POLITICS & INTERNATIONAL RELATIONS | RESEARCH ARTICLE

The effect of psychological capital on performance through the role of career engagement: Evidence from Indonesian public organizations

Daswati Daswati¹, Hillman Wirawan², Syahruddin Hattab², Rudi Salam⁴,⁵ and Ahmad Syarief Iskandar⁶

Abstract: This study aims at investigating the effect of Psychological Capital (PsyCap) on employees’ career engagement and performance in public service organisations in Indonesia. Using the Jobs Demands-Resources (JD-R) model, this study also examines the indirect effect of PsyCap on performance through the mediating role of career engagement. Participants were full-time employees from various public service organizations in Indonesia (e.g., schools). The study was advertised mainly via alumni network groups. After a three-phase data collection, 265 participants fully completed the study. The data were collected using Psychological Capital Questionnaire (PCQ), Career Engagement Scale (CES), and Individual Performance Scale (IPS) and analyzed using a Structural Equation Modeling (SEM) technique. This study found the positive effect of PsyCap on employees’ career engagement and performance. Career engagement positively mediated the indirect effect of PsyCap on employees’ performance. Drawing from the JD-R model and the work engagement perspective, this study postulated that PsyCap provided significant personal resources to help employees cope with demanding career-related activities. While employees engaged in career

ABOUT THE AUTHOR

Daswati and Syahruddin Hattab are associate professors in Public Administration sciences at Universitas Tadulako. They focus on studying leadership practices in public service organizations. Some of their research projects intend to develop positive behaviors in public organizations. Hillman Wirawan is a lecturer and researcher at the Department of Psychology, Universitas Hasanuddin. He is also a current PhD student at the School of Psychology, Deakin University, Australia. Many of his works aim to explore the effect of positive and negative leadership in organizations. His recent works were published in Taylor and Francis, Elsevier, and Emerald publishing groups. Ahmad Syarief Iskandar is an associate professor at the Faculty of Islamic Economic and Business, IAIN Palopo. His research projects mainly focus on management, consumer behaviors, and marketing strategies.

PUBLIC INTEREST STATEMENT

Performance is essential for employees and organizations across the globe. Following the work engagement principles and theory, we investigated how career engagement mediated the effect of employees’ psychological resources (i.e., PsyCap) on performance (i.e., task and contextual performance) in public organizations. After performing the SEM technique, we found that PsyCap positively improved career engagement and the improvement of career engagement also increased employees’ performance. Our findings were in line with the JD-R model and work engagement theory. Employees in public service organizations should carefully evaluate their career-related activities and how their psychological states, such as self-efficacy, favor their career engagement. The career engagement concept is a new type of engagement in the workplace, and it still needs further investigation.
advancement activities, they also improved their performance. PsyCap provided the employees with psychological resources (e.g., self-efficacy) which were fruitful for their career engagement and performance. Career engagement, on the other hand, helped facilitate the effect of PsyCap on performance. This study is among a few studies that focus on investigating career engagement in public organizations. Discussion, implications, and future research directions are included.

**Subjects:** Public Administration & Management; Public Management; Public Services; Public Management; Civil Service & Public Sector

**Keywords:** Public service organization; PsyCap; career engagement; performance; personal resources

1. **Introduction**

In many studies, employees’ well-being has been investigated by many researchers as an important part of an individual’s mental health in organizations (Ryff, 1995; Sloan, 2012; Van Dierendonck et al., 2004; Wright & Cropanzano, 2000; Young & Bhoumik, 2011). As suggested by some studies, employees’ well-being significantly improved performance (Boddy, 2014; Wright & Cropanzano, 2000). Psychological aspects have some positive impacts on desired employee outcomes. Psychological Capital (PsyCap) has been well known as one of the most powerful psychological resources for employees (Ahmad et al., 2019; Bogler & Somech, 2019; Percunda & Putri, 2020; Wang et al., 2017). PsyCap showed a positive effect on many employees’ outcomes (Ahmad et al., 2019; Berghiem et al., 2015; Karatepe & Avci, 2017; Luthans & Youssef-Morgan, 2017; Wirawan et al., 2020; Zhong & Ren, 2009). Specifically, the role of PsyCap, directly and indirectly, contributes to employees’ performance (Ahmad et al., 2019; Calheiros, 2018; Luthans & Youssef-Morgan, 2017; Newman et al., 2014; Peterson et al., 2011; Tamar et al., 2020). The literature has reached a considerably firm conclusion that PsyCap, in general, influenced how individuals behave in workplace contexts.

In several studies, the effect of PsyCap on employees’ attitudes, perceptions, behaviors, and performance was mediated by other variables. For example, the relationship between PsyCap and employee outcomes such as performance, safety, turnover intention, and engagement is mediated by job embeddedness (Sun et al., 2011), job satisfaction (Bergheim et al., 2015), and empowerment (Joo et al., 2016). Employees might have some benefits for possessing a high PsyCap. However, the effect of PsyCap might be mediated by other factors in the organization. Therefore, it is still crucial to investigate how PsyCap influences employees’ performance through a mediating variable.

Apart from the positive effect of PsyCap, career engagement has been introduced as one of the most important factors in a workplace context (Hirsch & Freund, 2014; Hirsch et al., 2011). The link between positive psychological states (e.g., optimism) and career engagement has also been established (Bharti & Rangnekar, 2019; Kim et al., 2014; McIveen & Perera, 2016). However, studies about the role of career engagement in the public organization context are still in infancy. Work engagement potentially shares similar features with career engagement (Neault & Pickerell, 2011). Investigating how PsyCap affects career engagement and performance will shed light on the literature in this area. In addition, a mechanism in which career engagement mediates the effect of PsyCap on performance will also enlighten our understanding of the positive effect of PsyCap in a public organization setting.

PsyCap and career engagement are both employees’ positive psychological states. PsyCap can predict performance while career engagement hypothetically also has a similar effect with work engagement. Thus, PsyCap and career engagement potentially improve performance. Although most studies have supported this notion, the role of career engagement must be investigated as an essential part of the relationship. On the other hand, performance is the key to success in organizations, and this idea also applies to the public service sector. That is, measuring and predicting performance will contribute to both organizational sciences and practices.
Indonesian public organizations have some distinct features compared to business organizations. In Indonesia, public organization employees are managed by the state and central government. The policies could determine how people engage and perform in a public organization. Although it generally shares many similarities with business organizations, human resources are managed with a different approach (Daraba et al., 2021). Unlike their business counterparts, the state and central government manage employment and career planning in public organizations. For example, the employees are recruited through a national selection, and their promotions are monitored by the Indonesian National Civil Service Agency. Similarly, their performance indicators were set and developed by the central government. As proposed earlier, employees will engage in career-related activities if they perceive enough resources to overcome demanding tasks. In this case, they should rely on their psychological resources (i.e., PsyCap) if the state and central government representatives do not provide immediate support when they face a challenging career-related tasks. Understanding how PsyCap improves career activities and performance, and how career engagement improves performance will contribute to the human resource practices in public service sectors.

The public organization circumstances could attract some questions concerning the effect of PsyCap on career engagement and performance. To address this issue, some scholars from Indonesia conducted studies and found that PsyCap positively impacted work engagement across various Indonesian public organizations (Niswoty et al., 2021; Saleh et al., 2020; Tamar et al., 2020; Wirawan et al., 2020). A scientific investigation is necessary to examine whether a similar impact persists for employees’ career engagement in public organizations. Therefore, it is pivotal to investigate how PsyCap contributes to employees’ career engagement and performance, and how career engagement mediates the effect of PsyCap on performance in public organizations.

2. Literature review and hypotheses
This study will first explain the concept of PsyCap and career engagement before further explain the indirect effect of PsyCap on performance via the role of career engagement. The relationship between variables will be drawn using the Jobs Demands-Resources (JD-R) model theory (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004).

