionnaires measured from a single source. The issue of common method variance (CMV) was examined as follows (Podsakoff, MacKenzie and Podsakoff, 2012). First, the CFA marker technique was applied (Williams, Hartman and Cavazotte, 2010) using the UCLA loneliness scale as a marker variable. The CFA marker technique is a correlational marker technique of controlling the method variance using a marker variable that is theoretically unrelated to substantive variables in a study (Lindell and Whitney, 2001; Williams *et al.*, 2010). Loneliness is unrelated to the concepts used in the research model, which provides an opportunity to assess the presence of the common method bias (Podsakoff *et al.*, 2012; Williams *et al.*, 2010). The effect of this variable was partialed out from the relationships between the studied variables. The original correlation matrix between variables was found to be similar to the partial correlation matrix. The result indicates that there was no serious common bias. As shown in Table 1, the fit indices demonstrated that the four-factor model fit the data much better than the single-factor, two-factor, three-factor or four-factor model.

Table 1 Confirmatory factor analysis (CFA) results for measurement models

Models	$\chi 2$	*df*	χ^2/df	CFI	SRMR	RMSEA
4-factor model	393.63	269	1.46	0.92	0.05	0.04
3-factor model	520.72	272	1.91	0.85	0.08	0.05
2-factor model	646.34	274	2.36	0.77	0.08	0.07
1-factor model	778.62	275	2.83	0.69	0.10	0.08

Note: N = 309 4-factor model: each variable was loaded on a single factor; 3-factor model: career mentoring and work meaningfulness were loaded on one factor; 2-factor model: career mentoring, learning goal orientation and work meaningfulness were loaded on one factor; 1-factor model: all variables were loaded on a single factor.

Results

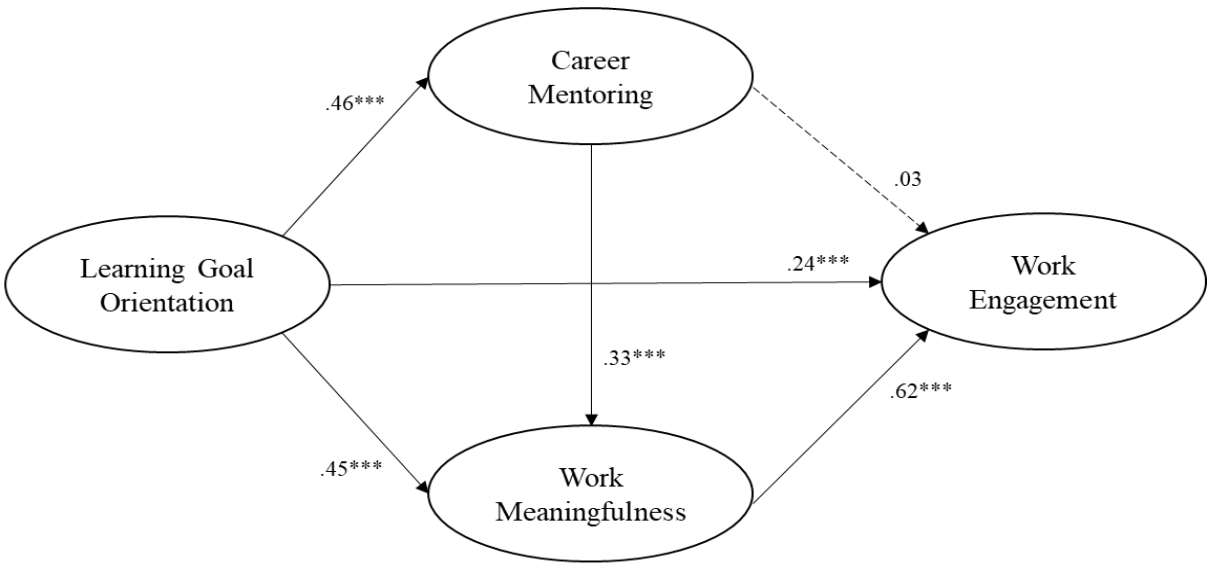
Table 2 shows the means, standard deviations, Cronbach's alpha reliability coefficients, and correlations among the variables included in this study. The proposed research model was tested as follows. First, structural equation modelling (SEM) was used to validate the proposed model. The values of all of the goodness-of-fit statistics for the model were acceptable: χ^2 = 738.15 (df = 335, $p < 0.001$), $\chi^2/df = 2.20$, CFI = 0.90, RMSEA = 0.06, and SRMR = 0.06. The results are summarized in Figure 2 and Table 3, based on standardized estimates among

variables and controlling for the effects of the organizational position, job tenure and sex of the mentors. Indirect effects included in the model were tested by calculating bootstrap estimates. The bootstrap analyses were performed on 2000 random samples, and the results interpreted using the 95% confidence interval (CI) (Table 4).

