

Beyond Compliance: Leveraging Ethical Leadership to Cultivate High-Performance Nursing Behaviors in Ghana

Kwame Asare Duffour^{1*}, Esther Ayesu², Gideon Amewudah³, Hassan Chantel Sekinatu⁴, Sulemana Buhari⁵

^{1,2,3,4,5}Human Resource and Organizational Development Department, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana.

*Corresponding Author: Kwame Asare Duffour, Human Resource and Organizational Development Department, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana.

ABSTRACT

Purpose: Grounded in Social Exchange Theory (SET), this study investigates the impact of Ethical Leadership (EL) on nurses' Organizational Citizenship Behaviors (OCB) and Employee Commitment (EC) toward patients. Despite the high-stakes nature of healthcare, the psychological mechanisms linking leadership ethics to extra-role behaviors remain under-researched in non-Western clinical settings. This research examines the nexus between EL, Employee Commitment (EC), and OCB within the Ghanaian public healthcare.

Design/methodology/approach: A quantitative, cross-sectional design was employed, surveying 159 nurses across three hospitals in the Kumasi Metropolis, Ghana. Data were collected via structured scales and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS v4 and SPSS v28. This approach allowed for a robust assessment of the structural pathways and the predictive relevance of the proposed model.

Findings: The results provide empirical evidence that EL is a robust antecedent of both nurse commitment and OCB. Structural path analysis reveals that ethical supervisors cultivate an environment of trust, which significantly enhances nurses' emotional attachment to their institutions. Furthermore, the study identifies Employee commitment as a vital conduit that transmits the influence of ethical leadership into pro-social, patient-centered behaviors. This suggests that OCB is not merely an individual trait but a reciprocated response to ethical governance.

Originality/Value: This research contributes to the "nursing-management" literature by offering rare empirical insights from a sub-Saharan African context. It demonstrates that in resource-constrained environments like Ghana, ethical leadership acts as a critical non-material resource that drives service excellence. The study provides a mandate for healthcare administrators to integrate ethical competency into leadership development to reduce turnover and improve patient care quality through enhanced employee engagement EC and OCB.

Keywords: Ethical Leadership, Employee Commitment, Organizational Citizenship Behavior.

ARTICLE INFORMATION

Received: 19 February 2026

Accepted: 25 March 2026

Published: 01 April 2026

Cite this article as:

Kwame Asare Duffour, Esther Ayesu, Gideon Amewudah, et al. Beyond Compliance: Leveraging Ethical Leadership to Cultivate High-Performance Nursing Behaviors in Ghana. *Open Access Journal of Business and Economics*, 2026; 3(1): 15-28.

<https://doi.org/10.71123/3068-420X.030102>

Copyright:©2026. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.



Introduction

In order to foster a productive work environment, boost morale among employees, and safeguard the organization's core principles, leaders should demonstrate what is known as ethical leadership (Demirtas, 2013; Haar et al., 2019). Cullen (2022) define ethical leadership as embodying behaviour that aligns with societal and moral norms. This behaviour is not only manifested in personal actions but it is also evident in the ways leaders engage and interact with others. This leadership approach is anchored in a profound respect for ethical principles and values, as well as an acknowledgment of the dignity and rights of others. As highlighted by Agha et al. (2017), this style encompasses associated concepts like trust, integrity, honesty, empathy, equitable treatment, charisma, and fairness. A number of studies have been conducted to examine the effects of ethical leadership on employee outcomes and behaviours (Pakizekho & Sharifabad, 2022; Vu et al., 2020; Wadei et al., 2023).

Organisational Citizenship Behaviour (OCB) plays a vital role in fostering intricate relationships among employees within an organisation, as it enhances adaptability during unexpected situations (Tan et al., 2019). A study by Ting and Law Wai Man (2012) investigated how ethical leadership impacts employee OCB and found a direct positive correlation between the two. A similar positive connection between ethical leadership and employee OCB was observed in a study by Shareef and Atan (2019) which was centred around three major public universities in Iraq's Kurdistan Region. Adding to this, Çelik et al. (2015) highlighted that ethical leadership considerably boosts organizational commitment. In line with these findings, Loi et al. (2015) identified a link between ethical leadership practices and the emotional allegiance or affective commitment of employees to their organizations. However, Aryati et al. (2018) reported that ethical leadership did not significantly affect organizational commitment. This implies that the influence of ethical leadership on employee commitment is inconsistent and inconclusive.

Employee commitment refers to the depth of an employee's emotional and psychological bond with their workplace (Cherian et al., 2018; Thien et al., 2021). It is like an inner dedication where employees deeply resonate with and embrace the organisation's goals and underlying values. The significance of ethical practices and the moral facets of leadership have become evident in light of the numerous ethical controversies witnessed across a range of organizations (Demirtas, 2013; Davidson & Hughes, 2020). Contemporary organizations are increasingly recognizing the repercussions of ethical leadership on employee

behaviour (Kia et al., 2019). Consequently, examining how ethical leadership affects OCB and Employee commitment is pivotal for a deeper comprehension of its organizational implications (Yang & Wei, 2018). Yet, there remains a scarcity of comprehensive research focusing on the nexus between ethical leadership, OCB, and Employee commitment (Abuzaid, 2018). While some studies have underscored a marked positive correlation between ethical leadership and employee commitment, others have discerned no significant relationship between the two (Agha et al., 2017; Aryati et al., 2018; Çelik et al., 2015; Dey et al., 2022; Nemr & Liu, 2021; Özsungur, 2020). Hence, more empirical studies are required to enhance our understanding. Furthermore, while the significance of ethical leadership in today's organizational landscape is increasingly acknowledged, there remains a dearth of insights into its direct influence on employees' commitment and OCB, especially within the backdrop of entities in the agricultural sector, like Ghanaian Hospitals. Consequently, the prevailing issue is the scarcity of concrete evidence elucidating the degree to which ethical leadership shapes employee commitment and OCB within the confines of Ghanaian Hospitals. This gap in knowledge impedes the crafting of efficacious strategies geared towards fostering ethical leadership and reaping its beneficial outcomes in the organization. It is worth at this juncture that this study seeks to examine the influence of ethical leadership on employees' commitment and OCB using Ghanaian Hospitals. This study aims to offer a collection of theoretical concepts and real-world applications from which other scholars can build upon to attempt the replication of the research and address the knowledge voids revealed by this study. The rest of this article is organized as follows: Section 2 presents the theoretical background and analyses of relevant literature. This is followed by the presentation of the study's empirical review and hypotheses. Section 3 shows the research methodology. Section 4 presents the results, discussion, and implications. Section 5 draws the conclusion and future research prospect.

