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## Article

Working from home during the corona pandemic: Investigating the role of authentic leadership, psychological capital, and gender on employee performance

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## MANAGEMENT | RESEARCH ARTICLE

# Working from home during the corona pandemic: Investigating the role of authentic leadership, psychological capital, and gender on employee performance

Dahyar Daraba<sup>1\*</sup>, Hillman Wirawan<sup>2,3</sup>, Rudi Salam<sup>4,5</sup> and Muhammad Faisal<sup>1</sup>

**Abstract:** The Corona Pandemic has forced many organizations to limit human interactions by implementing what so-called Work-from-Home (WFH). This study aims to investigate the role of Authentic Leadership, Psychological Capital, and employees' gender in predicting employees' performance in a public organization in Indonesia during the implementation of WFH. Participants were recruited from a governmental institution under the Minister of Home Affairs in Indonesia. An online survey link was sent to 150 full-time employees via email or virtual groups. There were 116 usable responses included in the data analysis. The results supported the study hypotheses suggesting that employees' perception of leaders' authenticity could directly influence employees' performance or indirectly via employees' PsyCap. The effect of Authentic Leadership on PsyCap was significantly moderated by employees' gender in which female respondents showed a positive and significant impact of Authentic Leadership on their PsyCap. Working from home could have a significant impact on how employees perceive supports from leaders.

### ABOUT THE AUTHOR

Dahyar Daraba and Muhammad Faisal are senior lecturers at Institut Pemerintahan Dalam Negeri (IPDN), Indonesia. In addition, Dahyar Daraba received his Doctoral degree in Public Administration from Universitas Negeri Makassar. Rudi Salam is a young lecturer and researchers at Universitas Negeri Makassar, Indonesia. He is a current Doctoral candidate at Universitas Brawijaya studying Business Administration in service industries. Together they have focused on studying the role of Leadership and Human Resource Management in public service organizations. Hillman Wirawan is a lecturer of Industrial and Organizational Psychology at Universitas Hasanuddin. He is also a Ph.D. candidate at the School of Psychology Deakin University, studying Abusive Supervision and Dark Personality Traits in organizations. He has published his works in some reputable journals such as *Education + Learning* and *Leadership and Organization Development Journal*. All the authors collaborated to investigate the effect of Covid-19 crisis on public organizations in Indonesia.

### PUBLIC INTEREST STATEMENT

Corona Virus Disease 2019 (Covid19) has adversely impacted many vital sectors around the globe. This pandemic forced many public organizations to adopt a new way of working and managing human resources. Millions of employees have shifted from working-from-office to working-from-home (WFH). The implementation of WFH in public organizations in Indonesia has changed how people perceive their workplace, leaders, and co-workers. Female employees in public organizations tended to suffer more from psychological resource depletion. Women are more likely than men to provide caregivers and nurturing families while working from home. This study found that the indirect effect of Authentic Leadership on performance through Psychological Capital was stronger for female employees than their male counterparts. Female employees used support from their authentic supervisors to restore psychological resource loss, which later improved their performance while working from home.

Drawing from the Gender Role theory and Work/Family Boundary theory, female employees are more likely than their male counterparts to experience resource loss due to work-family interference and demanding household chores when working from home. Discussion, limitations, and future research directions are included.

**Subjects: Public Administration & Management; Work & Organizational Psychology; Leadership; Human Resource Management**

**Keywords: authentic leadership; psychological capital; performance; public Organisation; WFH**

## 1. Introduction

The spread of Covid-19 worldwide has caused many undesired impacts on human health (Jajodia et al., 2020; Rajendran et al., 2020). Most organizations badly impacted by this Corona Pandemic, which consequently have forced them to implement some measures to contain the spread of the Coronavirus while at the same time harming the organizations and business process and outcomes (Bartik et al., 2020; Donthu & Gustafsson, 2020; Sohrabi et al., 2020). People should implement social distancing, self-isolation, and limit traveling to contain the spread, which also dramatically reduced organization and business activities (Nicola et al., 2020).

In Indonesia, both private and public sectors also experience a similar negative impact of the Corona Pandemic (Susilawati et al., 2020). Working from home (WFH) is believed to be a means to contain the spread of the Covid-19 while preventing further economic loss (Dingel & Neiman, 2020; Mustajab et al., 2020; Rysavy & Michalak, 2020). Many governments across the globe struggle to implement strict measures while at the same time, should prevent further economic loss. Thus, WFH becomes the most effective choice including for public organizations.

The implementation of WFH raises some questions among scholars in management, organizational studies, and organizational psychology. During this crisis, public organizations—like other business organizations—also face dramatic turbulence (Ansell et al., 2020). Many scholars agree that leadership is vital as leaders can support employees during the time of uncertainty and insecurity (Dirani et al., 2020; Li et al., 2020). Understanding how leadership functions are essential for managing human resources during the crisis (McLean & Jiantreerangkoo, 2020), including managing personnel in public services. One of the concerns is how leadership impacts employees' performance while the employees engage in WFH mode. Leadership and powers rely on how followers perceive the situation and leaders (Hersey et al., 1979). Changing the organizational context and interactions between the leader and follower potentially influence leadership and its effect on employees and organizations.

