Information Management and Business Review (ISSN 2220-3796)
Vol. 18, No. 1, pp. 40-52, 2026

Green Behavior in the Workplace: The Role of Authentic Leadership and Psychological Capital in Shaping Environmental Citizenship in the Sri Lankan Public Sector

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Abstract: This study investigates both the direct and mediated influences of authentic leadership on organizational citizenship behaviour toward the environment (OCBE), with psychological capital serving as an intervening mechanism. Using a quantitative approach, data were gathered from 396 frontline employees across six public sector institutions in Sri Lanka through a survey questionnaire. The findings reveal that psychological capital plays a partial mediating role in the association between authentic leadership and OCBE. This indicates that authentic leadership affects OCBE not only directly but also indirectly by fostering employees' psychological capital. The observed relationships highlight the pivotal role of authentic leadership in enhancing positive psychological resources and promoting environmentally responsible discretionary behaviours among employees. The proposed research framework offers practical insights for senior management in Sri Lankan public sector organizations, particularly in the development of leadership initiatives aimed at cultivating authentic leaders who can encourage environmental sustainability through employees' OCBE.

Keywords: *Authentic Leadership, Organizational Citizenship Behaviour toward the Environment, Psychological Capital, Public Sector, Sri Lanka*

1. Introduction

Public institutions in many countries play a prominent role in environmental policy decisions and implementation (Bansal & Roth, 2000; Kulin & Sevä, 2019; Armstrong, 2019; Handoyo, 2024). These public institutions, at both the federal and local levels, try to solve environmental problems to ensure sustainable development. Problems, like air and water quality, biodiversity, population and climate change, and resource conservation, are some of the main problems that people expect public institutions to resolve (Voulvoulis & Burgman, 2019; Yuan, Masron, Chen & Azman, 2025). In this regard, discretionary pro-environmental behaviour, or organizational citizenship behaviour toward the environment (OCBE) among employees of public institutions, has not been researched in-depth (Boiral, 2009; Daily, Bishop & Govindarajulu, 2009; Stritch & Christensen, 2014). In fact, to date, no study has specifically examined public employees' involvement in OCBE.

According to Cheema, Afsar and Javed (2020), OCBE is considered to be of immense importance to the environmental performance of organizations. However, since pro-environmental behaviour at the workplace involves voluntary participation of employees, making it a part of their job description is difficult (Zhang, Zhang & Daim, 2023). Further, the effectiveness of formal environmental management practices often depends on voluntary pro-environmental behaviour because OCBE compensates for the weaknesses of formal practices, systems, and technologies (Luu, 2018). Although OCBE is cost-effective and may seem insignificant, over time, OCBE can have a substantial impact on the environmental performance of the organization. OCBE among public sector employees, in particular, is important since they are responsible for executing and enforcing policies related to environmental performance (Dahl & Lindblom, 1953; Vigoda-Gadot & Cohen, 2004).

Several researchers suggest that a leader's support plays a key role in pro-environmental behaviour (e.g., Maqsoom, Prasittisopin & Ullah, 2025; Ramus & Killmer, 2007; Daily et al., 2009). Robertson and Barling (2017) noted that research on how managers can encourage employees to demonstrate pro-environmental behaviour is still in its infancy. Therefore, there have been increasing calls for identifying leadership styles that could encourage employees' pro-environmental behaviour, consequently reducing the detrimental effects on the environment (Aguilera, Rupp, Williams & Ganapathi, 2007; Boiral, Talbot & Paillé, 2015; Afsar, Badir & Kiani, 2016). Although several studies have investigated the impact of various leadership styles on OCBE, studies on the influence of the authentic leadership style on OCBE are lacking (Robertson & Barling, 2013; Afsar et al., 2016; Ying, Faraz, Ahmed & Raza, 2020).

The rapidly escalating environmental problems globally have contributed to more attention being given to authentic leadership (Walumbwa, Avolio, Gardner, Wernsing & Peterson, 2008). Avolio and Gardner (2005) and Luthans and Avolio (2003) argued that authentic leadership is characterized by high ethical standards that guide decision-making and behaviour. Bound by their moral values and ethical behaviour (Lussier & Achua, 2013), authentic leaders can have a significant influence on employees' OCBE. Authentic leaders are emotionally intelligent and possess integrity, resilience, courage, and a genuine desire to serve others (Valsania, León, Alonso & Cantisano, 2012). According to Avolio and Mhatre (2012), authentic leaders lead by example and are often role models to others. They champion environmental causes, which then motivates their employees to display OCBE. Authentic leaders have been identified as having attributes, such as being genuine, honest, and sincere, and these attributes inspire employees to be engaged in pro-environmental behaviour, in turn, leading to the achievement of environmental sustainability of the organization (Northouse, 2010).

Additionally, the underlying mechanisms through which authentic leadership is related to OCBE have not been adequately studied. Consistent with the findings of previous studies, this study believes the occurrence of OCB (organizational citizenship behaviour), such as pro-environment-specific OCB, mainly depends on the psychological capital of individuals. Psychological capital, as a form of personal resource, could stimulate emotions towards the environment and motivate employees to engage in voluntary behaviour, such as OCBE (Luthans, Avolio, Avey & Norman, 2007). To date, the role of psychological capital as a mechanism through which authentic leaders influence their subordinates' OCBE has received scant attention. This study, therefore, believes that psychological capital can help in generating other resources that are positively related to OCBE (Avey, Luthans & Jensen, 2009). Accordingly, psychological capital is introduced as a mediator to investigate how authentic leadership predicts employees' OCBE.

Drawing on conservation of resources (COR) theory (Hobfoll, 1989), this study explains how authentic leadership may stimulate employees' organizational citizenship behaviour toward the environment (OCBE) through the enhancement of psychological capital. COR theory emphasizes the importance of resources, proposing that individuals invest in resources to prevent losses, recover from depletion, and accumulate further resources (Hobfoll, 2001). These resources encompass elements that employees value, including job-related resources (e.g., leader support, autonomy, and performance feedback) and personal resources (e.g., self-efficacy, resilience, and knowledge) (Xu, Liu & Chung, 2017). Within the present study, authentic leadership is conceptualized as a job resource that supports the development of psychological capital. Psychological capital reflects an individual's positive psychological state of development (Luthans et al., 2007; Avey et al., 2009; Norman, Avey, Nimnicht & Pigeon, 2010). Enhanced psychological capital enables employees to better regulate their work environment and to pursue goals beyond formal role requirements, including OCBE (Laschinger & Fida, 2014). Accordingly, this study proposes that authentic leadership behaviour, as a specific form of job resource, strengthens employees' psychological capital, a key personal resource, which subsequently promotes OCBE.