Table 2 Means, standard deviations, and correlations

Variable	Mean	Standard deviation	1	2	3	4	5	6	7
1 Learning goal orientation	3.64	0.72	(0.83)						
2 Career mentoring	3.41	0.77	0.45 ***	(0.85)					
3 Work meaningfulness	3.49	0.75	0.52 ***	0.45 ***	(0.82)				
4 Work engagement	2.91	0.82	0.56 ***	0.44 ***	0.66 ***	(0.87)			
5 Position	2.01	1.23	0.19 **	0.22 ***	0.06	0.09			
6 Tenure	12.61	9.70	-0.05	0.01	0.01	-0.02	0.36 ***		
7 Gender	1.36	0.48	-0.07	-0.05	0.00	-0.02	0.36 ***	0.29 ***	-

Note: *p < .05; **p < .01; ***p < .001. Cronbach's alpha are shown in the parentheses on the diagonal of the correlation matrix. Position (lowly employee = 1, chief manager = 2, section manager = 3, deputy general manager = 4, general manager or higer = 5, 6= others).Gender (male = 1, female = 2)



Note: n = 309. *p < .05; **p < .01; ***p < .001. The dotted line shows that the coeficient was not significant. The effects of position, tenure and gender were controlled.

Figure 2 Results of structural equation modelling

As shown in Table 3, career mentoring had a nonsignificant effect on work engagement (0.03) but was positively related to work meaningfulness (0.33, p< 0.001). Thus, H2a but not H1 was supported. However, bootstrapping estimates indicated that the relationship between career mentoring and work engagement was indirect and mediated by work meaningfulness

(career mentoring → work meaningfulness → work engagement) (indirect effect = 0.21, 95% CI [0.12, 0.31]), thus supporting hypothesis H2b. The SEM results indicated that a learning goal orientation had a positive direct effect on both career mentoring (0.46, p<0.001) and work engagement (0.24, p<0.01), thus supporting H3 and H4.

Table 3 Structural model estmates (N = 309)

Structural path			Standardized estimate	*t-value*
Learning goal orientation	=>	Career mentoring	0.46	6.79 ***
Learning goal orientation	=>	Work meaningfulness	0.45	5.77 ***
Learning goal orientation	=>	Work engagement	0.24	3.44 **
Career mentoring	=>	Work meaningfulness	0.33	4.05 ***
Career mentoring	=>	Work engagement	0.03	0.41
Work meaningfulness	=>	Work engagement	0.62	8.68 ***
Control variables				
Position	=>	Career mentoring	0.18	2.94 **
Position	=>	Work meaningfulness	-0.12	-2.19 *
Position	=>	Work engagement	0.01	0.23
Tenure	=>	Career mentoring	-0.02	-0.22
Tenure	=>	Work meaningfulness	0.09	1.47
Tenure	=>	Work engagement	-0.01	-0.29
Gender	=>	Career mentoring	0.01	0.20
Gender	=>	Work meaningfulness	0.03	0.50
Gender	=>	Work engagement	0.03	0.53

Note: * p < .05; ** p < .01; *** p < .001
CFI = 0.90; SRMR= 0.06; RMSEA = 0.06; χ^2/df= 2.20

H5a, H5b, and H5c predict that a learning goal orientation has three indirect effects on work engagement (learning goal orientation → career mentoring → work engagement; learning goal orientation → work meaningfulness → work engagement; learning goal orientation → career mentoring → work meaningfulness → work engagement). The bootstrapping results yielded CIs for each one (indirect effect = 0.01, 95% CI [–0.01, 0.07] zero included; indirect effect = 0.28, 95% CI [0.19, 0.38] zero excluded; indirect effect = 0.09, 95% CI [0.05, 0.16] zero excluded). These data indicate that learning goal orientation has an indirect effect on work engagement, through career mentoring, and leads to work meaningfulness. However, while H5b and H5c were supported, H5a was not.