PsyCap emerged from the notion of positive work behaviors in organizational contexts, and it has been known for its positive impacts on both employees and organizations (Luthans, Youssef et al., 2007; Luthans & Youssef-Morgan, 2017; Luthans et al., 2015; Newman et al., 2014; Youssef-Morgan & Luthans, 2015). PsyCap can be defined as employees’ positive mental states that help them cope with demanding tasks, maintain positive attitudes and behaviors, and energise their performance. The PsyCap construct consists of four positive psychological dimensions: hope, optimism, resiliency, and efficacy (Luthans, Youssef et al., 2007; Luthans et al., 2015). These dimensions, for some researchers, were believed as state-like dimensions because they tend to be stable over time, and the individual still has an opportunity to improve these states (Newman et al., 2014; Youssef-Morgan & Luthans, 2015). A line of evidence also supports that PsyCap positively affects desirable employees’ outcomes (Abbas & Raja, 2015; Calheiros, 2018; Gupta et al., 2017; Luthans et al., 2010; Nafei, 2015; Rabenu et al., 2017).

On the other hand, work engagement emerged as positive work behaviors in organizations (Bakker, 2011). Employees with high work engagement show attachment to their work roles, and they dedicate their time and energy to complete their tasks (Bakker, 2011; Bakker & Demerouti, 2008; Bakker et al., 2008). This concept morphed and intertwined with workplace career engagement principles (Bharti & Rangnekar, 2019). Career engagement is an emerging positive concept in organizational studies and can be defined as the extent to which people seek opportunities to advance their career (Hirschi, 2011, 2014; Hirschi & Freund, 2014; Hirschi et al., 2014, 2011). Also, Vondracek et al. (2010) argued that career engagement is an individual’s effort to promote career success. People with high career engagement will proactively seek information and opportunities, improve their skills, and engage in career advancement activities (Hirschi, 2011;
Hirschi & Freund, 2014; Hirschi et al., 2014). These activities may include career planning, career self-exploration, environmental career exploration, networking, voluntary human capital and skill development, and positioning behaviors (Hirschi, 2011; Hirschi & Freund, 2014; Hirschi et al., 2014). In other words, employees who have high career engagement will actively seek opportunities to promote their career success in their organization.

People in organizations need supports and resources to accomplish tasks and achieve goals (Alessandri et al., 2018; Christian & Slaughter, 2007; Shabbir et al., 2021). According to the JDR model, employees might experience burnout due to demanding jobs and a lack of resources. In a condition where job demands are high, and resources are limited, people will be more likely to experience exhaustion (Bitmiş & Ergeneli, 2015; Hakanen et al., 2006; Schaufeli & Bakker, 2004). On the contrary, work engagement will be more likely to occur if job demands are coupled with available resources (Bakker & Demerouti, 2008; Bakker et al., 2012; Schaufeli & Bakker, 2004; Truss, 2013). Drawing from this perspective, this study theorizes that career engagement shares similar features with employees’ work engagement. In that sense, employees will engage in career advancement activities if enough resources support their career demands.

The effect of PsyCap on career engagement will be similar to the effect of PsyCap on work engagement. As found by some studies, PsyCap could act as the employees’ resources and helped them to maintain the level of engagement in organizations (Adil & Kamal, 2016; Chaurasia & Shukla, 2014; Gupta et al., 2017; Joo et al., 2016; Simons & Buitendach, 2013; Thompson et al., 2015; Wirowan et al., 2020). Employees who are working in public service sectors also need resources to accomplish goals and overcome demanding tasks. Hope, efficacy, resilience, and optimism are all positive psychological states that supply resources to employees when dealing with demanding circumstances. Thus, these four psychological states in public organizations will provide resources and help employees overcome demanding tasks, including demanding career-related activities (e.g., career self-exploration). As a result, they will have enough psychological resources to face demanding career advancement activities. The first hypothesis is as follows:

Hypothesis 1: PsyCap positively contributes to employees’ career engagement

Public organisation performance represents a complex interrelated factors that define the overall organisational performance in which each type of public organisation might be measured effectively using a different combination of factors (Alonso & Lewis, 2001; Henman, 2016; Moura et al., 2020, 2019). In a broader perspective, public organisation performance is defined by several indicators in which these indicators are distinct from one public organisation to another (Propper, 2003; Van & Leeuw, 2002). However, individual job performance or how employees perform their jobs in any organisations involves specific and non-specific job performance (Motowidlo, 2000). Employee’s job performance is one of crucial indicators of public organisation performance because it relates to how people within the organisations perform their jobs which later impact the overall public organisation performance and outcomes (Moura et al., 2019; Van & Leeuw, 2002).

Earlier, the notion of individual job performance proposed two major parts, they are specific task performance and contextual job performance (Campbell et al., 1990). Koopmans et al. (2012) suggest that performance in an organization is individual overall behaviors covering expected performance (task and contextual performance) and counterproductive work behaviors. Task and contextual job performance can generate a composit score that explain individual job performance (Campbell et al., 1990; Mustea et al., 2021). These two factors in public services can be measured using subjective evaluation through supervisor rating (Alonso & Lewis, 2001) or a self-report rating (Leisink & Steijn, 2009). In some recent studies, this individual performance in public sectors was
influenced by some antecedents (Campanella et al., 2021; Johari & Yahya, 2016; Palma et al., 2017).

PsyCap has been known for its positive impact on employees’ performance (Chaurasia & Shukla, 2014; Kong et al., 2018; Rabenu et al., 2017; Sun et al., 2011). PsyCap indicates that employees have positive psychological states (e.g., self-efficacy), which are positively associated with employees’ expected performance. PsyCap is a form of personal resource in which its dimensions were found to be positively related to employees’ performance in public organisation. Following the JD-R model (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004), job demands and resources determine employees’ work engagement. Job demand is a form of job stressor that cause counterproductive work behaviours (CWB) and poor performance (Spector & Jex, 1998). When employees are exposed with high job demands, they will more likely to perpetrate undesirable work behaviours as a response to the stressor. PsyCap could counter the negative effect of job demands by providing resources that help prevent the onset of distress (Avey et al., 2011). Thus, regardless the amount of job demands each dimension of PsyCap will help employees to restore and prevent distress caused by job demands. The second hypothesis is as follows:

Hypothesis 2: PsyCap positively contributes to employees’ performance

As proposed earlier, career engagement might share some features similar to employees’ work engagement. In the work engagement mechanism, employees could encounter excessive demands and while in this situation, they would need support from their job (e.g., leaders) or their resources (e.g., PsyCap) to cope with the stressful conditions (Bakker & Demerouti, 2008). Similarly, employees could also encounter excessive demands to advance their careers. In this case, they need to seek further information, find some self-development programs or complete special assignments (Bharti & Rangnekar, 2019; Dopson et al., 2021; Hirschi & Freund, 2014; Hirschi et al., 2011). All these tasks could be demanding for the employees, but they still need them to advance their careers.

On the other hand, performance can vary from in-role to extra-role behavior, including job role, career role, team, and organization role (Welbourne et al., 1998). According to the engagement principles, engaged employees will show outstanding performance in their work roles (Chaurasia & Shukla, 2014). Although engagement in career-related activities and job is distinct, they are positively related (Neault & Picketell, 2011). Some studies have linked career engagement and job satisfaction (Hirschi, 2014; Upadyaya & Salmela-Aro, 2015) and career engagement and career outcomes (Baluku et al., 2020; Kim et al., 2014; Lechner et al., 2019).