This study makes several contributions. First, unlike other leadership styles, the impact of the authentic leadership style on OCBE has not been fully understood. This study enriches the understanding of the antecedents of OCBE. Secondly, the mechanisms through which leaders' authentic leadership behaviour influences OCBE are unclear. Hence, the examination of psychological capital as a mediating variable can shed light on how employees' OCBE occurs. Third, research involving authentic leaders has been conducted in a number of settings, but is scant in the public sector, especially in developing countries. Issues, such as emission of greenhouse gases, lack of ecosystem integrity, deforestation, urbanization, reduction of biodiversity, and lack of recycling and reuse practices, have been reported in Sri Lanka (Opatha & Arulrajah, 2014). Such issues should not be the obstacles to rebuilding the country after a prolonged civil war that dragged on for nearly three decades (1983-2009). These issues need effective and urgent attention. In this regard, pro-environmental behaviour among public sector employees in Sri Lanka is highly sought after to address the current environmental degradation.

2. Literature Review

Authentic Leadership and Psychological Capital: Authentic leadership is seen as a central aspect of diverse forms of positive leadership and serves as an important explanatory model of leadership (Valsania et al., 2012).

Authentic leadership is defined as, a pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness (in values, identity, emotions, objectives, and goals, and their consequences on employees); balanced information processing (objectively analysing facts and data, both external and self-referential); moral perspective (upholding moral and ethical standards in the face of the possible group, social, or organizational pressure); and relational transparency (maintaining a relationship with the employees based on sincerity and honesty) (Walumbwa et al., 2008).

The influence of authentic leadership on followers' psychological capital can be explained through several interrelated mechanisms. To begin with, the practice of authentic leadership encourages followers' personal development and self-growth by fostering positive self-concepts and developmental experiences (Ilies, Morgeson & Nahrgang, 2005; Atwijuka & Caldwell, 2017). By cultivating trust-based relationships, authentic leaders generate positive affective states, strengthen commitment, and enhance followers' sense of autonomy and growth orientation (Macik-Frey, Quick & Cooper, 2009; Coxen, Van der Vaart & Stander, 2016). In addition, authentic leaders leverage their own positive psychological resources to facilitate similar capacities in their followers (Gardner, Avolio & Walumbwa, 2005). Prior studies suggest that authentic leadership both relies on and reinforces followers' positive psychological capacities while simultaneously promoting an ethical work climate (Walumbwa et al., 2008; Rego, Júnior & Cunha, 2015). Moreover, through psychological contagion processes, the strengths displayed by authentic leaders may be transmitted to employees, thereby enhancing their overall psychological capital (Norman, Luthans & Luthans, 2005; Rego, Sousa, Marques & Cunha, 2012). Drawing on the above arguments, this study proposes the following hypothesis:
H1: There is a positive association between authentic leadership and psychological capital.

Authentic Leadership and OCBE: OCBE is defined as "individual and discretionary social behaviours that are not explicitly recognized by the formal reward system and that contribute to a more effective environmental management by organizations" (Boiral, 2009, p.223). Boiral and Paillé (2012) viewed OCBE as comprising eco-civic engagement (voluntarily engaging in environmental activities of the organization); eco-helping (voluntarily helping other co-workers address environmental concerns); and eco-initiatives (discretionary behaviour and solutions to enhance environmental performance). Eco-initiatives reflect the individual initiative dimension, while eco-helping is consistent with the interpersonal helping dimension. Eco-civic engagement reflects not only the personal industry dimension but also loyal boosterism through employees' discretionary behaviour to promote the green image of their organization to outside stakeholders, such as customers and the community (Luu, 2018).

This study looks into various ways by which authentic leaders could influence OCBE among their followers, like positive modelling, emotional contagion, personal and social identification, increased trust, positive social exchanges, and support of self-determination (Ilies et al., 2005). Authentic leaders can facilitate positive behaviour toward the environment by increasing integrity and positive modelling (Avolio, Gardner et al., 2004; Walumbwa et al., 2008). According to Northouse (2010), an authentic leader can understand problems from various perspectives, including environmental concerns, which is one way these leaders support and encourage sustainable development. Invariably, the consistent display of care for the environment is likely to be emulated by the followers to engage in eco-initiatives to meet their supervisor's expectations without any hope of reward (Paillé, Boiral & Chen, 2013). Furthermore, as a type of job resource, support from authentic leaders plays an extrinsic motivational role in the attainment of organizational goals, such as OCBE (Avey et al., 2009). Based on the above reasoning, the following hypothesis is formulated:
H2: There is a positive association between authentic leadership and OCBE.

Psychological Capital and OCBE: Occupational psychologists consider that voluntary workplace behaviour, such as OCBE, is normally exhibited by high psychological capital employees because they simultaneously invest their physical and cognitive energies into their work (Pradhan, Jena & Bhattacharya, 2016). Raineri and Paillè (2015) claimed that employees' OCBE is not based on expectations of rewards. It is premised on personal values, cognitive capabilities, and interpersonal awareness, which can be attributed to a positive psychological state. Bamberg and Möser (2007) argued that, besides environmental attitude and perceived behavioural control, individuals' personal moral norms and psychological state regarding the environment are important predictors of their intention to engage in voluntary environmental behaviour. Hence, there is a likelihood that

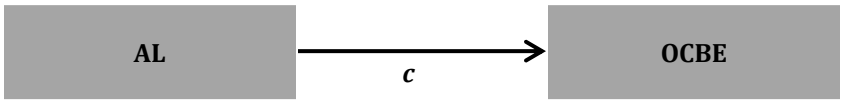
positive psychological capital may lead to a desirable OCBE, not as part of the employee's job description, but as support offered voluntarily by the individual employee to the organization (Norman et al., 2010). Based on the above discussion, this study hypothesizes that:
H3: There is a positive association between psychological capital and OCBE.

