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Original Article

The Impact of Nurses' Psychological Well-Being on Organizational Commitment: The Mediating Role of Work Engagement and the Moderating Role of Perceived Organizational Support

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Abstract

Background: Post-COVID-19 pandemic showed a marked increase in nurse resignations, which has exacerbated pressure on healthcare systems globally. Mental health and Perceived Organizational Support have emerged as critical factors influencing nurses' commitment to their organizations in the post-pandemic era. We aimed to explore the complex relationships between psychological well-being, work engagement, organizational commitment, and perceived organizational support within the Vietnamese healthcare context.

Methods: The research employed a cross-sectional quantitative approach. The questionnaire was distributed through Google Forms during March and April 2024, providing valuable insights into the studied phenomena within Vietnam's unique socio-cultural landscape. Convenience and snowball sampling were used to gather data. Upon completion of data collection, a total of 302 valid observations were obtained. The analysis was conducted using PLS-SEM.

Results: Work Engagement mediates the Psychological Well-being - Organizational Commitment relationship; Perceived Organizational Support moderates the Psychological Well-being - Organizational Commitment relationship; Perceived Organizational Support also moderates the mediation of Work Engagement between Psychological Well-being and Organizational Commitment. This study enhances the understanding of how Psychological Well-being and Work Engagement influence nurses' Organizational Commitment and highlights the role of Perceived Organizational Support as a key organizational resource in shaping these mechanisms. Furthermore, Organizational Commitment is linked to demographic variables such as age and monthly income, with age being a positive predictor and monthly income a negative predictor.

Conclusion: Healthcare managers can promote Nurses' Organizational Commitment by employing strategies to enhance their Psychological Well-being, Work Engagement, and Perceived Organizational Support.

Keywords: Psychological well-being; Work engagement; Organizational commitment; Perceived organizational support

Introduction

During the post-COVID-19 pandemic, the global nursing workforce has been significantly depleted. In the UK, half of the nursing students are considering dropping out due to high tuition costs and intense work pressure (1). Meanwhile, the U.S. saw a turnover rate of 18.4% for staff RNs in 2023 (2), and South Korea recorded a rate of 19.7% (3). In Indonesia, nurse turnover rates are notably high, ranging from 15% to 43%, negatively impacting the medical sector (4). In Vietnam, 42.2% of nurses had anxiety problems, 24.3% of nurses were depressed, and 16.5% of nurses had stress (5). According to a report by the Vietnamese Ministry of Health, 9,680 healthcare workers, including many nurses, resigned or departed between January 1, 2021, and June 30, 2022 (6). Nurses' retention is a complex issue, involving not only their decisions to stay or leave but also a variety of psychological factors that influence those choices. Enhancing nurses' organizational commitment (OC) is essential for bolstering workforce stability and reducing turnover.

According to Job Demand-Resource theory (JD-R) (7, 8), job resources refer to "the physical, psychological, social, or organizational aspects of a job that (a) may reduce job demands and the associated physiological and psychological costs, (b) are functional in achieving work goals, and (c) stimulate personal growth, learning, and development". Job resources play an important role in promoting extrinsic motivation by helping employees effectively manage job demands and achieve their career desires. Moreover, by fulfilling essential psychological needs for autonomy, belonging, and competence, natural job resources inspire and motivate employees (9). Job demands indicated that "those aspects of a job that require sustained physical and/or psychological effort and are therefore associated with certain physiological and/or psychological costs". Psychological Well-being (PWB) encompasses a holistic positive state in individuals, by focusing on developing essential human capacities, nurturing strong and supportive relationships, and inspiring a life of purpose and meaning, individuals can achieve a purpose-oriented life (10). Job demands are a catalyst in the process of creating motivation and job resources, including PWB, and are believed to enhance work engagement (WEG) (11, 12). Furthermore, PWB is linked to positive outcomes such as OC (13, 14). OC represents an employee's deep connection, active involvement, and loyalty to their workplace. It involves aligning with the organization's goals and values, demonstrating a strong dedication to the organization's success, and demonstrating a clear intention to remain a part of the organization (15). WEG is a positive and fulfilling state of mind associated with work, marked by vigour, dedication, and absorption (16). Previous research has shown that WEG positively influences OC (17) and WEG mediates the correlation between job resources and OC (18). Perceived Organizational Support (POS) refers to "an employee's belief that their contributions are valued and their well-being is a priority for the organization" (19). POS is considered a vital resource within the work environment (20). Higher levels of POS can significantly boost PWB (21), WEG (22), and OC (23).