Literature Review

Social Exchange Theory (SET)

This research leverages the framework of the SET to delve into the effects of ethical leadership on employee commitment and OCB. Through the lens of the SET (Blau, 1964), actions undertaken by individuals hinge on the anticipation of reciprocated rewards. The crux of the social exchange theory underscores the transaction of both concrete and abstract resources between individuals or between individuals and larger social units, like organizations (Cropanzano et al., 2001). The significance of ethical leadership in fostering employee OCB has

been underscored by scholars, who have grounded their arguments on the framework of social exchange interaction (Kacmar et al., 2013). Based on the SET, individuals are more likely to return the support of a leader when they view that leader as displaying care and concern for their overall welfare (Tan et al., 2019). When an ethical leader demonstrates trustworthiness and fairness, their followers see these behaviours as typical of an ethical leader. This perception leads to workers exhibiting selfless rather than selfish actions (Brown et al., 2005; Brown & Treviño, 2006). This study used the SET because this theory provides a robust analytical lens to unravel the possible mechanisms that explain why employees might display more commitment and engage in OCBs when led by ethical leaders. Ethical leaders are viewed as ‘givers’ in the social exchange process, offering fair and moral leadership in exchange for their subordinates’ reciprocity in terms of commitment and citizenship behaviours (Brown & Treviño, 2006).

Empirical Review and Hypothesis Development

Influence of Ethical Leadership on Employee Commitment

The influence of ethical leadership on employee behaviour has garnered significant attention in modern organizational discourse (Kia et al., 2019). It is recognized that leaders play a pivotal role in fostering organizational commitment (Çelik et al., 2015). Specifically, the ethical conduct exhibited by leaders amplifies employee commitment (Gul et al., 2012; Brown, 2005). Supporting this notion, research by Ghahroodi et al. (2013) and Toor and Ofori (2009) has demonstrated a positive correlation between ethical leadership and organizational commitment. Çelik et al. (2015) also reported that ethical leadership has a significant positive effect on organizational commitment. Furthermore, Brown and Trevino (2006) suggested a direct correlation between ethical leadership and the commitment employees display both to their work and

the organization. Similarly, research by Loi et al. (2015) identified a linkage between ethical leadership practices and affective commitment among employees. We, therefore, hypothesize that:

Hypothesis 1: Ethical leadership will significantly and positively influence employee commitment.

Influence of Ethical Leadership on OCB

The first point of connection between ethical leadership and OCB arises from the role modeling that leaders provide. Ethical leaders, through their conduct and decision-making, set an example that others within the organization tend to follow (Brown et al., 2005). Employees observing their leaders behaving ethically can feel inspired to emulate these behaviours, leading to increased engagement in OCB. Ethical leaders thereby directly influence the extent of citizenship behaviour among their employees. Lu (2014) posits that OCB serves as a barometer for organizational outcomes and can be employed to assess the authenticity of ethical leadership. Similarly, Brown and Treviño (2006) propose a positive association between ethical leadership and OCB, suggesting that ethical leadership might act as a precursor to OCB (as supported by Lu, 2014; Kacmar et al., 2011). Studies have extensively investigated the relationship between ethical leadership and employee OCB (Pitzer-Brandon, 2013). For example, a study by Ting and Law Wai Man (2012) reported a direct positive correlation between the two. Similarly, Lu (2014) found that ethical leadership significantly predicts OCB. A similar positive connection between ethical leadership and employee OCB was observed in a study by Shareef and Atan (2019) which was centred around three major public universities in Iraq’s Kurdistan Region. Thus, leaders who demonstrate ethical behaviour significantly influence the extent to which their employees engage in such actions. We, therefore, hypothesise that:

Hypothesis 2: Ethical leadership will significantly and positively influence OCB

Conceptual Framework

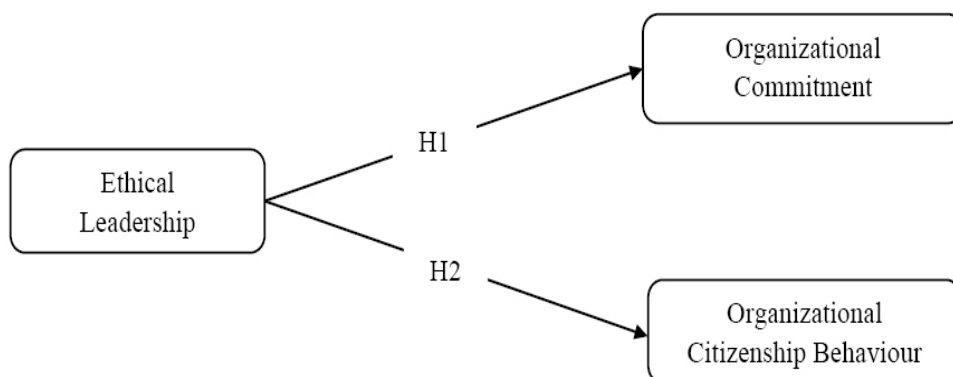


Figure 1. Conceptual framework

Methods

Participants, Procedure, and Measures

The purpose of this research is to describe the level of ethical leadership in correlation to employee commitment and OCB at Ghanaian Hospitals in Kumasi Metropolis. The target population for this study was staff of Kumasi South Hospital, KNUST Hospital, and Manhyia District Hospital. The hospitals were selected based on their revenue, size, and impact in the region. The combined staff population is estimated to be 472 working staff. The method of convenience sampling was employed to select the participants. The sample size constituted 159 nurses from the selected hospitals. For the analytical procedures, SPSS version 28 and SmartPLS was used. Ethical leadership was measured using six (6) items from Brown et al. (2005). Employee commitment was measured by using six (6) items developed by Meyer and Allen (1997). To measure organizational citizenship behaviour, a six-item scale from Podsakoff et al. (1990) was used.

Results

Demographic Information of the Respondents

The majority of respondents were female, making up nearly two-thirds (64.8%) of the sample, with males accounting for 35.2%. This suggests that females are more prevalent within this group. The age range of respondents

varied considerably. The largest group (41.5%) was aged 25-34 years. The least represented age group was those aged 55 years and above, making up only 1.3% of respondents. This indicates that the organization's staff skews towards younger ages, particularly those in their late twenties to mid-thirties. 38.4% reported being single. There were no divorced individuals in the sample. Regarding the educational level of respondents, most had completed at least a Bachelor's degree (33.3%) or had a diploma (28.9%). Fewer respondents had only a basic or secondary education (26.4%) or a Master's degree (11.3%). No respondents had a PhD or Doctorate. This distribution indicates a fairly educated workforce, with a notable emphasis on undergraduate and diploma-level education. The length of service at Ghanaian Hospitals is another important demographic factor. The majority of respondents (48.4%) had been with the hospital for 11-15 years, indicating a high level of staff retention or loyalty. The least represented group was those who had worked for the hospital for 1-5 years (8.8%) and those who had been there for over 20 years (0%).

Normality Test

This section provides the outcomes of normality tests conducted on the three primary constructs. The Kolmogorov-Smirnov test and the Shapiro-Wilk test were used to perform the analyses. The result is presented in Table 1.