Mediation Effect of Psychological Capital: This study positions psychological capital as a mediating variable for several key reasons. To begin with, psychological capital represents a positive psychological resource that is relatively malleable and capable of being enhanced over time (Luthans, 2002). It is therefore argued that authentic leadership can contribute to the strengthening of employees' psychological capital, which subsequently affects their organizational citizenship behavior for the environment (OCBE). As a form of job resource, authentic leadership is likely to foster a supportive and encouraging work context that facilitates the growth of employees' psychological capital. In addition, authentic leaders demonstrate attributes such as self-awareness, internalized moral perspectives, balanced information processing, and relational transparency in their everyday interactions (Walumbwa et al., 2008). These leader behaviors are expected to transmit positive emotions to employees (Isen, 2000), which, when accumulated over time, can develop enduring psychological resources (Fredrickson, 2001). As employees' psychological capital strengthens, they become more inclined to engage in higher levels of OCBE. Thus, this study proposes the following:
H4: Psychological capital mediates the relationship between authentic leadership and OCBE.

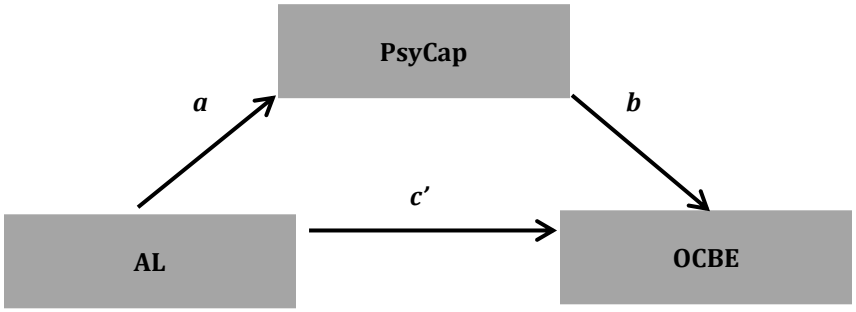
Research Model: Figure 1 illustrates the proposed model for this study, which examines the direct associations specified in Hypotheses 1-3 as well as the mediating role of psychological capital in the link between authentic leadership and organizational citizenship behaviour toward the environment (OCBE) proposed in Hypothesis 4. To evaluate the mediation effect, the bootstrapping approach was applied (Preacher & Hayes, 2004; Preacher, Rucker & Hayes, 2007). This procedure involves generating a large number of resamples by randomly drawing observations with replacement from the original dataset and estimating the target statistic for each resample (Preacher & Hayes, 2004; Preacher et al., 2007). Mediation analysis is based on the premise that the influence of predictor variables on an outcome variable may occur both indirectly through a mediating variable and directly without passing through the mediator. The indirect effect represents the portion of the predictor's influence that operates via the mediator. Bootstrapping is widely regarded as a robust technique for mediation testing because it accommodates non-normality in the sampling distribution of indirect effects. As such, it has been recommended as a superior alternative to traditional mediation tests, including the Sobel test (MacKinnon, Warsi & Dwyer, 1995).

Figure 1: Direct and Indirect Model

Direct Relationship



Indirect Relationship



Note: AL=Authentic Leadership, PsyCap=Psychological Capital, OCBE=Organizational Citizenship Behaviour toward the Environment

3. Methodology

Data were obtained from the front-line employees in six large publicly-owned utility organizations under the commercial category in Sri Lanka using a self-administered questionnaire sent by mail. The operations of these six organizations, i.e., Transport Board, Ceylon Electricity Board, Road Development Authority, Lanka Electricity Company, National Transport Commission, and Water Resource Board, affect society and the environment. The population of the study consists of 10,163 front-line workers. A total of 569 questionnaires were distributed using the formula suggested by Bartlett, Kotrlik and Higgins (2001), taking into consideration the poor response rate which is expected in survey research. A disproportionate stratified random sampling method was used to draw the sample from the six public sector organizations. The mailing address was obtained from the Human Resource Department of each organization, and the questionnaires were mailed to the selected participants. The data collection process lasted for four months from April 2018 to July 2018.

Measurement and Scales: The study used the Organizational Citizenship Behaviour toward the Environment Scale (Boiral & Paillè, 2012) to measure OCBE. The scale is a 10-item self-report instrument. A five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used to measure the construct. The internal consistency values (Cronbach's Alpha) of the dimensions range from 0.81 to 0.92 (Boiral, 2009; Boiral & Paillè, 2012).

The 16-item follower-rated Authentic Leadership Questionnaire (ALQ) by Avolio, Gardner and Walumbwa (2007) was used to assess authentic leadership. Respondents were asked to indicate the frequency of authentic leadership traits displayed by their respective superior using a five-point Likert-type scale, ranging from 1 (not at all) to 5 (frequently). Cronbach's alpha values of the dimensions range from 0.70 to 0.77 (Walumbwa et al., 2008).

The study used the 24-item Psychological Capital Questionnaire (PCQ) by Luthans et al. (2007) to measure psychological capital items on a five-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The internal consistency estimates (Cronbach's alpha) for the dimensions range from .88 to .89 (Luthans et al., 2007).

4. Results

Demographic Profile: In total, 569 survey instruments were administered, of which 417 were completed and returned. Thirteen responses were excluded from further analysis because they contained incomplete information. As a result, 404 questionnaires were initially deemed suitable for analysis, representing a usable response rate of 71.0%. Following preliminary data screening, an additional eight cases were removed due to the presence of univariate and multivariate outliers. Consequently, the final sample comprised 396 valid responses. The sample consisted of 56.6% female and 43.4% male participants. Most respondents were aged between 29 and 45 years (43.9%) and held Diploma or Certificate-level qualifications (40.9%). With respect to tenure, 38.9% of participants reported having between one and five years of experience in their current roles.

