Investigating the complex relationships between nurses' work factors, Sharia-based nursing care, and patient satisfaction in an Islamic hospital: A PLS-SEM approach

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Abstract

Background: Healthcare services in Islamic hospitals are becoming increasingly important due to the growing global Muslim population and the demand for spiritually sensitive healthcare. Understanding the factors contributing to patient satisfaction in this context is paramount.

Objective: This research aimed to investigate the relationships between nurses' work factors, Sharia-based nursing care, and patient satisfaction in an Islamic hospital in Indonesia.

Methods: This study employed a cross-sectional design involving 260 respondents, comprising 130 patients and 130 nurses in inpatient rooms. Data collection took place in August 2022 at an Islamic Hospital in Indonesia using validated questionnaires. SmartPLS 3.2.8 was used to generate Partial Least Square Structural Equation Modeling (PLS-SEM) to assess and analyze relationships between research variables.

Results: Nurses' work factors had a significant impact on Sharia-based nursing care (β = 0.813, t = 18.582, p <0.001). Furthermore, Sharia-based nursing care had a significant influence on patient satisfaction (β = 0.509, t = 3.941, p <0.001), while nurses' work factors had a moderately significant effect on patient satisfaction (β = 0.396, t = 3.079, p = 0.002). The interaction between work factors and Sharia-based nursing care had an influence on patient satisfaction (β = 0.366, t = 3.666, p <0.001), explaining 74.4% of the variance observed in patient satisfaction.

Conclusion: This study offers valuable insights into the significance of improving nurses' work factors, including elements such as performance, feedback, correction, and job design, along with the integration of Sharia-based principles in nursing care. The study suggests that nursing administrators, healthcare policymakers, and academic institutions should prioritize the creation of supportive work environments and culturally sensitive care practices for nurses to enhance patient satisfaction.

Keywords

Background

Advancing hospitals to provide services to the community requires the full engagement of nurses, whose level of participation may vary. However, the most crucial and pressing issue is the recognition of nurses' work performance in nursing care. This recognition is pivotal for adapting nursing care to meet the community's evolving needs, driving important service improvements (Jaaffar & Samy, 2023). Therefore, the primary focus should be enhancing services that can elevate patient satisfaction, allowing hospitals to remain competitive and adaptable in this era of rapid change. Consequently, a breakthrough is essential to discover the key to achieving success in hospital management (Wulandari & Dirbawanto, 2022).

The key to success for a hospital lies within its human resources, with nurses representing the most significant and crucial human resource in the healthcare system. Therefore, the nursing profession plays a pivotal role in this endeavor. One of the breakthroughs that can lead to success is the enhancement of nursing work and the nursing care models implemented in hospitals. These elements are paramount for improving the quality of nursing care, as the current approach falls short of fully satisfying patients. This deficiency is primarily due to its emphasis on addressing patients' biological, psychological, social, and cultural needs while neglecting their spiritual needs (Lee & Lee, 2022).

Spirituality is an inseparable component of nursing care, constituting integral to nurses' interactions with patients. The spiritual dimension of nursing care holds significant power in aiding patients' healing and recovery processes (Talibo et al., 2019). Recognizing the importance of this aspect, religion-based nursing services, particularly Islamic nursing services, are highly sought after within communities. Furthermore, the demand for Islamic nursing services is amplified by the substantial global Muslim population, estimated at around 1.3 billion, making it the second-largest religious group worldwide. Approximately 25% of Muslims reside in the Indian subcontinent, 17% in Africa, 18% in Arabia and the former Soviet Republics, and 10% in the non-Arab Middle East regions. Additionally, Southeast Asia is home to 17% of the Muslim population (Amir, 2020). Indonesia houses 237,531,227 Muslims (Central Bureau of Statistics Indonesia, 2021). This significant global presence of the Muslim population presents an opportunity for hospitals to enhance their services catering to Muslim patients, highlighting the pivotal role of nurses in this initiative (Suprayitno & Setiawan, 2021).

