



Research article

Investigating the effect of authentic leadership and employees' psychological capital on work engagement: evidence from Indonesia

Risma Niswaty^{a,*}, Hillman Wirawan^{b,c}, Haedar Akib^a, M. Said Saggaf^d, Dahyar Daraba^e^a The Department of Administrative Sciences, Faculty of Social Sciences, Universitas Negeri Makassar, Makassar, Sulawesi Selatan, Indonesia^b The Department of Psychology, Faculty of Medicine, Universitas Hasanuddin, Makassar, Sulawesi Selatan, Indonesia^c School of Psychology, Faculty of Health, Deakin University, Geelong, Victoria, Australia^d The Department of Public Administration, Universitas Islam Makassar, Makassar, Indonesia^e The Economic Development and Community Empowerment Study Program, Faculty of Government Politics, Institut Pemerintahan Dalam Negeri (IPDN), Jatinangor, Indonesia

ARTICLE INFO

Keywords:

Authentic leadership
PsyCap
Work engagement
Human resources

ABSTRACT

This study aims at investigating the positive effect of Authentic Leadership on Work Engagement and the mediating role of Psychological Capital (PsyCap). This study employed the Jobs Demands Resource (JD-R) model theory to explain the contribution of Authentic Leadership and PsyCap on Work Engagement. Also, the direct effect of Authentic Leadership on employees' PsyCap was examined. This study randomly selected participants from 1,120 employees in one of the largest public service offices in Indonesia. 192 employees (male = 120 or 62.5%) fully participated in a three-wave data collection. By using a Structural Equation Modeling (SEM) technique, this study confirmed that the proposed theoretical model ($\chi^2/df = 2, p < .05, RMSEA = .07, SRMR = .07, CFI = .95$) showed a better fit than the alternative model ($\chi^2/df = 3, p < .05, RMSEA = .09, SRMR = .09, CFI = .85$). The results also confirmed that Authentic Leadership and PsyCap directly predicted Work Engagement. Furthermore, the indirect effect of Authentic Leadership on Work Engagement was positively mediated by employees' PsyCap. Authentic Leadership in Indonesian public organizations may provide a tremendous impact on employees' PsyCap and Work Engagement. This study has provided new insight into the application of the JD-R model in Indonesian public organizations. Discussion, implications, limitations, and future research directions are included.

1. Introduction

Organizations must manage their workforce and pay serious attention to their behaviors, attitudes, and psychological states. Organizations are expected to hire only competent candidates with positive work attitudes. It is expected that organizations consistently develop productive work behaviors and eliminate any counter-productive behaviors (Brown, 2004; Sanyal and Sett, 2011; Soni, 2004; Ulrich et al., 1995). Some previous findings found essential variables such as commitment (Meyer et al., 2002), satisfaction (Leider et al., 2016), engagement (Bakker et al., 2008), Psychological Capital (Luthans et al., 2015), and Leadership (Avolio et al., 2009). These variables are positive for employee's mental states as well as bringing productive performance to the organizations.

As mentioned earlier, Work Engagement has been found as one of the most desirable employee outcomes in organizations (Bakker et al., 2008).

The concept emerged from the positive organizational behavior and eventually became one of the most influential psychological states in organizations (Bakker and Demerouti, 2008). Employees with high Work Engagement potentially perform at their optimum level as they experience a meaningful connection with their tasks. Engaged employees are characterized by Vigor, Dedication, and Absorption in their daily work-life (Bakker, 2011; Bakker et al., 2008). They may interpret challenging work conditions as an engaging situation and a chance to utilize their resources. Hence, throughout the development of work engagement, the organizations benefit from their employees' full effort and subsequently impact business performance (Bakker, 2011).

Some studies have also found evidence of the positive effect of Work Engagement on employee's performance. For instances, researchers found a consistent positive effect of Work Engagement on employee's performance (Bakker and Bal, 2010; Bakker et al., 2008; Breevaart et al.,

* Corresponding author.

E-mail address: risma.niswaty@unm.ac.id (R. Niswaty).

2014). Recent studies also documented the positive effect of Work Engagement on organizational commitment (Simons and Buitendach, 2013) and job crafting (Bakker, 2017). The findings suggested that Work Engagement had a tremendous impact on many vital outcomes in organizations. It is crucial to encourage HR practitioners and scientists to investigate Work Engagement antecedents as it brings many benefits to both employees and organizations. Understanding the antecedents would favor HR practitioners to design a systematic approach to foster Employee Work Engagement.

It is well established from several studies that Work Engagement can be predicted by the employee's psychological resources (Bradbury-Jones, 2015; Joo et al., 2016; Kang and Busser, 2018). Psychological Capital (PsyCap) is a form of employee's psychological resources (Luthans et al., 2015). To illustrate, PsyCap predicted engagement among front-line staff in the hospitality business (Paek et al., 2015), employees in various large for-profit companies (Chaurasia and Shukla, 2014; Joo et al., 2016; Wirawan et al., 2020), and public services (Saleh et al., 2020). Nevertheless, Kang & Busser (2018) and Parrott et al. (2019) postulated that PsyCap and leadership should be employed to predict Work Engagement in different job types (e.g., technician vs. hospitality) and levels (e.g., staff vs. manager).

Evidence has also supported that Authentic Leadership positively impacted employee's engagement (Alok and Israel, 2012; Bamford et al., 2013; Joo et al., 2016; Wang and Hsieh, 2013). Considering these previous findings, it is plausible that both Authentic Leadership and PsyCap contribute a significant positive impact on Work Engagement. However, evidence from an Indonesia for-profit organization suggested contrasting findings because when Authentic Leadership was combined with PsyCap, the effect of Authentic Leadership on Work Engagement was not significant (Wirawan et al., 2020). On the contrary, another study found that only PsyCap positively correlated with employee's Work Engagement, while a positive leadership style had a non-significant effect (Pugar and Parahyanti, 2018). Some studies also found that when combined with other engaging leadership and organizational culture, the positive leadership style (i.e., Transformational Leadership) still contributed a positive impact on Work Engagement (Arifin et al., 2014; Rahmadani and Schaufeli, 2020). Without considering the role of job resources such as organizational support and positive leadership styles, PsyCap showed a positive impact on Work Engagement (Percunda and Putri, 2020).

Although Work Engagement tends to be consistent across different cultures and contexts (Klassen et al., 2012), the contribution of Authentic Leadership and PsyCap as the antecedents of Work Engagement might not always be consistent. In Indonesia, positive leader behaviors could have improved Work Engagement (Arifin et al., 2014; Rahmadani and Schaufeli, 2020; Wirawan et al., 2020). However, employees might also need different resources to deal with day-to-day work demands (Bakker et al., 2008). Thus, fostering PsyCap as an alternative resource may further improve employee's engagement at work. Thus, to advance knowledge in this area, the incremental value of PsyCap when predicting Work Engagement should be examined in line with Authentic Leadership.