In terms of supporting employees' psychological resources, Authentic Leadership is one of the most effective job resources for employees (Avolio & Gardner, 2005; Fusco et al., 2016; Luthans & Avolio, 2003; Oh et al., 2017; Walumbwa et al., 2010; Wang & Hsieh, 2013). Several lines of evidence suggest that Authentic Leadership was positively associated with employees' engagement and performance (Lyubovnikova et al., 2017; H. U. I. Wang et al., 2014; Wong & Laschinger, 2013). Authentic leadership seems to be a reliable source for maintaining and cultivating employees' psychological resources and performance during a crisis.

There is a growing body of literature that recognizes the importance of Psychological Capital (PsyCap). Several lines of evidence suggest that Psychological Capital (PsyCap) also has a positive impact on employees' performance (Chaurasia & Shukla, 2014; Luthans, Avolio et al., 2007; Sun et al., 2011). A number of studies have also postulated that PsyCap mediated the relationship between Authentic Leadership and some desired employees' outcomes such as job satisfaction (Amunkete & Rothmann, 2015), creativity (Zubair & Kamal, 2015), and follower development

(Woolley et al., 2011). These studies indicate a relationship between Authentic Leadership and PsyCap in which the increased Authentic Leadership and PsyCap are associated with performance improvement.

Authentic Leadership, PsyCap, and employee performance appear to be closely linked. However, historically, research investigating the association between Authentic Leadership and employees' psychological states and behaviors has focused much on neutral circumstances or traditional work conditions. Although there is unambiguous evidence stating that the effect was consistent across different cultures (Wirawan et al., 2020), less is known whether the theoretical model would show a similar result during the global crisis (i.e., Covid-19) when employees are working from home. As mentioned earlier, employees have been working from home since early 2020. Plausibly, the WFH has brought many changes to employees' work-life balance and how they perceive leadership.

Awareness of work-from-home or remote working is not recent, having possibly first been described by some scholars such as Felstead et al. (2002) and Shamir and Salomon (1985). The conflict between work and family domains causes Work-to-Family Interference and Family-to-Work Interference, leading to burnout (Peeters et al., 2005). Male and female employees showed unequal responses to work-family interference. For example, female employees were reported to have higher parenting roles and work values than their male counterparts (Cinamon & Rich, 2002). They also experienced a higher work-family conflict than men (Grönlund, 2007). Women and men show different responses to job demands and work-family conflict. These studies were conducted in a non-WFH situation, and further investigations are necessary to draw a conclusion regarding how women and men perceive leadership, retain their psychological resources, and maintain performance.

As the work mode dramatically changes from traditional to WFH, male and female employees could show distinct reactions to leaders' behaviors. Previously published studies on Authentic Leadership's effect on male and female employees' outcomes are not consistent. For instance, Woolley et al. (2011) suggested that Authentic Leadership's contribution to a positive work climate was perceived as more influential by male than female employees. In contrast, Wirawan et al. (2020) found that gender did not moderate Authentic Leadership's effect on Employees' Engagement. Hypothetically, women would need more support from leaders because they might experience a higher work-family conflict and role conflict while working from home (Cinamon & Rich, 2002; Grönlund, 2007).

Given the above discussion, this current research addresses two primary issues. First, this study investigates the effect of employees Authentic Leadership on employees' PsyCap and performance among employees working from home. Second, this study investigates the moderating effect of gender on the effect of Authentic Leadership on performance via PsyCap. So far, very little attention has been paid to the role of employees' gender in this debate. Woolley et al. (2011) have postulated that male employees perceived Authentic Leadership more positively due to organizational values. However, in a more neutral organization (i.e., perceived gender equality), gender showed a non-significant moderating effect (Wirawan et al., 2020). While juggling with work and family demands, employees need support from leaders to secure their resources and maintain performance. However, male and female employees could show different expectations towards leadership due to demanding work and family tasks. For instance, women would expect more supports from leaders because they experience a higher work-family conflict.

This study provides new insights into the discussion about leadership amid the Corona Pandemic. New evidence is necessary to explain how WFH and employees' gender in public service could change the positive effect of Authentic Leadership on PsyCap and performance. The Corona Pandemic circumstance, WFH, and gender could have changed how subordinates perceive their leaders and unwittingly also their performance. Therefore, this current study intended to close this gap by providing new evidence into this discussion.

Research must be conducted from an organization that fully implemented the WFH policy. Therefore, this current study was conducted in a public organization under the Minister of Home Affairs in Indonesia. This organization implemented a strict measure to contain the spread of Covid-19 and asked employees to work from home since the beginning of 2020.