Spiritual care is inherently aligned with nursing care because patient well-being includes more than just the medical aspects of nursing. Nurses are entrusted with addressing not only the patient's medical needs but also all aspects related to their welfare (Bangcola, 2021). Recognizing that nurses play a pivotal role in determining the quality of hospital services, the development of Islamic-based nursing services can cater to this specific market. Nursing services constitute a vital component of quality and safety in hospital care and significantly impact patient satisfaction regarding treatment outcomes. Patient satisfaction, in this context, refers to the state in which individuals are content and pleased with an action or event following the utilization of healthcare services. Furthermore, patient satisfaction with nursing care is further influenced by nurses' spiritual intelligence (Aboosalehi et al., 2022).

In a broader organizational context, performance refers to the achievements that individuals or groups within an organization can attain in alignment with their respective authorities and responsibilities, all in pursuit of overarching organizational objectives (Wijaya et al., 2022). These organizational objectives can also find application in implementing a Sharia-based nursing care model, given its alignment with the goals of a Sharia hospital. Currently, there is a lack of a specific Sharia-based nursing care model available for nurses to follow. Reduced nurse performance can often be attributed to work pressure, frequent fatigue, dizziness, and insufficient rest due to heavy workloads. Suboptimal nurse performance may lead to unmet patient needs and prolonged recovery processes (Simorangkir et al., 2021).

The essence of Sharia-based nursing care lies in its incorporation of fundamental nursing processes while uniquely anchoring its principles in Islamic intellectual, physical, ethical, moral, and spiritual values. It is worth noting that Sharia-based nursing care differs from conventional nursing. In its implementation, Sharia-based nursing care is infused with the five elements of *Maqashid Syariah*, which include spiritual aspects (*Hifz Ad-diin*), physical and psychological aspects (*Hifz An-Nafs*), intellectual aspects (*Hifz Al -' aql*), caring for offspring aspects (*Hifz An-Nasl*), and economic aspects (*Hifz Al-Maal*) (DSN-MUI & MUKISI, 2017). Furthermore, the interventions and implementations also differ significantly from ordinary nursing care, including practices such as *murrotal* al-Quran therapy, *dhikr* therapy, *thaharah* guidance, and prayer guidance tailored to the patient's abilities (DSN-MUI & MUKISI, 2017). These distinctive features enable Sharia-based nursing care to fulfill all the needs of patients and their families, which is believed to improve patient satisfaction and other outcomes.

Our research seeks to explore the relationship between various key elements in this context. Specifically, it focuses on three variables for which there exists a dearth of direct research relating to the relationships between nurses' work factors, Sharia-based nursing care, and patient satisfaction. These variables are essential in enhancing healthcare service quality (Bakar et al., 2018). However, a comprehensive exploration of the relevance and application of this model within the context of Sharia-based healthcare remains an understudied area. This research formulates several hypothetical paths: the first relates to work factors in Sharia-based nursing care; the second concerns Sharia-based nursing services and patient satisfaction; the third involves the impact of work factors on patient satisfaction, and the fourth path explores the interaction between work factors, Sharia-based nursing care, and patient satisfaction.

Methods

Study Design
A cross-sectional design was used to investigate the complex relationships between nurses' work factors, Sharia-based nursing care, and patient satisfaction at an Islamic hospital in Indonesia.

Samples/Participants
The total number of respondents for this study amounted to 260, comprising 130 nurses and 130 patients receiving treatment in the inpatient rooms. The determination of the sample size in this study was based on the Rule of Thumb formula, which is associated with the Structural Equation Model (SEM) employing the maximum likelihood method. The recommended minimum sample size typically falls within the range of 100-150 respondents or 5-10 times the number of indicators (observed variables). In this study, there were 13 variable indicators, resulting in a calculated sample size of 9 × 14 variables, equivalent to 126 respondents, then rounded up to 130 (Ghozali & Latan, 2021). The maximum likelihood calculation method was employed to select seven inpatient rooms through the cluster sampling technique (**Table 1**).

For patients, the inclusion criteria were as follows: 1) Being a patient in an inpatient room, 2) Possessing literacy skills, 3) Identifying as Muslim, and 4) Falling within the age range of 17 to over 65 years old. Patients receiving treatment in the intensive care unit, neonatal or pediatric rooms, or experiencing impaired consciousness were excluded. As for nurses, the inclusion criteria were as follows: 1) Being assigned to inpatient rooms, 2) Holding at least an associate degree in nursing at the first level, including those with a senior high school education level who completed a three-year associate degree in nursing, 3) Identifying as Muslims. Nurses

assigned to the intensive care unit or emergency unit were excluded.

