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ORIGINAL RESEARCH

Spiritual Leadership Enhances Caring Behaviour: The Mediating Role of Calling

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Abstract

Background: Caring behaviour is essential for patient health; however, it is often not practised optimally. Therefore, spiritually-based leadership is required to encourage this behaviour. Unfortunately, research investigating the ability of spiritual leadership to enhance caring behaviour through spiritual well-being is limited.
Purpose: This study aimed to examine the impact of spiritual leadership and spiritual well-being in the form of calling and membership on caring behaviour.
Methods: This study employed an explanatory quantitative design with a cross-sectional approach. One hundred fourteen inpatient nurses who provided comprehensive patient care were selected using a total sampling technique. Data were collected using the Spiritual Leadership Questionnaire and the Caring Behaviours Inventory. The analysis adopted partial least squares structural equation modelling (PLS-SEM) using a second-order reflective-formative model.
Results: The findings demonstrate that spiritual leadership has a significant direct effect on caring behaviour (t=3.976, p=0.000), calling (t=4.672, p=0.000), and membership (t=2.845, p=0.005). However, the direct impact of membership on caring behaviour was insignificant (t=1.298, p=0.194). Calling proved to mediate the effects of spiritual leadership on caring behaviour (t=3.145, p=0.002), while membership could not function as a mediator (t=1.197, p=0.231).
Conclusion: This study emphasizes the importance of spiritual leadership in nursing care, particularly in enhancing nurses' caring behaviours. Healthcare organizations should implement training programs on spiritual leadership to encourage calling nurses to perform their duties with dedication. Developing nurse membership should be considered, but the main focus must be on strategies that strengthen nurses' calling, as this is an essential factor in providing quality and empathetic care.

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1. Introduction

The contribution of nurses to the overall functioning of hospitals is of utmost importance (Zoromba & Emad, 2021). These individuals' responsibilities encompass attending to patients' healthcare needs, administering nursing care, and overseeing various duties within a fiercely competitive healthcare setting (An et al., 2020). Throughout the day, nurses engage in multiple interactions with patients, and the compassionate demeanour exhibited by nurses significantly influences the standard of nursing care, ultimately resulting in exceptional service (Adams, 2016; Antón-Solanas et al., 2022). According to Abdurrouf et al. (2022), a positive correlation exists between patient satisfaction and the alignment of nursing treatment with caring principles.

The concept of nurse-caring behaviour pertains to establishing a connection between nurses and patients rooted in fundamental human values, such as compassion and empathy (Turkel et al., 2018). Cultivating optimal caring behaviour has been shown to enhance patient trust and competence, leading to improvements in service quality and patient safety (Abdurrouf et al., 2022). Alternatively, in the absence of appropriate caring behaviour, there is a potential decline

in the quality of nursing services (Sitzman et al., 2019), as well as a negative impact on individual health and well-being (Alligood, 2021; De Chesnay & Anderson, 2019). Furthermore, manifesting caring behaviour establishes a conducive atmosphere that cultivates a constructive rapport between the healthcare professional and the individual receiving care. This condition will engender a sense of comfort and acknowledgment in patients (Watson, 2021).

Caring conduct is an integral part of care delivery and plays a vital role in enhancing patient health. However, its implementation looks to be suboptimal. Several study findings reflect this, demonstrating that nurse caring behaviour still needs to be improved. According to Oluma and Abadiga (2020), the proportion of nurses with robust and caring behaviour perceptions is low. Kibret et al. (2022) discovered that nurse-caring behaviour was unacceptable and that a supportive work environment, adequate time, and resources are required to improve nurse-caring behaviour. Similarly, Handayani and Kuntarti (2022) said there are continuous challenges in Indonesia connected to low nurse caring behaviour. Several approaches, including leadership, are required to increase nurse caring behaviour in healthcare organizations.

The role of leadership in an organization's capacity to adapt to change and attain sustainability has been widely acknowledged (Hughes et al., 2018; Lee et al., 2020; Subhaktiyasa & Sintari, 2024). The influence of leadership on all facets of an organization is a critical and pivotal factor (Alblooshi et al., 2021; Subhaktiyasa, 2023). Crosby and Bryson (2018) and Rudolph et al. (2018) show that leaders can motivate and guide individuals toward attaining common objectives. Therefore, within the realm of nursing management, the implementation of effective leadership practices has the potential to inspire and direct nurses toward the demonstration of exemplary caring behaviour while simultaneously cultivating a professional atmosphere that is conducive to the provision of optimal patient care (Huber, 2017). It underscores the necessity of a leadership approach emphasizing good, humanistic conduct rooted in ethical and moral principles. The importance of spiritual leadership becomes evident in light of the abovementioned factors and the prevailing global diversity issues (Subhaktiyasa et al., 2023).