Descriptive Statistics, Reliability Coefficients, and Correlations: The descriptive statistics and the correlation matrix values for all variables are presented in Table 1. The mean values and standard deviation of the variables are as follows: OCBE (*M=3.502*, *SD*=.758, psychological capital (*M*=4.116, *SD*=.394), and authentic leadership (*M*=3.957, *SD*=.523), which are all higher than the midpoint of their respective scales. Overall, the results suggest that respondents perceived themselves as frequently engaging in organizational citizenship behaviour toward the environment (OCBE) and reported relatively high levels of psychological capital. In addition, supervisors were generally perceived as exhibiting authentic leadership behaviours. The internal consistency of the measurement instruments was satisfactory, with Cronbach's alpha values of 0.940 for OCBE, 0.911 for authentic leadership, and 0.896 for psychological capital. As shown in Table 1, Pearson correlation analysis reveals that all associations align with the proposed hypotheses. Authentic leadership demonstrates a significant positive correlation with OCBE ($r = .357$, $p < 0.01$) and with psychological capital ($r = .630$, $p < 0.01$). Similarly, psychological capital is significantly and positively associated with OCBE ($r = .302$, $p < 0.01$). These results indicate that stronger perceptions of authentic leadership are linked to higher levels of psychological

capital and OCBE among employees in Sri Lanka's public utility sector. Furthermore, higher psychological capital appears to be associated with increased engagement in OCBE.

Table 1: Descriptive Statistics, Reliability, and Correlations among Variables (N=396)

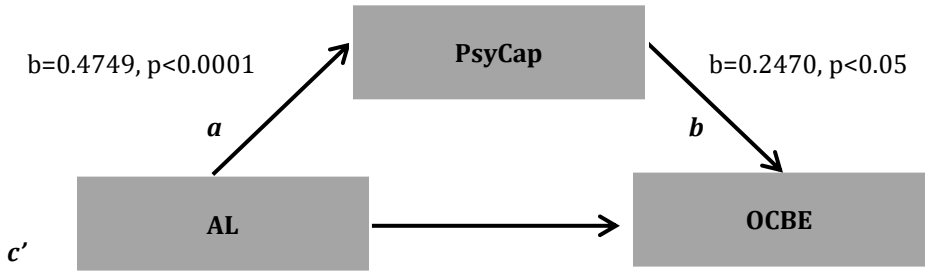
Variable	Mean	SD	1	2	3
1. OCBE	3.502	0.758	(0.940)		
2. AL	3.957	0.523	.357**	(0.911)	
3. PsyCap	4.116	0.394	.302**	.630**	(0.896)

Notes: Coefficient alphas are presented along the diagonal
**Correlation is significant at the 0.01 level (2-tailed)
AL=Authentic Leadership, PsyCap=Psychological Capital, OCBE=Organizational Citizenship Behaviour towards Environment

Hypothesis Testing: The hypotheses were tested via multiple regressions and mediation analysis using PROCESS Macro (Hayes, 2013) and SPSS 23. PROCESS is a conditional process modelling program developed by Preacher and Hayes (2004) that utilizes an ordinary least squares-based path analytical framework to test for both direct and indirect effects (Hayes, 2013). In Table 2, Model 1 shows the direct relationship between authentic leadership and psychological capital. Model 2 shows the direct relationships between authentic leadership and psychological capital, and OCBE.

Table 2 also presents the multiple regressions and mediation analysis results. H1 posits a positive relationship between authentic leadership and psychological capital. Model 1 of Table 2 shows that authentic leadership is significantly and positively related to authentic leadership (β=.4749, p< .0001), thus supporting H1. H2 states that authentic leadership is positively associated with OCBE. Model 2 of Table 2 shows that authentic leadership is significantly and positively related to OCBE (β=.4007, p< .0001), hence providing support for H2. H3 posits a positive relationship between psychological capital and OCBE. Model 2 of Table 2 shows that psychological capital is significantly and positively related to OCBE (β=.2470, p< .05), thereby supporting H3. Figure 2 illustrates that all the paths are statistically significant. Using the bootstrapping method through the bias-corrected confidence estimates, this study obtained a 95% confidence interval (CI) of indirect effects with 5,000 bootstrap resamples (Preacher & Hayes, 2008). Results of the mediation analyses, as depicted in Table 2, confirm the mediating role of psychological capital in the relationship between authentic leadership and OCBE (β=.1173, CI=0.0123-0.2283), providing support for H4. From the bootstrap percentile of CI shown in Table 2, the entire path is 95% of the bootstrap estimates, not including 0, evincing that the indirect effect of authentic leadership on OCBE is significantly different from 0.

Figure 2: Model of authentic leadership as a predictor of OCBE mediated by psychological capital



Direct effect, b=0.4007, p<0.0001
Indirect effect, b=0.1173, 95%, CI (0.0123, 0.2283)

Note: AL=Authentic Leadership, PsyCap=Psychological Capital, OCBE=Organizational Citizenship Behaviour toward the Environment

However, it was necessary to statistically test whether or not the relationship between the independent and dependent variables decreases or disappears when the effect of the mediator variable is controlled. The Sobel test was used to look at the significance of the z-value calculated through this test. The results are significant (S = 2.050, A = 2.035, G = 2.067, $p < .05$) (see Table 2), showing that psychological capital has a partial mediating effect on the relationship between authentic leadership and OCBE. Thus, authentic leadership affects OCBE both directly and indirectly through psychological capital.

Table 2: The mediation analysis (N= 396)

Predictors	**Model 1 PsyCap ß (SE)**	**Model 2 OCBE ß (SE)[a]**	
Independent Variables			
AL	.4749(.0295)**	.4007(.0875)**	
PsyCap	-	.2470 (.1161)*	
R^2	.3970	.1374	
Bootstrap indirect effects on OCBE (through PsyCap)[b]	**ß (SE)**	**LL 95% CI**	**UL 95% CI**
AL	0.1173(.0554)**	.0123	.2283
	Test statistics	**SE**	**p-value**
Sobel test	2.050	0.062	0.040
Aroian test	2.035	0.063	0.042
Goodman test	2.067	0.062	0.039

Note: LL = Lower limit; UL = Upper Limit; CI = Confidence Interval. Unstandardized regression coefficients are reported with standard error in parentheses.
[a] Direct and total effect. [b]Bootstrap sample size = 5000.
Note: AL=Authentic Leadership, PsyCap=Psychological Capital, OCBE=Organizational Citizenship Behaviour towards Environment
*p < .05; ** p < .01

Discussion

The significant positive association identified between authentic leadership and psychological capital indicates that stronger perceptions of leader authenticity are linked to higher levels of psychological capital among public sector employees in Sri Lanka. This outcome reinforces earlier scholarly arguments that authentic leadership fosters positive emotional experiences and enhances followers' psychological well-being through the establishment of genuine and trust-based leader–follower relationships (Ilies et al., 2005; Macik-Frey et al., 2009; Coxen et al., 2016; Atwijuka & Caldwell, 2017). From the perspective of the Conservation of Resources (COR) theory, authentic leadership can be viewed as a critical job-related resource that facilitates the accumulation and strengthening of employees' psychological capital (Avolio & Gardner, 2005). Overall, the results align with prior empirical evidence demonstrating that authentic leadership plays an important role in promoting positive psychological resources among employees (Ilies et al., 2005; Walumbwa et al., 2008; Clapp-Smith et al., 2009; Rego et al., 2012; Amunkete & Rothmann, 2015).