This study employs the JD-R model and the principle of work engagement (Bakker & Demerouti, 2008; Bakker et al., 2012; Schaufeli & Bakker, 2004) to predict the direct effect of career engagement on performance. Regardless of the purpose of their behaviors (e.g., work-related vs career-related), engaged employees all focus on investing energy in organizations, teams, and tasks (Chaurasia & Shukla, 2014). In public organizations, employees will invest energy to overcome demanding career tasks and engage in career activities. Although the activities (e.g., career exploration) are intended to advance their career, at the same time, employees will also improve skills and show their best performance to support their career advancement. Therefore, while employees engage in career advancement activities, they also unwittingly refine their tasks and contextual performance. This leads to the following hypothesis:

Hypothesis 3: Career engagement positively contributes to employees’ performance

Considering the previous hypotheses, this study proposes that employees’ career engagement mediates the effect of PsyCap on performance. Positive psychological states (i.e., PsyCap)
Figure 1. Hypothetical model.

provided personal resources for employees to engage in various career advancement activities. Hence, these activities will also improve employees' personal qualities and willingness to monitor their task completions in the organization. Thus, the next hypothesis will be:

Hypothesis 4: The effect of PsyCap on performance will be mediated by career engagement

Please refer to the following Figure 1 for the study hypothetical model.

There are two important points regarding this mediation model. Firstly, this study replicated some previous studies that examined the mediating role of work engagement using the mediation model (Alessandri et al., 2018; Chaurasia & Shukla, 2014; Karatepe & Talebzadeh, 2016). This study acknowledged that employees' engagement could be influenced by many factors other than their PsyCap, such as climate within the organization (Kang & Busser, 2018), support from leaders (Clapp-Smith et al., 2009; Rego et al., 2012), and psychological detachment (Avey et al., 2011). Gender also might determine the relationship between employee resources and engagement (Daraba et al., 2021). Furthermore, a meta-analysis of the effect of PsyCap on positive employee’s outcomes found that the type of sample (i.e., US vs non-US) and organizations (i.e., manufacture vs service sector) significantly moderated the relationships (Avey et al., 2011). Similarly, individual factors such as motivation, commitment, and satisfaction (Bright, 2007; Fang, 1997; Miao et al., 2019; Saputro et al., 2020), and organizational factors such as climate, structure, and leadership influence public organization performance (Bayram & Zoubi, 2020; Berberoglu, 2018; Henman, 2016; Johari & Yahya, 2019).

The above factors could advance our understanding about the relationship between PsyCap, engagement, and performance in different sample and organization types. It appears that organizational and individual differences might moderate the effect of PsyCap on engagement. Therefore, this study will also examine potential moderating effect of individual demographic variables and organizational factors on the effect of PsyCap on performance via career engagement. This procedure intends to test whether or not the mediation model is influenced by individual and organizational factors.

3. Method

3.1. Participants

Participants were full-time employees from various public organizations in Indonesia. As mentioned above, each public organization might have a particular approach in measuring its employee and organizational outcomes. However, this study investigates individual perception of their task and contextual performance regardless the job levels and public organization types. Thus, a combination of several public organizations will allow this study to examine the consistency of the theoretical model across different public organizations and provide support for the generalization of the findings. Participants were recruited from one of the top university alumni networks in Makassar, Indonesia. Career Development Centre (CDC) in this university provided access to the alumni network groups. Then, the study was advertised via these groups and alumni email addresses. The advertisement targeted employees working at least two years in a public organization such as schools, universities,
hospitals, and other public services. After five working days, 351 employees agreed to participate in this study. Since this study employed a three-wave data collection technique, participants were asked to complete a survey every two weeks. There were some dropouts in every phase, including participants with careless responses. At the first phase, 330 completed the survey, but 10 failed the attention check questions. In the second phase, 280 completed the survey. In the end, 265 participants fully participated in the study. The male and female participants were nearly equal (51% male and 49% female). Most participants had worked for more than ten years with a mean age of 42 (SD = 9.59).

3.2. Measures

3.2.1. Psychological capital questionnaire

The Psychological Capital Questionnaire (PCQ) from Luthans, Avolio, et al. (2007) was used to measure PsyCap in organizational settings (Newman et al., 2014). The scale has 24 items with six items in every dimension (Luthans, Avolio, et al., 2007). The PCQ construct consisted of four state-like dimensions (i.e., hope, efficacy, resiliency, and optimism) that described employees’ PsyCap in an organizational setting. The scale was adapted from English to Indonesian with the translate-back-translate procedure (Brislin, 1970). The scale was administered using a six-point Likert-type scale with options ranged from 1 = strongly disagree to 6 = strongly agree. Confirmatory Factor Analysis results showed that this scale fitted the original four-factor solution ($\chi^2$/df = 1.96, $p < .001$, RMSEA = .08) which was better than the one-factor solution ($\chi^2$/df = 7.95, $p < .001$, RMSEA = .12). The scale had high reliability with a Cronbach’s alpha coefficient of .88. “I feel confident in representing my work area in meetings with management” was one of the items on the scale.

3.2.2. Career engagement scale

Employees’ career engagement was measured using a nine-item Career Engagement Scale (CES). CES was originally developed by Hirschi et al. (2014) to measure involvement in career advancement activities. This scale was also adapted to Bahasa Indonesia and went through validity and reliability tests. The administration used a five-point Likert type scale (1 = almost never to 5 = very often). A factor analysis with a CFA technique supported the three-factor solution ($\chi^2$/df = 1.62, $p < .001$, RMSEA = .06, SRMR = .05, TLI = .97). The factors were 1) career planning, 2) career exploration, and 3) career self-development. Each factor describes employees’ behaviors that are relevant to career engagement activities in a public organization. This three-factor solution was better than the one-factor solution ($\chi^2$/df = 12, $p < .001$, RMSEA = .12, SRMR = .11, TLI = .89). This scale was highly reliable, with a Cronbach’s alpha coefficient of .91. The items included “actively sought to design your professional future.”

3.2.3. Individual performance scale

Individual Performance Scale (IPS) was adapted from English to Bahasa Indonesia to measure employees’ performance (Koopmans et al., 2012). This scale is a self-report performance scale in which employees were asked to rate their task and contextual performance. This study administered two dimensions IPS (i.e., task and contextual performance), to measure employees’ expected behaviors when performing their jobs. This performance measure was deemed most feasible during the Covid-19 situation where most employees worked from home. The scale was administered using a six-point Likert type option from 1 = strongly disagree to 6 = strongly agree. Confirmatory Factor Analysis found that the two-factor solution had a better fit ($\chi^2$/df = 1.32, $p < .001$, RMSEA = .05, SRMR = .05, TLI = .98) than the one-factor solution ($\chi^2$/df = 18.82, $p < .001$, RMSEA = .11, SRMR = .10, TLI = .88). Cronbach alpha was .94, indicating a very reliable measure. “I managed to plan my work so that it was done on time” was one of the items.

3.2.4. Demographic variables

This study also collected participants’ age, gender, tenure, and job level. All these data were collected using a self-report question where participants typed their responses or selected available options. For example, the “what is your current age?” question must be typed, while for “what is your gender?”
participants must select one available option (i.e., male, female, or prefer not to mention). The questions were administered using Bahasa Indonesia. In addition to all measures, this study also randomly included three attention check questions (e.g., if you read this question, please select “strongly agree!”) to identify participants with careless responses (Huang et al., 2012). Participants who did not give correct responses to the attention check questions were excluded from this study.

3.3. Procedure
The survey was administered using the QuestionPro research edition (questionpro.com). This survey platform is a web-based survey tool that allows researchers to administer various question types, assign identification codes for participants, and randomise the items in each scale. Employees received a link to access study information, informed consent, measures, and debriefing form (at the end of the study). Once the participants clicked the study information link, they were required to read the informed consent form and submit their agreement to participate in this study. Those who refused to participate would not be directed to the following survey webpage, and their records would not be retained. This study committed to protecting all participants personal information. Each participant was given a unique identification code (e.g., p0123) to match their responses throughout different administrations. No identifiable individual records (e.g., name, ID, email, and phone number) were collected to ensure no impacts on their employment and career promotion.