Table 1 Sample calculation with cluster sampling

Inpatient Room	Total (Ni)	$\sum n$ =Ni:N	Total Sample ni= $(\sum n)$ x n
Inpatient room A	18	0.125	16
Inpatient room B	27	0.188	25
Inpatient room C	17	0.118	16
Inpatient room D	19	0.132	17
Inpatient room E	15	0.104	14
Inpatient room F	28	0.195	25
Inpatient room G	19	0.132	17
Total	143		130

Instruments

This study measured three latent variables, consisting of 14 indicators representing exogenous variables. Specifically, the study centered on work factors as the exogenous variable, while Sharia-based nursing care and patient satisfaction were the endogenous variables. The indicators for work factors included performance, feedback, correction, and job design. Sharia-based nursing care was measured using five indicators: assessment, diagnosis, intervention, implementation, and evaluation. Patient satisfaction was assessed through five indicators: reliability, assurance, tangibility, empathy, and responsiveness (RATER). All variables in this study were evaluated using a questionnaire, and permission to modify or employ the instrument was obtained from the original authors (**Table 2**).

Table 2 Instrument sources

Variables	Indicator	Items	Sources
Work factors	Feedback	4	(Debora, 2018)
	Performance	4	(Hasibuan, 2019)
	Correction	4	
	Job design	3	
	Total	23	
Sharia-based nursing care	Assessment	5	(DSN-MUI & MUKISI, 2017)
	Diagnosis	5	
	Intervention	5	
	Implementation	5	
	Evaluation	5	
	Total	25	
Patient satisfaction	Reliability	6	(Nursalam, 2020)
	Assurance	3	
	Tangible	5	
	Empathy	5	
	Responsiveness	4	
	Total	23	

A Likert scale was utilized to evaluate nurses' work factors and Sharia-based nursing care, including response options ranging from 'strongly disagree' to 'strongly agree.' For patient satisfaction, responses were categorized as 'highly dissatisfied,' 'dissatisfied,' 'neutral,' 'satisfied,' and 'highly satisfied.' The variables were ordinal, with indicators falling within the ranges of 76%-100% (considered good), 55%-75% (deemed sufficient), and >55% (low). The Sharia-based nursing care variable consisted of 25 questions divided into five processes, each comprising five questions.

In this study, the instrument's validity was tested using the correlation technique, specifically the Pearson product-moment correlation formula. Validity test decisions were based on calculated ρ (rho) and predefined correlation coefficient limits (*r*). The validity of the work factors, Sharia-based nursing care, and patient satisfaction variables was tested with a sample of 15 respondents, using an *r*-table value of 0.4124. Questions found to be valid were subsequently tested for reliability, with the results compared to the r-table. The instrument was considered reliable if the results were greater than the predefined *r*-value. An item was considered reliable if its alpha value exceeded the predefined alpha value. In this study, the measuring instrument was considered good if Cronbach's alpha exceeded 0.6.

The results of the validity and reliability tests were as follows: The work factors questionnaire demonstrated a validity range of 0.575 to 0.987 and a reliability range of 0.851 to 0.980. The Sharia-based nursing care questionnaire had a validity range of 0.656 to 0.993 and a reliability range of 0.879 to 0.975. The patient satisfaction questionnaire displayed a validity range of 0.552 to 0.876 and a reliability range of 0.851 to 0.906.

Data Collection

The researchers collected primary data for this study by distributing questionnaires in August 2022. It is noted that patients were asked to fill in the patient satisfaction questionnaire, while the nurses were asked to fill in the nurses' work factors and Sharia-based nursing care questionnaire. The data collection process involved several steps. Initially, a research permit was requested from the hospital, followed by an ethical review conducted by the hospital's Ethics Committee after obtaining the permit. Upon successful ethical approval, data collection began with inpatients who met the predefined inclusion and exclusion criteria, which detailed the objectives and procedures of the research. Those who agreed to participate signed the informed consent sheet, ensuring compliance with ethical research principles, including informed consent, anonymity, confidentiality, fidelity, and autonomy. Subsequently, the collected data underwent completeness checks before being processed.