## 2. Literature review and hypotheses

### 2.1. *The effect of authentic leadership on employee performance*

Authentic leadership is believed to be one of the desirable leadership styles that positively impact employees' performance (Walumbwa et al., 2010; Wang et al., 2014; Wong & Laschinger, 2013). Luthans and Avolio (2003) defined Authentic Leadership as a process that draws from psychological capacities and positive organizational climate, which leads to better self-awareness and self-regulated positive behaviors for leaders and associates and later results in positive self-development. The authentic leader shows positive mental states such as confidence, hopefulness, optimism, resilience, transparency, ethics, future-oriented, and prioritizing his/her associates' development. Authentic leadership develops overtime throughout experience in which the leader will develop a genuine and transparent relationship with his/her followers and enrich their self-awareness as a leader (Avolio & Gardner, 2005).

Walumbwa et al. (2008) have examined Authentic Leadership's construct and proposed four dimensions of Authentic Leadership, namely leader self-awareness, relational transparency, internalized moral perspective, and balanced processing. This multidimensional construct was a positive predictor for employees' positive attitudes and performance (Walumbwa et al., 2008, 2010; Wang & Hsieh, 2013; Wang et al., 2014). Drawing from the Authentic Leadership Development theory (Luthans & Avolio, 2003), authentic leaders display a fair, positive, and more open work climate. All these can create a conducive climate to engage in behaviors that favorable to organizations. In other words, having supportive, fair, transparent, and ethical leaders while dealing with demanding and stressful work may improve employees' performance. This leads to the first hypothesis:

H1: Authentic Leadership directly contributes to employees' performance

### 2.2. *The effect of authentic leadership on performance is mediated by PsyCap*

PsyCap is defined as a positive psychological state of development characterized by self-confidence (efficacy), hope, resilience, and optimism (Luthans et al., 2006; Luthans, Youssef et al., 2007; Luthans et al., 2015). Research suggests that PsyCap is positively associated with performance (Sun et al., 2011), work-engagement (Thompson et al., 2015), job satisfaction (Hyo & Hye, 2015), and Organisational Citizenship Behaviour (Pradhan et al., 2016). PsyCap has a negative association with some undesired employees' outcomes (Bitmiş & Ergeneli, 2015) and stress (Avey et al., 2009). A recent meta-analysis found that PsyCap was positively associated with Authentic Leadership (Kong et al., 2018). The evidence from Management and Psychology suggests that PsyCap fosters employees' positivity and attenuates many undesired employees' outcomes.

PsyCap has been previously found to mediate the relationship between leadership and employees' performance (Amunkete & Rothmann, 2015; Eid et al., 2012; Wang et al., 2014). This mediating effect can be traced back to the nature of the Authentic Leadership Development process (Luthans & Avolio, 2003), where Luthans and Avolio postulated that the authentic leaders' psychological capacity and positive organizational context would lead to associates' positive self-development. The self-development results from the associates' continuing improvement of positive psychological states (e.g., efficacy, resiliency). Thus, Authentic Leadership potentially nurtures employees' PsyCap.

Employees' PsyCap can improve as a result of Authentic Leadership, and subsequently, PsyCap leverages employees' performance. This indirect effect of Authentic Leadership on performance

through PsyCap can be disclosed using Job-Demand Resource (JDR) model (Bakker & Demerouti, 2007). The Job-Demand Resource (JDR) model states that employees need resources to cope with demanding work routine (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004). Employees will engage in their work if they have enough resources to juggle with their demanding routine. In contrast, high work demand and insufficient resources may lead to employees' burnout. Leader's support is a form of job resources. This support is perceived as fair treatment and support for self-development, and it potentially enriches employee's resources. Thus, Authentic Leadership is a means to provide personal resources for employees to cope with demanding work. Consequently, as personal resources increase so the four dimensions of PsyCap. A high level of PsyCap means more resources to engage in demanding work, which consequently improves performance. The next hypothesis is:

H2: the effect of Authentic Leadership on employees' performance is mediated by employees' PsyCap

### **2.3. The effect of Authentic Leadership on employee performance through PsyCap is moderated by employees' gender**

Two prominent theories will be applied to draw a theoretical model on how gender moderates the effect of Authentic Leadership on employee performance via PsyCap. First, the Gender Role Orientation theory (Bird et al., 1984) and second, the Work/Family Border theory (Clark, 2000).

According to the Gender Orientation theory, women and men hold certain beliefs about the typical roles of women/men in meeting family and work responsibilities (Bird et al., 1984). Mintz and Mahalik (1996) state that some people believe that women are responsible for nurturing the family and child-rearing, while men are the family's providers (traditional view of gender role). On the contrary, some men are willing to share some of the household chores (participant view of gender role) or view the role as equally shared (role-sharing view of gender role). However, in most cases, women tend to act as the primary caregivers, and they are more likely than men to suffer from an unbalance work-family life (Maume et al., 2010).