Table 4 Results of indirect effects based on bootstrapping estimates

Indirect effects	Estimate	SE	Bias-corrected 95% CI		Hypothesis
			Lower	Upper	
Effects from CM to WE					
CM => WM => WE	0.21 **	0.06	0.12	0.31	H2b
Effects from LGO to WE (Sum of indirects)	0.39 ***	0.05	0.31	0.49	
LGO=> CM => WE	0.01	0.03	-0.04	0.07	H5a
LGO=> WM => WE	0.28 ***	0.06	0.19	0.38	H5b
LGO=> CM => WM => WE	0.09 **	0.03	0.05	0.16	H5c

Note. N = 309. *p < .05; **p < .01; ***p < .001.
Standardized estimates are reported. Bootstrap sample size = 2000. LGO = learning goal orientation; CM = career mentoring; WM = work meaningfulness; WE = work engagement.

Discussion

Previous studies have extensively focused on the outcomes of mentoring relationships (Eby and Robertson, 2020; Ghosh and Reio, 2013; Janssen *et al*., 2016), however, the current research contributes towards exploring the developmental mechanisms of mentoring experiences from the mentors' viewpoint. The findings revealed that mentoring experience promoted work engagement through work meaningfulness and that learning goal orientation is a personal predictor of career mentoring and work meaningfulness. The results also indicate that learning goal orientation promotes work engagement through career mentoring and subsequently through work meaningfulness.

Theoretical implications

This study offers several contributions to mentoring research. First, mentoring was shown to promote work engagement via work meaningfulness. The findings suggest that mentors may experience meaningfulness at work by contributing to mentees' advancement and success (Cox, 2000; Hu *et al*., 2014; Washington and Cox, 2016), which further results in improving the engagement in their work. As previous studies have indicated, mentors may learn alongside mentees (Allen *et al.*, 1997; Rekha and Ganesh, 2019), as well as gain respect and trust from the mentees and peers by providing effective mentoring functionality to help them attain instrumental goals (Kram and Isabella, 1985). Although these rewarding and learning experiences have been examined as the psychological dispositions that drive mentors to remain engaged not only mentoring but also in their work (Chao *et al*., 1992; Warneken and Tomasello, 2009; Washington and Cox, 2016), the current study specifically identifies in what way the execution of mentoring may influence the mentors' psychology facilitating their work engagement, which has been overlooked previously (Ghosh and Reio, 2013; Janssen *et al.*,

2016). Thus, this study will be of great benefit to practitioners and organizations by extending the understanding of how mentoring experiences affect positive psychological states that promote motivation at work.

Second, the finding demonstrated that learning goal orientation directly and indirectly promotes work meaningfulness through mentoring. It may be interpreted that employees with high learning goals are more likely to regard mentoring as an opportunity of skill development (Dweck and Leggett, 1988; Matsuo, 2019), and participate in understanding a challenging mission intently (Pintrich, 2000; Dweck, 1986, May *et al*., 2004; Vande Walle, 1997). That is, as a few existing studies have identified, individuals assigned as mentors may be accelerated by LGO to sense the meanings within mentoring behaviors (May *et al*., 2004), and subsequently adapt quickly to the difficulties and obstacles by treating them as opportunities to learn (Dweck, 1986; Vande Walle *et al*., 1999). We particularly investigated the role of LGO in mentoring from the mentors' perspective by explaining the way goal-oriented mentors may be internally motivated to provide necessary career-related support and functions as role models. This differs from prior literature which focused on how LGO relates to the mentee's mentoring function received and their career development (Godshalk and Sosik, 2003; Rekha and Ganesh, 2019). Together, we provide additional insight into mentors' psychological process of completing self-improvement by identifying how ideal mentoring experiences are formed (Noe, 1988; Janssen *et al*., 2016; Wang *et al*., 2014).

Finally, the results reveal that work meaningfulness has a positive effect on work engagement, even after controlling the effect of learning goal orientation. Psychological meaningfulness may boost the emotional energy required to increase work involvement, autonomy, and enthusiasm (Kahn, 1990), and thereafter be converted into the vigor, dedication, and absorption that consequently generate one's engagement in the work (Bakker and Demerouti, 2008). These findings are consistent with previous studies reporting a positive relationship between psychological meaningfulness and work engagement (Steger *et al*., 2012; Kahn, 1990). As hypothesized earlier, mentors may become aware of the meaningfulness from the fulfillment of coaching and assigning challenging tasks (Cox, 2000; Hu *et al.*, 2014; Washington and Cox, 2016). Thus, importantly, our study may be a first empirical study that sheds light on how sensing meaningfulness in mentoring implementation fosters work engagement.