Most research on PWB and nurses' OC primarily focused on developed countries, leaving a significant gap concerning emerging economies, particularly Vietnam. This gap underscores the need for research on PWB's impact on nurses' OC in the Vietnamese healthcare. Furthermore, previous research has often examined the factors of WEG and POS separately, without considering their interdependent influence (13, 17, 18, 22, 23). This fragmented approach fails to capture the interdependent dynamics, limiting our knowledge of the complicated influence of PWB on nurses' OC. Consequently, a comprehensive and in-depth analysis is essential to uncover how PWB affects nurses' OC, with WEG as a mediator and POS as a moderator. By exploring these

aspects, we aimed to answer the research questions:
RQ1: How does WEG mediate PWB-nurses' OC relationship in Vietnamese healthcare?
RQ2: How does POS moderate the PWB-Nurses' OC, PWB-WEG, and WEG-nurses' OC relationship in Vietnamese healthcare?
Besides, we investigated the influence of demographic factors, including personal statistics such as gender, age, marital status, education level, income level, years of service in nursing, and geographical area (24, 25), on nurses' OC within the Vietnamese healthcare.

Methods

Study design and participants

To achieve the study's objectives, a comprehensive data collection strategy combining convenience and snowball sampling was employed. Convenience sampling allowed efficient access to readily available participants, while snowball sampling helped reach key but less accessible nursing groups. This approach enhanced data diversity and reduced representational bias, thereby improving the reliability and generalizability of the findings. However, convenience and snowball sampling can lead to overrepresenting certain demographics and homogeneity among participants, potentially skewing data and limiting its generalizability to other groups or settings. Data was gathered from March to April 2024 via Google Forms across diverse Vietnamese healthcare. Participants were recruited through personal and career networks, with survey invitations distributed through email and social media platforms. This study required participants to be full-time nurses, aged 18 years and above. Before participation, participants received a detailed summary of the study's aims, scope, and details to ensure they provided informed consent. This approach was crucial in capturing a broad range of experiences and perspectives.

Survey questionnaire design

This research seeks to identify the factors influencing nurses' OC within Vietnamese healthcare institutions. The questionnaire was divided into two sections: the first section collected demographic data from participants, and the second section, which formed the core of the questionnaire, included questions related to the variable measurements.

Measurements

The primary constructs in this research include PWB, WEG, POS, and OC, each employed from previous research to suit the specific context of this research. The PWB was adopted from (10), which consisted of eight items. The WEG construct was assessed with a nine-item scale from (26). The 8-item survey of POS (19) measured nurses' POS, and the OC was adopted from (27), which consisted of five items. The questionnaire was carefully translated into Vietnamese using the back-translation method (28) to ensure linguistic accuracy and accessibility. All items were rated on a 5-point Likert scale.

Data analysis

We conducted the descriptive statistical analysis using Microsoft Excel. For partial leasts quares structural equation modeling (PLS-SEM), we utilized SmartPLS 3.2.9.
PLS-SEM and bootstrapping were chosen for their effectiveness in handling complex mediation and moderation models, which is ideal for exploratory research focused on theoretical development (29). Initial evaluation involved verifying the scales, variables, and model for reliability, convergent and discriminant validity, utilizing measures such as cronbach's alpha, composite reliability (CR) (30, 31), outer loading, average variance extracted (AVE) (32), variance inflation factor (VIF) (33), and discriminant validity (34). The first step involved evaluating the measurement model. The second step, bootstrapping with 5000 subsamples, was used to test the structural model.