Study about the effect of Authentic Leadership and PsyCap on Work Engagement in Indonesia organizations is still developing. There was a possibility that public and private sector Work Engagement were different in terms of levels and antecedents (Vigoda-Gadot et al., 2013). Little is known whether or not the type of organization could change how employees perceive support from their leaders and how they exert their resources (e.g., self-efficacy). The effect of Authentic Leadership on PsyCap has been documented by some researchers (Amunkete and Rothmann, 2015; Daraba et al., 2021). It is also possible that Authentic Leadership influences Work Engagement by fostering employee's psychological resources. In Indonesia, organizations were still largely influenced by high power distance and collectivism in which leadership significantly determined employee outcomes (Heuer et al., 1999; Irwanto, 2009). In Indonesian private sectors, power distance appeared to be lower over time (Heuer et al., 1999) which could reduce the role of

Authentic Leadership in the business sector (Wirawan et al., 2020). In contrast, evidence supported that leadership in public sector still significantly influenced Work Engagement (Alarcon et al., 2010).

Since a recent study in Indonesia has confirmed that Authentic Leadership was less influential than PsyCap in predicting Work Engagement (Wirawan et al., 2020), and Authentic Leadership could influence Work Engagement via PsyCap (Daraba et al., 2021), this current study will focus on testing the theory in an Indonesian public service organization. Hypothetically, both Authentic Leadership and PsyCap potentially improve employee's Work Engagement regardless of the organization types. Testing the effect of Authentic Leadership and PsyCap in Indonesia's public organization will grant new insight into how employees exert different resources in different organizations.

2. Literature review and hypotheses

Drawing from the Jobs Demands Resource (JD-R) model developed by Bakker and Demerouti (2008), Thompson et al. (2015), and Bakker (2011), this study tested the two resources of employee's Work Engagement. Firstly, the job resources contain all fundamental aspects of a job, including the physical environment, social supports, psychological aspects, and the organization. All these factors play an essential role in reducing workload, assisting task achievement, and facilitating the workplace (Schaufeli and Bakker, 2004). Secondly, personal resources also contribute to an essential role in determining one's Work Engagement. Personal resources are positive self-evaluations that help individuals strive in challenging situations (Bakker and Demerouti, 2008). According to the JD-R model (Bakker, 2011), job resources and personal resources are essential for employees.

Leadership determines the magnitude of job resources, and it becomes one of the vital resources for employee's work-engagement (Bakker and Demerouti, 2008). In this case, leaders may act as a primary employee's resource to maintain their engagement or strive in everyday work-life. It has been well established that leadership determines employee work engagement (Saks and Gruman, 2009). For instance, a Transformational and Authentic Leadership style predicted employee engagement and performance (McCull-Kennedy and Anderson, 2002; Prochazka et al., 2017; Tonkin, 2013). Moreover, providing employees with a transformational style and contingent reward potentially increases engagement (Breevaart et al., 2014; Tims et al., 2011). However, some leader's behaviors, such as the management-by-exception style, bring a non-significant effect on employee engagement (Breevaart et al., 2014).

Authentic Leadership is a form of a leader's positive and supportive behaviors. Authentic Leadership can be defined as a leader's authentic behaviors characterized by leaders' positive psychological capacity and ethical values to foster employees' self-development (Walumbwa et al., 2010). Moreover, Walumbwa et al. (2008) stated that authentic leaders tend to display four core behaviors: self-awareness, relational transparency, balanced processing, and internalized moral perspective. Avolio and Gardner (2005) also argued that authentic leaders showed their true self and acted authentically. Authentic leaders are aware of their strengths and weaknesses and focus on followers' self-development (Walumbwa et al., 2010).

Authentic Leadership emerges as one of the most influential leadership styles, and it also shares many characteristics similar to Transformational Leadership (Banks et al., 2016; Tonkin, 2013). Authentic leaders initiate the follower's positive changes by showing a positive role model (Avolio et al., 2009; Gardner et al., 2011). Authentic leaders display honesty and show followers their true selves. These leaders inspire others to engage in the workplace and to optimize their performance. By exhibiting these authentic characteristics, leader can develop employee commitment (Rego et al., 2016), Work Engagement (Walumbwa et al., 2010), and performance (Peterson et al., 2012). Leaders' authentic behaviors can reduce the imbalance between demand and resources by providing transparent communication, the inspiration for self-development, and balanced processing (Walumbwa et al., 2010).

Authentic Leadership provides employees resources to subsequently engage in the organization (Alok and Israel, 2012; Walumbwa et al., 2010; Wang and Hsieh, 2013). Therefore, Authentic Leadership may predict employees Work Engagement. Thus, the first hypothesis will be:

Hypothesis 1. Authentic Leadership will positively predict Work Engagement

On the other hand, Luthans et al. (2015) identified four positive psychological states that positively affected employees' mental states, attitudes, and performance. These four constructs (i.e., Hope, Optimism, Self-Efficacy, and Resiliency) were combined and called Psychological Capital (PsyCap). PsyCap is defined as positive individual developmental states characterized by high self-efficacy, optimism, hope, and resilience (Luthans et al., 2015; Newman et al., 2014; Youssef-Morgan and Luthans, 2015).

According to the JD-R model, personal resources were also found to be the essential antecedent of employee's Work Engagement (Bakker, 2011; Bakker and Demerouti, 2008). PsyCap has been introduced as an employee's resource (Thompson et al., 2015). PsyCap may act as positive characteristics to overcome strains and favor individual achievement in organizations (Luthans et al., 2015). Following the JD-R model, all positive mental states in PsyCap can be exerted by an individual when dealing with exhausted job demands. Employees will be more likely to engage in their work if they have enough personal resources to cope with demanding work. In line with a number of studies, PsyCap is one of the most sought after resources for employee's Work Engagement (De Waal and Pienaar, 2013; Simons and Buitendach, 2013; Thompson et al., 2015). The next hypothesis will be:

Hypothesis 2. PsyCap will positively predict Work Engagement

Having less resources than needed would give employees less control over the demanding work in which later reduces their engagement (Karasek, 1979). Also, the imbalance between effort and reward can lead to work strain (Siegrist, 1996) and consequently reduce well-being (de Jonge et al., 2000). Together, Authentic Leadership and PsyCap can act as resources for employees. Authentic Leadership is a means of providing supervisory supports in this regard may act as the job resource. Similarly, PsyCap with four positive psychological states (e.g., hope, resiliency, efficacy, and optimism) act as personal resources. Some previous studies have shown that Authentic Leadership and Psychological Capital positively influenced employee's attitudes, psychological states, and performance (Adil and Kamal, 2016; Clapp-Smith et al., 2009; Rego et al., 2012). In brief, both Authentic Leadership and PsyCap contribute a positive impact on Work Engagement.