The observed positive relationship between authentic leadership and OCBE among public sector employees in Sri Lanka indicates that leaders who act authentically can encourage employees to voluntarily adopt environmentally responsible behaviors that extend beyond formal job requirements (Avolio, Gardner et al., 2004; Walumbwa et al., 2008). When supervisors are viewed as genuine and consistent advocates of environmental initiatives, employees tend to experience higher levels of satisfaction and organizational commitment, which in turn strengthens their readiness to engage in discretionary behaviors such as OCBE (Ilies et al., 2005; Clapp-Smith et al., 2009). Through ethical conduct, role modeling, and the reinforcement of social and moral responsibility, authentic leaders can heighten employees' awareness of environmental issues and motivate pro-environmental actions (Ilies et al., 2005; Walumbwa et al., 2008). These findings are consistent with prior research showing that employees are more likely to mirror environmentally responsible behaviors when leaders actively demonstrate and clearly communicate expectations regarding pro-

environmental practices in the workplace (Ramus & Steger, 2000; Boiral, 2009; Daily et al., 2009; Paillé & Boiral, 2013).

The results of this study indicate that employees with higher levels of psychological capital are more inclined to engage in favorable environmental citizenship behaviors. Psychological capital supports adaptive change and promotes constructive workplace outcomes, including behaviors that go beyond prescribed job roles. As an internal personal resource, psychological capital enables individuals to accumulate and mobilize further resources, thereby increasing their willingness to perform discretionary behaviors such as OCBE (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2007). Consistent with earlier empirical evidence (Norman et al., 2010), the present findings suggest that psychological capital functions as an important antecedent of voluntary extra-role behaviors in organizational settings. Overall, the analysis underscores that employees who experience stronger positive psychological states at work are more likely to demonstrate elevated levels of OCBE than those with comparatively lower psychological capital.

The presence of partial mediation identified in this study indicates that authentic leadership contributes to the cultivation of employees' positive psychological states (Luthans & Youssef, 2007), which function as critical personal resources for encouraging discretionary behaviors beyond formal job requirements, including OCBE (Youssef-Morgan & Luthans, 2015). At the same time, the results reveal that authentic leadership also exerts a direct influence on OCBE. These findings align with spillover theory (Wilensky, 1960), which posits that affective experiences such as psychological capital developed through authentic leadership extend beyond their immediate domain and are reflected in favorable workplace behaviors like OCBE. Moreover, by serving as a key job-related resource, authentic leadership facilitates the enhancement of employees' psychological capital, a vital personal resource that equips individuals with the capacity to mobilize additional resources necessary for engaging in extra-role behaviors, including OCBE (Avey et al., 2009; Rego et al., 2012).

5. Implications

Theoretical implications: This study makes several theoretical contributions. First, this study overcomes the lack of research on the influence of authentic leadership on OCBE in a non-Western context by providing new insights into the significance of authentic leadership in predicting psychological capital and OCBE in emerging economies, like Sri Lanka. The findings of this study, therefore, add to the body of knowledge on the authentic leadership style in a non-Western context (Zhang, Everett, Elkin & Cone, 2012).

Secondly, the findings of this study address the gaps in existing leadership studies on the element of authentic leadership and its influence on the behaviour of employees toward the environment. This study enriches our understanding of both authentic leadership and employees' pro-environmental behaviour. This is one of the main contributions of the current study, casting authentic leadership as an antecedent of OCBE (Walumbwa et al., 2008).

Thirdly, by testing the model in a public sector setting, the findings of this study augment knowledge on concepts, like authentic leadership, psychological capital, and OCBE, which are still lacking in the public sector compared to the private sector (Christensen & Whiting, 2009). Our research evinces that authentic leadership and psychological capital are important antecedents of OCBE behaviour among public sector employees.

Fourthly, by including a mediator in the leadership-pro-environmental relationship, the present study suggests that through the development of psychological capital, authentic leaders can motivate employees to display OCBE toward sustainable development. It appears that psychological capital can serve as an important mechanism to explain the association between authentic leadership and positive workplace behaviour, such as OCBE. Hence, psychological capital should be considered as one of the enablers in future studies involving leader-member relationships toward ensuring environmental sustainability.

Finally, our research extends the COR theory by indicating that job resources (authentic leadership) may be helpful for generating other personal resources (psychological capital), which in turn, can motivate employees to engage in pro-environmental behaviour beyond the call of duty. To date, the application of the COR theory, which forms part of the Job Demands-Resources Model (Bakker & Demerouti, 2007), has been limited to

studies on traditional workplace outcomes, such as stress, work burnout, voice behaviour, well-being, work engagement, and job performance (e.g., De Cuyper, Mäkikangas, Kinnunen, Mauno & Witte, 2012). The use of the COR theory to study pro-environmental behaviour among public sector employees not only uncovers its potential in predicting employee outcomes in other domains, but also distinguishes our study from other studies that have focused on traditional theories, like the social exchange theory (Blau, 1964); social identity theory (Tajfel & Turner, 1985); and the Theory of Planned Behaviour (Ajzen, 1991).

Practical Implications: In practical terms, since authentic leadership is found to be a crucial component in promoting public sector employees' OCBE at the workplace, it is important for public sector organizations to promote an authentic leadership style among leaders in the public sector in Sri Lanka. This is because employees who receive proper guidance and direction from authentic leaders who display strong internal moral values, including being responsible towards the environment, will emulate such behaviour. Accordingly, this study suggests that managers must understand their role as role models. Since employees tend to learn from and imitate their leaders' behaviour, managers should set examples of pro-environmental behaviour to protect the environment. Efforts must be taken to implement green policies to demonstrate that such leaders really "walk their talk" (Luu, 2019; Maqsoom et al., 2025).