This study employed a three-wave data collection technique to reduce Common Method Bias (MacKenzie & Podsakoff, 2012). The measures were distributed in three phases of data collection. Those who agreed to participate received a link to complete the first phase of the survey. The first phase of the survey contained questions about demographic variables and PsyCap. In the next two weeks, all participants who completed the first survey received a link to complete questions about their career engagement. Two weeks later, they completed the performance survey. Participants who did not complete all phases were excluded from the study, and their responses were not used in the data analysis. A week after the last phase of data collection, all participants who participate in the first phase received a debriefing form. This study design was reviewed and approved by the Research Institute, Faculty of Social and Political Sciences, Universitas Tadulako (No. 2956/ UN.28.1.13/PP/2021).

3.4. Data analysis
Structural Equation Modelling (SEM) with IBM SPSS AMOS version 24 was used to test this study’s theoretical model and hypotheses. This computation technique allows researchers to test the fit between a theoretical construct and empirical data, including the relationship between latent variables in the model (Schreiber, 2006). The model fit indices such as chi-square ($\chi^2$) and RMSEA (Byrne, 2001; Hu & Bentler, 1999; Schreiber, 2006) were evaluated and compared with other alternative models.

4. Results and discussion

4.1. Results
Firstly, descriptive statistics and bivariate correlations were computed to reveal mean, standard deviation, and associations between variables (see Table 1).

The correlation coefficients indicated that age was positively correlated with tenure ($r = .84$, $p < .01$) and job level ($r = .24$, $p < .01$). Similarly, tenure and job level were also positively correlated ($r = .21$, $p < .01$). Age, gender, and tenure were not associated with any main variables in this study (i.e., PsyCap, career engagement, and performance). However, job level was positively related to PsyCap ($r = .30$, $p < .01$), career engagement ($r = .17$, $p < .05$), performance ($r = .19$, $p < .05$). As expected, all main variables were highly correlated with correlation coefficients ranged from .64 ($p < .01$) to .66 ($p < .01$). These results suggested that older employees had more opportunity to
Table 1. Mean, standard deviation and bivariate correlations

| No. | Variable          | Mean (SD) | 1     | 2     | 3     | 4     | 5     | 6     |
|-----|-------------------|-----------|-------|-------|-------|-------|-------|-------|
| 1   | Age               | 41.93 (9.59) | —     | —     | —     | —     | —     | —     |
| 2   | Gender            | 0.52 (0.50)  | .12   | —     | —     | —     | —     | —     |
| 3   | Tenure            | 15.10 (9.36) | .84** | .14   | —     | —     | —     | —     |
| 4   | Job level         | 1.44 (0.70)  | .24** | .08   | .21** | —     | —     | —     |
| 5   | PsyCap            | 12.85 (11.89) | .10   | .09   | .04   | .30** | —     | —     |
| 6   | Career engagement | 37.56 (5.55) | −.06  | .03   | −.14  | .17*  | .64** | —     |
| 7   | Performance       | 63.64 (9.46) | −.06  | .14   | −.06  | .19*  | .66** | .64** |

N = 265, *p < .05, **p < .01, gender was coded 0 = female or 1 = male, and job level was coded 0 = staff, 1 = supervisor, 2 = manager.
| Model | No of Factor                                       | $\chi^2$ | df | $p$  | $\chi^2$/df | RMSEA | SRMR | CFI | TLI |
|-------|--------------------------------------------------|----------|----|------|-------------|-------|------|-----|-----|
| 1     | Three factors (PsyCap, CE, and Performance)       | 1726.34  | 97 | .00  | 1.78        | .07   | .07  | .94 | .93 |
| 2     | Alternative 1: Two factors (PsyCap and CE together, Performance) | 1902.58  | 97 | .00  | 1.96        | .08   | .07  | .85 | .82 |
| 3     | Alternative 2: One factor                         | 2091.31  | 97 | .00  | 2.16        | .08   | .08  | .77 | .75 |
climb job levels, while their job levels also determined their performance, career engagement, and PsyCap.

The next part of the analysis was to test the study’s hypotheses using the SEM technique. This study proposed that the effect of PsyCap could directly impact employees’ performance or indirectly through the role of career engagement. This study also compared the hypothesized model with other alternative models to reduce some biases in drawing the hypothetical model. In the alternative models, PsyCap and career engagement were treated as a single factor (alternative 1) and all focal variables in one factor (alternative 2). Also, potential Common Method Bias (CMB) was diagnosed using Harman’s single-factor test (Podsakoff et al., 2003), and the results showed that 37.80% (less than 50%) variance were extracted from all the items. The results indicated that the data collection method contained insignificant CMB. Thus, the model was considered valid, and CMB was not an issue. These results also confirmed that employing multiwave data collection could reduce some potential biases.

The path coefficients (standardized estimates) were computed to test hypotheses in this study. The following Table 2 shows the results of model fits of three different models:

The results confirmed that the hypothesized model yielded a close fit (χ²/df = 1.78, RMSEA = .07, SRMR = .07, CFI = .94, and TLI = .93) which indicated that the data fitted the study’s theoretical model. This model showed a better fit than the other two alternative models; the two factor model (χ²/df = 1.96, RMSEA = .08, SRMR = .07, CFI = .85, and TLI = .82) and the one factor model (χ²/df = 2.16, RMSEA = .08, SRMR = .08, CFI = .77, and TLI = .75). The next part of the analysis was to identify standardized estimates in the model and to confirm hypotheses in this study. Standardized estimates for the hypothesized model are presented in the following Table 3:

The path coefficients in the model confirmed that PsyCap directly influenced career engagement (.72, p < .001) and performance (.60, p < .001). Career engagement also directly predicted performance (.26, p < .001) and the effect of PsyCap on performance was mediated by career engagement (.19, p < .001). These results supported all hypotheses in this study. In brief, the PsyCap could directly affect career engagement and performance, and the indirect effect of PsyCap on performance was partially mediated by career engagement.

As previously mentioned, some factors could influence this mediation model. To address this assumption, exploratory analyses were conducted to test if the mediation model was influenced by participant genders, public organization types (e.g., hospital, university), levels (i.e., staff, supervisor, and manager), and tenures. A moderated-mediation technique was performed using PROCESS model 8 (see Hayes, 2013). The results suggested that none of these variables significantly moderated the indirect effect of PsyCap on performance via career engagement. Therefore, the mediation model was consistent across different genders, public organization types, job levels, and tenures.

| Table 3. Path coefficients of direct and indirect effects of PsyCap on performance via career engagement |
| --- |
| **Effect** | **Path** | **Standardized Estimate** |
| Direct | PsyCap → career engagement | .72*** |
| | Career engagement → performance | .26*** |
| | PsyCap → performance | .60*** |
| Indirect | PsyCap → career engagement → performance | .19*** |

N = 265, ***p < 0.01
5. Discussion
This study aims to investigate the direct and indirect effect of PsyCap on performance and the mediating role of career engagement in Indonesian public organizations. In general, the hypothesized model was confirmed, suggesting that career engagement mediated the effect of PsyCap on performance. Thus, career engagement is still considered an important factor in the model, and its role is crucial in predicting employees' task and contextual performance in public service organizations.

This study contributes new insight to the public administration literature, particularly on the role of employees' psychological states and engagement. The role of career engagement in administration sciences is still in infancy and perhaps has been ignored by some researchers. By employing the JD-R model (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004), this study drew the mediating role of career engagement on PsyCap-performance relationship. In addition, the principles of positive psychological resources (i.e., PsyCap) was also employed to predict the positive impact of PsyCap on performance (Luthans, Youssef et al., 2007; Luthans et al., 2015).

The effect of PsyCap on employees' performance has been extensively explored and studied by some researchers (Abbas & Raja, 2015; Calheiros, 2018; Gupta et al., 2017; Luthans et al., 2010; Nafei, 2015; Rabenu et al., 2017). These studies found consistent results that PsyCap contributed to employees' desirable outcomes, including performance. The four positive mental states within the PsyCap construct allowed individuals to set higher goals, act with confidence, seek alternative options, and struggle during a crisis (Luthans, Youssef et al., 2007; Luthans et al., 2015). All these positive mental states influence how employees behave in public organizations and subsequently impact their performance. This study also supports the notion that regardless of organization types (i.e., public vs private), PsyCap can still positively influence employees' performance (Luthans, Youssef et al., 2007; Luthans et al., 2015).