As suggested by the JD-R model, engagement occurs when employees perceive enough resources to deal with job demand (Bakker and Demerouti, 2008). Although Authentic Leadership and PsyCap are two distinct resources that help employees cope with job demand, some lines of evidence have supported that Authentic Leadership directly impacted employee's PsyCap (Adil and Kamal, 2016; Rego et al., 2012, 2016; Wang et al., 2014; Woolley et al., 2011; Zubair and Kamal, 2015). Leaders with authentic characteristics could provide supervisory supports for employee's self-development. Authentic Leaders are able to focus on followers' self-development (Walumbwa et al., 2010). The next hypothesis is as follows:

Hypothesis 3. Authentic Leadership will positively predict PsyCap

As the authentic leaders foster employee's self-development, they also develop employee's PsyCap. Employees with enough psychological resources will have enough resources to deal with demanding tasks at work. Therefore, Authentic Leadership will improve Work-Engagement by developing employee's PsyCap. This leads to the last hypothesis:

Hypothesis 4. PsyCap will mediate the effect of Authentic Leadership on Work Engagement (see Figure 1)

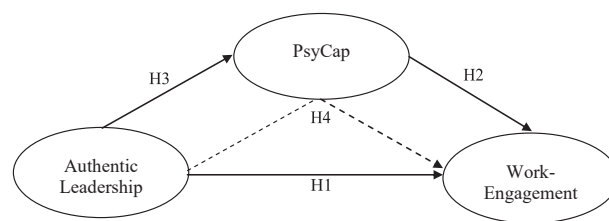


Figure 1. Theoretical model.

3. Method

3.1. Participants and procedure

Participants were recruited during an Annual Employee Engagement survey in a public service office in Makassar, Indonesia. This organization was selected because it was the largest public service office in eastern Indonesia. In order to eliminate common method bias, the data were collected in three waves. Participants were randomly selected from 1,120 personnel with a sample size of 293 (Cochran, 1977). All participants could drop the study at any point without telling their reasons. Demographic variables (e.g., gender and age) and Authentic Leadership were administered in the first wave, PsyCap in the second wave, and Work Engagement in the last wave. In the first wave, there were 220 out of 293 participants completed the survey. However, in the next two weeks, only 211 participants returned the survey. In the final wave of the data collection (two weeks after the second wave), 192 participants completed the survey. Using the G^* power Calculation, this sample size had enough power to eliminate type II error (Erdfelder et al., 2009; Faul et al., 2007). Participants who failed to return the survey in the previous wave were excluded from the next data collection.

There were 192 employees who fully participated in the three-wave data collection or 65.5% of the targeted sample size. The survey was administered with a paper-and-pencil method, and the participants were given the whole workday (from 08.00 am to 04.00 pm) to complete the survey. All participants were identified using a unique participant's code, and no other personal information could be used to identify each participant. This study complied all regulations and research ethic standard in Indonesia, and informed consent was obtained from each participant. The study protocol has been approved by the Research Ethic Committee at Universitas Negeri Makassar (Project ID: 2368.UN36.11/LP2M/2020).

3.2. Measures

3.2.1. Authentic Leadership

The 16-item Authentic Leadership Questionnaire (ALQ) from Avolio et al. (2004) was used to measure employees' perception of his/her immediate supervisor's Authentic Leadership behaviors. The ALQ was constructed using four dimensions; self-awareness (e.g., My leader seeks feedback to improve interactions with others), balanced processing (e.g., My leader solicits views that challenge his or her deeply held positions), internalized moral perspective (e.g., My leader demonstrates beliefs that are consistent with actions) and relational transparency (e.g., My leader says exactly what he or she means). Since the scale was originally developed in English, a scale adaptation process was conducted from English to Bahasa Indonesia. The ALQ used a five-point Likert scale with response options ranged from 1 (strongly disagree) to 5 (strongly agree). Considering discussions and debates about model fit indices (Hu and Bentler, 1999; Marsh and Balla, 1994; Schreiber, 2006; Weston and Gore, 2006), an acceptable model fit shows a combination of $\chi^2/df < 3$, $p > .05$, SRMR and RMSEA $< .09$, GFI and CFI close to .95 and Average Variance Extracted (AVE) higher than .50 for each dimension. Confirmatory Factor Analysis (CFA) confirmed the model was good fit ($\chi^2/df = 2.4$, RMSEA = .06, CFI = .95) with AVE was .58, .62, .52 and .61 for self-awareness,

balanced processing, internalized moral perspective, and relational transparency respectively. The Composite Reliability (CR) was also acceptable with all coefficients higher than .75 for each dimension. The inter-item correlation with Alpha Cronbach yielded .86 for the full measure. The results suggested that the measure had a valid construct and reliable for research purposes.

3.2.2. Psychological Capital

Psychological Capital Questionnaire (short version) or PCQ (Luthans et al., 2015) was used to measure Participants' level of PsyCap in four different dimensions (i.e., Hope, Optimism, Resilience, and Efficacy). The scale has 12 items with three items for each dimension. In the previous validation studies, the PCQ satisfied validity and reliability standard for research purposes (Antunes et al., 2017; Gørgens-Ekermans and Herbert, 2013). The scale response options ranged from 1 (strongly disagree) to 5 (strongly agree). The initial Bahasa Indonesia version of the PCQ was retrieved from the scale publisher (Mind Garden). Using the same cutoff criteria, this study found that the Confirmatory Factor Analysis (CFA) confirmed the model was close fit ($\chi^2/df = 2.6$, RMSEA = .07, CFI = .90) with AVE of .59, .67, .65, and .60 for Hope, Optimism, Resilience, and Efficacy, respectively. All CRs were also acceptable (i.e., higher than .70) for each dimension. The alpha coefficient was .81 for the full-scale inter-item correlations. The findings indicated that the Indonesia version of PCQ had an acceptable construct validity and was deemed reliable for research purposes.