Nevertheless, evidence regarding gender or sex differences in work and family interdependencies has shown mixed results with some studies showed no differences (Grönlund, 2007; Siu et al., 2010) while others found significant differences between male and female employees (Duxbury & Higgins, 1991; Rothbard, 2001). Powell and Greenhaus (2010) argue that the influence of gender in work-family interference is determined by other confounding factors (e.g., number of children) rather than gender per se. Changing the work context, in this regard, might also influence the effect of gender on work-family interferences.

Second, the Work/Family Border theory explains that work and family are two distinct life spheres, but both can influence each other (Clark, 2000). The arenas of home and work are separated by so-called borders or lines that have three forms; physical (home and office are physically separated), temporal (office hours vs. family time), and psychological (e.g., strict office rules vs. family talk). As suggested by Clark (2000), permeation can occur when a member of the domains interact and interrupt each other. For example, children interrupt when a mother tries to complete a sales report, or a supervisor asks to send a file during family time.

During the Corona Pandemic, many employees work from home. While this condition could contain the spread of Covid-19, it also could blur the boundary between work and family. The interaction between work and family domain might deplete personal resources and lead to burnout (Peeters et al., 2005). Women tend to struggle to balance the work and family arena due to gender bias and stereotypical domestic roles (Maume et al., 2010; Rehman & Azam Roomi, 2012). Women are in charge of most household chores, regardless of their employment status. At this point, it is worth pointing out that female employees are more likely than male employees to experience resource loss due to work/chores overload while working from home. More than men,

women tend to perceive leadership support (e.g., fair, transparent, and supporting self-development) as a means to restore psychological resources. That is, the last hypothesis will be:

H3: Employees' gender moderates the effect of Authentic Leadership on performance through PsyCap, where the effect will be stronger for female employees than their male counterparts

The following Figure 1 depicts this study's theoretical mechanism:

### 3. Method

#### 3.1. Participants

Participants were recruited from one of the largest institutions under the Minister of Home Affairs of Indonesia. This institution is responsible for recruiting, training, and educating new personnel working for Indonesia's governmental organizations. In total, this institution has 150 full-time employees working in 34 provinces. All targeted respondents received an invitation to participate in the study via email or social network sites. The online survey contained an informed consent form, study questionnaires, and a debriefing form. Participation in this study was voluntary, and participants could discontinue at any time without reason. One hundred twenty participants completed all three phases of the data collection. However, four of them were excluded from the study because they indicated that they did not work from home during the Corona pandemic. From 150 participants, only 116 (77%, 52 female and 64 male) fully completed the survey and indicated that they had worked from home.

#### 3.2. Measures

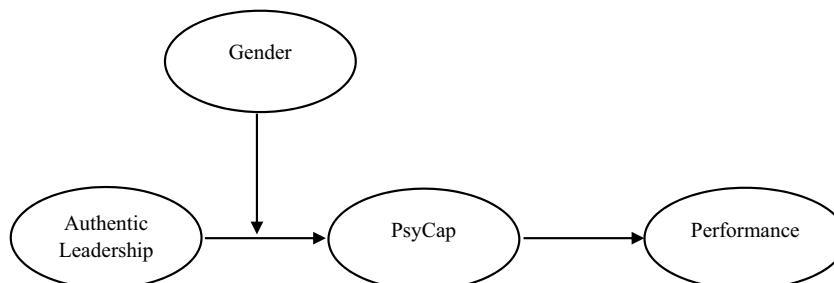
##### 3.2.1. Authentic leadership inventory

Leaders' Authentic Leadership is a measure based on participants' perception of their immediate supervisor's authentic behaviors. Participants were asked to rate their supervisor's Authentic Leadership behaviors in the past three months using the Authentic Leadership Inventory or ALI for short (Walumbwa et al., 2008). The ALI consists of four dimensions (i.e., self-awareness, unbiased processing, moral perspective, relational transparency) in which each dimension has four items or 16 items in total. The inventory uses a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). This inventory is highly reliable for research purposes based on the scale internal consistency (Cronbach's alpha = .92). "Listens carefully to different points of view before coming to conclusions" is an example of the items.

##### 3.2.2. Psychological capital questionnaire

Participants' Psychological Capital is measured using a 24-item Psychological Capital Questionnaire (PCQ) from Luthans, Avolio et al. (2007). PCQ measures four dimensions of positive psychological states, namely Hope, Optimism, Resilience, and Efficacy. Each employee was asked

**Figure 1. The theoretical mechanism of the conditional indirect effect of authentic leadership on performance.**





to describe how she/he thinks about herself/himself in the past week. Each PCQ dimension contains six items Likert-type scale with options ranging from 1 (strongly disagree) to 6 (strongly disagree). PCQ showed acceptable reliability with Cronbach's alpha coefficient .86. "I always look on the bright side of things regarding my job" is one of the items in the questionnaire.