Data Analysis

The descriptive analysis employed the frequency distribution test from SPSS version 26. Inner and outer model assessments were conducted using SmartPLS 3.2.8 to generate Partial Least Squares Structural Equation Modeling (PLS-SEM).

PLS-SEM is considered an alternative to Covariance-Based Structural Equation Modeling (CB-SEM) in cases where assumptions cannot be met or when the proposed model is exploratory and lacks substantial empirical evidence. PLS-SEM also facilitates testing the relationships between constructs within the conceptual model. It is worth noting that PLS-SEM has faced criticism from experts regarding its consistency and potential bias (Afthanorhan et al., 2021). PLS and consistent PLS prediction have been introduced to address these concerns, but their development remains ongoing. Given the exploratory nature of this research and the lack of a well-established model, PLS-SEM is suitable for hypothesis testing (Mansor et al., 2022).

In the outer model or validity test, an indicator is considered valid if its Average Variance Extracted (AVE) value is greater

than 0.5 or all outer loading variable dimension values are above 0.5. The structural or inner model test was conducted to predict the causal relationships between latent variables. The structural model was assessed using metrics such as the percentage of the variance explained by R2 (R square) for the dependent variable. The Predictive Relevance test (Q-square), commonly known as Stone-Geisser Q-square, was employed to evaluate the model's ability to predict observed values and parameter estimates across various contexts. A Q-square value higher than 0 indicates predictive relevance, while a value lower than 0 signifies reduced predictive relevance. A bootstrapping procedure was used to assess the structural path coefficients and the relationships or influences of latent variables. Hypotheses were tested by examining *t*-statistics or bootstrapping for hypothesis significance. Significance was determined by comparing the *t*-statistic value to the *t*-table, with values higher than $t > 1.96$ and a *p*-value less than or equal to 0.05 indicating statistical significance.

In this study, the amalgamation of two datasets was undertaken. Patient satisfaction data were sourced from patients, while work-related factors and Sharia-based nursing care data were collected from nurses. To ensure precise data integration, thorough data cleaning and merging processes were employed.

Ethical Consideration

The study received ethical approval from the Medical and Health Research Ethics Committee (MHREC) of Sultan Agung Islamic Hospital's Health Research Ethics Committee on 25 July 2022 under No. 72/ KEPK-RSISA/VII/2022. Participants' consent was obtained through the informed consent process. Patients were initially provided with a comprehensive explanation of the research by the researchers, both orally and in writing. After the patients clearly understood the research, they were presented with written informed consent. Patients who agreed to participate as respondents had the option to sign the informed consent sheet. This approach adhered to ethical research principles, including informed consent, anonymity, confidentiality, fidelity, and autonomy.

Results

The analysis of the age distribution among the nurses revealed that the majority fell within the age group of 26 to 35 years old, indicating late adulthood (70%). Regarding educational attainment, a significant proportion held an associate degree in nursing education (67.78%). Nurses in the 36 to 45-year-old bracket (late adolescents) constituted 24.6% of the sample, with a predominant educational background at the secondary school level (53.8%) (**Table 3**).

Table 3 Demographic characteristics of nurses and patients

| Characteristics				n	%
Nurses	Age	21 – 25 years old (Late adolescence)		15	11.5
		26 – 35 years old (Early adulthood)		91	70
		36 – 45 years old (Late adulthood)		24	18.5
			Total	130	100
	Education	Associate degree in nursing		88	67.7
		Nurse profession		42	32.3
			Total	130	100
Patients	Age	17 – 25 years old (Late adolescence)		12	9.2
		26 – 35 years old (Early adulthood)		20	15.4
		36 – 45 years old (Late adulthood)		32	24.6
		46 – 55 years old (Early elder)		31	23.8
		56 – 65 years old (Elder)		29	22.3
		> 65 years old (Late elder)		6	4.7
			Total	130	100
	Education	Elementary (Elementary school)		44	33.8
		Secondary (Junior high school or senior high school)		70	53.8
		High (Bachelor or Master degree)		16	12.3
			Total	130	100