Table 1. Tests of Normality

Constructs/Items	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
EL1	0.277	159	0.000	0.821	159	0.000
EL2	0.244	159	0.000	0.804	159	0.000
EL3	0.258	159	0.000	0.860	159	0.000
EL4	0.245	159	0.000	0.871	159	0.000
EL5	0.276	159	0.000	0.836	159	0.000
EL6	0.225	159	0.000	0.845	159	0.000
EC1	0.228	159	0.000	0.874	159	0.000
EC2	0.277	159	0.000	0.813	159	0.000
EC3	0.312	159	0.000	0.796	159	0.000
EC4	0.308	159	0.000	0.807	159	0.000
EC5	0.305	159	0.000	0.790	159	0.000
EC6	0.291	159	0.000	0.824	159	0.000
OCB1	0.217	159	0.000	0.871	159	0.000
OCB2	0.207	159	0.000	0.895	159	0.000
OCB3	0.289	159	0.000	0.823	159	0.000
OCB4	0.275	159	0.000	0.825	159	0.000
OCB5	0.301	159	0.000	0.829	159	0.000
OCB6	0.336	159	0.000	0.801	159	0.000
Composite EL	0.183	159	0.000	0.887	159	0.000
Composite EC	0.190	159	0.000	0.910	159	0.000
Composite OCB	0.143	159	0.000	0.936	159	0.000

a. Lilliefors Significance Correction

From the results in Table 1, we notice that for all the constructs/items, both the Kolmogorov-Smirnov and Shapiro-Wilk tests returned a significance level (sig.) of 0.000. In general, a sig. value less than 0.05 indicates that the data significantly deviates from a normal distribution (Pallant, 2016). Therefore, these results suggest that the data for all the constructs/items do not follow a normal distribution. The Shapiro-Wilk test, which is more appropriate for smaller sample sizes, also confirms the Kolmogorov-Smirnov findings, further reinforcing the conclusion of non-normality (Razali & Wah, 2011). In conclusion, the findings suggest that the data for all constructs/items in this study do not meet the assumption of normality. These results have important implications for further statistical analyses and need to be taken into

account when choosing appropriate statistical tests.

Confirmatory Composite Analysis (CCA) for Reliability and Validity Assessment

This segment reports the CCA which covers measurement model assessment for determining the reliability and validity of the data. Composite reliability and Cronbach's alpha (α) were used in assessing the reliability of the constructs. Further, the convergent validity was assessed using average variance extracted ($AVE > 0.50$) while discriminant validity was assessed using Fornell-Larcker, cross-loading, and Heterotrait-Monotrait Ratio ($HTMT_{0.85}$) criteria. The results are presented in Tables 2 to 5 and Figure 2.

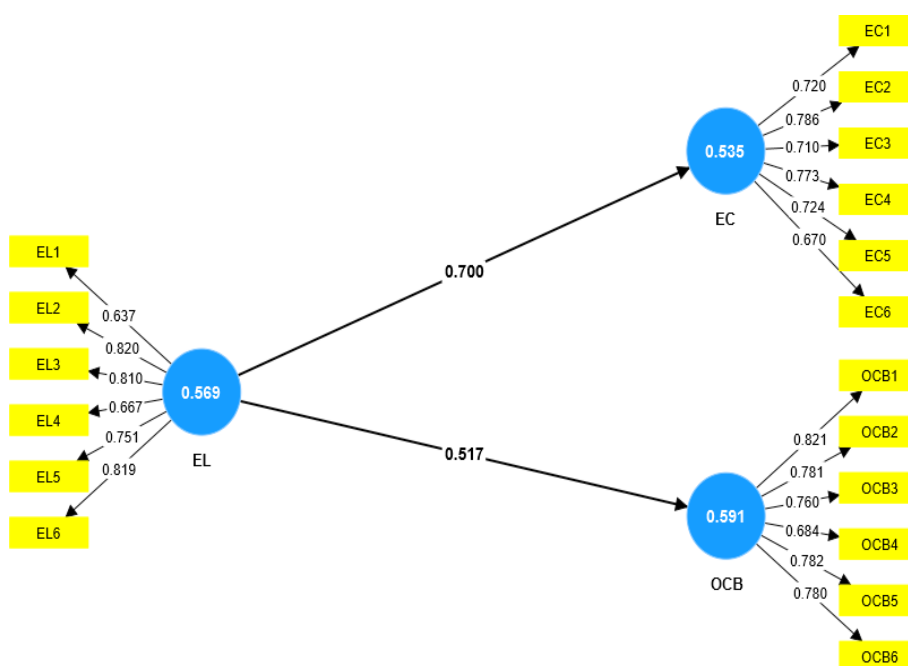


Figure 2. Measurement model showing the loadings and AVEs

Table 2. Loadings

Items	Loadings	t-statistics	p-values	VIF
EC1 <- EC	0.720	12.997	0.000	1.877
EC2 <- EC	0.786	16.488	0.000	2.189
EC3 <- EC	0.710	17.785	0.000	1.627
EC4 <- EC	0.773	14.130	0.000	4.218
EC5 <- EC	0.724	13.856	0.000	1.917
EC6 <- EC	0.670	8.695	0.000	4.003
EL1 <- EL	0.637	8.024	0.000	1.874
EL2 <- EL	0.820	21.824	0.000	2.830
EL3 <- EL	0.810	20.239	0.000	2.093
EL4 <- EL	0.667	9.893	0.000	1.523
EL5 <- EL	0.751	14.103	0.000	1.795
EL6 <- EL	0.819	29.949	0.000	1.994
OCB1 <- OCB	0.821	24.477	0.000	2.017
OCB2 <- OCB	0.781	18.569	0.000	1.945
OCB3 <- OCB	0.760	12.949	0.000	2.247
OCB4 <- OCB	0.684	10.421	0.000	1.905
OCB5 <- OCB	0.782	23.401	0.000	1.593
OCB6 <- OCB	0.780	15.457	0.000	2.013

Table 2 shows the factor loadings with respective t-statistics, p-values, and variance inflation factors (VIF) for the constructs. High factor loadings (greater than 0.5) are indicative of a significant relationship between the item and its construct (Hair et al., 2010). For the construct employee commitment, all six items (EC1 - EC6) have factor loadings ranging from 0.670 to 0.786, indicating a strong correlation with the construct. The t-statistics for all these items are above 1.96 (the threshold for a two-tailed test at the 5% level), and the p-values are 0.000, indicating the significance of these items in explaining the construct EC (Kline, 2011). The VIF values are below the typical threshold of 5, suggesting that there is no severe multicollinearity between the items (O'Brien, 2007).

Similarly, for the construct Ethical Leadership (EL), all items (EL1 - EL6) show high factor loadings (0.637

- 0.820), significant t-statistics, and p-values of 0.000, signifying a strong relationship between these items and the EL construct. The VIF values are well below the threshold of 5, showing no severe multicollinearity. Lastly, for the construct OCB, all the items (OCB1 - OCB6) display high factor loadings (0.684 - 0.821), large t-statistics, and p-values of 0.000, which again indicate a strong relationship between these items and the construct OCB. The VIF values for these items are below the threshold of 5, suggesting no significant multicollinearity.