### 3.2.3. Individual work performance questionnaire

This study employed a self-report performance rating from the Individual Work Performance Questionnaire (IWPQ), initially developed by Koopmans et al. (2012). Given that this study intends to measure employee performance while working from home, a self-report performance measure is more appropriate because employees have a better chance of evaluating their performance than their peers or supervisors. Each participant rated their performance in the past three months using a 5-point Likert-type scale (1 = seldom to 5 = always for the Task and Contextual performance dimension, and 5 = never to 1 = often for Counterproductive Work Behaviours). Cronbach's alpha of .79 indicated a reliable measure. "I actively participated in work meetings" and "I was able to separate main issues from side issues at work" are two examples of the IWPQ items.

### 3.2.4. Working online survey

This study adapted item number 28 (i.e., in the past week while working from home, how often are you using online platforms doing job-related work such as a project?) from the SONTUS (Olufadi, 2016) to measure the frequency of working online to complete job-related tasks. This item has an 11-point Likert-type scale starting from 1 (not applicable to me/I do not work from home) to 11 (11 = I used it more than three times during the past week but spent more than 30 min each time). This question was intended to detect whether participants work from home using online platforms such as Zoom and Google Meet. Participants who responded 1 to the survey were regarded as non-WFH employees and excluded from this study.

### 3.2.5. Demographic questions

Participants' demographic data were recorded using self-report demographic questions. The demographic variables are age (what is your age?), gender (are you male?), education (what is your highest level of education?), and tenure (how long you have been working in this organization?). Like the other questionnaires, all questions were given in Indonesian. Participants typed the number for the questions about age and tenure. For the gender and education, participants must select one from available options.

## 3.3. Procedure

The data were collected from the employees who were working from home during the Corona Pandemic. They serve as full-time employees in an institution under the Minister of Home Affairs of Indonesia. Participants were included in the study only if they had worked from home using social networking sites. Since April 2020, employees were not allowed to visit their offices daily and were ordered to work from home using online platforms. A survey link was sent to all employees regardless of their job levels. The link was sent by the Human Resources (HR) department via email or virtual groups on social networking sites. All participants were asked to complete an online survey containing demographic questions (e.g., gender), working online survey, Authentic Leadership Inventory, Psychological Capital Questionnaire, and Individual Work Performance Questionnaire. They were also given an informed consent form and debriefing form (which appeared after completing the last questionnaire).

This study implemented a three-wave data collection technique to rule out the common method bias (MacKenzie & Podsakoff, 2012). In the first wave, participants were given an informed consent form, demographic questions (e.g., gender), and ALI. After one month, participants who completed the first wave were given the next link containing PCQ. In the last wave, two months after the second wave, participants completed the IWPQ and were given the study debriefing form. Participants were identified using a unique code generated by the HR department. The code was used to match

responses in three different waves. The data collection strictly followed the ethical codes and human research ethics of the Association of Psychological Sciences and Practices in Indonesia.

### 3.4. Data analysis approach

This study employed different analysis techniques before finally testing the study hypotheses. Firstly, three measures (ALI, PCQ, and IWPQ) required a construct validity test because they contained multiple items. Secondly, the measurement model analysis was performed to ensure the validity of the measurement model. Thirdly, descriptive statistics and bivariate correlations analysis before employing the moderated-mediation regression technique using macro PROCESS by Hayes (Hayes, 2013). The Hayes' macro PROCESS allowed researchers to test conditional indirect effects with a single mediator. This data analysis technique was robust and convenient for this study's hypotheses testing.

## 4. Results

### 4.1. Measurement model analysis

Before performing hypotheses testing, each measure's construct validity was tested using Confirmatory Factor Analysis (CFA). The results showed that all measures satisfied acceptable model fit indices ( $\chi^2/df < 4$ , RMSEA  $< .09$ , TLI  $> .90$ ), please see [table 1](#). These results suggested that the Authentic Leadership Inventory and PsyCap measurement confirmed the original four-factor solution, and Individual Work Performance confirmed the original three-factor solution.

This study also examined the study measurement model using the CFA technique. The results suggested that the proposed measurement model with three latent variables (i.e., Authentic Leadership, PsyCap, and performance) showed a better fit ( $\chi^2/df = 1.9$ , RMSEA = .08) than the one-factor model ( $\chi^2/df = 1.9$ , RMSEA = .10) and the two-factor model where Authentic Leadership and PsyCap were represented by a single latent variable ( $\chi^2/df = 2$ , RMSEA = .13). For the proposed model, all measures had an Average Variance Extracted (AVE) coefficient higher than .52 with Composite Reliability (CR) higher than .75, indicating an acceptable convergent validity. These results suggested that this study had a valid and acceptable measurement model.