Although recent studies suggest that spiritual leadership can provide benefits in improving care and overall well-being (Hidayat et al., 2019; Ribeiro et al., 2021; Wu & Lee, 2020), empirical evidence explicitly exploring its impact on caring behaviours is limited. Oh and Wang (2020) noted that most existing studies have not profoundly explored the mechanisms linking spiritual leadership to caring behaviour in healthcare settings. Previous studies have only provided an overview of the benefits of spiritual leadership in a broader context. According to Yang and Fry (2018), Fry et al. (2016) and Subhaktiyasa (2024), spiritual leadership can play a crucial role in assisting nurses in comprehending their goals and missions, fostering a connection and involvement with patients, and delivering care that addresses the spiritual, emotional, physical, and psychological well-being of patients. It can result in nurses practising effective, caring behaviours and improving patients' health and quality of life. Spiritual leadership provides direction based on strong moral and spiritual values, enhancing nurses' spiritual well-being and strengthening their caring behaviour. Hence, there is a need for further research that fills this gap to understand the more concrete impact of spiritual leadership on nurses' caring behaviour.

The comprehension of the notions of calling and membership is crucial in gaining insight into the influence of spiritual leadership on the caring behaviour exhibited by nurses. Calling is described as a nurse's belief in pursuing a higher purpose and mission in providing patient care. On the other hand, membership relates to a nurse's sense of belonging and engagement with patients and fellow nurses, which fosters a sense of belonging in the nursing community (Baixinho et al., 2022; Kallio et al., 2022; Ricciardi & Shofer, 2019; Ziedelis, 2018). Hence, spiritual leadership in the context of nurses' caring behaviour is paramount in enhancing the overall quality of care inside healthcare institutions. Nevertheless, research on the capability of spiritual leadership to enhance caring behaviour through the dimension of spiritual well-being is limited and requires further exploration. Currently, no studies comprehensively integrate spiritual leadership, spiritual well-being, and caring behaviour in one holistic research model, which provides a deeper understanding of the role of spirituality in nurses' caring behaviour. Findings from previous studies indicating low levels of caring behaviour among nurses point towards further exploring the spiritual aspect of nursing care. Therefore, the primary objective of this study is to investigate the impact of spiritual leadership on caring behaviour, focusing on the dimensions of calling and membership. The results of this study are expected to enrich the academic literature and provide practical guidance for health managers in implementing spiritual

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leadership to create a more humanistic work environment that supports optimal caring behaviour.

2. Methods

2.1. Research design

This study used an explanatory quantitative design with a cross-sectional approach to examine the effect of spiritual leadership on nurses' caring behaviour, considering the calling and membership dimensions as mediating variables. This design was chosen as it allows for predicting cause-and-effect relationships between predetermined variables and measuring and analyzing data numerically through hypothesis testing (Hair et al., 2019). This approach is also appropriate for exploring how spiritual leadership influences nurses' spiritual well-being and caring behaviour by providing robust empirical evidence through multivariate statistical analysis (Hair et al., 2021).

Figure 1 illustrates the conceptual framework employed in this investigation. The hypotheses of this study are derived from the theoretical overview, relevant research findings, and the specified framework (Baixinho et al., 2022; Fry et al., 2005; Fry et al., 2016; Kallio et al., 2022; Yang & Fry (2018), including H1: Spiritual leadership has a significant positive effect on caring behaviour; H2: Spiritual leadership has a significant positive effect on calling; H3: Spiritual leadership has a significant positive effect on membership; H4: Calling has a significant positive effect on caring behaviour; H5: Membership has a significant positive effect on caring behaviour; H6: Calling mediates the influence of spiritual leadership on caring behaviour; and H7: Membership mediates the influence of spiritual leadership on caring behaviour.