3.2.3. Work engagement

Work Engagement Scale (Schaufeli and Bakker, 2004) was used to measure employees' Work Engagement. Like the other two measures, the scale went through a translate-back-translate procedure from English to Bahasa Indonesia. Based on the above cutoff criteria, the CFA results showed a good-fit model ($\chi^2/df = 2.8$, RMSEA = .07, CFI = .95) with an acceptable Alpha Cronbach (.82) for the full-scale inter-item correlations. Each dimension's discriminant validity was also acceptable with AVE .65, .63, and .61 for Vigor, Dedication, and Absorption, respectively. The CR was also acceptable with a coefficient higher than .72 for each dimension. The validation study supported that the data confirmed a three-factor structure with Vigor (six items), Dedication (five items), and Absorption (six items). The items included "Time flies when I am working" and "I am enthusiastic about my job." Similarly, this scale also used a five-point Likert scale with response options from 1 (strongly disagree) to 5 (strongly agree). Given the results, the Work Engagement Scale was valid and reliable for research purposes.

4. Results and discussion

4.1. Results

4.1.1. Participants' profile

The following Table 1 described participants' gender, job levels, and education:

Table 1. Participants' gender, job levels, and education.

Variable	Category	Frequency	Percentage
Gender	Male	120	62.5
	Female	72	37.5
Level	Staff	176	91.7
	Management	16	8.3
Education	Postgraduate	21	10.9
	Bachelor	70	36.5
	Diploma	5	2.6
	High School	96	50.0

Note: N = 192.

As seen in Table 1, most of the participants were male (62.5%) and 37.5% female. Next, the data were collected mostly from junior staff and only 16 senior staff. In terms of education, 50% had a high school diploma because most of the employees were recruited after completing high school and then enrolled in training and education for four years. There were some (10.9%) who continued their education and held postgraduate degrees.

Table 2 illustrates the participants' age and tenure. Most participants were in their late 20s and had worked for nearly six years. A small number of participants had worked for more than two decades with age older than 50. These results indicated that the participants represented various age and tenure groups.

4.1.2. Descriptive statistics and correlations

In the first step of the analysis, descriptive statistics and bivariate correlations were performed. The following Table 3 shows mean scores, standard deviations, and correlations between variables. As seen in Table 3, all variables in this study were positively and significantly ($p < .05$ to $p < .01$) correlated with Authentic Leadership.

Authentic Leadership was positively associated with PsyCap ($r = .37$, $p < .01$) and with Work Engagement ($r = .39$, $p < .01$). Similarly, PsyCap was positively associated with Work Engagement ($r = .39$, $p < .01$). Authentic Leadership and Work Engagement were positively associated with all PsyCap dimensions, except self-efficacy, while Authentic Leadership was positively associated with all Work Engagement dimensions. In addition, this study did not observe any significant correlations between participants demographic variables with Authentic Leadership, PsyCap, and Work Engagement.

4.1.3. Hypothesis testing using Structural Equation Modeling (SEM)

To test the hypotheses, a Structural Equation Modeling (SEM) was employed using an IBM SPSS and AMOS statistical package (Byrne, 2001; Weston and Gore, 2006). This study proposed a model in which Authentic Leadership directly predicted Work Engagement and indirectly via the role of employees' PsyCap.

The proposed theoretical model was compared with another alternative model. The proposed model consisted of Authentic Leadership and PsyCap as predictors of Work Engagement where PsyCap mediated the relationship between Authentic Leadership and Work Engagement. The alternative model was employed to test if Authentic Leadership and PsyCap could improve the model if they were in the same factor. The model has a good fit if it has a combination of $\chi^2/df < 3$, $p > .05$, RMSEA < .09 and SRMR < .09, and GFI and CFI close to .95 (Byrne, 2001; Hu and Bentler, 1999; Marsh and Balla, 1994; Weston and Gore, 2006). Based on those criteria, the proposed theoretical model yielded a better fit ($\chi^2/df = 2$, $p < .05$, RMSEA = .07, SRMR = .07, CFI = .95) than the alternative model ($\chi^2/df = 3$, $p < .05$, RMSEA = .09, SRMR = .09, CFI = .85). The results confirmed that Authentic Leadership directly contributed to Work Engagement or indirectly via PsyCap. Please refer to the following Figure 2 for this study's empirical model.

Table 2. Participants' age and tenure in year.

	Minimum	Maximum	Mean	Std. Deviation
Age	21	60	29.38	8.94
Tenure	1	25	5.69	5.31

Note: N = 192.

Table 4 showed path coefficients of direct and indirect effects of Authentic Leadership on Work Engagement. All path coefficients were found to be positive and significant indicating that all proposed hypotheses in this study were supported. Therefore, Authentic Leadership positively predicted Work Engagement (Hypothesis 1) and PsyCap (Hypothesis 3), PsyCap positively predicted Work Engagement (Hypothesis 2), and PsyCap mediated the relationship between Authentic Leadership and Work Engagement (Hypothesis 4). The following Table 4 listed the path coefficients for each effect:

4.2. Discussion

This study examined the effect of Authentic Leadership and PsyCap on employees' Work Engagement in the public sector. The indirect effect of Authentic Leadership on Work Engagement was also investigated by examining the mediating role of PsyCap. In general, this study confirmed the proposed theoretical model where Authentic Leadership directly predicted Work Engagement or indirectly via PsyCap. The application of the JD-R model was confirmed as both type of resources (i.e., Authentic Leadership and PsyCap) positively influenced employees' Work Engagement. The JD-R model (Bakker, 2011; Bakker and Demerouti, 2008) and the effort-reward balance principle (Siegrist, 1996) emphasized that reward-effort interaction should be balanced to give employees more control over demanding work. Job and personal resources together provide employees with confidence control over exhausting job demand (Bakker and Demerouti, 2007; Karasek, 1979; Xanthopoulou et al., 2009).

Firstly, this study confirmed that Authentic Leadership positively predicted Work Engagement. Authentic leader characteristics allow a leader to better interact with their subordinates by exhibiting their authentic behaviors. For example, leaders may reveal that they have specific weaknesses, and they need support from others to achieve the organization goals. Perceiving a leader's trustworthiness potentially encourages employees to engage at work as they receive support in completing tasks. Authentic Leadership is also characterized by high self-

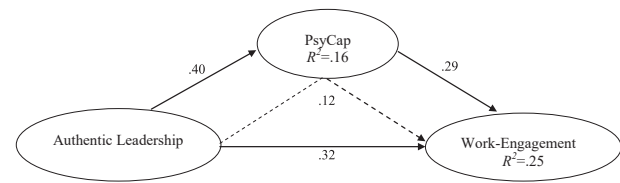


Figure 2. Empirical model.

regulation (Walumbwa et al., 2010). This characteristic ensures employees that they are working under a reliable boss. This study strengthened some previous findings where Authentic Leadership's role was essential in predicting employees' Work Engagement (Alok and Israel, 2012; Walumbwa et al., 2010; Wang and Hsieh, 2013).