In conclusion, all the constructs in this analysis demonstrate high loadings, significant t-statistics, and p-values, along with low VIF values. These results provide strong support for the measurement model and the validity of these constructs in the context of this study.

Table 3. Reliability and convergent validity

Constructs	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)
EC	0.828	0.873	0.535
EL	0.848	0.887	0.569
OCB	0.869	0.896	0.591

For all three constructs (EC, EL, OCB), the reliability values are above the 0.70 threshold. For instance, Cronbach's alpha values range from 0.828 to 0.869, which suggests good internal consistency among the items in each construct. Similarly, the composite reliability values for the three constructs (EC, EL, OCB) are all above 0.7, ranging from 0.873 to 0.896, indicating excellent internal consistency. Regarding the convergent validity which was examined using the Average Variance Extracted (AVE), if AVE is above 0.5, it means that, on average, the construct

explains over 50% of the variance of its indicators, which suggests good convergent validity (Fornell & Larcker, 1981). The AVE values for EC, EL, and OCB are all above 0.5, indicating that each construct captures a substantial amount of the variance in its items. In conclusion, based on Cronbach's alpha, composite reliability, and AVE values, the constructs of employee commitment, ethical leadership, and OCB demonstrate both high reliability and good convergent validity in the context of this study.

Discriminant Validity

Table 4. Cross loadings for discriminant validity

Constructs/Items	EC	EL	OCB
EC1	0.720	0.573	0.603
EC2	0.786	0.611	0.569
EC3	0.710	0.492	0.515
EC4	0.773	0.479	0.353
EC5	0.724	0.498	0.420
EC6	0.670	0.361	0.342
EL1	0.375	0.637	0.202
EL2	0.566	0.820	0.361
EL3	0.514	0.810	0.432
EL4	0.420	0.667	0.307
EL5	0.560	0.751	0.400
EL6	0.659	0.819	0.539
OCB1	0.413	0.462	0.821
OCB2	0.450	0.378	0.781
OCB3	0.403	0.222	0.760
OCB4	0.354	0.182	0.684
OCB5	0.749	0.574	0.782
OCB6	0.441	0.271	0.780

From Table 4, all items of the constructs EC, EL, and OCB show their highest loadings on their respective constructs, which is a good initial indication of discriminant validity. According to Hair et al. (2010), for a construct to exhibit good discriminant validity, the loading of an item on its

construct should be significantly higher than its cross-loadings with any other construct. For example, EC1 has a loading of 0.720 on its construct (EC) and lower cross-loadings on EL (0.573) and OCB (0.603). This pattern is observed consistently for all items within each construct.

Table 5. Discriminant validity by Fornell-Larcker and HTMT criteria

Constructs	EC	EL	OCB
Fornell-Larcker criterion			
EC	0.732		
EL	0.700	0.754	
OCB	0.654	0.517	0.769
Heterotrait-monotrait ratio (HTMT) criterion			
EC			
EL	0.800		
OCB	0.691	0.499	

From Table 5 above, the square root of the AVE for each construct (EC: 0.732, EL: 0.754, OCB: 0.769) is higher than the correlations between constructs (e.g., EC-EL: 0.700, EC-OCB: 0.654, EL-OCB: 0.517), indicating satisfactory discriminant validity. The HTMT criterion is an additional, more stringent approach to assess discriminant validity. Lower HTMT values indicate better discriminant validity. Henseler et al. (2015) suggest a threshold value of 0.85 or 0.90, depending on the context. Looking at the table, the HTMT values between all pairs of constructs (EC-EL: 0.800, EC-OCB: 0.691, EL-OCB: 0.499) are below 0.85,

further supporting the presence of discriminant validity. In conclusion, based on both the Fornell-Larcker and HTMT criteria, the constructs exhibit good discriminant validity in this study. Thus, the cross-loadings, Fornell-Larcker, and HTMT results provide robust evidence supporting the discriminant validity of the constructs. This assures us that the constructs in the study - EC, EL, and OCB - are distinct from each other, and measure separate and unique phenomena, which is crucial for the integrity and validity of the research findings (Hair Jr, et al., 2016).

Correlation Analysis

Table 6. Correlation matrix

Constructs	1	2	3	4	5	6	7	8
1. Gender	--							
2. Age	0.018	--						
3. Marital Status	0.258**	-.527**	--					
4. Education	-0.233	0.235**	-0.296**	--				
5. Tenure	-0.202	0.474**	-0.315**	0.307**	--			
6. EL	-0.008	0.101	-0.056	0.069	-0.010	--		
7. EC	0.097	0.214**	-0.067	-0.002	-0.038	0.627**	--	
8. OCB	0.030	0.120	-0.047	-0.018	-0.058	0.422**	0.506**	--

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

From Table 6 above, there is no significant correlation between gender and EL, suggesting that the gender of the employees does not have a substantial impact on their perception of ethical leadership. Similarly, there is no significant correlation between gender and OCB, indicating that OCB is not gender-dependent. However, EL shows a significant positive correlation with EC (r = 0.627) and OCB (r = 0.422). This implies that ethical leadership is strongly associated with both the commitment of employees and their OCB. Furthermore, EC and OCB

are significantly positively correlated (r = 0.506). This suggests that employees who are committed to their organization are more likely to demonstrate OCB.

In conclusion, the results obtained from the correlation analysis reveal meaningful relationships between various demographic variables and the constructs under study. It also strengthens the connection between ethical leadership, employee commitment, and OCB.

Hypotheses Testing

Table 7. Hypotheses results

Hypothesis	Path	β	SE	t-statistics	p-values	f ²	R ²
H1	EL -> EC	0.700	0.042	16.777	0.000	0.963	0.491
H2	EL -> OCB	0.517	0.056	9.299	0.000	0.365	0.267

For hypothesis H1, which proposed that ethical leadership increases organizational commitment of employees, the results indicate a statistically significant path coefficient ($\beta = 0.700$; $SE = 0.042$; $t = 16.777$; $p = 0.000$). Thus, hypothesis H1 is supported. The effect size ($f^2 = 0.963$) and R squared value ($R^2 = 0.491$) for this path suggest a substantial effect, indicating that ethical leadership accounts for about 49.1% of the variance in nurse commitment. H2 posited that ethical leadership improves OCB of employees. The

analysis substantiates this hypothesis, with a significant path coefficient ($\beta = 0.517$; $SE = 0.056$; $t = 9.299$; $p = 0.000$). The effect size ($f^2 = 0.365$) indicates a moderate effect, while the R squared value ($R^2 = 0.267$) shows that ethical leadership explains about 26.7% of the variance in OCB. In summary, the results provide strong support for both hypotheses. It is clear from these findings that ethical leadership plays a crucial role in promoting both nurse’s commitment and OCB in Ghanaian hospitals.