Secondly, managers should attend training and development courses to develop authentic leadership qualities, specifically relating to their organization's green initiatives. They should share with employees pro-environmental values and support and stimulate them to engage in OCBE. They should also encourage employees to become "authentic leaders" themselves (Walumbwa et al., 2008; Luthans & Avolio, 2003), who then can help their colleagues develop green values and behave pro-environmentally. Therefore, training interventions should be considered by the organizations. Likewise, coaching employees in pro-environmental values and skills, encouraging them to share, and engaging employees in collective green activities, will promote their social responsibility performance and sustainability of the organization (Akisik & Gal, 2017; Luu, 2019).

Thirdly, although OCBE is a voluntary pro-environmental employee behaviour in the workplace, such behaviours should be encouraged further through proper recognition and reward, which can be in the form of monetary or non-monetary rewards. Public sector organizations can include an assessment of employees' concerns with and awareness of environmental performance in their annual performance appraisal. Employees should be rewarded accordingly if they demonstrate an acceptable level of OCBE. Such recognition will raise greater awareness of the importance of OCBE.

Finally, it is also important to find the fit between the person and the organization in terms of pro-environmental values and skills. The recruitment and selection process in the public sector organizations should be revisited for this purpose. From the perspective of employees, organizations should attach importance to the assessment of candidates' environmental values and skills in the recruitment and selection process, like self-assessment and 360-degree feedback. Individuals with high environmental values are more likely to be motivated to engage in OCBE in the workplace than those with low environmental values. Similar assessments can be considered for managerial positions in the organization.

Limitations and Future Research Recommendations: This study has a number of limitations, which pave the way for future research. First, the cross-sectional data used in the current study preclude any causal inferences. Future research should go beyond cross-sectional data and include longitudinal or time-lagged data to allow for causal inferences. Second, although the results of Harman's single-factor test show that there are no serious CMV biases in the current study, it cannot be completely excluded. Subsequent studies may collect data from multiple sources. Third, the current study only focused on a mediating mechanism to link authentic leadership to employees' OCBE, ignoring its boundary conditions. According to the contingency theory of leadership, the effectiveness of leadership is constrained by specific situational conditions (Thompson & Vecchio, 2009). Future research should incorporate these situational factors as moderators into the research framework. Finally, the concept of authentic leadership should not just focus on motivating employees to display OCBE, but should go beyond this to improve the organization's environmental and financial performance. Future research can add organizational environmental performance, green innovation, and even

financial performance as outcomes into the research framework (Boiral, 2009) to have an in-depth understanding of OCBE.

Conclusion

The current research examines the direct and indirect effects of authentic leadership on OCBE with psychological capital as a mediator. The findings suggest that psychological capital partially mediates the relationship between authentic leadership and OCBE. In other words, the direction of the relationship between authentic leadership and OCBE is both direct and indirect, mediated through psychological capital. The evidence of the indirect influence of psychological capital on the relationship between authentic leadership and OCBE suggests that psychological capital, as an important personal resource, contributes significantly to the promotion of positive workplace behaviour, like OCBE. Our research sets the stage for further research toward understanding how authentic leadership and psychological capital can increase pro-environmental outcomes in organizations.

References

Afsar, B., Badir, Y., & Kiani, U. S. (2016). Linking spiritual leadership and employee pro-environmental Behavior: The influence of workplace spirituality, intrinsic motivation, and environmental passion. *Journal of Environmental Psychology, 45,* 79–88. https://doi.org/10.1016/j.jenvp.2015.11.011

Aguilera, R. V., Rupp, D. E., Williams, C. A., & Ganapathi, J. (2007). Putting the S back in corporate social Responsibility: A multilevel theory of social change in organizations. *Academy of Management Review, 32*(3), 836–863. https://doi.org/10.5465/amr.2007.25275678

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211.

Akisik, O., & Gal, G. (2017). The impact of corporate social responsibility and internal controls on Stakeholders' view of the firm and financial performance. *Sustainability Accounting, Management and Policy Journal, 8*(3), 246–280.

Amunkete, S., & Rothmann, S. (2015). Authentic leadership, psychological capital, job satisfaction and Intention to leave in state-owned enterprises. *Journal of Psychology in Africa, 25*(4), 271–281.

Armstrong, J. H. (2019). Modeling effective local government climate policies that exceed state targets. *Energy Policy, 132,* 15–26.

Atwijuka, S., & Caldwell, C. (2017). Authentic leadership and the ethic of care. *Journal of Management Development, 36*(8), 1040–1051.

Avey, J. B., Luthans, F., & Jensen, S. M. (2009). Psychological capital: A positive resource for combating Employee stress and turnover. *Human Resource Management, 48*(5), 677–693.

Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly, 16*(3), 315–338.

Avolio, B. J., Gardner, W. L., & Walumbwa, F. O. (2007). *Authentic leadership questionnaire*. Mind Garden. http://www.mindgarden.com

Avolio, B. J., Gardner, W. L., Walumbwa, F. O., Luthans, F., & May, D. R. (2004). Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviours. *The Leadership Quarterly, 15*(6), 801–823.

Avolio, B. J., & Mhatre, K. H. (2012). Authentic leadership: Advances in theory and research. In K. S. Cameron & G. M. Spreitzer (Eds.), The Oxford Handbook of Positive Organizational Scholarship (pp. 773–783). Oxford University Press.

Bakker, A.B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology*, 22(3), 309–328.

Bamberg, S., & Möser, G. (2007). Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour. *Journal of Environmental Psychology, 27*(1), 14–25.

Bansal, P., & Roth, K. (2000). Why companies go green: A model of economic responsiveness. *Academy of Management Journal, 43*(4), 717–736.

Bartlett, J. E., Kotrlik, J. W., & Higgins, C. C. (2001). Organizational research: Determining an appropriate Sample size in survey research. *Information Technology, Learning, and Performance Journal, 19*(1), 43–50.

Blau P.M. (1964). *Exchange and Power in Social Life*. New York: John Wiley.