The frequency distribution analysis indicated that the majority of the variables under study had a good level of performance. Specifically, most nurses demonstrated excellent performance (73.1%), with similarly positive assessments for the feedback variable (75.1%) and the correction variable (75.1%). Furthermore, a substantial proportion of nurses had a good job design (72.3%). Regarding Sharia-based nursing care, the analysis revealed that the majority of nurses displayed proficiency in assessment (73.8%). Additionally, they had a good level of competence in diagnosis (67.7%), intervention (73.1%), implementation (69.2%), and evaluation (72.3%). The evaluation of patient satisfaction across five indicators indicated that patients largely perceived nurses to possess a high level of reliability (75.4%) and tangibility (71.5%), assurance (70%), empathy (71.5%), and responsibility (73.8%) (**Table 4**).

When interpreting the measurement model in **Table 5**, it was considered valid as the reliability of indicators for each part of the outer loading exceeded 0.7. Additionally, the Average Variance Extracted (AVE) values for all variables surpassed 0.7. The reliability assessment in this study employed composite reliability and Cronbach's alpha as reference values, with all variables showing values higher than 0.7, indicating high reliability as their values exceeded 0.80.

The coefficient of determination revealed that the work factors accounted for 66.1% of the Sharia-based nursing care. In other words, 66.1% of Sharia-based nursing care was predicted or determined by work factors, leaving 33.9% attributed to other factors. Furthermore, the coefficient of determination for Sharia-based nursing care and work factors in determining patient satisfaction was 74.4% (**Figure 1**).

Table 4 Distribution of research variables

Variables		Poor		Average		Good		Total	
		n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
Work factors	Performance	6	4.6	29	22.3	95	73.1	130	100
	Feedback	4	3.1	28	21.5	98	75.4	130	100
	Correction	5	3.8	27	20.8	98	75.4	130	100
	Job design	4	3.1	32	24.6	94	72.3	130	100
Sharia-based nursing care	Assessment	2	1.5	32	24.6	96	73.8	130	100
	Diagnosis	4	3.1	38	29.2	88	67.7	130	100
	Intervention	3	2.3	32	24.6	95	73.1	130	100
	Implementation	6	4.6	34	26.2	90	69.2	130	100
	Evaluation	6	4.6	30	23.2	94	72.3	130	100
Patient satisfaction	Reliability	3	2.3	29	22.3	98	75.4	130	100
	Assurance	4	3.1	35	26.9	91	70	130	100
	Tangible	1	0.8	36	27.7	93	71.5	130	100
	Empathy	1	0.8	36	27.7	93	71.5	130	100
	Responsiveness	2	1.5	32	24.6	96	73.8	130	100
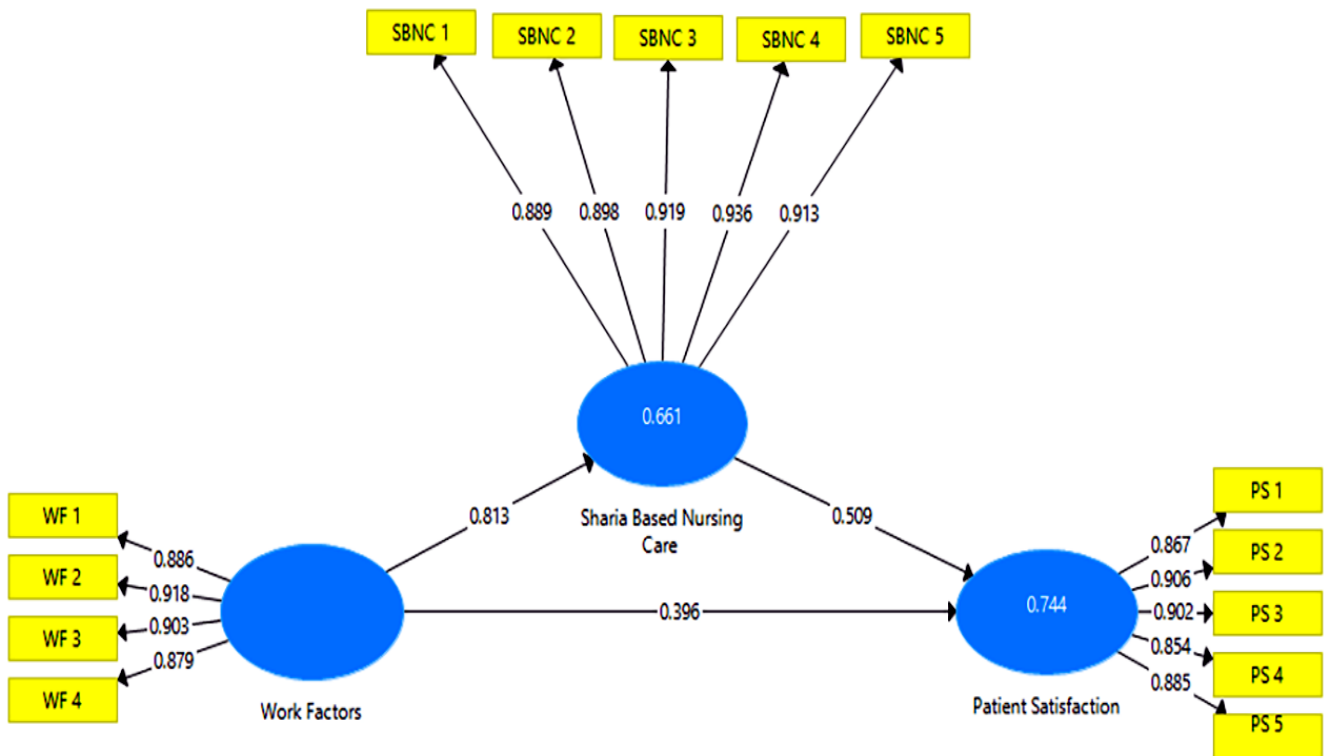
Figure 1 Outer model of the relationships between work factors (WF), Sharia-based nursing care (SBNC), and patient satisfaction (PS)