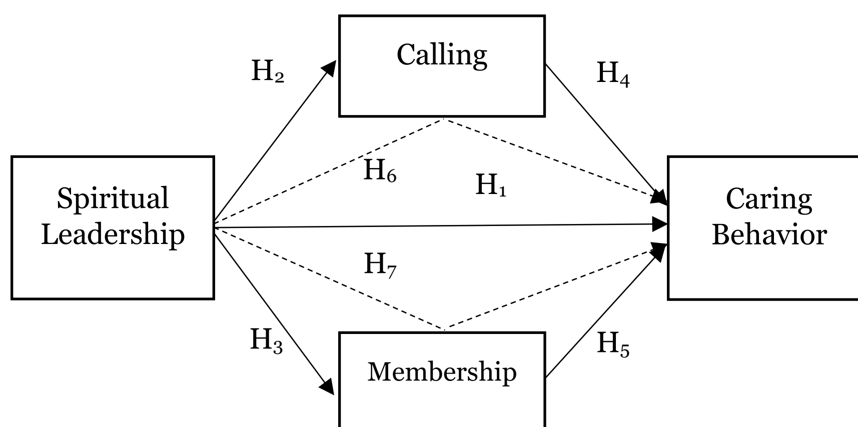

Figure 1. Research framework model

2.2. Setting and samples

This study was conducted at a government hospital in Denpasar, Bali, Indonesia. The facility is one of the leading referral hospitals in the region, providing comprehensive care services for both inpatients and outpatients. The context of this study focused on nurses serving in inpatient care units, which offer a range of healthcare services such as observation, diagnosis, therapy, medical rehabilitation, and other medical interventions. A total of 114 nurses working in inpatient care units of hospitals were selected as the target population in this study based on their extensive exposure to patients with various medical conditions, which provides a comprehensive view of the influence of spiritual leadership on caring behaviour. Sample determination refers to non-probability sampling with a purposive sampling technique through the total sampling process (Creswell & Creswell, 2018; Narayan et al., 2023). Inclusion criteria for this study included nurses who had worked in the inpatient care unit for at least one year and were willing to participate. Exclusion criteria were applied to nurses who were on leave or off duty during the data collection period. The hospital was approached through coordination with the management to obtain permission and ensure full support in the data collection process. All study participants were explained the purpose of the study and their rights as respondents before the data were collected. The sample size of 114 was appropriate for multivariate research based on the inverse square root method, which considers the power of the statistical test, the path coefficient, and the significance

level (Kock & Hadaya, 2018). This number has met the statistical power of 80% with a path coefficient level of 0.21 - 0.3 and a significant level of 1%, as shown in Table 1 (Hair et al., 2021).

Table 1. Minimum sample sizes for different levels of minimum path coefficients (ρ_{min}) and a power of 80%

ρ_{min}	Significance level		
	1%	5%	10%
0.05–0.1	1004	619	451
0.11–0.2	251	155	113
0.21–0.3	112	69	51
0.31–0.4	63	39	29
0.41–0.5	41	25	19

2.3. Measurement and data collection

The variables in this study included spiritual leadership (X1) as the independent variable, calling (M1) and membership (M2) as the mediating variables, and caring behaviour (Y) as the dependent variable. The operational definition of spiritual leadership refers to a collection of ideals, attitudes, and behaviours that catalyze an individual's and others' intrinsic motivation. The variable in question was evaluated utilizing the Spiritual Leadership Questionnaire developed by Fry et al. (2005). This questionnaire comprises three distinct dimensions, namely vision (X1), faith/hope (X2), and altruistic love (X3), each consisting of a total of 14 indicators. The attribute of calling is a fundamental quality nurses hold in high regard and employ to inspire themselves and their colleagues in fulfilling necessities. Membership can be characterized as the subjective experience of being comprehended, esteemed, and integrated within a group or network in a professional setting. Calling was measured through 4 indicators, and membership through 5 indicators by Fry et al. (2005). The caring behaviour variable, defined as the acts performed by nurses to deliver care that aligns with the needs and preferences of patients to improve and restore their health, was assessed using the Caring Behaviours Inventory. This inventory, developed by Wolf et al. (1994), consists of 42 items.

All questionnaires in this study have been translated into Indonesian and measured using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). This scale was chosen to provide sufficient response variation and support in-depth statistical analysis (Wang & Krosnick, 2020). The construct validity results of these translated tools were tested through measurement evaluation using the PLS-SEM method, which includes convergent validity, discriminant validity, and reliability. The measurement model evaluation results show that convergent validity has been achieved, as indicated by the outer loading value exceeding 0.7 and the average variance extracted (AVE) value above 0.5. Discriminant validity also met the criteria, as seen from Heterotrait-Monotrait Ratio (HTMT) value below 0.9. The instrument's reliability also met the criteria with a composite reliability (CR) value greater than 0.7. Thus, all instruments used in this study have demonstrated strong validity and reliability.

Data were collected through in-person visits to nine inpatient wards from December 2022 to February 2023. Nurses were approached based on the inclusion criteria and explained the purpose of the study and the potential benefits of participation. The researcher emphasized voluntary participation and explained how to keep respondents' data confidential. Nurses willing to participate were given informed consent and asked to complete the questionnaire. The researcher also provided detailed guidance on the questionnaire completion methodology to ensure a proper understanding of each question. The data collected were only used for research purposes and could only be accessed by the researcher to maintain the integrity and confidentiality of the information.