Boiral, O. (2009). Greening the corporation through organizational citizenship behaviours. *Journal of Business Ethics, 87*(2), 221–236.

Boiral, O., & Paillé, P. (2012). Organizational citizenship behaviour for the environment: Measurement and validation. *Journal of Business Ethics, 109*(4), 431–445.

Boiral, O., Talbot, D., & Paillé, P. (2015). Leading by example: A model of organizational citizenship Behaviour for the environment. *Business Strategy and the Environment, 24*(6), 532–550. https://doi.org/10.1002/bse.1835

Cheema, S., Afsar, B., & Javed, F. (2020). Employees' corporate social responsibility perceptions and Organizational citizenship behaviors for the environment: The mediating roles of organizational identification and environmental orientation fit. *Corporate Social Responsibility and Environmental Management, 27*(1), 9–21.

Christensen R. K., & Whiting S. W. (2009). Employee evaluations in the public sector: Public service motivation, task and citizenship behaviors. *The Korean Journal of Policy Studies*, *23*, 41-56.

Clapp-Smith, R., Vogelgesang, G. R., & Avey, J. B. (2009). Authentic leadership and positive psychological Capital: The mediating role of trust at the group level of analysis. *Journal of Leadership & Organizational Studies, 15*(3), 227–240.

Coxen, L., Van der Vaart, L., & Stander, M. W. (2016). Authentic leadership and organisational citizenship Behaviour in the public health care sector: The role of workplace trust. *SA Journal of Industrial Psychology, 42*(1), a1364. https://doi.org/10.4102/sajip.v42i1.1364

Dahl, R. A., & Lindblom, C. E. (1953). *Politics, economics, and welfare*. Harper and Brothers.

Daily, B. F., Bishop, J. W., & Govindarajulu, N. (2009). A conceptual model for organizational citizenship behaviour directed toward the environment. *Business & Society, 48*(2), 243–256.

De Cuyper, N., Mäkikangas, A., Kinnunen, U., Mauno, S., & Witte, H. D. (2012). Cross-lagged associations between perceived external employability, job insecurity, and exhaustion: Testing gain and loss spirals according to the conservation of resources theory. *Journal of Organizational Behavior*, *33*(6), 770–788.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*(3), 218–226.

Gardner, W. L., Avolio, B. J., & Walumbwa, F. O. (2005). *Authentic leadership theory and practice: Origins, Effects and development*. Elsevier.

Handoyo, S. (2024). Public governance and national environmental performance nexus: Evidence from cross-country studies. *Heliyon, 10*(23), e40637.

Hayes, A. (2013). *Introduction to mediation, moderation, and conditional process analysis*. Guilford Press.

Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology, 50*(3), 337–421.

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*(3), 513–524.

Ilies, R., Morgeson, F. P., & Nahrgang, J. D. (2005). Authentic leadership and eudaimonic well-being: Understanding leader–follower outcomes. *The Leadership Quarterly, 16*(3), 373–394.

Isen, A. M. (2000). Positive affect and decision making. In M. Lewis & J. Haviland-Jones (Eds.), *Handbook of emotions*(2nd ed., pp. 417–435). Guilford Press.

Kulin, J., & Sevä, I. J. (2019). The role of government in protecting the environment: Quality of government and the translation of normative views about government responsibility into spending preferences. *International Journal of Sociology, 49*(2), 110–129. https://doi.org/10.1080/00207659.2019.1582964

Laschinger, H. K. S., & Fida, R. (2014). New nurses' burnout and workplace wellbeing: The influence of authentic leadership and psychological capital. *Burnout Research, 1*(1), 19–28. https://doi.org/10.1016/j.burn.2014.03.002

Lussier, R. N., & Achua, C. F. (2013). *Leadership: Theory, application, skill development.* South-Western College.

Luthans, F. (2002). Positive organizational behavior: Developing and managing psychological strengths. *Academy of Management Executive, 16*(1), 57–75. https://doi.org/10.5465/ame.2002.6640181

Luthans, F., & Avolio, B. J. (2003). Authentic leadership development. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship* (pp. 241–258). Berrett-Koehler.

Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and the relationship between performance and satisfaction. *Personnel Psychology, 60*(3), 541–572. https://doi.org/10.1111/j.1744-6570.2007.00083.x

Luthans, F., & Youssef, C. (2007). Emerging positive organizational behaviour. *Journal of Management, 33*(3), 321–349. https://doi.org/10.1177/0149206307300814

Luu, T. T. (2018). Activating tourists' citizenship behaviour for the environment: The roles of CSR and frontline employees' citizenship behaviour for the environment. *Journal of Sustainable Tourism, 26*(7), 1178–1203. https://doi.org/10.1080/09669582.2017.1349774

Luu, T. T. (2019). Building employees' organizational citizenship behavior for the environment: The role of environmentally-specific servant leadership and a moderated mediation mechanism. *International Journal of Contemporary Hospitality Management, 31*(1), 406–426. https://doi.org/10.1108/IJCHM-07-2017-0437

Macik-Frey, M., Quick, J. C., & Cooper, C. L. (2009). Authentic leadership as a pathway to positive health. *Journal of Organizational Behavior, 30*(3), 453–458. https://doi.org/10.1002/job.584

MacKinnon, D. P., Warsi, G., & Dwyer, J. H. (1995). A simulation study of the mediated effect measures. *Multivariate Behavioral Research, 30*(1), 41–62. https://doi.org/10.1207/s15327906mbr3001_3

Maqsoom, A., Prasittisopin, L., & Ullah, F. (2025). Impact of responsible leadership on construction Employees' pro-environmental behavior: Exploring the mediating role of key variables. *Sustainable Futures, 9,* 100668. https://doi.org/10.1016/j.sftr.2025.100668

Norman, S., Luthans, B., & Luthans, K. (2005). The proposed contagion effect of hopeful leaders on the Resiliency of employees and organizations. *Journal of Leadership and Organizational Studies, 12*(2), 55–64. https://doi.org/10.1177/107179190501200208

Norman, S. M., Avey, J. B., Nimnicht, J. L., & Pigeon, G. N. (2010). The interactive effects of psychological Capital and organizational identity on employee organizational citizenship and deviance behaviours. *Journal of Leadership & Organizational Studies, 17*(4), 380–391. https://doi.org/10.1177/1548051809353764

Northouse, P. G. (2010). *Leadership: Theory and practice* (5th ed.). Sage.