Practical implications

This study also provides useful insights for managerial practitioners. When mentors are made aware of the psychological meaningfulness of formal programs, they are more likely to invest their efforts in mentoring. Thus, practical operators should strategically construct meaningful mentoring programs for employees. This should be preceded by educating participants on the value of mentoring programs, which will encourage them to integrate mentoring into their

work schedule (Young and Perrewé, 2000). For example, managers should conduct introductory meetings in which they clarify their expectations of mentors before mentoring starts. In addition, because effective mentoring depends on both participants engaged in the mentoring process, periodic feedback from mentees may promote mentors' motivation in further mentoring.

We also showed that mentors with high-level goals will be more engaged in mentoring and thus find higher psychological meaningfulness in their work. This finding implies that learning-goal-oriented employees are more inspired in their work because the nature of the mentor plays a decisive role in establishing a functional mentoring relationship (Noe, 1988; Turban, Moake, Wu and Cheung, 2017), and motivating the mentee to have high managerial aspirations as well as career satisfaction (Godshalk and Sosik, 2003). Therefore, practitioners should integrate goal orientation into human resource development training programs. In addition, employees should be confronted with new issues, such as the culturally diverse workforce that characterizes today's global organizational environment (Young, Haffejee and Corsun, 2018). The adaptive and creative behaviours of goal-oriented mentors in developing personal relationships are a critical element in the competitiveness of modern organizations (Huang and Luthans, 2015).

Limitations and future research

This study has certain limitations. First, we did not examine how the mentor experience impacts the various aspects of mentoring. For example, in some studies, greater benefits have emerged from dyadic participations in informal rather than formal mentoring arrangements, but in others such as ours, formal mentoring relationships were shown to evolve into informative mentoring relationships and career progress (Kram, 1983; Chao *et al*., 1992). Moreover, technological advancements and globalization have led to innovative forms of mentoring in today's workplace (e.g., e-mentoring; reverse-mentoring; Allen *et al*., 2017).

Second, while we examined the power of career mentoring in the workplace based on a quantitative survey, qualitative assessments are required to determine how psychosocial mentoring and role modeling may benefit mentors, as the psychological impact of serving as a mentor cannot be investigated quantitatively.

Third, although the results showed a nonsignificant effect of gender on the independent variables, other variables should be considered as antecedents of career mentoring in the research model. For example, it would be interesting to examine and control the effects of personality traits on career mentoring, work meaningfulness, and work engagement. Future studies should investigate the roles of other dispositional or demographic variables (Young and Perrewé, 2000) in examining the relationship between mentoring implementation and

psychological states.

Fourth, according to statistical references, at least 10 samples are necessary for one variable (Peduzzi, Concato, Kemper, Holford and Feinstein, 1996). Although the sample size of the present study (n = 309) matches this criterion, a larger sample should be collected to test the invariance or homogeneity of the results.

Finally, although the response rate of this study has no serious drawbacks considering that the average response rate for organizational studies was reported to be 35.7% (Baruch and Holtom, 2008), future research should enhance the response rate and adopt the random sampling method to reduce biased responses.

Conclusion

Mentors may be highly motivated within their work organization as they are likely to find psychological meaningfulness in mentoring programs. However, their aspirations will be influenced by their learning goal orientation. Mentors with more experience were more engaged in their mentoring role than were mentors with less mentoring experience. This difference may be of interest to researchers and practitioners involved in the study and design of mentoring programs.

References

Allen, T. D., Poteet, M. L. and Burroughs, S. M. (1997), 'The mentor's perspective: A qualitative inquiry and future research agenda', *Journal of Vocational Behavior,* **51,** 1, 70-89.

Allen, T. D. and Poteet, M. L. (1999), 'Developing effective mentoring relationships: Strategies from the mentor's viewpoint', *The Career Development Quarterly,* **48,** 1, 59-73.

Allen, T. D. and Eby, L. T. (2003), 'Relationship effectiveness for mentors: Factors associated with learning and quality', *Journal of Management,* **29,** 4, 469-486.

Allen, T. D. and O'Brien, K. E. (2006), 'Formal mentoring programs and organizational attraction', *Human Resource Development Quarterly,* **17,** 1, 43-58.