2.4. Data analysis

The data underwent analysis using Partial Least Squares Structural Equation Modeling-(PLS-SEM) methodology, facilitated using Smart-PLS 3.0 software. The evaluation of the second-order reflective-formative model in this study was conducted by referencing Hair et al. (2019). The initial phase of assessing the measurement model (outer model) entails examining its construct validity, encompassing both convergent and discriminant validity. The assessment of

construct validity in the reflective model involved an examination of the loading value, AVE, HTMT, and CR. On the other hand, the formative model underwent evaluation by considering the external weight and the collinearity among the indicators. The second phase encompasses the assessment of the structural model, also referred to as the inner model, by applying diverse criteria. These criteria include the R-squared value, statistical significance, confidence intervals, and the adequacy of the standardized root mean square residual (SRMR) value (Hair et al., 2019; Hair et al., 2021).

2.5. Ethical considerations

This study was conducted following the established protocol, and ethical clearance was obtained from the Health Research Ethics Committee of Wangaya Regional General Hospital with reference number 070/5697/RSUDW. Participants were given a full explanation of the purpose, procedures, benefits, and potential risks of participating in this survey. Written informed consent was obtained from each participant after they received clear information and understood their rights to withdraw from the study without any consequences. Data collected from participants were kept confidential and used only for this study under the research ethics guidelines. All steps were taken to protect participants' rights and privacy.

3. Results

3.1. Respondent characteristics

Table 2 presents the characteristics of the 114 nurses, of which 14 were male and 100 were female. The age distribution of the participants in the study spanned from 23 to 53 years, with 61 individuals possessing a formal nursing education and 53 holding a diploma in nursing. A total of 12 nurses had accumulated fewer than five years of work experience, while 51 nurses had worked for a duration ranging from 5 to 10 years. Additionally, another 51 nurses had accumulated over 10 years of professional experience.

Table 2. Respondent characteristics

Demographics	Frequency (f)	Percentage (%)
Gender		
Male	14	12.3
Female	100	87.7
Age range (years)		
17 - 25	4	3.5
26 - 35	68	59.6
36 - 45	39	34.2
46 - 55	3	2.6
Latest education		
Diploma	53	53.5
Bachelor and profession	61	46.5
Length of service in years		
< 5	12	10.5
5 - 10	51	44.7
> 10	51	44.7

3.2. Evaluation of measurement model

There are three latent variables: vision, faith/hope, and altruistic love, which are measured using a one-stage approach (first-order construct). Meanwhile, the spiritual leadership variable is a latent variable measured using a two-stage method (second-order construct). The first stage of the outer model assesses the loading, CR, AVE, and HTMT (Heterotrait-Monotrait Ratio of Correlations) values for each item from constructs vision, faith/hope, and altruistic love. Table 3 displays the items of the first-order model that meet the criteria of loading >0.7, CR value >0.7, and AVE value >0.5, as recommended by Hair et al. (2019).

HTMT approaches are utilized to guarantee discriminant validity. The HTMT value is less than 0.90, as demonstrated in Table 4. The initial assessment of validity involved conducting a first-order validity test, which produced latent variable scores for vision, faith/hope, and altruistic

love. These scores were used in the second-order validity test for the spiritual leadership variable, whose results are presented in Table 5.

Table 3. Assessment of the measurement model (first-order)

Indicator	Item	Loadings	CRs	AVE
Vision	I understand and am committed to my organization's vision	0.846	0.963	0.838
	My workgroup has a vision statement that brings out the best in me	0.896		
	My organization's vision inspires my best performance	0.951		
	I have faith in my organization's vision for its employees	0.921		
	My organization's vision is clear and compelling to me	0.957		
Faith/hope	I have faith in my organization, and I am willing to do whatever it takes to ensure that it accomplishes its mission	0.710	0.913	0.678
	I persevere and exert extra effort to help my organization succeed because I have faith in what it stands for	0.871		
	I always do my best in my work because I have faith in my organization and its leaders	0.909		
	I set challenging goals for my work because I have faith in my organization and want us to succeed	0.826		
	I demonstrate my faith in my organization and its mission by doing everything I can to help us succeed	0.786		
Altruistic love	My organization really cares about its people	0.738	0.930	0.655
	My organization is kind and considerate toward its workers, and when they are suffering, it wants to do something about it	0.702		
	The leaders in my organization "walk the walk" as well as "talk the talk."	0.795		
	My organization is trustworthy and loyal to its employees	0.878		
	My organization does not punish honest mistakes	0.818		
	The leaders in my organization are honest and without false pride	0.873		
	The leaders in my organization have the courage to stand up for their people	0.845		