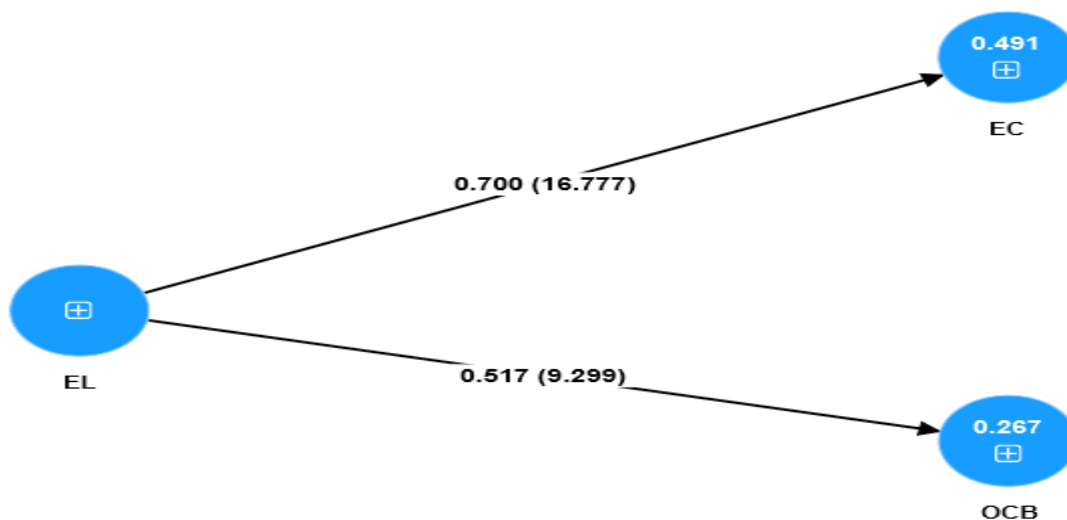


Figure 3. Structural model showing the hypotheses results

Discussion of Results

It is evident in this study that ethical leadership enhanced employee commitment of nurses of Ghanaian hospitals, supporting the first hypothesis of this study. The statistically significant relationship observed in the present research ($\beta = 0.700$; $p = 0.000$), along with the considerable effect size ($f^2 = 0.963$) and explained variance ($R^2 = 0.491$), reinforce the idea that ethical leadership plays a pivotal role in shaping employees’ commitment to their organization. A series of studies have indicated that ethical leadership leads to a higher level of organizational commitment (Ghahroodi et al., 2013; Toor & Ofori, 2009). This echoes the findings of our study where ethical leadership accounted for about 49.1% of the variance in nurses’ commitment at Ghanaian hospitals. Ethical leaders, through their actions, foster a sense of obligation and commitment among their employees (Neubert et al., 2009), thus setting the stage for a robust ethical culture within the organization (Brown et al., 2005). Moreover, ethical leadership positively influences employee commitment by acting as role models that

employees can emulate (Mayer et al., 2009). The aligned ethical values shared by leaders and followers enhance the attachment of nurses towards their organization (Brown et al., 2005), thus fostering a strong sense of commitment. This resonance of ethical principles forms a cornerstone of organizational commitment, as evidenced in the study by Çelik et al. (2015) and Brown and Trevino (2006).

However, it is important to note that the beneficial outcomes of ethical leadership are reliant on consistency between leaders’ words and actions. Discrepancies in this regard can undermine the positive influence of ethical leadership on employee commitment (Eisenbeiss et al., 2008). This serves as a reminder that ethical leadership is not merely about advocating ethical principles, but also about embodying these values consistently.

This study’s results proved that ethical leadership improved OCB of nurses in Ghanaian hospitals. That is, the evidence from the analysis supports the second hypothesis, with ethical leadership showing a significant positive impact on OCB ($\beta = 0.517$; $p = 0.000$). The effect size ($f^2 = 0.365$)

suggests a moderate effect, and the variance in OCB explained by ethical leadership is approximately 26.7% ($R^2 = 0.267$). The findings from the present study align with the existing body of literature, indicating a positive relationship between ethical leadership and nurses OCB (Brown & Treviño, 2006; Lu, 2014; Shareef & Atan, 2019; Ting & Law Wai Man, 2012). The role modeling performed by ethical leaders is a central mechanism through which they can foster increased OCB among employees (Brown et al., 2005). By exemplifying ethical behaviour in their actions and decision-making, ethical leaders can inspire employees to adopt similar behaviours, promoting increased participation in OCB. This suggests that the way leaders act and conduct themselves can directly influence the degree of citizenship behaviour among their employees. Ethical leaders also play a crucial role in fostering a positive ethical climate within an organization. This climate, characterised by shared perceptions about the appropriateness and value of ethical behaviours (Victor & Cullen, 1988), encourages employees to internalise these ethical norms. When an alignment exists between the ethical values of the organization (as embodied by the leaders) and those of the employees, it can drive increased engagement in OCB.

Implications of the Study

The implications of this study for both theory and practice are manifold. Theoretically, it strengthens the existing body of knowledge on ethical leadership and its influence on organizational outcomes by providing empirical evidence from a Ghanaian perspective, thus adding to the growing body of research from non-Western contexts. The empirical results lend credence to the notion that ethical leadership is a critical factor in fostering commitment and encouraging discretionary behaviours that go beyond formal job requirements.

In terms of practical implications, the findings underline the importance for organizations, like Ghanaian Hospitals, to invest in ethical leadership development. Such efforts may range from the incorporation of ethical considerations into leader selection and promotion processes to the creation of training and development initiatives that cultivate ethical leadership skills. To conclude, our study underscores the pivotal role ethical leadership plays in shaping nurses' Employee commitment and OCB.

Conclusion

The findings of this study provide robust evidence that ethical leadership significantly impacts both organizational commitment and OCB among nurses of Ghanaian Hospitals in Kumasi Metropolis. The analysis demonstrated a substantial and positive relationship between ethical leadership and organizational commitment

as well as a moderate and significant relationship between ethical leadership and OCB. The study thereby supports and extends the literature advocating the relevance of ethical leadership in shaping organizational commitment and stimulating OCB among employees (e.g., Brown & Treviño, 2006; Çelik et al., 2015; Lu, 2014).

In conclusion, the present study's findings are well aligned with the broader literature indicating a positive impact of ethical leadership on EC and OCB. These findings underscore the significance of ethical leadership in encouraging employees' discretionary behaviours that exceed their job descriptions and contribute to overall organizational effectiveness.

Limitation and Future Research

One avenue for future research could involve exploring additional variables that may serve as mediators or moderators in the association between ethical leadership and organizational outcomes. Potential variables that could be considered in this study encompass trust, job satisfaction, and perceived organizational support. This research opens up several avenues for future exploration. In addition, longitudinal research might help provide light on the interconnectedness of ethical leadership, Employee commitment, and OCB. These studies have the potential to offer valuable insights into the temporal dynamics of these relationships. Furthermore, there exists potential for additional investigation into these associations within diverse organizations and cultural settings.