Ethical considerations

Ethical guidelines were strictly followed, with participants fully briefed on the research aims and provided with informed consent. The participant was unreachable at that moment. To ensure anonymity, all personal identifiers were removed, and the data were anonymized using unique identification codes. This approach safeguarded participant confidentiality and privacy in accordance with ethical research standards. The study adhered to the Helsinki Declaration guidelines and did not involve any juveniles.

Results

Participants' characteristics

We gathered 302 valid questionnaires. Among the participants, 46 (15.23%) were aged 18 to 27 years, 150 (49.67%) were aged 28 to 37 years, 84 (27.81%) were aged 38 to 47 years, and 22 (7.29%) were older than 47 years. Regarding gender distribution, 40 participants (13.25%) were male, and 262 (86.75%) were female. Detailed characteristics of the participants are provided in Table 1.

Table 1: Sample characteristics (N = 302)

Characteristics	Categories	Frequency (N = 302)	Percentage (%)
Age(yr)	18-27	46	15.23
	28-37	150	49.67
	38-47	84	27.81
	> 47	22	7.29
Gender	Male	40	13.25
	Female	262	86.75
Education level	University/College	223	73.84
	Master and above	79	26.16
Monthly income	< $250	07	2.32
	$251-$400	94	31.12
	$401-$600	89	29.47
	> $601	112	37.09
Marital status	Single	42	13.91
	Married	260	86.09
Working time at the nursing	Less than 02 years	04	1.33
	02-<05 years	31	10.26
	05-<10 years	54	17.88
	10-<15 years	119	39.4
	15 years and above	94	31.13
Location	Northern	187	61.92
	Middle	59	19.54
	Southern	56	18.54

Measurement Model Analysis

The reliability and validity of the measuring model's elements were evaluated in this study. Table 2 displays the key indicators used to assess reliability and validity. Reliability was confirmed with Cronbach's Alpha indices and CR of all factors exceeding 0.70. Multicollinearity was addressed using the VIF, with all retained values below 5.0 except for item WEG8, which had a value of 5.603. The reliability test revealed that for specific factor loadings, the value of item WEG1 was equal to 0.617, less than 0.7; therefore, WEG1 was removed for analysis, and AVE for all items surpassed the thresholds of 0.5. Therefore, con-

vergent validity was established. Discriminant validity is established when one structure is distinguishable from the others, as demonstrated in our study using the Fornell-Larcker criterion, presented in Table 3.

Table 2: Results of validity and convergent validity

Construct	Items	Outer loading	VIF	Cronbach's Alpha	rho_A	CR	AVE
Organizational Commitment (OC)	OC1	0.727	1.721	0.885	0.888	0.916	0.688
	OC2	0.857	2.556				
	OC3	0.862	2.568				
	OC4	0.879	3.511				
	OC5	0.812	2.532				
Perceived Organizational Support (POS)	POS1	0.708	2.095	0.932	0.935	0.944	0.680
	POS2	0.766	2.558				
	POS3	0.832	2.970				
	POS4	0.876	3.457				
	POS5	0.843	2.868				
	POS6	0.864	3.917				
	POS7	0.875	4.787				
	POS8	0.816	3.040				
Psychological Well-being (PWB)	PWB1	0.776	2.570	0.927	0.936	0.939	0.659
	PWB2	0.755	2.192				
	PWB3	0.830	2.918				
	PWB4	0.812	2.622				
	PWB5	0.854	3.297				
	PWB6	0.900	4.550				
	PWB7	0.812	2.705				
	PWB8	0.745	2.142				
Work Engagement (WEG)	WEG2	0.736	1.992	0.922	0.923	0.937	0.683
	WEG3	0.827	3.498				
	WEG4	0.874	4.242				
	WEG5	0.878	3.823				
	WEG6	0.872	3.989				
	WEG7	0.814	3.534				
	WEG9	0.772	2.830				