Table 4. Assessment of discriminant validity using HTMT (first-order)

	Altruistic love	Faith/hope	Vision
Altruistic love			
Faith/hope	0.813		
Vision	0.797	0.862	

Table 5 presents the results of evaluating the second-order formative model of spiritual leadership variables. The evaluation is based on the outer weight and collinearity between indicators. There are two significant indicators, vision and faith/hope, with *p*-values less than 0.05. The altruistic love indicator has a *p*-value of 0.119, greater than 0.05, indicating non-significance. However, the loading factor value for altruistic love is 0.868, which is greater than 0.5, so it is not removed from the model, as Hair et al. (2019) advised. A high loading factor value indicates a robust absolute contribution in explaining the variance of the latent variable, so eliminating these measurement items can reduce the ability of the latent variable to represent the theoretical construct as a whole. Therefore, retaining items with high loading factors despite their insignificant outer weights is essential to maintain the validity and reliability of the overall model.

The outer VIF value assesses the collinearity between the indicators that comprise the spiritual leadership variable. The test results indicate that the VIF values for vision, faith/hope, and altruistic love are 3,099, 3,012, and 2,530, respectively, which are smaller than 5, as referred to by Hair et al. (2019). Hence, it can be concluded that there is no multicollinearity.

Table 5. Assessment of outer wight

Indicator	Original Sample	Sample Mean	Standard Deviation	T Statistics	P-value
Vision	0.467	0.497	0.194	2.410	0.016
Faith/hope	0.368	0.337	0.181	2.039	0.041
Altruistic love	0.254	0.246	0.163	1.560	0.119

The convergent validity of the second-order formative model of the calling, membership, and caring behaviour variables is displayed in Table 6. The evaluation begins with examining the required loading value, which should be above 0.7. The results showed that several indicators in the caring behaviour variable did not meet this requirement and were thus removed from the model. The outer loading value below 0.7 indicates that the indicator is less effective in representing the latent variable because the contribution is weak, so it is removed to maintain the validity and reliability of the model and ensure that only indicators with strong and consistent relationships are retained (Hair et al., 2019).

Table 6. Assessment of the measurement model (second-order)

Variable	Indicators	Loading	CRs	AVE
Calling	The work I do is very important to me	0.907	0.963	0.868
	My job activities are personally meaningful to me	0.952		
	The work I do is meaningful to m	0.968		
	The work I do makes a difference in people's lives	0.897		
Membership	I feel my organization understands my concerns	0.790	0.944	0.771
	I feel my organization appreciates me and my work	0.780		
	I feel highly regarded by my leadership	0.928		
	I feel I am valued as a person in my job	0.937		
	I feel my organization demonstrates respect for me and my work	0.941		
Caring Behaviour	Attentively listening to the patient	0.779	0.977	0.635
	Helping patient grow	0.748		
	Making the patient physically or emotionally comfortable	0.814		
	Being sensitive to patient	0.823		
	Being patient or tireless with patient	0.828		
	Helping patient	0.814		
	Giving instructions teaching the patient	0.794		
	Being confident with patient	0.781		
	Using soft gentle voice with patient	0.794		
	Watching over patient	0.759		
	Talking with patient	0.762		
	Encouraging patients to call if there are problems	0.746		
	Meeting patient's stated and unstated needs	0.866		
	Responding quickly to patient's call	0.839		
	Appreciating patients as human beings	0.875		
	Helping to reduce patient's pain	0.811		
	Showing concern for the patient	0.824		
	Giving patients treatment and medications on time	0.786		
	Paying special attention to patients during the first time, as hospitalization, treatments	0.735		
	Spending time with the patient	0.783		
	Putting patient first	0.820		
	Giving good physical care	0.866		
	Touching patients to communicate caring	0.736		
	Being hopeful for patient	0.712		

Additionally, the evaluation continued by evaluating the CR value above 0.7, indicating that each indicator measuring the variables of calling, membership, and caring behaviour was consistent and reliable. Finally, the AVE value for each variable was above 0.5, indicating good convergent validity. The HTMT value for each pair of variables is less than 0.90, indicating that this approach has also achieved discriminant validity.

3.3. Evaluation of structural model

The second-order convergent and discriminant validity test findings have satisfied the established standards. Hence, the measurement model (inner model) can be assessed to establish the connections between the latent variables of spiritual leadership, calling, membership, and caring behaviour. The results of this assessment are illustrated in Figure 2.