Disclosure of interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Declaration of funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

References

1. Abbott, M. L., & McKinney, J. (2013). *Understanding and applying research design*. John Wiley & Sons, Inc., Publication.
2. Abuzaid, A. N. (2018). The relationship between ethical leadership and organizational commitment in banking sector of Jordan. *Journal of Economic and Administrative Sciences*, 34(3), 187–203. <https://doi.org/10.1108/jeas-01-2018-0006>

3. Agha, N. C., Nwekpa, K. C., & Eze, O. R. (2017). Impact of ethical leadership on employee commitment in Nigeria- A study of Innoson Technical and Industrial Company Limited Enugu, Nigeria. *International Journal of Development and Management Review*, 12(1), 202–214.
4. Ahmad, I., Donia, M. B. L., Khan, A., & Waris, M. (2019). Do as I say and do as I do? The mediating role of psychological contract fulfillment in the relationship between ethical leadership and employee extra-role performance. *Personnel Review*, 48(1), 98–117. <https://doi.org/10.1108/PR-12-2016-0325>
5. Aronson, E. (2001). Integrating leadership styles and ethical perspectives. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 18(4), 244-256.
6. Asrar-ul-Haq, M., Kuchinke, K. P., & Iqbal, A. (2017). The relationship between corporate social responsibility, job satisfaction, and organizational commitment: Case of Pakistani higher education. *Journal of Cleaner Production*, 142, 2352–2363. <https://doi.org/10.1016/j.jclepro.2016.11.040>
7. Bakar, A. H., & Connaughton, S. L. (2022). Ethical leadership, perceived leader–member ethical communication and organizational citizenship behavior: Development and validation of a multilevel model. *Leadership and Organization Development Journal*, 43(1), 96–110. <https://doi.org/10.1108/LODJ-07-2021-0356>
8. Blau, P. (1964). *Exchange and power in social life*. Wiley.
9. Brown, M. E. (2007). Misconceptions of ethical leadership: How to avoid potential pitfalls. *Organizational Dynamics*, 36(2), 140–155.
10. Brown, M. E., & Treviño, L. K. (2006). Ethical leadership: A review and future directions. *Leadership Quarterly*, 17(6), 595–616.
11. Brown, M. E., & Treviño, L. K. (2006). Ethical leadership: A review and future directions. *The Leadership Quarterly*, 17(6), 595-616.
12. Brown, M. E., Treviño, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes*, 97(2), 117-134.
13. Bryman, A., & Cramer, D. (2012). *Quantitative data analysis with IBM SPSS 17, 18 and 19: A guide for social scientists*. Routledge.
14. Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56(2), 81-105.
15. Çelik, S., Dedeoğlu, B. B., & Inanir, A. (2015). Relationship between ethical leadership, organizational commitment and job satisfaction at hotel organizations. *Ege Akademik Bakis (Ege Academic Review)*, 15(1), 53–53.
16. Cherian, S., Alkhatib, A. J., & Aggarwal, M. (2018). Relationship between organizational commitment and job satisfaction of nurses in Dubai hospital. *Journal of Advances in Social Science and Humanities*, 4(1), 36373–36400. <https://doi.org/10.15520/jassh41276>
17. Chetty, P. J. J. (2015). *Sources of work stress, psychological attachment and attitudes towards change: Constructing a psychological profile for change interventions* [University of South Africa]. <http://uir.unisa.ac.za/handle/10500/20144>
18. Cooper, D., & Schindler, P. (2014). *Business research methods*. McGraw-Hill Irwin.
19. Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications Ltd. <https://doi.org/10.1007/s13398-014-0173-7.2>
20. Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31, 874–900.
21. Cropanzano, R., Byrne, Z. S., Bobocel, D. R., & Rupp, D. E. (2001). Moral virtues, fairness heuristics, social entities, and other denizens of organizational justice. *Journal of Vocational Behavior*, 58(2), 164-209.
22. Cullen, J. G. (2022). Moral recovery and ethical leadership. *Journal of Business Ethics*, 175(3), 485-497.
23. Davenport, T. O. (1999). *Human capital: What it is and why people invest in it*. Jossey Bass, San Francisco.
24. Davidson, F. D., & Hughes, T. R. (2020). Moral dimensions of leadership. *FD Davidson & TR Hughes, Oxford Research Encyclopedia of Education*. Oxford University Press. <https://doi.org/10.1093/acrefore/9780190264093.013.785>.
25. Demirtas, O. (2013). Ethical leadership influence at organizations: Evidence from the field. *Journal of Business Ethics*, 126(2), 273–284.
26. Dey, M., Bhattacharjee, S., Mahmood, M., Uddin, M. A., & Biswas, S. R. (2022). Ethical leadership for better sustainable performance: Role of employee values, behavior, and ethical climate. *Journal of Cleaner Production*, 337(January), 130527. <https://doi.org/10.1016/j.jclepro.2022.130527>
27. Eisenbeiss, S. A., Knippenberg, D., & Boerner, S. (2008). Transformational leadership and team innovation: Integrating team climate principles. *Journal of Applied Psychology*, 93(6), 1438-1446.