### 4.2. Descriptive statistics

The following [Table 2](#) shows mean, standard deviation, and correlations between variables:

Based on the correlation coefficients, the performance was positively correlated with the perception of Authentic Leadership (.38,  $p < .01$ ) and PsyCap (.49,  $p < .01$ ). PsyCap also had a positive association with tenure (.23,  $p < .05$ ) and employees' perception of Authentic Leadership (.41,  $p < .01$ ). Other significant correlations were also found for tenure and age (.87,  $p < .01$ ). The frequency of working online was also positively associated with age (.22,  $p < .05$ ) and tenure (.19,  $p < .05$ ). In brief, all focal predictors (i.e., Authentic Leadership and PsyCap) in this study were positively correlated with performance. The correlation between variables indicated a positive relationship between the two focal predictors (i.e., Authentic Leadership and PsyCap) and between those predictors and performance.

**Table 1. Confirmatory factor analysis**

Measure	$\chi^2$	df	p	$\chi^2/df$	RMSEA	TLI	SRMR
AL	201	98	.04	1.33	.06	.95	.07
PsyCap	493	246	.01	2	.08	.95	.08
Performance	267	133	.01	2	.08	.96	.08

AL = Authentic Leadership, PsyCap = Psychological Capital  
 N = 116

**Table 2. Mean, standard deviation, and bivariate correlations**

Variable	Mean(SD)	1	2	3	4	5	6	7
1. Age	44.70(11.3)	—						
2. Tenure	18.66(11.12)	.87**	—					
3. WO	9.32(2.38)	.22*	.19*	—				
4. Gender	.55(.49)	.29**	.36**	-.09	—			
5. AL	62.48(9.06)	.11	.09	-.07	.11	—		
6. PsyCap	116.89(10.16)	.18	.23*	.06	.11	.41**	—	
7. Performance	73.73(8.14)	-.03	-.03	-.07	.27**	.38**	.49**	—

WO = Working Online, AL = Authentic Leadership, PsyCap = Psychological Capital  
 N = 116, \*p < .05, \*\*p < .01

### 4.3. Hypotheses testing

The next step is to test the hypotheses using Hayes (2013) moderated-mediation regression technique. Table 3 below shows the results of the analysis:

The effect of Authentic Leadership on employee performance was significant (.19,  $p < .05$ ), which supported the first hypothesis (H1). The results suggested a significant effect of Authentic Leadership on PsyCap (.71,  $p < .01$ ) and performance (.19,  $p < .05$ ), where the effect of PsyCap on performance was also significant (.44,  $p < .01$ ). Since the effect of Authentic Leadership on performance could be either directly or through PsyCap, this confirmed the second hypothesis (H2). The results supported the hypotheses that employees' perception of their leader's authenticity directly influenced their performance or indirectly through their PsyCap.

Next, the analysis also tested the moderating effect of gender in the model. As hypothesized, the effect of Authentic Leadership on PsyCap depended on the employee's gender. Female employees showed a stronger effect of Authentic Leadership on PsyCap than their male counterparts. The results found that the interaction between Authentic Leadership and gender was significant (-.54,  $p < .01$ ), this indicated that the effect of employee's perception of leaders' authenticity depended on employee's gender. Furthermore, this following Table 4 showed the conditional effect of Authentic Leadership on PsyCap at different gender:

The effect was significant for female employees (.71,  $p < .01$ ) but not for male employees. In this case, female employees' perception of Authentic Leadership significantly influenced their PsyCap. The increase of Authentic Leadership perception would be followed by the increase of PsyCap or vice versa. Meanwhile, male employees did not show a significant effect of Authentic Leadership on their PsyCap. Since the effect of Authentic Leadership on PsyCap was moderated by gender, the third hypothesis was confirmed (H3). The following Figure 2 illustrates the interactive effect of Authentic Leadership and gender in predicting PsyCap:

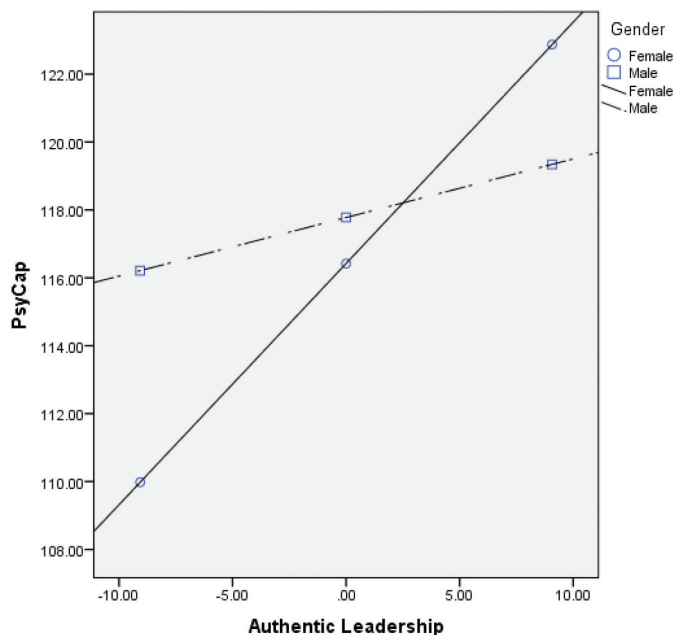
**Table 3. Moderated-mediation model 7 using PROCESS by Hayes**