Opatha, H. H. D. N. P., & Arulrajah, A. (2014). Green human resource management: Simplified general reflections. *International Business Research, 7*(8), 101–112. https://doi.org/10.5539/ibr.v7n8p101

Paillé, P., & Boiral, O. (2013). Pro-environmental behaviour at work: Construct validity and Determinants. *Journal of Environmental Psychology, 36,* 118–128. https://doi.org/10.1016/j.jenvp.2013.07.014

Paillé, P., Boiral, O., & Chen, Y. (2013). Linking environmental management practices and organizational Citizenship behaviour for the environment: A social exchange perspective. *The International Journal of Human Resource Management, 24*(18), 3552–3575. https://doi.org/10.1080/09585192.2013.777934

Pradhan, R. K., Jena, L. K., & Bhattacharya, P. (2016). Impact of psychological capital on organizational Citizenship behaviour: Moderating role of emotional intelligence. *Cogent Business & Management, 3*(1), 1194174. https://doi.org/10.1080/23311975.2016.1194174

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers, 36*(4), 717–731. https://doi.org/10.3758/BF03206553

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing Indirect effects in multiple mediator models. *Behavior Research Methods, 40*(3), 879–891. https://doi.org/10.3758/BRM.40.3.879

Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Assessing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research, 42*(1), 185–227. https://doi.org/10.1080/00273170701341316

Raineri, N., & Paillé, P. (2015). Linking corporate policy and supervisory support with environmental Citizenship behaviours: The role of employee environmental beliefs and commitment. *Journal of Business Ethics, 137*(1), 129–148. https://doi.org/10.1007/s10551-015-2548-x

Ramus, C. A., & Killmer, A. B. (2007). Corporate greening through prosocial extra-role behaviours: A Conceptual framework for employee motivation. *Business Strategy and the Environment, 16*(8), 554–570. https://doi.org/10.1002/bse.504

Ramus, C. A., & Steger, U. (2000). The roles of supervisory support behaviours and environmental policy in Employee "eco-initiatives" at leading-edge European companies. *Academy of Management Journal, 43*(4), 605–626. https://doi.org/10.2307/1556357

Rego, A., Sousa, F., Marques, C., & Cunha, M. P. (2012). Authentic leadership promotes employees' Psychological capital and creativity. *Journal of Business Research, 65*(3), 429–437. https://doi.org/10.1016/j.jbusres.2011.10.003

Rego, A., Júnior, D. R., & Cunha, M. P. (2015). Authentic leaders promoting store performance: The mediating Roles of virtuousness and potency. *Journal of Business Ethics, 128*(3), 617–634. https://doi.org/10.1007/s10551-014-2125-8

Robertson, J. L., & Barling, J. (2013). Greening organizations through leaders' influence on employees' pro-environmental behaviors. *Journal of Organizational Behavior, 34*(2), 176–194. https://doi.org/10.1002/job.1820

Robertson, J. L., & Barling, J. (2017). Toward a new measure of organizational environmental citizenship Behavior. *Journal of Business Research, 75,* 57–66. https://doi.org/10.1016/j.jbusres.2017.02.007

Stritch, J. M., & Christensen, R. K. (2014). Going green in public organizations. *American Review of Public Administration, 46*(3), 337–355. https://doi.org/10.1177/0275074014524297

Tajfel, H., & Turner, J.C. (1985). The Social Identity Theory of Intergroup Behavior. In S. Worchel, & W. G. Austin (Eds.), *Psychology of Intergroup Relations* (2nd ed., pp. 7-24). Chicago, IL: Nelson-Hall.

Thompson, G., & Vecchio, R. P. (2009). Situational leadership theory: A test of three versions. *The Leadership Quarterly, 20*(5), 837–848. https://doi.org/10.1016/j.leaqua.2009.06.014

Valsania, E. S., León, J., Alonso, F., & Cantisano, G. (2012). Authentic leadership and its effect on employees' organizational citizenship behaviours. *Psicothema, 24*(4), 561–566.

Vigoda-Gadot, E., & Cohen, A. (2004). *Citizenship and management in public administration: Integrating Behavioral theories and managerial thinking.* Edward Elgar.

Voulvoulis, N., & Burgman, M. A. (2019). The contrasting roles of science and technology in environmental Challenges. *Critical Reviews in Environmental Science and Technology, 49*(12), 1079–1106. https://doi.org/10.1080/10643389.2019.1579624

Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management, 34*(1), 89–126. https://doi.org/10.1177/0149206307308913

Wilensky, H. L. (1960). Work, careers, and social integration. *International Social Science Journal, 12*(4), 543–560.

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management, 14*(2), 121–141. https://doi.org/10.1037/1072-5245.14.2.121

Xu, J., Liu, Y., & Chung, B. (2017). Leader psychological capital and employee work engagement: The roles of employee psychological capital and team collectivism. *Leadership & Organization Development Journal, 38*(7), 969–985. https://doi.org/10.1108/LODJ-12-2015-0269

Ying, M., Faraz, N. A., Ahmed, F., & Raza, A. (2020). How does servant leadership foster employees' voluntary Green behaviour? A sequential mediation model. *International Journal of Environmental Research and Public Health, 17*(5), 1792. https://doi.org/10.3390/ijerph17051792

Yuan, R., Masron, T. A., Chen, Y., & Azman, N. S. (2025). Government effectiveness on environmental issues Degradation in developing countries. *International Journal of Environmental Science and Technology.* Advance online publication. https://doi.org/10.1007/s13762-025-06560-9

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

Zhang, H., Everett, A. M., Elkin, G., & Cone, M. H. (2012). Authentic leadership theory development: Theorizing on Chinese philosophy. *Asia Pacific Business Review, 18*(4), 587–605. https://doi.org/10.1080/13602381.2012.690683

Zhang, W., Zhang, W., & Daim, T. U. (2023). The voluntary green behavior in green technology innovation: The dual effects of the green human resource management system and the leader's green traits. *Journal of Business Research, 165,* 114049. https://doi.org/10.1016/j.jbusres.2023.114049