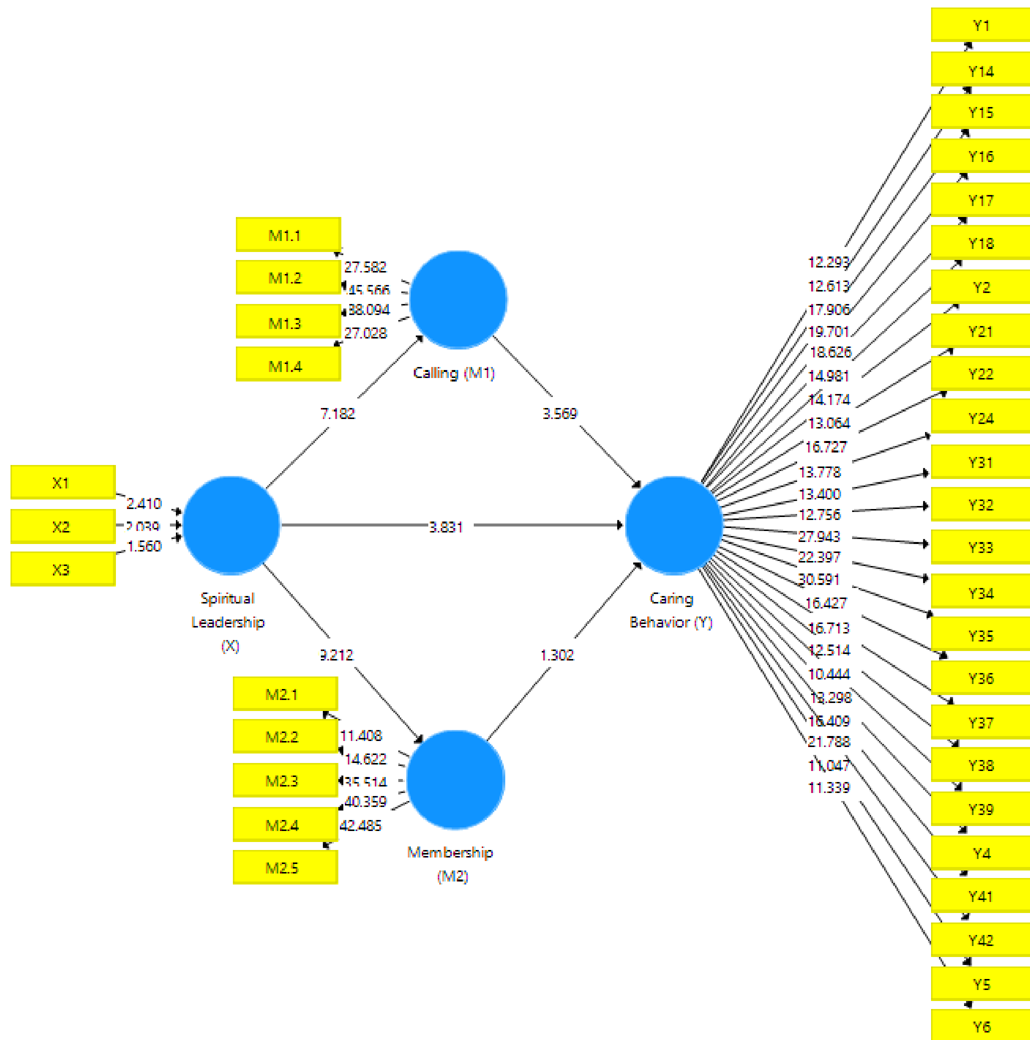

Figure 2. Research measurement model

The goodness of the model, or model fit, is demonstrated by the SRMR value, which should be less than 0.08, according to Hair et al. (2021). The test results show a value of 0.076 or less than the requirement, indicating that the proposed model is consistent with the empirical data. In addition, the R-Square value of calling is 0.342, meaning that spiritual leadership can explain the variability of the calling variable only by 34.2%, which is classified as a weak influence and indicates that other factors may have a more significant impact on the variability in calling. R Square membership is 0.535, indicating that spiritual leadership can explain the membership variable by 53.3%, which is classified as a medium influence. Likewise, the R Square caring behaviour of 0.519 indicates that spiritual leadership, calling, and membership together can explain 51.9% of caring behavior, which is classified as a medium influence. It shows a significant

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but not thoroughly dominant contribution. Furthermore, Table 7 presents the direct and indirect impacts among variables to examine the research hypothesis. The direct effect between variables demonstrates a t-statistic greater than 1.97 and a p-value of 0.00 or lower than 0.05, indicating it is considered significant. However, the direct effect between the membership variable and caring behaviour is insignificant, with a t-statistic of 1.298 or lower than 1.96 and a p-value of 0.194 or above 0.05.