On the other hand, this study found that Authentic Leadership also predicted employees' PsyCap. This particular finding was in line with some previous studies where Authentic Leadership contributed to employees' PsyCap (Adil and Kamal, 2016; Rego et al., 2012, 2016; Wang et al., 2014; Woolley et al., 2011; Zubair and Kamal, 2015). Authentic Leaders provide supervisory support for employees' self-development, and they focus on employees' self-development (Walumbwa et al., 2010). Authentic Leadership potentially creates a tremendous impact on employees' mental health, attitudes, and behaviors in the Indonesian public sectors. Leaders' positive characteristics may direct employees' self-development, improve their PsyCap, and restore potential resource loss, which is relevant to maintaining Work Engagement in Indonesian public organizations.

Furthermore, this study also confirmed that Authentic Leadership and PsyCap predicted Work Engagement. Like some recent studies in Indonesia (Daraba et al., 2021; Wirawan et al., 2020), Authentic Leadership and PsyCap were significant predictors for employees' attitudes and performance. However, some jobs (e.g., military, nurses) require a particular type of resource (e.g., positive supervisory behaviors) over the others. For example, employees in the public sector might experience greater supervisory support than their positive psychological states.

Although leadership and psychological states had some positive effects on Work Engagement, in this study Authentic Leadership outperformed the effect of PsyCap. In contrast, Wirawan et al. (2020) found that in some business organizations, the effect of PsyCap was stronger than Authentic Leadership, and the effects were mediated by employees' job satisfaction, while in this current study Authentic Leadership and PsyCap directly predicted employees' Work Engagement and PsyCap

Table 3. Descriptive statistics and correlations.

No.	Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1	AL-Total	59.13	8.86	-												
2	AL-SA	13.87	2.55	.83**	-											
3	AL-IMP	15.01	2.24	.85**	.62**	-										
4	AL-BP	15.39	2.13	.82**	.49**	.65*	-									
5	AL-RT	15.52	2.34	.82**	.53**	.57**	.63**	-								
6	PsyCap-Total	48.62	7.66	.37**	.25**	.26**	.30**	.36**	-							
7	PsyCap-Efficacy	12.95	2.34	.11	.02	.10	.12	.17*	.74**	-						
8	PsyCap-Hope	15.92	2.31	.28**	.27**	.20**	.23**	.24**	.79**	.36**	-					
9	PsyCap-Resilience	12.06	1.85	.33**	.21**	.27**	.27**	.31**	.72**	.29**	.48**	-				
10	PsyCap-Optimism	8.51	1.54	.32**	.24**	.21**	.32**	.35**	.76**	.49**	.47**	.47**	-			
11	WE-Total	62.77	11.66	.39**	.41**	.20*	.21**	.24**	.39**	.12	.22*	.35**	.16*	-		
12	WE-Vigor	22.73	3.37	.36**	.45**	.22**	.26**	.26**	.18*	.05	.20**	.25**	.09	.87**	-	
13	WE-Dedication	19.82	2.93	.33**	.31**	.22**	.21**	.31**	.25**	.18*	.14	.28**	.18*	.82**	.71**	-
14	WE-Absorption	21.78	4.25	.16*	.26**	.10	.08	.06	-.10	-.17*	-.03	.04	-.12	.83**	.52**	.44**

Note: N = 192, *p < 0.05, **p < 0.01, M = Mean, SD = Standard Deviation.

AL = Authentic Leadership, SE = Self Authentic, IMP = Internalized Moral Perspective, BP = Balanced Processing, RT = Relational Transparency.

PsyCap = Psychological Capital, WE = Work Engagement.

Table 4. Path coefficients of direct and indirect effects.

Effect	Path	Estimate
Direct	Authentic Leadership → Work Engagement	.32**
	PsyCap → Work Engagement	.29**
	Authentic Leadership → PsyCap	.40**
Indirect	Authentic Leadership → PsyCap → Work Engagement	.12**

$N = 192$, ** $p < 0.01$.

could also mediate the effect of Authentic Leadership on Work Engagement. Authentic Leadership had a stronger effect on Work Engagement than PsyCap, and it also directly influenced employees' PsyCap. Employees could view their leaders' positive attitudes as a great source of support more than their personal resources. Authentic Leadership stimulated subordinates' confidence and made them believe that they were supported.

Unlike other previous findings in business contexts (Wirawan et al., 2020) and public sectors (Daraba et al., 2021; Saleh et al., 2020; Tamar et al., 2020), this study focused on the direct effect of both leaders' positive characteristics and employees' psychological states on Work Engagement in public organisations. The results confirmed the dominant effect of leadership over employees' positive psychological states. In different contexts, such as in business, education, or hospitality, the effect of leaders' positive behaviours and positive psychological states could also change and it might depend on how subordinates value different resources. Also, in a time of crisis employees potentially expect more support from leaders than from their personal resources (Dirani et al., 2020).

The significant positive impact of Authentic Leadership on PsyCap and Work Engagement is shaped by how subordinates perceive their leaders (Bies et al., 2016). The magnitude of resources might be determined by how subordinates perceive support from supervisor, organization, and their own psychological states. Cultural dimensions (e.g., power distance) can accentuate some resources over others and finally influences many aspects of employees' work-life. This notion appeared to be the case in Indonesia's public organizations. Some public organizations were dominated by high power distance and collectivism in which leadership significantly determines employee outcomes (Heuer et al., 1999; Irawanto, 2009). While the role of power distance showed a downward trend in Indonesia's private sectors (Heuer et al., 1999) and consequently weakened the Authentic Leadership's effect in business sectors (Wirawan et al., 2020), the role of Authentic Leadership could be more potent in Indonesia's public sectors.

Supportive leaders' behaviors, such as Authentic Leadership, are essential for helping employees coping with excessive stress and improving their well-being, performance, and turnover (Harms et al., 2014). Although many tasks exposed employees, they would have enough resources to deal with job demands, which later increased their engagement. A reliable and credible leader provides employees with psychological (e.g., efficacy) and job resources (e.g., leadership support) that help employees strive in their daily work routine.

Beyond the leadership role, many studies have suggested that PsyCap provided personal resources for employees and improved employees' engagement (Chen, 2015; Paek et al., 2015; Simons and Buitendach, 2013; Thompson et al., 2015). PsyCap serves as employees' psychological resources. Regardless of the type of organization, PsyCap consistently provides support for employees across different organizational contexts. As previously mentioned, Authentic Leadership might influence the emergence of positive psychological states and consequently contributes to many desirable employees' outcomes, including Work Engagement. Therefore, although the effect was slightly lower than Authentic Leadership, PsyCap should still be considered a significant predictor for employees' Work Engagement.