PsyCap also has been linked to employees' engagement (Adil & Kamal, 2016; Chaurasia & Shukla, 2014; Gupta et al., 2017; Joo et al., 2016; Thompson et al., 2015; Wirawan et al., 2020). Like general employees' engagement, career engagement also demands employees to use their resources to cope with stressful career-related activities. Unlike in Indonesian business organizations, where most employees are required to focus on increasing business performance and profits, employees in public services are expected to advance their competencies related to public service activities. These activities are linked to their career advancement. In other words, engaging in career advancement activities will improve employees' performance, competencies, and performance records. In order to engage in career-related activities, employees must deal with the demanding tasks by exerting their available PsyCap.

This study has provided a new perspective on understanding the link between PsyCap and career engagement. The JD-R model and the work engagement perspective have provided a plausible explanation on how PsyCap affects employees' career engagement in public organizations. Employees who are highly engaged in their work will be more likely to invest their energy and dedicate their efforts to complete tasks (Bakker & Demerouti, 2008; Bakker et al., 2012; Chaurasia & Shukla, 2014; Schaufeli & Bakker, 2004). This attitude might also appear as employees invest their energy and effort to accomplish career advancement activities in organizations. After reviewing employee engagement principles and the JD-R theory and considering the findings in this study, this study postulates that career engagement can improve employees' performance in public service organizations.

This study also revealed that PsyCap influenced employees' performance by supporting employees' career engagement. The positive mental states (e.g., self-efficacy) provide personal resources for the employees to deal with demanding activities at work. In an Indonesian public organization, many activities were designed to improve service quality and employees' self-development. For example, those who want to hold a managerial-level position must complete a series of leadership...
training and self-development program from the home affairs department. Individuals need self-efficacy, optimism, hope and resiliency to continuously strive towards their task completion (Avey et al., 2011). These positive mental states provide resources for employees to engage in many work tasks, including when required to accomplish some career-related activities. Having enough personal resources will help employees to engage in their work, including when they are required to advance their career and performance at the same time.

Nevertheless, one should note that measuring performance in public service organizations was a challenging task for many researchers. Ideally, each job has its objective and subjective performance measures. However, in this study, many public organizations protected their performance data and only allowed certain parties to access the data. This regulation is common among researchers in public service organizations (Jordan & Troth, 2020). Alternatively, performance in the public sector can be measured using a generic measure of performance (Koopmans et al., 2012). Although this decision could attract some debates among researchers, this was the most feasible procedure to collect performance data. At the same time, this procedure prevented any potential breach of organization policies. Considering this issue, the effect of PsyCap and career engagement on performance could fluctuate as researchers move from one performance measure to the others.

In general, this study is among a few studies that investigated the link between career engagement and performance in public organizations. As discussed earlier, a myriad of studies confirmed the positive impact of employees’ PsyCap. However, the evidence regarding the relationship between career engagement and employees’ positive states and behaviors is scarce. The effect of PsyCap could improve career engagement in public organizations even though employees’ career paths were managed by the state and central government. This study has established new evidence on how career engagement transforms positive psychological resources to employee performance in public organizations. Career engagement in public organizations perhaps shares a similar mechanism with work engagement. Like work engagement, employee career engagement needs personal resources to improve career-related activities and engaging in these activities can lead to performance improvement.

5.1. Practical implications

This study offers two important practical implications. Firstly, psychological factors should be considered a vital element in improving employees’ performance in Indonesian public organizations. PsyCap, including its dimensions, is one of the most investigated psychological attributes in organizational studies. The positive effect of PsyCap on desirable employees’ outcomes has been documented by many scholars. Therefore, public organizations should design some interventions to enrich employees’ PsyCap. A PsyCap intervention has been implemented in public services in Italy, and the results were convincing (Costantini et al., 2017). Similar attempts have been made to improve employees’ PsyCap (Dello Russo & Staykova, 2015; Rew et al., 2014). Public organizations in Indonesia can improve career engagement and performance by developing employees’ PsyCap.

Secondly, career engagement should be designed to support service quality and performance in public service organizations. Some public organizations have attempted to link career advancement and employees’ performance. This procedure should be implemented with caution since career-related activities are significantly associated with employees’ performance. There are possibilities where public service employees perceive unfair career advancement paths (e.g., unfair promotion), which will adversely impact employees’ performance. Thus, developing employees, PsyCap must be coupled with justice in managing employees’ careers.

5.2. Limitation and future research directions

Although the empirical findings fully supported the hypothesized model, the results could vary across different organizations. The effect of positive leadership could be different for public and business organizations. Likewise, culture, social support and organization climate could also
influence performance. Thus, future studies may consider replicating this study in different organizations, cultures, and countries.

Furthermore, including other intervening variables can shed light on the effect of PsyCap and career engagement on performance in public organizations. Drawing from the JD-R model, PsyCap and positive leadership sometimes were used to predict desirable employees’ outcomes (Daraba et al., 2021; Wirawan et al., 2020). Although demographic variables did not influence the effect of PsyCap and career engagement on performance, future studies should further investigate other factors that could magnify or hinder the positive effect of PsyCap and career engagement. Also, there are other vital employee outcomes in public service organizations, such as well-being, job strain, turnover intention, and innovation. Future studies should consider these variables.

Lastly, the Corona pandemic has changed the way organizations usually operate, including many public organizations in Indonesia. Since most employees have worked from home, online data collection and self-report questions were more viable for many organizations. The Corona pandemic crisis could have influenced the effect of variables in this study, such as how employees perceive their performance. Also, in this study, researchers found that some public organizations were more cautious and even hesitant to share their data. They applied some strict measures before sharing information with other parties. Considering this issue, researchers should consider any alternative performance measure that is robust and feasible to administer in public organizations.

6. Conclusion
The application of the JD-R model suggested that PsyCap could provide personal resources to employees who were facing demanding career-related activities in public organizations. High PsyCap provides support for employees to cope with challenging career advancement activities. Further, employees in public sectors tend to link their career-related activities with task and contextual performance. In Indonesian public organizations, employees need their PsyCap to ensure personal resources to cope with career-related stressors, improve career engagement, perform effectively. PsyCap can directly predict performance or indirectly via career engagement. This partial mediating role of career engagement has brought a new perspective on the importance of career engagement in public service organizations. Public organizations should put more attention on improving their employees’ career engagement. Securing and maintaining psychological resources can improve career engagement, which later positively affects their performance.

Funding
The authors received no direct funding for this research.

Author details
Daswati Daswati
E-mail: daswati@untad.ac.id
Hillman Wirawan
Syahruddin Hattab
Rudi Salam
Ahmad Syarief Iskandar
1 Fakultas Ilmu Sosial Dan Ilmu Politik, Universitas Tadulako, Palu, Indonesia.
2 Department of Psychology, Faculty of Medicine, Universitas Hasanuddin, Makassar, Indonesia.
3 School of Psychology, Faculty of Health, Deakin University, Geelong, Australia.
4 Department of Public Administration, Faculty of Social Sciences, Universitas Negeri Makassar, Makassar, Indonesia.
5 Department of Administration Sciences, Faculty of Administrative Sciences, Universitas Brawijaya, Malang, Indonesia.
6 Faculty of Islamic Economic and Business, Institut Agama Islam Negeri Palopo, Palopo, Indonesia.

Disclosure statement
No potential conflict of interest was reported by the author(s).

Citation information
Cite this article as: Daswati, Hillman Wirawan, Syahruddin Hattab, Rudi Salam & Ahmad Syarief Iskandar. (2022). Cogent Social Sciences, 8(2), 2012971.