Model 1	Coefficient	SE	LLCI	ULCI	R	R <sup>2</sup>
AL	.71**	.13	.46	.97	.48	.23**
Gender	1.35	1.69	-2.00	4.71		
ALxGender	-.54**	-.19	-.91	-.17		
<i>Outcome: Psychological Capital</i>						
Model 2	Coefficient	SE	LLCI	ULCI	R	R <sup>2</sup>
AL	.19*	.02	.03	.34	.52	.27**
PsyCap	.44**	.05	.34	.53		
<i>Outcome: Performance</i>						
AL = Authentic Leadership, PsyCap = Psychological Capital, SE = Standard Error, LLCI = Lower level confidence interval, ULCI = Upper level confidence interval						
N = 116, * $p < .05$ , ** $p < .01$						

**Table 4. Conditional effects of authentic leadership on PsyCap at different gender**

Gender	Effect	SE	LLCI	ULCI
Female	.71**	.13	.46	.97
Male	.17	.14	-.10	.44
SE = Standard Error, LLCI = Lower-level confidence interval, ULCI = Upper-level confidence interval				
N = 116, ** $p < .01$				

**Figure 2. The moderating effect of gender on authentic leadership-psyCap relationship.**



The last hypothesis testing was to examine the effect of Authentic Leadership on performance via PsyCap at different gender in which females were predicted to show a higher effect of Authentic Leadership than their male counterparts. Since H2 and H3 were confirmed, the moderated-mediation model in this study was also supported. This concludes that the effect of Authentic Leadership on performance via PsyCap was moderated by employees' gender. Overall, the results also supported the last hypothesis (H4).

Overall, all hypotheses were confirmed, suggesting that employees' perception of their leaders' authenticity could directly improve performance or indirectly through employees' PsyCap. Also, male and female employees had different views toward leaders' authenticity while working from home, which also caused interaction between Authentic Leadership and gender in predicting PsyCap and performance.

## 5. Discussion

This study investigated Authentic Leadership's effect on employees' performance through employees' PsyCap at different gender. This study also examined the application of JDR theory, Gender Role Orientation, and Work/Family Border theory. The theories were employed to explain the moderated-mediation model related to the indirect effect of Authentic Leadership on performance among public service employees who were working from home. Hypothetically, the effect of Authentic Leadership on performance via PsyCap would be different for male and female employees, given the gender role conflict and work-family interference during the implementation of WFH.

The results supported all three hypotheses in this study. Firstly, the indirect effect of Authentic Leadership on employees' performance. Second, the mediating effect of PsyCap on the Authentic Leadership—performance relationship was also confirmed. Lastly, the findings also supported that the indirect effect of Authentic Leadership on performance via PsyCap was moderated by employees' gender. Female employees were more likely than males to experience the positive impact of leaders' authenticity on their PsyCap. Overall, the theoretical model was fully supported by the study's empirical findings.

The findings also shed light on the effect of leadership on employees' psychological states and performance during the corona pandemic. As mentioned earlier, the implementation of WFH for public organization potentially influence how employees perceive leadership, manage work-family interference, and perform their tasks via digital devices. This study confirmed the effect of Authentic Leadership on employees' PsyCap (Amunkete & Rothmann, 2015; Kong et al., 2018) and performance (Walumbwa et al., 2008, 2010; Wang & Hsieh, 2013; Wang et al., 2014). Given that the employees work from home, this study also revealed that WFH did not hamper the positive impact of Authentic Leadership on employees' psychological states and performance.

Another interesting point was the moderating effect of gender in the relationship. This study hypothesized that working from home during the Corona Pandemic could be perceived differently by male and female employees. Considering the Gender Orientation theory (Bird et al., 1984), the Family/Work Border theory (Clark, 2000), and women's work-family interference (Maume et al., 2010; Rehman & Azam Roomi, 2012), this study has contributed new evidence regarding the unique effect of WFH on public service employees.

Unlike most men, female employees in public services might have different experiences while working from home. The female role (e.g., care-provider, nurturing family, and parenting) interferes with their employee workload, consequently draining their resources. In this situation, female employees need to immediately identify supports to recover further resource loss while experiencing a rapid resource-depletion. In line with the JDR theory (Bakker & Demerouti, 2007), female employees need leaders' support, and at the same time, leaders' authenticity becomes a significant source of psychological resources. Female employees are more likely than their male counterparts to view leadership as a vital source of support, particularly for their psychological states.