Regarding indirect effects, the results indicate that calling can mediate the effect of spiritual leadership on varying behaviour, as indicated by the t-statistic value of 3.145 or greater than 1.97 and the p-value of 0.002 or lower than 0.05. Conversely, membership does not function as a moderator, as indicated by the t-statistic value of 1.197 or lower than 1.97 and the p-value of 0.231 or above 0.05. In addition, spiritual leadership has the highest impact on caring behaviour compared to calling and membership, as evidenced by the original sample value of 0.509.

Table 7. Assessment of path analysis and hypothesis testing

	Original Sample	Standard Deviation	T-Statistics	P-Values	Decision
Spiritual leadership → Caring Behaviour	0.509	0.132	3.852	0.000	H1 supported
Spiritual Leadership → Calling	0.584	0.081	7.208	0.000	H2 supported
Spiritual leadership → Membership	0.731	0.079	9.263	0.000	H3 supported
Calling → Caring Behaviour	0.417	0.115	3.611	0.000	H4 supported
Membership → Caring Behaviour	-0.158	0.122	1.298	0.194	H5 not supported
Spiritual leadership → Calling → Caring Behaviour	0.244	0.077	3.145	0.002	H6 supported
Spiritual leadership → membership → Caring Behaviour	-0.116	0.097	1.197	0.231	H7 not supported

4. Discussion

The study suggests a substantial relationship between spiritual leadership and calling, membership, and caring behaviour variables. The findings of this study support Hypothesis 1, which posits that spiritual leadership has a significant role in fostering nurses' empathic and compassionate disposition, resulting in increased levels of care and concern towards others. Ribeiro et al. (2021) argue that incorporating a spiritual dimension in nursing leadership is necessary within nursing practice. Implementing managers' spiritual leadership can address nurses' spiritual requirements and enhance the implementation of holistic care methods. According to the study conducted by Hidayat et al. (2019), it was observed that the implementation of spiritual leadership in the role of the inpatient room supervisor promotes the development of growth, intuition, and risk management. Subhaktiyasa et al. (2024) also assert that spiritual leadership can increase work motivation and employee performance. Nurses with elevated levels of spiritual leadership demonstrate an increased propensity for displaying caring behaviour and compassion towards individuals. Pio and Tampi (2018) determined that spiritual leadership significantly impacts nurse job satisfaction and organizational citizenship behaviour. This finding suggests that spiritual leadership is crucial in fostering positive and compassionate behaviour among nurses.

The findings of the study confirm Hypotheses 1 and 2, demonstrating that spiritual leadership has a significant and positive influence on both calling and membership in relation to spiritual health. Spiritual leadership facilitates the discovery of a transcendent purpose in life and the attainment of significance in nursing, enabling nurses to discern their vocation and cultivate a profound sense of enthusiasm for their occupation. The findings by Wu and Lee (2020) support the notion that spiritual leadership impacts the spiritual well-being of nurses, specifically in relation to their sense of calling. Spiritual leadership facilitates nurses' comprehension of the societal impact of their profession and empowers them to effect positive change in the lives of others. The findings presented in this study align with the research conducted by Zou et al. (2020),

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which emphasizes the significance of leadership in the workplace regarding the impact on nurses' spirituality and subjective well-being.

In the membership context, spiritual leadership is pivotal in fostering improved interpersonal connections. The reason behind the positive impact of spiritual leadership is its ability to facilitate personal growth and the growth of others. Individuals who possess elevated degrees of spiritual leadership have heightened empathy and understanding, enabling the cultivation of more robust interpersonal connections. Additionally, it facilitates a sense of belonging and fosters a stronger sense of affiliation within social collectives, enabling individuals to become integral members of a broader community. This statement aligns with the spiritual leadership understanding proposed by (Fry et al., 2016; Subhaktiyasa, 2024; Subhaktiyasa & Sintari, 2024). These scholars assert that one's sense of purpose and belonging can facilitate attaining spiritual well-being. These findings are consistent with the studies conducted by Fry et al. (2016) and Hunsaker (2016), which validate the capacity of spiritual leadership to foster spiritual well-being, augmenting individual and organizational performance.