References
Abbas, M., & Raja, U. (2015). Impact of psychological capital on innovative performance and job stress. Canadian Journal of Administrative Sciences/Revue Canadienne Des Sciences de l’Administration, 32(2), 128–138. https://doi.org/10.1002/cjas.1314
Adil, A., & Kamal, A. (2016). Impact of psychological capital and authentic leadership on work engagement and job related affective well-being. Pakistan Journal of Psychological Research, 31(1), 1–21. https://www.proquest.com/scholarly-journals/impact-psychological-capital-authentic-leadership/docview/1819646671/se-2
Ahmad, J., Athar, M. R., Azam, R. I., Hamstra, M. R. W. W., & Hanif, M. (2019). A resource perspective on abusive supervision and extra-role behaviors: The role of subordinates’ psychological capital. Journal of Leadership and Organizational Studies, 26(1), 73–86. https://doi.org/10.1177/1548051817867391

Alessandri, G., Consiglio, C., Luthans, F., & Borgogni, L. (2018). Testing a dynamic model of the impact of psychological capital on work engagement and job performance. Career Development International, 23(1), 33–47. https://doi.org/10.1108/CDI-11-2016-0210

Alonso, P., & Lewis, G. B. (2001). Public service motivation and job performance: Evidence from the federal sector. American Review of Public Administration, 31(4), 363–380. https://doi.org/10.1177/02750740122064992

Avey, J. B., Reichard, R. J., Luthans, F., & Mhatre, K. H. (2011). Meta-analysis of the impact of positive psychological capital on employee attitudes, behaviors, and performance. Human Resource Development Quarterly, 22(2), 127–152. https://doi.org/10.1002/hrdq.20070

Bokker, A. B., Demerouti, E., Lieke, L., & Ten Brummelhuis, L. L. (2012). Work engagement, performance, and active learning: The role of conscientiousness. Journal of Vocational Behavior, 80(2), 555–564. https://doi.org/10.1016/j.jvb.2011.08.008

Bokker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. Journal of Managerial Psychology, 22(3), 309–328. https://doi.org/10.1108/02683940710733115

Bokker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. Career Development International, 13(3), 209–223. https://doi.org/10.1108/13620430810870476

Bokker, A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. Work and Stress, 22(3), 187–200. https://doi.org/10.1080/02678370802393649

Bokker, A. B. (2011). An evidence-based model of work engagement. Current Directions in Psychological Science, 20(4), 265–269. https://doi.org/10.1177/0963721411414534

Boluku, M. M., Mugabi, E. N., Nansamba, J., Matagi, L., Onderi, P., & Otto, K. (2008). Psychological capital and career outcomes among final year university students: The mediating role of career engagement and perceived employability. International Journal of Applied Positive Psychology, 61, 55–80. https://doi.org/10.1007/s10420-020-00040-w

Boyram, P., & Zoubi, K. (2020). The effect of servant leadership on employees’ self-reported performance: Does public service motivation play a mediating explanatory role? Management Science Letters, 10(8), 1771–1776. https://doi.org/10.5267/j.msl.2020.1.002

Berberoglu, A. (2018). Impact of organizational climate on organizational commitment and perceived organizational performance: Empirical evidence from public hospitals. BMC Health Services Research, 18(1), 1–9. https://doi.org/10.1186/s12913-018-3149-z

Bergheim, K., Nielsen, M. B., Mearns, K., & Eid, J. (2015). The relationship between psychological capital, job satisfaction, and safety perceptions in the maritime industry. Safety Science, 74(1), 27–36. https://doi.org/10.1016/j.ssci.2016.11.024

Bharti, T., & Rangnekar, S. (2019). Optimism and career engagement in employees: An empirical test. International Journal of Business Excellence, 19(3), 429–446. https://doi.org/10.1504/IJBEIX.2019.102834

Bitmaj, M. G., & Ergeneli, A. (2015). How psychological capital influences burnout: The mediating role of job insecurity. Procedia - Social and Behavioral Sciences, 207(10), 363–368. https://doi.org/10.1016/j.sbspro.2015.10.106

Boddy, C. R. (2014). Corporate psychopaths, conflict, employee affective well-being and counterproductive work behaviour. Journal of Business Ethics, 121(1), 107–121. https://doi.org/10.1007/s10551-013-1680-0

Bogler, R., & Somech, A. (2019). Psychological capital, team resources and organizational citizenship behavior. The Journal of Psychology, 153(8), 784–802. https://doi.org/10.1080/00223980.2019.1614515

Bright, L. (2007). Does person-organization fit mediate the relationship between public service motivation and the job performance of public employees? Review of Public Personnel Administration, 27(4), 361–379. https://doi.org/10.1177/0734371X07307149

Brilin, R. W. (1970). Back-translation for cross-cultural research. Journal of Cross-Cultural Psychology, 1(3), 185–216. https://doi.org/10.1177/1532757418767391

Bottani, A., Costantini, S., Azam, Faisal, & Amir, R. (2013). Authentic leadership and positive psychological capital. Journal of Leadership & Organizational Studies, 15(3), 227–240. https://doi.org/10.1177/1548053013526366

Clapp-Smith, R., Vogelgesang, G. R., & Avey, J. B. (2009). Authentic leadership and positive psychological capital. Journal of Leadership & Organizational Studies, 15(3), 227–240. https://doi.org/10.1177/1548053013526366

Costantini, A., De Paolo, F., Ceschi, A., Sartori, R., Meneghini, A. M., & Di Fabio, A. (2017). Work engagement and psychological capital in the Italian public administration: A new resource-based intervention programme. SA Journal of Industrial Psychology, 43(1), 1–11. https://doi.org/10.4001/sajip.v43i1.1413

Darab, 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...
Daswati et al., Cogent Social Sciences (2022), 8: 2012971 https://doi.org/10.1080/23311886.2021.2012971

performance. Cogent Business & Management, 8(1), 0–17. https://doi.org/10.1080/23311975.2021.1885573

Dello Russo, S., & Stoykova, P. (2015). Psychological Capital Intervention Protocol (PCIP): A replication and extension. Human Resource Development Quarterly, 26(3), 329–347. https://doi.org/10.1002/hrdq.21212

Dopson, L. R., Lee, P. C., Lee, M. J., & Lora, A. (2021). Perceived importance of career engagement initiatives in hospitality education. Journal of Hospitality & Tourism Education, 34(1), 1–9. https://doi.org/10.1080/10690727.2020.1868314

Fang, M. (1997). A study of work motivation: The influence of organizational variables and individual characteristics on work motivation and outcomes. American Psychological Association. https://psycnet.apa.org/record/1997-95020-007

Gupta, M., Shaheen, M., & Reddy, P. K. (2017). Impact of psychological capital on organizational citizenship behavior: Mediation by work engagement. Journal of Management Development, 36(7), 973–983. https://doi.org/10.1108/JMD-06-2016-0084

Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. Journal of School Psychology, 43(6), 495–513. https://doi.org/10.1016/j.jsp.2005.11.001

Hayes, A. F. (2013). Introduction to mediation, moderation, and conditional process analysis. The Guildford Press. 978-1-60918-230-4

Hennman, P. (2016). Performing the state: The socio-political dimensions of performance measurement in policy and public services. Policy Studies, 37(6), 499–507. https://doi.org/10.1080/01442872.2016.1144739

Hirschi, A., Freund, P. A., & Herrmann, A. (2014). The career engagement scale: Development and validation of a measure of proactive career behaviors. Journal of Career Assessment, 22(4), 575–594. https://doi.org/10.1177/1069072713514813

Hirschi, A., & Freund, P. A. (2014). Career engagement: Investigating intrapersonal predictors of weekly fluctuations in proactive career behaviors. The Career Development Quarterly, 62(1), 5–20. https://doi.org/10.1002/jdc.21002.21004.2014.20066.x

Hirschi, A., Niles, S. G., & Akos, P. (2011). Engagement in adolescent career preparation: Social support, personality and the development of career decisiveness and congruence. Journal of Adolescence, 34(1), 173–182. https://doi.org/10.1016/j.jadolescence.2009.12.009