The implementation of WFH might be more challenging for female workers; that is, they need leaders who are transparent, fair, and aware of their self-development. Generally, both male and female employees still need support from their leaders during this Corona Pandemic. Many public organizations, including their employees, are suffering from uncertainty and insecurity, both in Indonesia (Susilawati et al., 2020) and worldwide (Ansell et al., 2020; Dirani et al., 2020). This circumstance could be perceived as a threat to employee's job security. Having leaders with a more authentic style could help them secure their psychological resources. However, considering the findings, it seems that female employees in Indonesia's public organization struggle to restore their resource loss and view leadership as a means to recover from psychological resource loss.

Another possible explanation for this is that male and female employees have different leadership perceptions or have different expectations from their leaders during the WFH. This assumption may partly be explained by the Implicit Leadership Theory (Eden & Leviatan, 1975). According to this theory, while some scholars have clear definitions of effective leadership, subordinates have their own naïve and implicit expectations about how leaders should behave in their organizations. In this study, females tend to expect support from leaders to secure and restore their psychological resources.

Individual differences (e.g., gender) and work contexts (e.g., WFH) should be taken into account to fully comprehend the effect of leadership on employees' psychological states and performance. Albeit most people believe that positive leadership is essential for employees and organizations, employees' characteristics and work itself should be considered. Some leadership styles might be more influential and effective for employees under certain circumstances. Concerning the leadership in public organisations, this study has strengthened some previous findings regarding Authentic Leadership, employee's PsyCap, and performance. Nevertheless, the effect of Authentic Leadership is subject to employee's gender (female vs. male) and circumstances surrounding the workplace (e.g., conventional vs. WFH).

## 6. Implications

### 6.1. Theoretical implications

Unlike other previous findings, this study offers new insight into how Authentic Leadership influences PsyCap and performance during crisis and conflict. The WFH mode has been exercised for more than a decade. However, in the past, WFH was voluntary and did not co-exist with the Corona Pandemic. Second, this current WFH exacerbates work-family interference, where female employees are more likely to suffer from resource depletion. Investigating how female/male employees respond to leadership in this critical condition grants a new perspective on the different effects of Authentic Leadership on employees. Thus, this study postulates that WFH potentially leads to gender-role conflict and work-family interference, which can shape individual perception towards the leader's authenticity and consequently affect their psychological states and performance.

### 6.2. Practical implications

This study has confirmed that leaders who display authentic behaviors (i.e., self-awareness, unbiased processing, moral perspective, relational transparency) can improve employee performance through securing and restoring employee's PsyCap. Thus, public organizations are expected to nurture this mechanism by encouraging leaders to be more transparent and exercise leadership with justice and a high moral perspective. Secondly, PsyCap, as a form of employee's psychological resources, seems to be an effective employee's resources. This type of resource should be nurtured by leaders and systematically developed by organizations throughout training or other self-development approaches. Lastly, public organizations should be aware of any downsides of implementing WFH for employees. Although it appears to be one of the most effective solutions during the Corona Pandemic, the implementation could breach the work-family border principles, cause high gender-role conflict, and drain female employees' psychological resources. Therefore, with respect to these findings, the WFH policies should be exercised with caution by public organizations.

## 7. Limitations and future research directions

This study was conducted in a public organization in Indonesia, and it examined a theoretical model using data collected from employees who were working from home. It is believed that the results would be consistent for employees in private sectors who also engaged in WFH. This study only focused on the public sector, while evidence is still needed from the private sector. The subsequent studies should also investigate other private sectors' variables, such as perceived organization crisis or market downturn. These variables could interact with gender and work-family conflict to influence the effect of leader behaviors on employees. Secondly, national culture might have shaped individual expectations, including how male/female employees behave in certain situations. Although this study admitted that Indonesian culture had shaped gender roles in society, less is known whether the results would be consistent across different cultures. Gender and its attributes are associated with some cultural dimensions (e.g., gender egalitarianism). Future studies can employ other study designs, such as using a cross-cultural approach. Lastly, the number of participants only represents one public organization, while there are many public organizations in Indonesia under different ministers and departments. Therefore, this study would yield rich information as more data collected from different organizations.

## 8. Conclusion

The Corona Pandemic has brought rapid changes into many vital sectors, including maintaining a work-life balance. Gender role and work-family interference have made WFH challenging for some people, particularly for many female employees in public organizations. Unlike male employees, they are expected to provide care for their families while maintaining their regular performance. The WFH mode could violate the work/family borders and create high demand, which eventually could drain the employee's psychological resources. The results suggested that Authentic Leadership leveraged employees' performance by improving the level of PsyCap. Also,

Authentic Leadership became significant support to restoring psychological resources for female employees.

Furthermore, given the moderating effect of gender, this study also emphasizes that public organizations should consider how male and female employees respond to leadership. For the role of Authentic Leadership, the results have supported the notion that women are more likely than men to expect support from their leaders to maintain their psychological resources. This mechanism tends to occur when women are facing such a challenging situation while working from home.

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