28. Eisenbeiss, S. A., van Knippenberg, D., & Boerner, S. (2008). Transformational leadership and team innovation: Integrating team climate principles. *Journal of Applied Psychology, 93*, 1438–1446.
29. Elci, M., Şener, İ., Aksoy, S., & Alpkan, L. (2012). The impact of ethical leadership and leadership effectiveness on employees' turnover intention: The mediating role of work-related stress. *Procedia-Social and Behavioral Sciences, 58*, 289–297.
30. Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Sage.
31. Fisher, R., McPhail, R., & Menghetti, G. (2010). Linking employee attitudes and behaviors with business performance: a comparative analysis of hotels in Mexico and China. *International Journal of Hospitality Management, 29*(3), 397–404.
32. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 39*–50.
33. Gerpott, F. H., Quaquebeke, N. Van, Schlamp, S., & Voelpel, S. C. (2019). An identity perspective on ethical leadership to explain organizational citizenship behavior: The interplay of follower moral identity and leader group prototypicality. *Journal of Business Ethics, 156*(4), 1063–1078. <https://doi.org/10.1007/s10551-017-3625-0>
34. Ghahroodi, H. K., Mohd, M. Z. B. T. S., & Seyedghorban, Z. (2013). Examining ethical leadership and its impacts on the followers' behavioral outcomes. *Asian Social Science, 9*(3), 91–96.
35. Gul, S., Ahmad, B., Rehman, S. U., Shabir, N., & Razzaq, N. (2012). Leadership styles, turnover intentions and the mediating role of organizational commitment. *Information and Knowledge Management, 2*(7), 44–51.
36. Haar, J., Roche, M., & Brougham, D. (2019). Indigenous insights into ethical leadership: A study of Māori leaders. *Journal of Business Ethics, 160*, 621–640. <https://doi.org/10.1007/s10551-018-3869-3>
37. Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*. SAGE Publications, Inc. <https://doi.org/10.1108/EBR-10-2013-0128>
38. Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications.
39. Hair Jr, J., Page, M., & Brunsveld, N. (2019). *Essentials of business research methods*. Routledge.
40. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*. Prentice hall.
41. Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review, 31*(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
42. Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: Updated guidelines. *Industrial Management and Data Systems, 116*(1), 2–20. <https://doi.org/10.1108/IMDS-09-2015-0382>
43. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115–135.
44. Huang, J., & He, L. (2022). Perceived HRM practices and organizational citizenship behaviours: A case study of a Chinese high-tech organization. *Personnel Review, 51*(3), 1085–1099. <https://doi.org/10.1108/PR-11-2019-0605>
45. Kia, N., Halvorsen, B., & Bartram, T. (2019). Ethical leadership and employee in-role performance: The mediating roles of organizational identification, customer orientation, service climate, and ethical climate. *Personnel Review, 48*(7), 1716–1733. <https://doi.org/10.1108/PR-12-2018-0514>
46. Kline, R. B. (2011). *Principles and practice of structural equation modeling*. Guilford publications.
47. Kumasey, A. S., Delle, E., & Ofei, S. B. (2014). Occupational stress and organizational commitment: Does sex and managerial status matter? *International Journal of Business and Social Research, 4*(5), 173–182.
48. Loi, R., Lam, L. W., Ngo, H. Y., & Cheong, S. I. (2015). Exchange mechanisms between ethical leadership and affective commitment. *Journal of Managerial Psychology, 30*(6), 645–658. <https://doi.org/10.1108/JMP-08-2013-0278>
49. Lu, X. (2014). Ethical leadership and organizational citizenship behavior: The mediating roles of cognitive and affective trust. *Social Behavior and Personality, 42*(3), 379–390. <https://doi.org/10.2224/sbp.2014.42.3.379>
50. Mabasa, F. D., Mabasa, E. L., & Netshidzivhani, M. V. (2016). The relationship between job satisfaction and organizational commitment among academic staff members in a selected higher education institution. *Journal of WEI Business and Economics, 5*(2), 25–35.
51. Makasa, J. W. (2013). *Perceived levels of occupational stress among basic school teachers: A case study of selected Lusaka urban schools*. 1–80.
52. Mayer, D. M., Kuenzi, M., Greenbaum, R., Bardes, M., & Salvador, R. B. (2009). How low does ethical leadership flow? Test of a trickle-down model. *Organizational*

- Behavior and Human Decision Processes*, 108(1), 1-13.
53. Mayer, D. M., Kuenzi, M., Greenbaum, R., Bardes, M., & Salvador, R. B. (2009). How low does ethical leadership flow? Test of a trickle-down model. *Organizational Behavior and Human Decision Processes*, 108(1), 1-13.
 54. McCann, J., & Holt, R. (2009). Ethical leadership and organizations: An analysis of leadership in the manufacturing industry based on the perceived leadership integrity scale. *Journal of Business Ethics*, 87, 211-220.
 55. Meyer, J. P., & Allen, N. J. (1984). Testing the "side-bet theory" of organizational commitment: Some methodological considerations. *Journal of Applied Psychology*, 69(3), 372-378. <https://doi.org/10.1037/0021-9010.69.3.372>
 56. Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1), 61-89. [https://doi.org/10.1016/1053-4822\(91\)90011-Z](https://doi.org/10.1016/1053-4822(91)90011-Z)
 57. Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology*, 78(4), 538-551.
 58. Mo, S., & Shi, J. (2017). Linking ethical leadership to employees' organizational citizenship behavior: Testing the multilevel mediation role of organizational concern. *Journal of Business Ethics*, 141(1), 151-162. <https://doi.org/10.1007/s10551-015-2734-x>
 59. Moela, J. S. (2016). *Investigating the relationship between organizational culture and employee engagement in a Public Service Department*. University of South Africa.
 60. Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14(2), 224-247.
 61. Muchinsky, P. (2007). *Psychology applied to work*. Thomson International, Bakersfield, CA.
 62. Nagalingam, U. D., Kadir, N. B. A., & Hoesni, S. M. (2019). The mediating role of work engagement in the relationship between emotional intelligence and organizational commitment among higher education institution lecturers. *International Journal of Learning, Teaching and Educational Research*, 18(8), 31-53.
 63. Nemr, M. A. A., & Liu, Y. (2021). The impact of ethical leadership on organizational citizenship behaviors: Moderating role of organizational cynicism. *Cogent Business and Management*, 8(1). <https://doi.org/10.1080/23311975.2020.1865860>
 64. Neubert, M. J., Carlson, D. S., Kacmar, K. M., Roberts, J. A., & Chonko, L. B. (2009). The virtuous influence of ethical leadership behavior: Evidence from the field. *Journal of Business Ethics*, 90, 157-170.
 65. Neubert, M. J., Carlson, D. S., Kacmar, K. M., Roberts, J. A., & Chonko, L. B. (2009). The virtuous influence of ethical leadership behavior: Evidence from the field. *Journal of Business Ethics*, 90(2), 157-170.
 66. Niemeyer, J. R. L., & Cavazotte, F. D. S. C. N. (2016). Ethical leadership, leader-follower relationship and performance: A study in a telecommunications company. *RAM. Revista de Administração Mackenzie*, 17, 67-92.
 67. O'Brien, R. M. (2007). A caution regarding rules of thumb for variance inflation factors. *Quality & Quantity*, 41(5), 673-690.
 68. Organ, D. W. (1988). A restatement of the satisfaction-performance hypothesis. *Journal of Management*, 14(4), 547-557.
 69. Organ, D. W. (1994). Organizational citizenship behavior and the good soldier. In M. G. Rumsey, C. B. Walker, & J. H. Harris (Eds.), *Personnel Selection and Classification* (pp. 53-67). Lawrence Earlbaum Associates.
 70. Organ, D. W. (1997). Organizational citizenship behavior: It's construct clean-up time. *Human Performance*, 10(2), 85-97.
 71. Owuoth, G. G., & Mwangangi, P. (2015). Effect of public procurement regulations on procurement performance in public sector in Kenya: A case of Rural Electrification Authority. *International Journal of Social Sciences Management and Entrepreneurship*, 2(1), 171-184.
 72. Özsungur, F. (2020). The effects of ethical leadership on work engagement, intrapreneurship, and service innovation behavior: sample of chambers of commerce and industry. *International Journal of Public Leadership*, 16(2), 199-216. <https://doi.org/10.1108/ijpl-11-2019-0073>
 73. Pakizekho, S., & Sharifabad, M. B. (2022). The relationship between ethical leadership, conscientiousness, and moral courage from nurses' perspective. *BMC Nursing*, 21(164), 1-8. <https://doi.org/10.1186/s12912-022-00941-y>
 74. Pallant, J. (2016). *SPSS survival manual: A step-by-step guide to data analysis using IBM SPSS*. McGraw-Hill Education.
 75. Pangayom, A. I. T., & Kusmaningtyas, A. (2023). Ethical leadership and authentic leadership for improving innovative work behavior. *International Journal of Science and Research Archive*, 9(1), 679-690.
 76. Panneerselvam, R. (2010). *Research methodology*. PHI Learning Limited.