Table 3: Fornell-Larcker Criterion and Heterotrait-Monotrait Ratio

Fornell-Larcker Criterion				
	OC	POS	WB	WEG
OC	0.829			
POS	0.380	0.824		
WB	0.313	0.436	0.812	
WEG	0.605	0.463	0.353	0.826

Structural Model Analysis

The scrutiny of the structural model within our investigation encompassed a multifaceted approach, examining the magnitude and significance of path coefficients, verifying the absence of multicollinearity via VIF scores amongst the constructs, and evaluating the predictive relevance. The magnitude of the interrelationships within the model was ascertained through path coefficients alongside their respective *P*-values to affirm statistical significance. Additionally, the R^2 values linked to each construct surpassed the minimum threshold of 0.10 (OC=0.417; WEG=0.251), which signifies an acceptable level of explanatory capacity. Furthermore, in this research, all Q^2 values were above zero (OC=0.272; WEG=0.163), indicating that the model possesses predictive relevance. The results of the PLS-SEM analysis are shown in Table 4 and Fig. 1.

Table 4: Path analysis

Variable	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values	Conclusion
Direct effect						
PWB -> OC	0.152	0.148	0.064	2.399	0.016	Supported
PWB -> WEG	0.282	0.285	0.070	4.012	0.000	Supported
WEG -> OC	0.494	0.491	0.053	9.245	0.000	Supported
Age -> OC	0.140	0.142	0.049	2.844	0.004	Supported
Income -> OC	-0.143	-0.144	0.058	2.450	0.014	Supported
Indirect effect						
PWB -> WEG -> OC	0.139	0.140	0.038	3.652	0.000	Supported
Moderating effect						
POS*PWB -> OC	0.087	0.079	0.049	1.771	0.075	Supported
POS*PWB -> WEG	0.094	0.091	0.044	2.135	0.033	Supported
POS*WEG -> OC	-0.116	-0.105	0.058	2.008	0.045	Supported