4.3. Implications

In terms of theoretical contribution, this study shed light on the importance of Authentic Leadership on employees' psychological states and engagement in public organizations. In addition, this study also supported that PsyCap also contributed significant variances to employees' Work Engagement. However, it is believed that Authentic Leadership plays more vital roles than employees' personal resources in Indonesia's public organizations. Authentic Leadership can directly influence Work Engagement while fostering employees' PsyCap, which eventually also increases Work Engagement.

From a practical point of view, human resources practitioners should further understand how to develop employee engagement by considering various resources. Work Engagement emerges as the results of exerting resources to cope with high job demands. In this sense, the lack of resources will adversely impact employee engagement. Public organizations in Indonesia are still influenced by high power distance, and consequently, the dominant roles of authority figures are largely tolerated. Followers rely on authority and the leader's decision. Employees are prone to perceive leaders as their preferable resource because their roles determine employees' psychological states, engagement and performance. Thus, Authentic Leadership in public sectors has a double impact on employees' outcomes. First, it helps foster employees' positive psychological states, and second, it ensures employees to have enough resources to face challenging work demand.

Human Resources practitioners should take the above discussion into account to design engagement programs in public organizations. They must start at identifying values and approaches in managing human resources. The most influential resources should be understood to nurture its effect on engagement effectively. Besides, some organizations may benefit from exerting their employees' psychological resources, while others depend on job resources (e.g., leadership role). For example, organizations with a semi-military approach (e.g., department of law and human rights, department of immigration) influence their employees' engagement throughout leadership roles. Practitioners can focus on developing Authentic Leadership in these public organizations in order to improve Work Engagement effectively. Hence, PsyCap should also be viewed as an integral part of designing employees' engagement programs in public organizations. Although PsyCap was primarily influenced by Authentic Leadership, it directly determines employees' Work Engagement.

4.4. Limitations and future research directions

Firstly, the data were collected from a main public service office in the eastern part of Indonesia. Although the data seemed sufficient to generate conclusions regarding the effect of leadership and psychological resources, generalization should be made with caution. The sample could be insufficient to generalize the results across different countries or cultures. Therefore, future studies should include a bigger sample size across different organizational types. Secondly, it is beyond this study's scope to investigate the role of moderating variables in the relationships. This study focused on the effect of Authentic Leadership on Work Engagement via the role of PsyCap. Future studies should consider some moderating variables to fully understand the effect of job and personal

resources on engagement. For instance, the study could include the role of Leader-Member Exchange (LMX), Implicit Leadership Theory, organization size, individual differences, and perceived crisis in organization.

5. Conclusions

This study was designed to investigate the effect of Authentic Leadership on Work Engagement via the role of employees' PsyCap in an Indonesian public organization. This study concluded that Authentic Leadership and PsyCap directly predicted employee's Work Engagement and PsyCap mediated the relationship between Authentic Leadership and Work Engagement. Authentic Leadership played important roles in developing subordinates' PsyCap. Leaders with authentic characteristics also provide necessary resources for employees to cope with exhausted job demands. This study has also contributed to our understanding of the application of the JD-R model in Indonesian public organizations. In the Indonesia context, public organizations could have been dominated by authority figures as a result of a high power distance. This condition largely influenced the effect of Authentic Leadership on employee's PsyCap and Work Engagement. Leaders' authenticity may protect followers from further resource loss by displaying positive supervisory support. Authentic leaders also help employees maintain their resources to deal with demanding tasks in organizations.

Declarations

Author contribution statement

Risma Niswaty: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Haedar Akib: Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data.

M. Said Saggaf: Conceived and designed the experiments; Performed the experiments.

Hillman Wirawan: Conceived and designed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Dahyar Daraba: Conceived and designed the experiments.

Funding statement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Data availability statement

The authors do not have permission to share data.

Declaration of interests statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