Contrary to the initial hypothesis, this study's results reveal no significant effect between the membership variable and caring behaviour. Hypothesis 5 states that membership, defined as an individual's perception of a sense of attachment to a particular group or community, will positively impact caring behaviour. It is assumed that individuals with a strong affiliation with their workplace tend to show a higher commitment to their professional duties and have a sense of responsibility towards coworkers and patients. However, the results of this study are not in line with previous research that emphasizes the importance of membership in strengthening nursing practice (Kim et al., 2022; Peña et al., 2022) and existing literature in the field of organizational behaviour that shows variations in organizational citizenship behaviour based on membership status (Hunsaker, 2016; Subhaktiyasa et al., 2022). Several factors could explain this discrepancy in results. One possibility is that individual personality characteristics, such as introversion or emotional stability, may moderate the extent to which a sense of attachment translates into caring behaviour. In addition, an individual's values and motivations in driving caring behaviour may be more dominant than the influence of group membership, suggesting that some individuals may exhibit high levels of caring independently of a sense of affiliation with the group. The social environment and organizational culture can also play an important role; if the organizational culture does not strongly reinforce or model caring behaviour, the impact of membership on such behaviour may be weakened. Variations in caring behaviour may also be influenced by contextual factors such as workload, stress levels, or organizational support, which could reduce the impact of membership on caring behaviour. Furthermore, this finding supports the refutation of Hypothesis 7, positing that the relationship between spiritual leadership and caring behaviour could be mediated by membership. Additional research should be undertaken to explore the implications of these findings within an organizational environment, specifically focusing on aspects such as organizational culture.

The act of calling within the nursing profession has been found to have a favourable impact on caring behaviour, thus supporting Hypothesis 4. The concept of calling refers to an individual's subjective experience of perceiving a distinct purpose or mission in life that is integral to their sense of self, hence serving as a motivational force that guides their actions in alignment with this purpose (Fry et al., 2016). The nursing profession is often driven by a strong sense of duty and compassion, which can inspire nurses to deliver exceptional levels of care and demonstrate empathy towards their patients. This profession has the potential to provide nurses with a sense of significance and direction in their professional endeavours, and in certain instances, it can assist them in navigating ethical predicaments that may emerge. Multiple research has supported the present study's conclusions, highlighting the significance of communication in nursing (Jung & Kim, 2020; Kallio et al., 2022; H. Kim & Han, 2019; Miller, 2019; Wu & Lee, 2020).

Furthermore, the study demonstrates the significant favourable impact of calling as a mediator, supporting Hypothesis 6. Within the realm of nursing, spiritual leadership has the potential to exert an influence on caring behaviour through the establishment of a professional identity and the cultivation of motivation to align one's conduct with professional principles. The presence of effective spiritual leadership can shape or strengthen the sense of calling among nurses and inspire them to align their actions with the core principles of the nursing profession. The findings presented in this study are consistent with prior research conducted by Wu and Lee (2020), which revealed a positive relationship between calling and work engagement among

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nurses in fulfilling their professional obligations. In a similar vein, Han (2020) concluded that communication plays a significant role in facilitating the enhancement of nurses' performance.

5. Implication and limitations

The results of this study highlight the importance of integrating spiritual leadership in nursing practice, particularly in enhancing the expression of compassionate behaviours among nurses. The practical implication of these findings for nursing practice is that healthcare organizations should consider implementing training programs that specifically target spiritual leadership development to foster a sense of calling and membership among nurses. This training could include developing leadership skills that focus on spiritual values, such as empathy, gratitude, and awareness of the meaning of work, which are expected to increase nurses' commitment to patients and the organization. Furthermore, it is important to acknowledge that this study is subject to a constraint in terms of the sample size employed to evaluate the association between variables. While the PLS-SEM test can address this issue, it is recommended that future studies employ a more extensive sample drawn from various healthcare organizations. Additionally, researchers should consider additional variables, such as organizational culture, due to the influence of local wisdom infused with spiritual values.

6. Conclusion

This study examined the influence of spiritual leadership, calling, and membership on caring behaviour. The results indicated an impact between spiritual leadership and caring behavior, where spiritual leadership can increase empathy and compassion and strengthen nurses' understanding of patients' needs. In addition, spiritual leadership also has the potential to enhance the sense of calling and membership, which contribute to the spiritual well-being of nurses in healthcare organizations. Although calling was a significant mediator in the relationship between spiritual leadership and caring behavior, membership did not substantially impact caring behavior. These findings highlight the importance of further research into the role of membership, particularly in the context of an individual's affiliation with a community of shared values and objectives.

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Author contribution

Conception and design (SAKC, NKAS, PGS); Analysis and interpretation of data (PGS, SAKC, NKSA); Drafting the article (SAKC, NKAS, PGS, NLNDWP, NKC, MA); Critical revision of the article for important intellectual content (PGS, NLNDWP, NKC, MA).

Conflict of interest

The authors of this study declare that they have no conflicts of interest.

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