Allen, T. D. (2007), *'Mentoring relationships from the perspective of the mentor. The Handbook of Mentoring at Work: Theory, research, and practice',* pp. 123-147.

Allen, T. D., Eby, L. T., Chao, G. T. and Bauer, T. N. (2017), 'Taking stock of two relational aspects of organizational life: Tracing the history and shaping the future of socialization and mentoring research', *Journal of Applied Psycholo*gy, **102,** 324–337.

Bakker, A. B. and Demerouti, E. (2008), 'Towards a model of work engagement', *Career Development International,* **13,** 3, 209-223.

Bakker, A. B., Schaufeli, W. B., Leiter, M. P. and Taris, T. W. (2008), 'Work engagement: An emerging concept in occupational health psychology', *Work & Stress,* **22,** 3, 187-200.

Baruch, Y. and Holtom, B. C. (2008), 'Survey response rate levels and trends in organizational research', *Human Relations,* **61,** 8, 1139-1160.

Breevaart, K., Bakker, A. B., Demerouti, E., and Machteld, V. D. H. (2015), 'Leader-member exchange, work engagement, and job performance', *Journal of Managerial Psychology,* **30,** 7, 754-770.

Chao, G. T., Walz, P. and Gardner, P. D. (1992), 'Formal and informal mentorships: A comparison on mentoring functions and contrast with non-mentored counterparts', *Personnel Psychology,* **45,** 3, 619-636.

Chandler, D. E., Kram, K. E. and Yip, J. (2011), 'An ecological systems perspective on mentoring at work: A review and future prospects', *Academy of Management Annals,* **5,** 1, 519-570.

Cox, E. (2000), 'The call to mentor', *Career Development International,* **5,** 4/5, 202-210.

Cronbach, L. J. (1951). 'Coefficient alpha and the internal structure of tests', *Psychometrika,* **16,** 3, 297-334.

Creed, P. A., King, V., Hood, M. and McKenzie, R. (2009), 'Goal orientation, self-regulation strategies, and job-seeking intensity in unemployed adults', *Journal of Applied Psychology,* **94,** 3, 806.

Duda, J. L. and Nicholls, J. G. (1992), 'Dimensions of achievement motivation in schoolwork and sport', *Journal of Educational Psychology,* **84,** 3, 290.

Dweck, C. S. (1986), 'Motivational processes affecting learning', *American Psychologist,* **41,** 10, 1040.

Dweck, C. S. and Leggett, E. L. (1988), 'A social-cognitive approach to motivation and personality', *Psychological Review,* **95,** 2, 256.

Eby, L. T. and Lockwood, A. (2005), 'Protégés' and mentors' reactions to participating in formal mentoring programs: A qualitative investigation', *Journal of Vocational Behavior,* **67,** 3, 441-458.

Eby, L. T. and Robertson, M. M. (2020), 'The psychology of workplace mentoring relationships', *Annual Review of Organizational Psychology and Organizational Behavior,* **7,** 75-100.

Fornell, C., and Larcker, D. F. (1981), 'Structural equation models with unobservable variables and measurement error: algebra and statistics', *Journal of Marketing Research,* **18,** 3, 382-388.

Ghosh, R. and Reio Jr, T. G. (2013), 'Career benefits associated with mentoring for mentors: A meta-analysis', *Journal of Vocational Behavior,* **83,** 1, 106-116.

Godshalk, V. M. and Sosik, J. J. (2003), 'Aiming for career success: The role of learning goal orientation in mentoring relationships', *Journal of Vocational Behavior,* **63,** 3, 417-437.

Graen, G. B. and Uhl-Bien, M. (1995), 'Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective', *Leadership Quarterly,* **6,** 219-247.

Guevara, K. and Ord, J. (1996), 'The search for meaning in a changing work context', *Futures,* **28,** 8, 709-722.

Hansford, B., Tennent, L. and Ehrich, L. C. (2002), 'Business mentoring: help or hindrance?', *Mentoring and Tutoring,* **10,** 2, 101-115.

Haggard, D. L., Dougherty, T. W., Turban, D. B., and Wilbanks, J. E. (2011), 'Who is a mentor? A review of evolving definitions and implications for research', *Journal of Management,* **37,** 1, 280-304.

Hooper, D., Coughlan, J., and Mullen, M. R. (2008), 'Structural equation modeling: guidelines for determining model fit'. *Electronic Journal on Business Research Methods,* **6,** 1, 141-146.