References

- Adil, A., Kamal, A., 2016. Impact of psychological capital and authentic leadership on work engagement and job related affective well-being. *Pak. J. Psychol. Res.* 31 (1), 1–21.
- Alarcon, G., Lyons, J.B., Tartaglia, F., 2010. Understanding predictors of engagement within the military. *Mil. Psychol.* 22, 301–310.
- Alok, K., Israel, D., 2012. Authentic leadership & work engagement. *Indian J. Ind. Relat.* 47 (3), 498–510.
- Amunkete, S., Rothmann, S., 2015. Authentic leadership, psychological capital, job satisfaction and intention to leave in state-owned enterprises. *J. Psychol. Afr.* 25 (4), 271–281.
- Antunes, A.C., Caetano, A., Pina e Cunha, M., 2017. Reliability and construct validity of the Portuguese version of the psychological capital Questionnaire. *Psychol. Rep.* 120 (3), 520–536.
- Arifin, F., Troena, E., Djumahir, M., 2014. Organizational culture, transformational leadership, work engagement and teacher's performance: test of a model. *Int. J. Educ. Res.* 2 (1), 1–14.
- Avolio, B.J., Gardner, W.L., 2005. Authentic leadership development: getting to the root of positive forms of leadership. *Leader. Q.* 16 (3), 315–338.
- Avolio, B.J., Gardner, W.L., Walumbwa, F.O., Luthans, F., May, D.R., 2004. Unlocking the mask: a look at the process by which authentic leaders impact follower attitudes and behaviors. *Leader. Q.* 15 (6), 801–823.
- Avolio, B.J., Walumbwa, F.O., Weber, T.J., 2009. Leadership: current theories, research, and future directions. *Annu. Rev. Psychol.* 60 (1), 421–449.
- Bakker, A.B., 2011. An evidence-based model of work engagement. *Curr. Dir. Psychol. Sci.* 20 (4), 265–269.
- Bakker, A.B., 2017. Job crafting among health care professionals: the role of work engagement. *J. Nurs. Manag.* August, 1–11.
- Bakker, A.B., Bal, P.M., 2010. Weekly work engagement and performance: a study among starting teachers. *J. Occup. Organ. Psychol.* 83 (1), 189–206.
- Bakker, A.B., Demerouti, E., 2007. The Job Demands-Resources model: state of the art. *J. Manag. Psychol.* 22 (3), 309–328.
- Bakker, A.B., Demerouti, E., 2008. Towards a model of work engagement. *Career Dev. Int.* 13 (3), 209–223.
- Bakker, A.B., Schaufeli, W.B., Leiter, M.P., Taris, T.W., 2008. Work engagement: an emerging concept in occupational health psychology. *Work. Stress* 22 (3), 187–200.
- Bamford, M., Wong, C.A., Laschinger, H., 2013. The influence of authentic leadership and areas of worklife on work engagement of registered nurses. *J. Nurs. Manag.* 21 (3), 529–540.
- Banks, G.C., McCauley, K.D., Gardner, W.L., Guler, C.E., 2016. A meta-analytic review of authentic and transformational leadership: a test for redundancy. *The Leadership Quarterly*.
- Bies, R.J., Tripp, T.M., Shapiro, D.L., 2016. Abusive leaders or master motivators? "Abusive" is in the eye of the beholder. *Understanding the High Performance Workplace: the Line between Motivation and Abuse*.
- Bradbury-Jones, C., 2015. Review: engaging new nurses: the role of psychological capital and workplace empowerment. *J. Res. Nurs.* 20 (4), 278–279.
- Breevaart, K., Bakker, A., Hetland, J., Demerouti, E., Olsen, O.K., Espevik, R., 2014. Daily transactional and transformational leadership and daily employee engagement. *J. Occup. Organ. Psychol.* 87 (1), 138–157.
- Brown, K., 2004. Human resource management in the public sector. *Publ. Manag. Rev.* 6 (3), 303–309.
- Byrne, B.M., 2001. Structural equation modeling with AMOS, EQS, and LISREL: comparative approaches to testing for the factorial validity of a measuring instrument. *Int. J. Test.* 1 (1), 55–86.
- Chaurasia, S., Shukla, A., 2014. Psychological capital, LMX, employee engagement & work role performance. *Indian J. Ind. Relat.* 50 (2), 342–357.
- Chen, S.-L., 2015. The relationship of leader psychological capital and follower psychological capital, job engagement and job performance: a multilevel mediating perspective. *Int. J. Hum. Resour. Manag.* 26 (18), 2349–2365.
- Clapp-Smith, R., Vogelgesang, G.R., Avey, J.B., 2009. Authentic leadership and positive psychological capital. *J. Leader. Organ. Stud.* 15 (3), 227–240.
- Cochran, W.G., 1977. *Sampling Techniques*, third ed. John Wiley & Sons, Inc.
- Daraba, D., Wirawan, H., Salam, R., Faisal, M., 2021. Working from home during the corona pandemic: investigating the role of authentic leadership, psychological capital, and gender on employee performance Working from home during the corona pandemic: investigating the role of authentic leadership, psyc. *Cogent Bus. Manag.* 8 (1), 1–17.
- de Jonge, J., Bosma, H., Peter, R., Siegrist, J., 2000. Job strain, effort-reward imbalance and employee well-being: a large-scale cross-sectional study. *Soc. Sci. Med.* 50 (9), 1317–1327.
- De Waal, J.J., Pienaar, J., 2013. Towards understanding causality between work engagement and psychological capital. *SA J. Ind. Psychol.* 39 (2).
- Dirani, K.M., Abadi, M., Alizadeh, A., Barhate, B., Garza, R.C., Gunasekara, N., Ibrahim, G., Majzun, Z., 2020. Leadership competencies and the essential role of human resource development in times of crisis: a response to Covid-19 pandemic. *Hum. Resour. Dev. Int.* 23 (4), 1–15.
- Erdfelder, E., Faul, F., Buchner, A., Lang, A.G., 2009. Statistical power analyses using G*Power 3.1: tests for correlation and regression analyses. *Behav. Res. Methods* 41 (4), 1149–1160.
- Faul, F., Erdfelder, E., Lang, A.G., Buchner, A., 2007. G*Power 3: a flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behav. Res. Methods* 39 (2), 175–191.
- Gardner, W.L., Cogliser, C.C., Davis, K.M., Dickens, M.P., 2011. Authentic leadership: a review of the literature and research agenda. *Leader. Q.* 22 (6), 1120–1145.
- Görgens-Ekermans, G., Herbert, M., 2013. Psychological capital: internal and external validity of the psychological capital Questionnaire (PCQ-24) on a South African sample. *SA J. Ind. Psychol.* 39 (2), 1–13.
- Harms, P.D., Krasikova, D.V., Vanhove, A.J., Herian, M.N., Lester, P.B., 2014. "Stress and emotional well-being in military organizations" in the role of emotion and emotion regulation in job stress and well being. *Res. Occup. Stress Well Being* 11 (1), 103–132.
- Heuer, M., Cummings, J.L., Hutabarat, W., 1999. Cultural stability or change among managers in Indonesia? *J. Int. Bus. Stud.* 30 (3), 599–610.