In the Fornell-Larcker matrix, the square root of AVE (on the diagonal) exceeded all other values, and the Heterotrait-Monotrait (HTMT) ratio was below 0.90. Consequently, it can be concluded that the measurement model demonstrated discriminant validity (Purwanto, 2021). In this study, the Q-Square value for the Sharia-based nursing care model was 0.642, and for patient satisfaction, it was 0.712. According to Ghozali and Latan (2021), these values indicate that the models are good and possess strong predictive relevance because they exceeded the threshold of >0.35. This suggests that the models are capable and relevant for application in different settings or locations. Specifically, this model has a predicted relevance of 71.2% when applied in other settings or areas.

As presented in **Table 6**, the analysis of path coefficients revealed a significant correlation between work factors and Sharia-based nursing care. Nurses' work factors had a significant impact on Sharia-based nursing care (β = 0.813, *t* = 18.582, *p* <0.001). Furthermore, sharia-based nursing care had a significant influence on patient satisfaction (β = 0.509, *t* = 3.941, *p* <0.001), while nurses' work factors had a moderately significant effect on patient satisfaction (β = 0.396, *t* = 3.079, *p* = 0.002). Lastly, work factors and Sharia-based nursing care jointly influenced patient satisfaction (β = 0.366, *t* = 3.666, *p* <0.001).

Table 5 Measurement model evaluation

Measurement Model Evaluation					
Convergent Validity and Reliability					
Latent variable	Items	Convergent Validity		Internal Consistency Reliability	
		Loadings	AVE	Composite Reliability (CR)	Cronbach Alpha
Work factors	WF1	0.886	0.804	0.942	0.919
	WF2	0.918			
	WF3	0.903			
	WF4	0.879			
Sharia-based nursing care	SBNC 1	0.889	0.831	0.961	0.949
	SBNC 2	0.898			
	SBNC 3	0.919			
	SBNC 4	0.936			
	SBNC 5	0.913			
Patient satisfaction	PS1	0.867	0.780	0.947	0.929
	PS2	0.906			
	PS3	0.902			
	PS4	0.854			
	PS5	0.885			
Discriminant Validity - Heterotrait-Monotrait Ratio (HTMT)					
Variable	**Work Factors**			**Sharia-Based Nursing Care**	
Sharia-based nursing care	0.855				
Patient satisfaction	0.876			0.877	
Coefficient of Determination					
Variable	**R-Square**			**R-Square Adjusted**	
Sharia-based nursing care	0.661			0.658	
Patient satisfaction	0.744			0.740	
Q-Square Predictive Relevance (Q²)					
Variable	**Q-Square**				
Sharia-based nursing care	0.642				
Patient satisfaction	0.712				