Hunt, D. M. and Michael, C. (1983), 'Mentorship: A career training and development tool', *Academy of Management Review,* **8,** 3, 475-485.

Huang, L. and Luthans, F. (2015), 'Toward better understanding of the learning goal orientation–creativity relationship: The role of positive psychological capital', *Applied Psychology,* **64,** 2, 444-472.

Hu, C., Wang, S., Yang, C. C. and Wu, T. Y. (2014), 'When mentors feel supported: Relationships with mentoring functions and protégés' perceived organizational support', *Journal of Organizational Behavior,* **35,** 1, 22-37.

Janssen, S., van Vuuren, M. and de Jong, M. D. (2016), 'Informal mentoring at work: A review and suggestions for future research', *International Journal of Management Reviews,* **18,** 4, 498-517.

Kahn, W. A. (1990), 'Psychological conditions of personal engagement and disengagement at work', *Academy of Management Journal,* **33,** 4, 692-724.

Klein, H. J., Noe, R. A. and Wang, C. (2006), 'Motivation to learn and course outcomes: The impact of delivery mode, learning goal orientation, and perceived barriers and enablers', *Personnel Psychology,* **59,** 3, 665-702.

Kram, K. E. (1983), 'Phases of the mentor relationship', *Academy of Management Journal,* **26,** 4, 608-625.

Kram, K. E. and Isabella, L. A. (1985), 'Mentoring Alternatives: The Role of Peer Relationships in Career Development', *Academy of Management,* **28,** 1, 110-132.

Kram, K. E. (1988), '*Mentoring at work: Developmental relationships in organizational life'.*

New York: University Press of America.

Lindell, M. K. and Whitney, D. J. (2001), 'Accounting for common method variance in cross-sectional research designs', *Journal of Applied Psychology,* **86,** 1, 114.

Matsuo, M. (2019), 'Empowerment through self-improvement skills: The role of learning goals and personal growth initiative', *Journal of Vocational Behavior,* **115,** 103311.

May, D. R., Gilson, R. L. and Harter, L. M. (2004), 'The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work', *Journal of Occupational and Organizational Psychology,* **77,** 1, 11-37.

Macey, W. H. and Schneider, B. (2008), 'The meaning of employee engagement', *Industrial and Organizational Psychology,* **1,** 1, 3-30.

Noe, R. A. (1988), 'An investigation of the determinants of successful assigned mentoring relationships', *Personnel Psychology,* **41,** 3, 457-479.

Mullen, E. J. (1994), 'Framing the mentoring relationship as an information exchange', *Human Resource Management Review,* **4,** 3, 257-281.

Nunnally, J. C. (1978), *'Psychometric Theory. McGraw-Hill Book Company',* pp. 86-113, 190-255.

Ozolins, U. (2009), 'Back translation as a means of giving translators a voice', *Translation and Interpreting,* **1,** 2, 1-13.

Peduzzi, P., Concato, J., Kemper, E., Holford, T. R. and Feinstein, A. R. (1996), 'A simulation study of the number of events per variable in logistic regression analysis', *Journal of Clinical Epidemiology,* **49,** 12, 1373-1379.

Pintrich, P. R. (2000), 'Multiple goals, multiple pathways: The role of goal orientation in learning and achievement', *Journal of Educational Psychology,* **92,** 3, 544.

Podsakoff, P. M., MacKenzie, S. B. and Podsakoff, N. P. (2012), 'Sources of method bias in social science research and recommendations on how to control it', *Annual Review of Psychology,* **63,** 539-569.

Ragins, B. R. and Scandura, T. A. (1999), 'Burden or blessing? Expected costs and benefits of being a mentor', *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, **20,** 4, 493-509.

Ragins, B. R. and Verbos, A. K. (2007), 'Positive relationships in action: Relational mentoring and mentoring schemas in the workplace', In J. E. Dutton & B. R. Ragins (Eds.), *Exploring positive relationship at work: Building a theoretical and research foundation* (pp. 91–116). Mahwah, NJ: Erlbaum.

Ragins, B. R. and Kram, K. E. (2007), 'The roots and meaning of mentoring. In B. R. Ragins & K. E. Kram (Eds.)', *The handbook of mentoring at work: Theory, research, and*

practice (pp. 3–15). Thousand Oaks, CA: Sage.