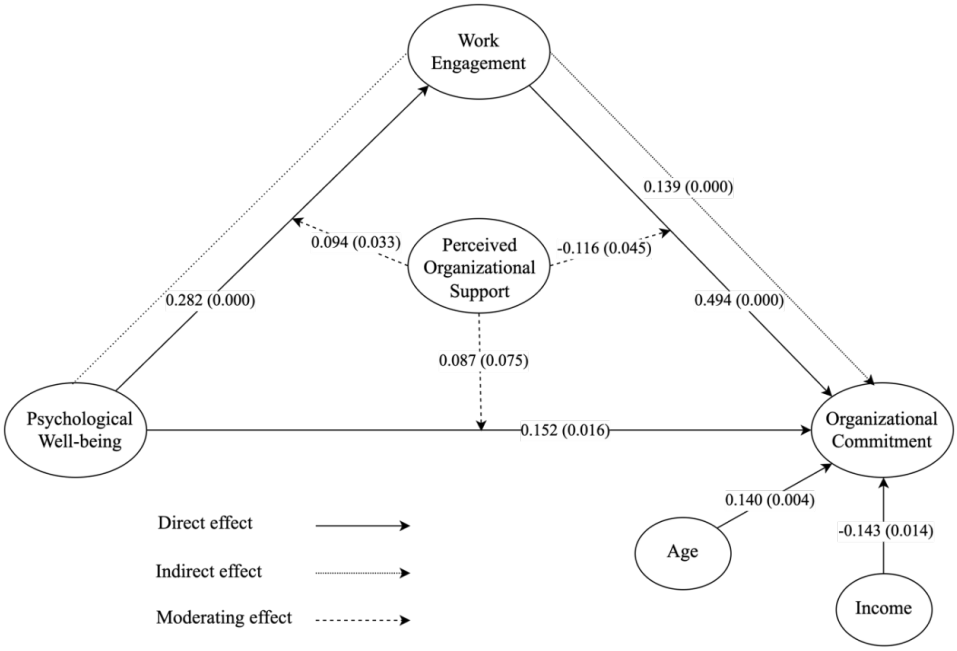

Fig. 1: PLS-SEM model result

PWB positively impacted WEG and OC (β=0.282, P<0.001; β=0.152, P=0.016, respectively). WEG significantly affected OC with a notable effect size (β=0.494, P<0.001), indicating a strong direct influence. Age positively impacted OC (β=0.140, P=0.004), and income negatively impacted OC (β=-0.143, P=0.014). Moreover, WEG acted as a partial mediator in the PWB-OC relationship (β=0.139, P<0.001). Additionally, the interaction between POS and PWB positively affected OC and WEG (β=0.087, P=0.075; β=0.094, P=0.033, respectively) (Figs 2 and 3), the interaction between POS and WEG negatively affected OC (β=-0.116, P=0.045) (Fig. 4).