Notes: WF = Work factors; SBNC = Sharia-based nursing care; PS = Patient satisfaction

Table 6 Path coefficients between research variables

Hypothesis	β	SD	t	p	Result
Work factors → Sharia-based nursing care	0.813	0.044	18.582	<0.001	Supported
Sharia-based nursing care → Patient satisfaction	0.509	0.129	3.941	<0.001	Supported
Work factors → Patient satisfaction	0.396	0.129	3.079	0.002	Supported
Work factors → Sharia-based nursing care → Patient satisfaction	0.414	0.113	3.666	<0.001	Supported

Discussion

A major strength of this study is its demonstration of the novel contributions of work factors in Sharia-based nursing care toward enhancing patient satisfaction in Islamic hospitals. This study provides a model that elucidates how work factors in Sharia-based nursing care can significantly elevate patient satisfaction, thus making a noteworthy contribution to the nursing field. This is particularly significant given that the Muslim population is the largest in the world, and the demand for spiritual care is on the rise. Consequently, as hospitals aspire to expand and improve their service quality, this model offers a valuable framework by advocating the development and implementation of Sharia-based nursing care. The relationship model between work factors and Sharia-based nursing care highlights its potential to bolster patient satisfaction. Furthermore, enhanced patient satisfaction is likely to result in increased patient loyalty, which, in turn, can attract more individuals to return to the hospital when needed and even recommend the hospital to others.

The study revealed that nurses' work factors significantly influenced Sharia-based nursing care and patient satisfaction. The constructs of work factors include performance, feedback, corrections, and job design, which are discussed in the following. First, performance is a significant indicator of nurses' work factors. Our finding aligns with a prior study that has demonstrated the impact of performance on the quality of nursing care (Wijaya et al., 2022). Performance management serves the purpose of initially understanding how effectively and efficiently an organization operates and manages performance. Subsequently, it assists organizations in making decisions that are consistently aligned with organizational performance (Nursalam, 2020; Simorangkir et al., 2021). Second, feedback plays a crucial role in enhancing nurses' performance. This feedback serves as a summary of healthcare professionals' clinical performance, providing valuable information to nurses for the assessment and adjustment of their performance (Debora, 2018). Consequently, feedback empowers nurses to improve their performance (Hasibuan, 2019). Third, correction is another essential aspect that nurses and nurse managers contribute to professional development; it is a fundamental component of the learning process and helps bridge the gap between theoretical knowledge and practical application. In clinical education models, correction and feedback are integrated to facilitate learning and minimize disparities between theory and practice. As a clinical supervision model, correction fosters improved knowledge acquisition through systematic

processes and positive feedback (Hasibuan, 2019; Mokhtari et al., 2022). Last, the final indicator of work factors is job design, defined as the ability to determine the work activities of an individual or a group of employees within an organization. Job design aims to structure work tasks to align with organizational needs (Hasibuan, 2019). This study has demonstrated that job factors significantly impact Sharia-based nursing care and lead to increased patient satisfaction.

Our study revealed a significant positive correlation between work factors and Sharia-based nursing care. This finding suggests that as work factors in the nursing environment improve, there is a corresponding increase in the quality of nursing care delivered based on Sharia principles. This relationship highlights the pivotal role of a conducive work environment in facilitating the integration of Sharia-based care practices. The literature supports this correlation by emphasizing that a positive work environment, characterized by adequate resources, support, and staffing, is associated with improved patient care and outcomes (Aiken et al., 2012).

The findings also indicated that Sharia-based nursing care significantly impacts patient satisfaction. This result signifies that when healthcare providers incorporate Sharia principles into their nursing practices, patients are more likely to report higher satisfaction levels. This aligns with previous research emphasizing the importance of culturally sensitive care in enhancing patient satisfaction (Bangcola, 2021; Brunett & Shingles, 2018). It underlines that meeting the cultural and religious needs of patients, in this case, those aligned with Sharia principles contributes significantly to their overall satisfaction with care.