- Hu, L.T., Bentler, P.M., 1999. Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Struct. Equ. Model.* 6 (1), 1–55.
- Irawanto, D.W., 2009. An analysis of national culture and leadership practices in Indonesia. *J. Divers. Manag.* 4 (2), 41–48.
- Joo, B.K., Lim, D.H., Kim, S., 2016. Enhancing work engagement: the roles of psychological capital, authentic leadership, and work empowerment. *Leader. Organ. Dev. J.* 37 (8), 1117–1134.
- Kang, H. J. (Annette), Busser, J.A., 2018. Impact of service climate and psychological capital on employee engagement : the role of organizational hierarchy. *Int. J. Hospit. Manag.* 75 (1), 1–9.
- Karasek, R.A., 1979. Job demands , job decision latitude, and mental strain: implications for job redesign. *Adm. Sci. Q.* 24 (2), 285–308.
- Klassen, R.M., Aldhafri, S., Mansfield, C.F., Purwanto, E., Siu, A.F.Y., Wong, M.W., Woods-Mcconney, A., 2012. Teachers engagement at work: an international validation study. *J. Exp. Educ.* 80 (4), 317–337.
- Leider, J.P., Harper, E., Shon, J.W., Sellers, K., Castrucci, B.C., 2016. Job satisfaction and expected turnover among federal, state, and local public health practitioners. *Am. J. Publ. Health* 106 (10), 1782–1788.
- Luthans, F., Youssef-Morgan, C.M., Avolio, B.J., 2015. *Psychological Capital and beyond*. Oxford University Press.
- Marsh, H.W., Balla, J., 1994. Goodness of fit in confirmatory factor analysis: the effects of sample size and model parsimony. *Qual. Quantity* 28 (2), 185–217.
- McCull-Kennedy, J.R., Anderson, R.D., 2002. Impact of leadership style and emotions on subordinate performance. *Leader. Q.* 13 (5), 545–559.
- Meyer, J.P., Stanley, D.J., Herscovitch, L., Topolnysky, L., 2002. Affective, continuance, and normative commitment to the organization: a meta-analysis of antecedents, correlates, and consequences. *J. Vocat. Behav.* 61 (1), 20–52.
- Newman, A., Ucbasaran, D., Zhu, F.E.I., Hirst, G., 2014. Psychological capital: a review and synthesis. *J. Organ. Behav.* 138 (1), 120–138.
- Paek, S., Schuckert, M., Kim, T.T., Lee, G., Terry, T., Lee, G., 2015. Why is hospitality employees' psychological capital important? The effects of psychological capital on work engagement and employee morale. *Int. J. Hospit. Manag.* 50, 9–26.
- Parrott, L., Cazzell, M., Dragon, W., Basham, G., 2019. Understanding key drivers of staff and manager engagement: linking research to leadership. *Nurse Leader* 17 (3), 248–252.
- Percunda, A.D., Putri, N.K., 2020. Hospital nurses' psychological capital and work engagement – are they really related? The case of an Indonesian hospital. *J. Health Transl. Med.* 23 (1), 52–59.
- Peterson, S.J., Walumbwa, F.O., Avolio, B.J., Hannah, S.T., 2012. RETRACTED: the relationship between authentic leadership and follower job performance: the mediating role of follower positivity in extreme contexts. *Leader. Q.* 23 (3), 502–516.
- Prochazka, J., Gilova, H., Vaculik, M., 2017. The relationship between transformational leadership and engagement: self-efficacy as a mediator. *J. Leader. Stud.* 11 (2), 22–33.
- Pugar, D.H., Parahyanti, E., 2018. Correlation between transformational leadership, psychological capital and work engagement. In: *Proceedings of the Universitas Indonesia International Psychology Symposium for Undergraduate Research (UIPSUR 2017)*, 139, pp. 75–79. Uipsur 2017.
- Rahmadani, V.G., Schaufeli, W.B., 2020. Engaging leadership and work engagement as moderated by “diuwongke”: an Indonesian study. *Int. J. Hum. Resour. Manag.* 1–29, 0(0).
- Rego, A., Sousa, F., Marques, C., Cunha, M.P.e., 2012. Authentic leadership promoting employees' psychological capital and creativity. *J. Bus. Res.* 65 (3), 429–437.
- Rego, P., Lopes, M.P., Nascimento, J.L., 2016. Authentic leadership and organizational commitment: the mediating role of positive psychological capital. *J. Ind. Eng. Manag.* 9 (1), 129–151.
- Saks, A.M., Gruman, J.A., 2009. What do we really know about employee engagement? *Comput. Complex.* 2 (1), 1–9.
- Saleh, A., Wirawan, H., Tamar, M., 2020. Improving health care service through healthy psychological capital and positive attitudes. *Int. J. Adv. Sci. Eng. Inf. Technol.* 10 (4), 1723–1730.
- Sanyal, S., Sett, P.K., 2011. Managing human resources in dynamic environments to create value: role of HR options. *Int. J. Hum. Resour. Manag.* 22 (9), 1918–1941.
- Schaufeli, W.B., Bakker, A.B., 2004. Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study. *J. Organ. Behav.* 25 (3), 293–315.
- Schreiber, J.B., 2006. Modeling and confirmatory factor Analysis Results : a review. *J. Educ. Res.* 99 (6), 324–337.
- Siegrist, J., 1996. Adverse health effects of high-effort/low-reward conditions. *J. Occup. Health Psychol.* 1 (1), 27–41.
- Simons, J.C., Buitendach, J.H., 2013. Psychological capital, work engagement and organisational commitment amongst call centre employees in South Africa. *SA J. Ind. Psychol.* 39 (2), 1–12.
- Soni, V., 2004. From crisis to opportunity: human resource. *Rev. Pol. Res.* 21 (2), 157–178.
- Tamar, M., Wirawan, H., Saleh, A., 2020. Investigating the effects of psychological capital on nurses' positive attitude and behavior; evidence from Indonesia. *J. Crit. Rev.* 7 (15), 273–284.
- Thompson, K.R., Lemmon, G., Walter, T.J., 2015. Employee engagement and positive psychological capital. *Organ. Dynam.* 44 (3), 185–195.
- Tims, M., Bakker, A.B., Xanthopoulou, D., 2011. Do transformational leaders enhance their followers' daily work engagement? *Leader. Q.* 22 (1), 121–131.
- Tonkin, T.H., 2013. Authentic versus transformational Leadership : assessing their effectiveness on organizational citizenship behavior of followers. *Int. J. Bus. Publ. Admin.* 10 (1), 40–62.
- Ulrich, D., Brockbank, W., Yeung, A.K., Lake, D.G., 1995. Human resource competencies: an empirical assessment. *Hum. Resour. Manag.* 34 (4), 473–495.
- Vigoda-Gadot, E., Eldor, L., Schohat, L.M., 2013. Engage them to public service: conceptualization and empirical examination of employee engagement in public administration. *Am. Rev. Publ. Adm.* 43 (5), 518–538.
- Walumbwa, F.O., Avolio, B.J., Gardner, W.L., Wernsing, T.S., Peterson, S.J., 2008. Authentic leadership: development and validation of a theory-based measure. *J. Manag.* 34 (1), 89–126.
- Walumbwa, F.O., Wang, P., Wang, H., Schaubroeck, J., Avolio, B.J., 2010. Psychological processes linking authentic leadership to follower behaviors. *Leader. Q.* 21 (5), 901–914.
- Wang, D.-S., Hsieh, C.-C., 2013. The effect of authentic leadership on employee trust and employee engagement. *SBP (Soc. Behav. Pers.)* 41 (4), 613–624.
- Wang, H.U.I., Sui, Y., Luthans, F., Wang, D., Wu, Y., 2014. Impact of authentic leadership on performance : role of followers' positive psychological capital and relational processes. *J. Organ. Behav.* 21 (February 2012), 5–21.
- Weston, R., Gore, P.A., 2006. A brief guide to structural equation modeling. *Counsel. Psychol.* 34 (5), 719–751.
- Wirawan, H., Jufri, M., Saman, A., 2020. The effect of authentic leadership and psychological capital on work engagement: the mediating role of job satisfaction. *Leader. Organ. Dev. J.* 41 (8), 1139–1154.
- Woolley, L., Caza, a., Levy, L., 2011. Authentic leadership and follower development: psychological capital, positive work climate, and gender. *J. Leader. Organ. Stud.* 18 (4), 438–448.
- Xanthopoulou, D., Bakker, A.B., Demerouti, E., Schaufeli, W.B., 2009. Reciprocal relationships between job resources, personal resources, and work engagement. *J. Vocat. Behav.* 74 (3), 235–244.
- Youssef-Morgan, C.M., Luthans, F., 2015. Psychological capital and well-being. *Stress Health* 31 (3), 180–188.
- Zubair, A., Kamal, A., 2015. Authentic leadership and creativity; mediating role of work-related flow and psychological capital. *J. Behav. Sci.* 25 (1), 150–171.