77. Phetsombat, P., & Na-Nan, K. (2023). A causal model of ethical leadership affecting the organizational citizenship behavior of teachers in the office of the basic education commission. *Sustainability*, *15*(8), 1–21. <https://doi.org/10.3390/su15086656>
78. Pitzer-Brandon, D. M. (2013). *The impact of ethical leadership on employee organizational citizenship behaviors* (Capella University). Capella University. <https://doi.org/10.1016/j>
79. Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *The Leadership Quarterly*, *1*(2), 107-142.
80. Raykov, T. (1997). Estimation of composite reliability for congeneric measures. *Applied Psychological Measurement*, *21*(2), 173-184.
81. Razali, N. M., & Wah, Y. B. (2011). Power comparisons of Shapiro–Wilk, Kolmogorov–Smirnov, Lilliefors, and Anderson–Darling tests. *Journal of Statistical Modeling and Analytics*, *2*(1), 21-33.
82. Roscoe, J. T. (1975). *Fundamental research statistics for the behavioural sciences* (2nd ed.). Holt, Rinehart and Winston, Inc.
83. Rowe, G. “Jay” R. (2019). *Ethical leadership and ethical behavior in the large publicly traded United States-based banks* (Liberty University, School of Business). Liberty University, School of Business. https://doi.org/10.1007/978-3-030-02038-5_6
84. Sarwar, N., Haider, S., Akhtar, M. H., & Bakhsh, K. (2023). Moderated-mediation between ethical leadership and organizational citizenship behavior: The role of psychological empowerment and high-performance managerial practices. *Management Research Review*, *46*(5), 649–666. <https://doi.org/10.1108/MRR-07-2021-0528>
85. Saunders, M., Lewis, P., & Thornhill, A. (2016). *Research methods for business students* (7th ed.). Pearson Education Limited.
86. Savaneviciene, A., & Stankeviciute, Z. (2011). Human resource management practices linkage with organizational commitment and job satisfaction. *Economics and Management*, *16*, 921–928.
87. Saxena, N., & Puri, P. (2015). Organizational commitment in relation to organizational politics: A study on government employees. *International Journal of Humanities and Social Science Invention*, *4*(8), 2319–7722.
88. Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). John Wiley & Sons Ltd. https://doi.org/10.1007/978-94-007-0753-5_102084
89. Shareef, R. A., & Atan, T. (2019). The influence of ethical leadership on academic employees' organizational citizenship behavior and turnover intention: Mediating role of intrinsic motivation. *Management Decision*, *57*(3), 583–605.
90. Sharma, A., Agrawal, R., & Khandelwal, U. (2019). Developing ethical leadership for business organizations: A conceptual model of its antecedents and consequences. *Leadership and Organization Development Journal*, *40*(6), 712–734.
91. Shin, Y. (2012). CEO ethical leadership, ethical climate, climate strength, and collective organizational citizenship behavior. *Journal of Business Ethics*, *108*(3), 299–312. <https://doi.org/10.1007/s10551-011-1091-7>
92. Siegel, P. G. (2013). *Ethical leadership and organizational commitment in the Canadian Armed Forces: An analysis of perceived supervisor ethical leadership as a predictor of organizational commitment in a Canadian Armed Forces sample*. Saint Mary's University.
93. Smith, C. A. O. D. W. N. J. P., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology*, *68*(4), 653-663.
94. Stutely, R. (2003). *Numbers guide: The essentials of business numeracy*. Bloomberg Press.
95. Su, W., & Hahn, J. (2021). Improving millennial employees' OCB: A multilevel mediated and moderated model of ethical leadership. *International Journal of Environmental Research and Public Health*, *18*(15). <https://doi.org/10.3390/ijerph18158139>
96. Tan, L. P., Yap, C. S., Choong, Y. O., Choe, K. L., Rungruang, P., & Li, Z. (2019). Ethical leadership, perceived organizational support and citizenship behaviors: The moderating role of ethnic dissimilarity. *Leadership and Organization Development Journal*, *40*(8), 877–897. <https://doi.org/10.1108/LODJ-04-2019-0160>
97. Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, *2*, 53-55.
98. Thien, L. M., Adams, D., & Koh, H. M. (2021). Nexus between distributed leadership, teacher academic optimism and teacher organizational commitment: A structural equation modelling analysis. *International Journal of Educational Management*, *35*(4), 830–847. <https://doi.org/10.1108/IJEM-05-2020-0278>
99. Ting, S. Y., & Law Wai Man, E. (2012). *Cultivating OCB through ethical leadership: Studying the influence of collectivism*. Hong Kong Baptist University.
100. Toor, S. U. R., & Ofori, G. (2009). Ethical leadership:

- Examining the relationships with full range leadership model, employee outcomes, and organizational culture. *Journal of Business Ethics*, 90, 533-547.
101. Victor, B., & Cullen, J. B. (1988). The organizational bases of ethical work climates. *Administrative Science Quarterly*, 33, 101-125.
102. Victor, C., & Cullen, J. B. (1988). The organizational bases of ethical work climates. *Administrative Science Quarterly*, 33, 101-125.
103. Vu, M., Tran, Q., & Nguyen, T. (2020). Ethical Leadership Connects Voice Behavior : The Mediating Role of Harmony Ethical Leadership Connects Voice Behavior : The Mediating Role of Harmony. *Journal of Business and Economic Development* 2020, 5(2), 56–63. <https://doi.org/10.11648/j.jbed.20200502.11>
104. Wadei, K. A., Asaah, J. A., Amoah-Ashyiah, A., & Wadei, B. (2023). Do the Right Thing the Right Way! How Ethical Leaders Increase Employees Creative Performance. *Journal of Leadership and Organizational Studies*, 1–14. <https://doi.org/10.1177/15480518231195597>
105. Watson, T. (2010). Leader ethics and organizational commitment. In *Mid-Atlantic Leadership Scholars Forum* (Vol. 3, No. 1, pp. 16-26).
106. Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17(3), 601-617.
107. Yang, Q., & Wei, H. (2018). The impact of ethical leadership on organizational citizenship behavior: The moderating role of workplace ostracism. *Leadership and Organization Development Journal*, 39(1), 100–113. <https://doi.org/10.1108/LODJ-12-2016-0313>
108. Ye, S., Yang, Y., Wang, W., & Zhou, X. (2022). Linking ethical leadership to employees' change-oriented organizational citizenship behavior: A multilevel moderated mediation model. *Social Behavior and Personality*, 50(7), 1–15.
109. Zechmeister, J. J., & Zechmeister, J. S. (2003). *Research methods in psychology* (6th ed.). McGraw-Hill Publications.
110. Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2009). *Business research methods* (8th ed.). South-Western College Pub.