Another noteworthy finding of our study is that nurses' work factors moderately affect patient satisfaction. This indicates that the quality of the work environment for nurses, such as staffing levels, professional support, and workplace conditions, has a tangible but moderate impact on how satisfied patients are with their care. This result emphasizes that healthcare organizations should invest in creating favorable work environments for their nursing staff as it can lead to improved patient satisfaction. Previous research has established a link between nurses' work conditions and patient satisfaction (Boev, 2012).

Additionally, our study revealed that the interaction between work factors and Sharia-based nursing care significantly influences patient satisfaction. This means that when work factors and Sharia-based nursing care practices are combined effectively, there is a substantial impact on patient satisfaction. This finding emphasizes the importance of integrating a supportive work environment and culturally sensitive care practices. It suggests that the synergy between these factors can lead to a greater enhancement in patient satisfaction than either factor alone. Such an integrated approach is consistent with recommendations for providing holistic and patient-centered care (Bangcola, 2021).

Moreover, our study findings indicate that these results can be applied to other hospital settings with a relevance of 71.2%. This implies that work factors have the potential to enhance Sharia-based nursing care. To elevate patient satisfaction through Sharia-based nursing care, hospitals must focus on nurse work factors by improving nurse performance, establishing a robust feedback and correction system, implementing effective job design practices through nurse

leaders or managers, and establishing a supervision system to ensure the continued effectiveness of these practices.

Implications for Nursing Practice
The findings of this study hold significant implications for nursing practice. First, our study emphasizes the importance of addressing and enhancing the work factors of nurses, integrating Sharia-based principles into nursing care, and comprehending their combined influence on patient satisfaction. Nursing administrators and healthcare policymakers can leverage these insights to formulate strategies to cultivate supportive work environments for nurses while integrating culturally sensitive care practices to enhance overall patient satisfaction. This study offers guidance for the implementation of nursing practices that are not only evidence-based but also culturally and religiously sensitive, thus contributing to a more patient-centered healthcare approach.

Furthermore, academic institutions can utilize this research to develop educational programs that instruct students about Sharia-based nursing care. Additionally, hospital managers and directors can derive valuable preliminary information from this research, as it offers insights to nurses for job design, feedback provision, and necessary corrections in the healthcare setting.

Limitations and Recommendations for Future Research
It is essential to acknowledge the limitations of this study. The study's findings are context-specific and may not be universally applicable. Future research should consider broader samples and diverse settings to enhance the generalizability of the results. Several recommendations for future research are proposed. Researchers should consider longitudinal studies to explore the long-term impact of work factors and Sharia-based nursing care on patient satisfaction. Additionally, investigating the influence of contextual factors, such as organizational culture and the specific cultural and religious contexts, on nursing practice and patient satisfaction is warranted. Comparative studies across different healthcare settings and populations can further expand our understanding of the relationships explored in this study.

Conclusion

This study presents valuable insights into the significant and positive relationships between nurses' work factors, the integration of Sharia-based principles in nursing care, and their combined influence on patient satisfaction in Islamic hospitals. The model introduced in this research highlights the potential of enhancing patient satisfaction through the implementation of Sharia-based nursing care, which holds particular importance in serving the world's largest Muslim population and the growing demand for spiritually sensitive healthcare. The study findings shed light on the specific work factors that contribute to this relationship, such as performance, feedback, correction, and job design. The implications for nursing practice are evident, suggesting nursing administrators, healthcare policymakers, and academic institutions need to focus on creating supportive work environments and culturally sensitive care practices for nurses.

Declaration of Conflicting Interest

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Authors' Contributions

All authors contributed equally to all stages of the study, including making substantial contributions (conception and design or acquisition of data or analysis and interpretation of data), drafting and revising the manuscript, giving final approval of the version to be published, and agreeing to be accountable for all aspects of the work.

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Data Availability

The datasets generated during and analyzed during the current study are available from the corresponding author upon reasonable request.

Declaration of Use of AI in Scientific Writing

Nothing to disclose.

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