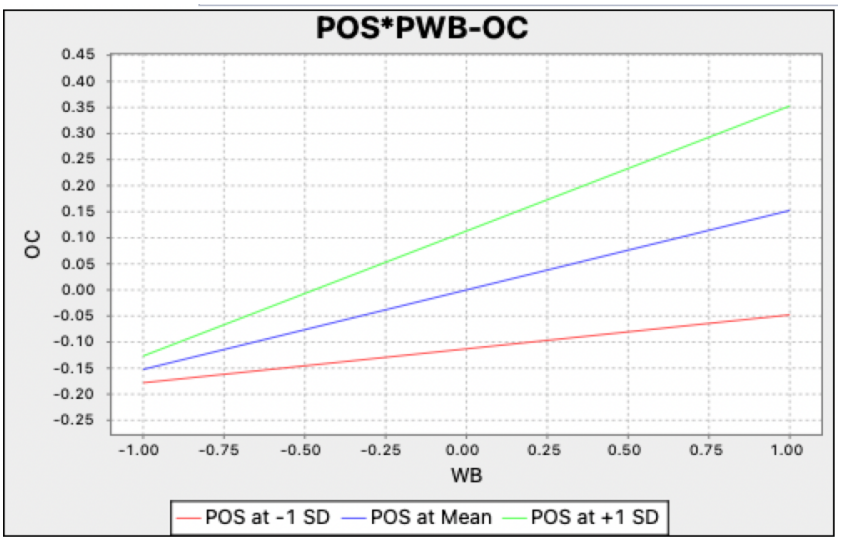

Fig. 2: The moderating effect of POS on the relationship of PWB to OC

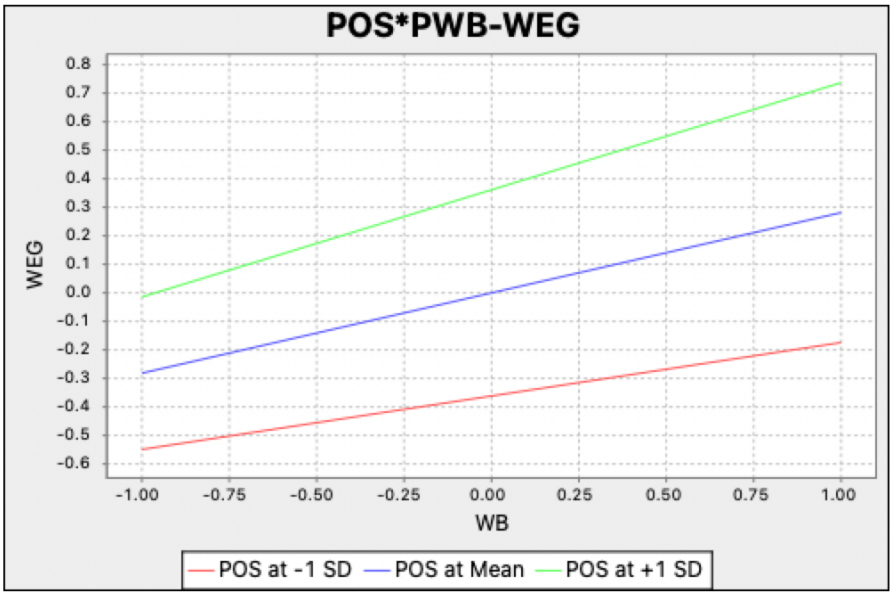

Fig. 3: The moderating effect of POS on the relationship of PWB to WEG

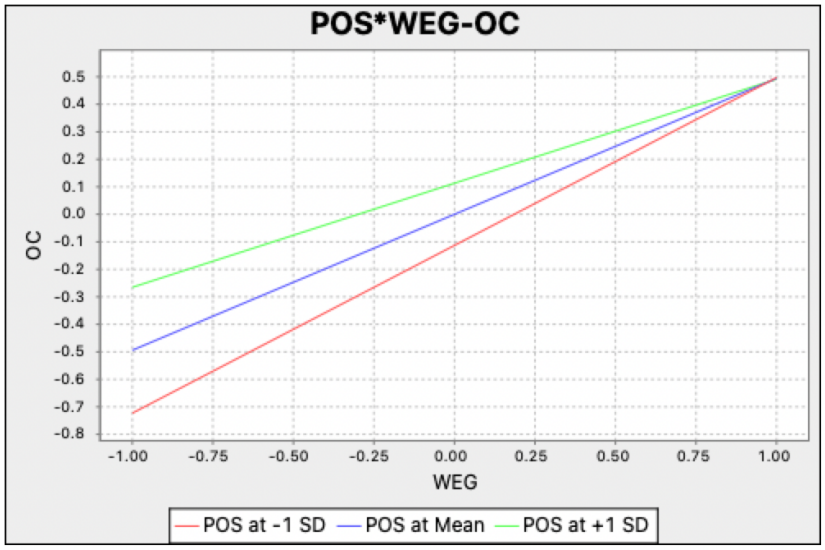

Fig. 4: The moderating effect of POS on the relationship of WEG to OC

Discussion

Our findings provided valuable insights into the predictors of nurses' OC, successfully accounting for 41.7% of the variance in OC. Our research explored the PWB-nurses' OC relationship in Vietnamese healthcare, focusing on the mediating role of WEG and the moderating role of POS. The result indicated that PWB had a significant positive effect on nurses' OC, the finding aligns with the outcomes of earlier research conducted by (11, 12). The result showed that WEG positively mediated the relationship between PWB and nurses' OC, the finding aligns with previous research conducted by (18). (18). Additionally, POS moderated the relationship between PWB, WEG, and OC. The current study highlighted that PWB was a key factor influencing nurses' OC within the Vietnamese healthcare context. This finding aligns with JD-R theory (7, 8), which emphasized providing adequate resources to reduce job demands' negative effects, and is consistent with the findings from (13, 14). This study fills research gaps by exploring the mediating role of WEG in the relationship between nurses' PWB and OC in the Vietnamese healthcare context. It also examines the moderating role of POS in these connections, an area not previously explored. The study provides new insights into how WEG and POS affect nurses' PWB and OC, contributing to the existing literature.

Regarding POS, our empirical results reveal significant positive moderating effects on PWB-nurses' OC and PWB-WEG relationships. The conservation of resources (COR) theory provides a solid foundation for understanding the influence of PWB on nurses' OC (37). POS provides additional resources that enable individuals to achieve their work goals. Therefore, our results suggest that the relationships between PWB and nurses' OC, and between PWB and WEG, are stronger when POS is higher due to the increased availability of resources.

One surprising finding in this study is that POS had significant negative moderating effects on the WEG-nurses' OC relationship. This suggests that a higher level of organizational support alters the dynamics of the WEG-OC relationship, offering a different perspective on how variables interact. Based on COR theory (38), high POS might lead nurses to feel their resources are sufficiently supported, reducing the necessity to invest further personal resources, thereby diminishing the influence of WEG on OC. This perception can lead to resource saturation, where additional engagement does not significantly increase commitment because their needs are already met. Moreover,

nurses might conserve their resources for non-work-related activities when they perceive high organizational support, weakening the impact of WEG on OC.