Hirschi, A. (2011). Callings in career: A typological approach to essential and optional components. Journal of Vocational Behavior, 79(1), 60–73. https://doi.org/10.1016/j.jvb.2010.11.002

Hirschi, A. (2014). Hope as a resource for self-directed career management: Investigating mediating effects on proactive career behaviors and life and job satisfaction. Journal of Happiness Studies, 15(6), 1495–1512. https://doi.org/10.1007/s10902-013-9488-x

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling, 6(1), 1–55. https://doi.org/10.1080/10705519909540118

Huang, J. L., Curran, P. G., Keeney, J., Poposki, E. M., & DeShon, R. P. (2012). Detecting and deterring insuffi cient effort responding to surveys. Journal of Business and Psychology, 27(1), 99–114. https://doi.org/10.1007/s10869-011-9231-8

Johari, J., & Yahya, K. K. (2016). Job characteristics, work involvement, and job performance of public servants. European Journal of Training and Development, 40(7), 554–575. https://doi.org/10.1108/EJTD-07-2015-0051

Johari, J., & Yahya, K. K. (2019). Organizational structure, work involvement, and job performance of public servants. International Journal of Public Administration, 42(8), 654–663. https://doi.org/10.1080/01900692.2018.1498106

Joo, B. K., Lim, D. H., & Kim, S. (2016). Enhancing work engagement: The roles of psychological capital, authentic leadership, and work empowerment. Leadership and Organization Development Journal, 37(8), 1117–1134. https://doi.org/10.1108/LODJ-01-2015-0005

Jordan, P. J., & Troth, A. C. (2020). Common method bias in applied settings: The dilemma of researching in organizations. Australian Journal of Management, 45(1), 1–14. https://doi.org/10.1177/03128962181971976

Kang, H. J. (Annette), & Busser, J. A. (2018). Impact of service climate and psychological capital on employee engagement: The role of organizational hierarchy. International Journal of Hospitality Management, 75(1), 1–9. https://doi.org/10.1016/j.ijhm.2018.03.003

Karatepe, O. M., & Avci, T. (2017). The effects of psychological capital and work engagement on nurses’ lateness attitude and turnover intentions. Journal of Management Development, 36(8), 1029–1039. https://doi.org/10.1108/JMD-07-2016-0141

Karatepe, O. M., & Talebzadeh, N. (2016). An empirical investigation of psychological capital among flight attendants. Journal of Air Transport Management, 55(8), 193–202. https://doi.org/10.1016/j.jairtraman.2016.06.001

Kim, B., Jung, S. H., Jung, S. H., Lee, B. H., Puig, A., & Lee, S. M. (2014). A moderated mediation model of planned happenstance skills, career engagement, career decision self-efficacy, and career decision certainty. The Career Development Quarterly, 62(1), 56–69. https://doi.org/10.1002/jcd.21611.0045.2014.00070.x

Kong, F., Tsai, C., Tsai, F., & Huang, W. (2018). Psychological capital research: A meta-analysis and implications for management sustainability. Sustainability, 10(3457), 1–9. https://doi.org/10.3390/su10103457

Koopmans, L., Bernaards, C., Hildebrandt, V., van Buuren, S., van der Beek, A. J., & de Vet, H. C. W. (2012). Development of an individual work performance questionnaire. International Journal of Productivity and Performance Management, 62(1), 6–28. https://doi.org/10.1108/1477106120121185273

Lechner, C. M., Donner, D., & Rammstedt, B. (2019). Grit (effortful persistence) can be measured with a short scale, shows little variation across social-demographic subgroups, and is associated with career success and career engagement. PLOS ONE, 14(11), 1–29. https://doi.org/10.1371/journal.pone.0224814

Lelsink, P., & Steijn, B. (2009). Public service motivation and job performance of public sector employees in the Netherlands. International Review of Administrative Sciences, 75(1), 35–52. https://doi.org/10.1177/0020825308099505

Luthans, F., Avey, J. B., Avolio, B. J., & Peterson, S. J. (2010). The development and resulting performance impact of positive psychological capital. Human Resource Development Quarterly, 21(1), 41–67. https://doi.org/10.1002/hrdq.20034

Luthans, F., Avolio, B. J., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. Personnel
Psychology, 60(1), 541–572. https://doi.org/10.1111/j.1744-6570.2007.00083.x

Luthans, F., Youssef-Morgan, C. M., & Avolio, B. J. (2015). Psychological capital and beyond. Oxford University Press.

Luthans, F., & Youssef-Morgan, C. M. (2017). Psychological capital: An evidence-based positive approach. Annual Review of Organizational Psychology and Organizational Behavior, 4(1), 339–366. https://doi.org/10.1146/annurev-orgpsych-032516-113324

Luthans, F., Youssef, C. M., & Avolio, B. J. (2007). Psychological Capital: Developing the Human Competitive Edge. 246. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195187526.001.0001

Mackenzie, S. B., & Podsakoff, P. M. (2012). Common method bias in marketing: Causes, mechanisms, and procedural remides. Journal of Retailing, 88(4), 542–555. https://doi.org/10.1016/j.jretai.2012.08.001

McIlveen, P., & Perera, H. N. (2016). Career optimism mediates the effect of personality on teachers' career engagement. Journal of Career Assessment, 24(4), 623–636. https://doi.org/10.1177/1060027715616099

Miao, Q., Eno, N., Newman, A., & Schwarz, G. (2019). Public service motivation and performance: The role of organizational identification. Public Money and Management, 39(2), p. 2. https://doi.org/10.1080/09540962.2018.1556004

Matowidlo, S. J. (2000). Some Basic Issues Related to Contextual Performance and Organizational Citizenship Behavior in Human Resource Management. Human Resource Management Review, 10(1), 115–126. https://doi.org/10.1016/S1053-4822(99)00042-X

Moura, L. F., Pinheiro de Lima, E., Deschamps, F. M., Van Aken, E., Gouvea Da Costa, S. E., Tovares Treintoa, F., Almeida Prado Cestari, J. M., & Assumpção Silva, R. (2020). Factors for performance measurement systems design in nonprofit organizations and public administration. Measuring Business Excellence, 24 (3), 377–399. https://doi.org/10.1108/MBE-10-2019-0102

Moura, L. F., Pinheiro de Lima, E., Deschamps, F. M., Van Aken, E., Gouvea Da Costa, S. E., Treinto, F. T., & Cestari, J. M. A. P. (2019). Designing performance measurement systems in nonprofit and public administration organizations. International Journal of Productivity and Performance Management, 68(8), 1373–1410. https://doi.org/10.1108/IJPPM-06-2018-0236

Mustea, L., Mihit, L. D., & Lobont, O. R. (2021). How should we measure public sector performance? Postmodern Openings, 12(1), 71–89. https://doi.org/10.18662/POI.12.1.2272

Nafei, W. (2015). Meta-analysis of the impact of psychological capital on quality of work life and organizational citizenship behavior: A study on Sadat City University. International Journal of Business Administration, 6(2), 2. https://doi.org/10.5430/ijba.v6n2p42

Neault, R. A., & Pickereill, D. A. (2011). Career engagement: Bridging career counseling and employee engagement. Journal of Employment Counseling, 48 (4), 185–188. https://doi.org/10.1002/jiec.2161-1920.2011.tb01111.x

Newman, A., Ucbasaran, D., Zhu, F. E. L., & Hirst, G. (2014). Psychological Capital: A Review and Synthesis. Journal of Organizational Behavior, 35(1), 120–138. https://doi.org/10.1002/job

Niswaty, R., Wirawan, H., Akih, H., Sogof, M. S., & Daroba, D. (2021). Investigating the effect of authentic leadership and employees’ psychological capital on work engagement: Evidence from Indonesia. Heliyon, 7(January), 1–8. https://doi.org/10.1016/j.heliyon.2021.e06992