Rekha, K. N. and Ganesh, M. P. (2019), 'Factors influencing mentors' learning from mentoring relationships: insights from a serial mediation study in India', *International Journal of Training and Development,* **23,** 3, 221-239.

Salanova, M. and Schaufeli, W. B. (2008), 'A cross-national study of work engagement as a mediator between job resources and proactive behavior', *The International Journal of Human Resource Management,* **19,** 1, 116–131.

Scandura, T. A. (1992), 'Mentorship and career mobility: An empirical investigation', *Journal of Organizational Behavior,* **13,** 2, 169-174.

Scandura, T. A. and Ragins, B. R. (1993), 'The effects of sex and gender role orientation on mentorship in male-dominated occupations' *Journal of Vocational Behavior,* **43,** 3, 251-265.

Scandura, T. A. and Schriesheim, C. A. (1994), 'Leader-member exchange and supervisor career mentoring as complementary constructs in leadership research', *Academy of Management Journal,* **37,** 6, 1588-1602.

Scandura, T. A. (1998), 'Dysfunctional mentoring relationships and outcomes', *Journal of Management,* **24,** 3, 449-467.

Spreitzer, G. M., Kizilos, M. A. and Nason, S. W. (1997), 'A dimensional analysis of the relationship between psychological empowerment and effectiveness satisfaction, and strain', *Journal of Management,* **23,** 5, 679-704.

Schaufeli, W. B., Bakker, A. B. and Salanova, M. (2006), 'The measurement of work engagement with a short questionnaire: A cross-national study', *Educational and Psychological Measurement,* **66,** 4, 701-716.

Steger, M. F., Dik, B. J. and Duffy, R. D. (2012), 'Measuring meaningful work: The work and meaning inventory (WAMI)', *Journal of Career Assessment,* **20,** 3, 322-337.

Turban, D. B., Moake, T. R., Wu, S. Y. H. and Cheung, Y. H. (2017), 'Linking extroversion and proactive personality to career success: The role of mentoring received and knowledge', *Journal of Career Development,* **44,** 1, 20-33.

VandeWalle, D. (1997), 'Development and validation of a work domain goal orientation instrument', *Educational and Psychological Measurement,* **57,** 6, 995-1015.

VandeWalle, D., Brown, S. P., Cron, W. L. and Slocum Jr, J. W. (1999), 'The influence of goal orientation and self-regulation tactics on sales performance: A longitudinal field test', *Journal of Applied Psychology,* **84,** 2, 249.

Wang Y. H., Hu, Ch. Y., Hurst, C. S. and Yang, Ch. Ch. (2014), 'Antecedents and outcomes of career plateaus: The roles of mentoring others and proactive personality', *Journal of Vocational Behavior,* **85,** 319-328.

Hu, C., Wang, S., Yang, C. C. and Wu, T. Y. (2014), 'When mentors feel supported: Relationships with mentoring functions and protégés' perceived organizational support', *Journal of Organizational Behavior,* **35,** 1, 22-37.

Washington, R. and Cox, E. (2016), 'How an evolution view of workplace mentoring relationships helps avoid negative experiences: The developmental relationship mentoring model in action', *Mentoring & Tutoring: Partnership in Learning,* **24,** 4, 318-340.

Warneken, F. and Tomasello, M. (2009), 'The roots of human altruism', *British Journal of Psychology,* **100,** 3, 455-471.

Wen, P., Chen, C., Dong, L. and Shu, X. (2019), 'The Role of Mentoring in Protégés' Subjective Well-Being', *Journal of Career Development,* **46,** 2, 171-183.

Williams, L. J., Hartman, N. and Cavazotte, F. (2010), 'Method variance and marker variables: A review and comprehensive CFA marker technique', *Organizational Research Methods,* **13,** 3, 477-514.

Woods, S. A. and Sofat, J. A. (2013), 'Personality and engagement at work: The mediating role of psychological meaningfulness', *Journal of Applied Social Psychology,* **43,** 11, 2203-2210.

Young, C. A., Haffejee, B. and Corsun, D. L. (2018), 'Developing cultural intelligence and empathy through diversified mentoring relationships', *Journal of Management Education,* **42,** 3, 319-346.

Young, A. M. and Perrewé, P. L. (2000), 'The exchange relationship between mentors and protégés: The development of a framework', *Human Resource Management Review,* **10,** 2, 177-209.