Additionally, our research indicates that nurses' age had a significant positive impact on nurses' OC in Vietnamese healthcare. This suggests that as nurses get older, they tend to develop stronger emotional attachments and loyalty to their organization. Older nurses may have longer tenure, leading to deeper ties to their workplace, greater knowledge of the organization, and a sense of stability and security in their work. In addition, they may place greater importance on organizational benefits, such as pensions or job security, which may increase their commitment. Our research indicates that monthly income had a significant negative impact on nurses' OC. Nurses with higher qualifications or positions tend to earn higher income monthly, and their skills are in high demand, especially in a country like Vietnam, where there is a significant shortage of nurses. The expansion of private hospitals and the healthcare sector in general has created more career opportunities for these professionals, giving them more options. With higher qualifications, they can easily move into higher-paying positions. This result reduces their OC with the organization.

Implications

Theoretical implications: This research extends the body of literature on PWB in several ways. First, it contributes to the development of PWB research by quantifying the relationship between PWB and nurses' OC within the Vietnamese healthcare context. Second, this research includes WEG as a mediating variable. The findings contribute to the existing knowledge by revealing the role of WEG in the PWB-nurses' OC relationship. This suggests that WEG may be seen as an important checkpoint in understanding how PWB influences nurses' OC. Additionally, the study demonstrated the moderating effect of POS on the relationships between PWB and nurses' OC, PWB, and WEG. Particularly, the negative moderating effect of POS on the WEG-OC relationship, the finding challenges the traditional view by indicating that WEG and OC are not always positively correlated with POS. Theoretical frameworks may need to consider the nature of the employee-organization relationship, rather than assuming a positive effect of organizational support. Finally, this research also provides evidence that age and income have impacted on nurses' OC.

Practical implications: Leaders and policymakers should address nurses' unique stressors and implement targeted interventions to alleviate them. Enhancing nurses' PWB will improve their OC and contribute to a more stable and effective healthcare system, especially in Vietnam, where healthcare demand often exceeds resources.

This study also shows the moderating effect of POS. POS has a positive effect on the relationship between PWB-OC and PWB-WEG. Therefore, policymakers need to take measures to improve each stage or each factor to improve nurses' OC by enhancing POS. However, POS has a negative effect on the relationship between WEG and OC, the negative effect suggests that excessive support from the organization may undermine highly engaged employees, potentially decreasing their motivation and commitment. Managers should focus on empowering employees and fostering a sense of ownership in their roles to enhance both engagement and commitment.

Limitations and future research

While the study offers valuable insights into PWB in developing countries, it has certain academic limitations. Future research should consider diverse cultural and economic contexts to deepen understanding of PWB's influence on nurses' OC. Additionally, as the cross-sectional design captures data at a single point in time, longitudinal studies are needed to observe how these relationships change over time.

In addition, relying on self-reported data introduces potential biases, including social desirability and memory biases. While self-reported measures can provide valuable insights into individuals' perceptions of their

performance, they are inherently subjective. To address these limitations, future studies should consider incorporating more objective measures of nurses' OC. This could enhance the study by incorporating supervisor ratings or objective data collection methods in addition to surveys.

Conclusion

This study has expanded our understanding of PWB and its impact on nurses' OC, especially in developing economies. By incorporating WEG and POS in our theoretical framework, we gained further insight into the complex effects of PWB on nurses' OC.

Our research shows that PWB improves nurses' OC and WEG, with POS moderating the PWB-nurses' OC relationship. These findings deepen our understanding of how PWB influences nurses' OC and underscore the importance of continuously updating theoretical models to align with the evolving work environment. To strengthen these conclusions, additional research is required in contexts with varying socioeconomic and cultural conditions. This research is particularly valuable for healthcare in developing countries, helping to implement or improve PWB strategies and highlighting the moderating role of POS in enhancing nurses' OC.

Journalism Ethics considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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Declaration of Conflicting Interests

The author(s) declare no conflicts of interest relevant to the current research.

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