Palma, R., Hinna, A., & Mangio, G. (2017). Improvement of individual performance in the public sector: Public service motivation and user orientation as levers. Evidence-Based HRM, 5(3), 344–360. https://doi.org/10.1108/EBHRM-07-2017-0040

Percundo, A. D., & Putri, N. K. (2020). Hospital nurses' psychological capital and work engagement – Are they really related? The case of an Indonesian hospital. Journal of Health and Translational Medicine, 23 (1), 52–59. https://jummcme.umed.edu.my/index.php/jummcme/article/view/25814/12111

Peterson, S. J., Luthans, F., Avolio, B. J., Walumbwa, F. O., & Zhang, Z. (2011). Psychological capital and employee performance: A latent growth modeling approach. Personnel Psychology, 64(2), 427–450. https://doi.org/10.1111/j.1744-6570.2011.01215.x

Podsakoff, P. M., Mackenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. Journal of Applied Psychology, 88(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Propper, C. (2003). The use and usefulness of performance measures in the public sector. Oxford Review of Economic Policy, 19(2), 250–267. https://doi.org/10.1093/oxrep/19.2.250

Raben, E., Yaniv, E., & Elizur, D. (2017). The relationship between psychological capital, coping with stress, well-being, and performance. Current Psychology, 36(4), 875–887. https://doi.org/10.1007/s12144-016-9477-4

Rego, A., Sousa, F., Marques, C., & Cunho, M. P. E. (2012). Authentic leadership promoting employees’ psychological capital and creativity. Journal of Business Research, 65(3), 429–437. https://doi.org/10.1016/j.jbusres.2011.10.003

Rew, L., Thompson, S., Brown, A., & Seo, E. (2014). An intervention to enhance psychological capital in homeless females: Preliminary findings. Journal of Adolescent Health, 54(2), p. 513. https://doi.org/10.1016/j.jadohealth.2013.10.041

Ryff, C. D. (1989). Psychological well-being in adult life. Current Directions in Psychological Science, 4(4), 99–104. https://doi.org/10.1111/j.1467-8721.1989.ep10772395

Saleh, A., Wirawan, H., & Tamar, M. (2020). Improving health care service through healthy psychological capital and positive attitudes. International Journal on Advanced Science, Engineering and Information Technology, 10(4), 1723–1730. https://doi.org/10.18517/ijaset.10.4.12429

Saputo, A. T., Setiawan, M., & Tri Kurniawati, D. (2020). Antecedents of employee performance in public services. International Journal of Research in Business and Social Science (2147-4478), 9(7), p. 7. https://doi.org/10.20525/ijbrs.v9i7.954

Schaufelli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. Journal of Organizational Behavior, 25(3), 293–315. https://doi.org/10.1002/job.248

Schreiber, J. B. (2006). Modeling and confirmatory factor analysis results: A review. The Journal of Educational Research, 99(6), 324–337. https://doi.org/10.3200/JOER.99.6.323-328
Shabir, T., Naz, K., & Dutt Trivedi, S. (2021). Perceived organizational support and employee performance: A moderating role of organizational justice during COVID-19. *International Journal of Educational Administration, Management, and Leadership*, 2(1), 35–44. https://doi.org/10.51629/ijeamal.v2i1.14

Simons, J. C., & Buitendach, J. H. (2013). Psychological capital, work engagement and organisational commitment amongst call centre employees in South Africa. *SA Journal of Industrial Psychology*, 39(2), 1–12. https://doi.org/10.4102/sajip.v39i2.1071

Sloan, M. M. (2012). Unfair treatment in the workplace and worker well-being: The role of coworker support in a service work environment. *Work and Occupations*, 39(1), 3–34. https://doi.org/10.1177/0730888411406555

Spector, P. E., & Jex, S. M. (1998). Development of four self-report measures of job stressors and strain: Interpersonal conflict at work scale, organizational constraints scale, quantitative workload inventory, and physical symptoms inventory. *Journal of Occupational Health Psychology*, 3(4), 356–367. https://doi.org/10.1037.1076-8998.3.4.356

Sun, T., Zhao, X. W., Bin, Y. L., & Fan, L. H. (2011). The impact of psychological capital on job embeddedness and job performance among nurses: A structural equation approach. *Journal of Advanced Nursing*, 68(1), 69–79. https://doi.org/10.1111/j.1365-2648.2011.05715.x

Tamar, M., Wirawan, H., & Saleh, A. (2020). Investigating the effects of psychological capital on nurses’ positive attitude and behavior; evidence from Indonesia. *Journal of Critical Reviews*, 7(15), 273–284. https://doi.org/10.18502/jcr.v7i15.6650

Thompson, K. R., Lemmon, G., & Walter, T. J. (2019). Employee engagement and positive psychological capital. *Organizational Dynamics*, 44(3), 185–195. https://doi.org/10.1016/j.orgdyn.2015.05.004

Truss, Catherine, Delbridge, Rick, Alfes, Kerstin. (2013). Introduction. In Truss, Catherine, Alfes, Kerstin, Delbridge, Rick, Shantz, Amanda, & Soane, Emma (Eds.), Employee engagement in theory and practice, 336 (First). London: Routledge. https://doi.org/10.4124/9780203706965

Upadhyaya, K., & Salmela-Aro, K. (2015). Development of early vocational behavior: Parallel associations between career engagement and satisfaction. *Journal of Vocational Behavior*, 90(2), 66–74. https://doi.org/10.1016/j.jvb.2015.07.008

Van Dierendonck, D., Borrrl, C., Haynes, C., & Stride, C. (2004). Leadership behavior and subordinate well-being. *Journal of Occupational Health Psychology*, 9(2), 165–175. https://doi.org/10.1037/1076-8998.9.2.165

Van, T. S., & Leeuw, F. L. (2002). The performance paradox in the public sector. *Public Performance & Management Review*, 25(3), p. 267. https://doi.org/10.1080/15309576.2002.11643661

Vondracek, F. W., Ferreira, J. A. G., & Dos Santos, E. J. R. (2010). Vocational behavior and development in times of social change: New perspectives for theory and practice. *International Journal for Educational and Vocational Guidance*, 10(2), 125–138. https://doi.org/10.1080/10775-010-9176-x

Wang, X., Liu, L., Zou, F., Hao, J., & Wu, H. (2017). Associations of occupational stressors, perceived organizational support, and psychological capital with work engagement among Chinese female nurses. *BioMed Research International*, 2017(1), 1–11. https://doi.org/10.1155/2017/5284628

Welbourne, T. M., Johnson, D. E., & Erez, A. (1998). The role-based performance scale: Validity analysis of theory-based measure. *Academy of Management Journal*, 41(5), 540–555. https://doi.org/10.2307/256941

Wirawan, H., Jufri, M., & Saman, A. (2020). The effect of authentic leadership and psychological capital on work engagement: The mediating role of job satisfaction. *Leadership & Organization Development Journal*, 41(8), 1139–1154. https://doi.org/10.1108/LOD-10-2019-0433

Wright, T. A., & Cragonzano, R. (2000). Psychological well-being and job satisfaction as predictors of job performance. *Journal of Occupational Health Psychology*, 5(1), 84–94. https://doi.org/10.1037.1076-8998.5.1.84

Young, V., & Bhaumik, C. (2011). Health and well-being at work: A survey of employees (171). London: the Department for Work and Pensions. www.gov.uk/government/organisations/department-for-work-pensions/about/research#research-publications

Youssef-Morgan, C. M., & Luthans, F. (2015). Psychological capital and well-being. *Stress and Health*, 31(3), 180–188. https://doi.org/10.1002/smi.2623

Zhong, L. F., & Ren, H. L. (2009). The relationship between academic stress and psychological distress: The moderating effects of psychological capital. *2009 International Conference on Management Science and Engineering - 16th Annual Conference Proceedings, ICMSE 2009, 1996* (pp. 1087–1091). Moscow. Institut Electrical and Electronics Engineers. https://doi.org/10.1109/ICMSE.2009.5318122
