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Original Article

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Effect of sharia-based nursing care using swanson's caring model (ShariaSwanCare) on patient satisfaction: a quasi-experimental study

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ABSTRACT

Introduction: Patient satisfaction is a key indicator of healthcare quality. As of 2023, Indonesia is home to 74 certified Sharia-based hospitals. However, research examining the effects of Sharia-based nursing care on patient satisfaction remains limited. Existing studies often treat Islamic healthcare practices and caring theories as separate domains, lacking integrated analysis through structured frameworks such as Swanson's Caring Theory. This study aimed to evaluate the effect of Sharia-Based Nursing Care, utilizing Swanson's Caring Model (ShariaSwanCare), on patient satisfaction in hospital settings.

Methods: A quasi-experimental pretest–posttest design with a control group was employed, involving 76 hospitalized patients (38 per group) selected via purposive sampling. Participants received a structured, five-day treatment for conditions such as hypertension, diabetes mellitus, cerebrovascular accident (stroke), and pneumonia. Eligibility criteria included compos mentis status and uninterrupted completion of the five-day treatment period. Patients who were transferred to other wards were excluded. The intervention group received ShariaSwanCare, administered daily for five consecutive days, with patient satisfaction assessed every 24 hours. The control group received standard hospital care without additional interventions. Data were analyzed using both paired t-tests and independent t-tests. A significance level of $p < 0.05$ was used for all analyses.

Results: Statistical analysis yielded a p-value of < 0.001, indicating that the implementation of ShariaSwanCare had a significant positive effect on patient satisfaction. Specifically, patients in the intervention group showed a greater increase in satisfaction scores compared to the control group. The paired t-test revealed a significant improvement from pre- to post-intervention in both groups, but the effect was more pronounced in the intervention group.

Conclusions: Sharia-based nursing practices, when integrated with Swanson's Caring Model, can effectively enhance patient satisfaction. With appropriate training and structured implementation, these practices have the potential to be adopted across Islamic hospitals.

Keywords: islamic hospitals, nursing care quality, patient satisfaction, sharia-based nursing care, swanson caring model

Introduction

Sharia-based hospitals have become increasingly prominent in Indonesia over the past two decades, following growing public demand for healthcare services aligned with Islamic values. As of 2023, there are 74 certified Sharia hospitals in the country, many of which operate under private Islamic foundations, although some are managed in partnership with government health institutions (Mukisi, 2023). This is especially

relevant because Indonesia is the world's largest Muslim-majority country (Syahrul Ramadhan and Arin Ervita Sari, 2023), where the provision of healthcare that respects Islamic values is not only a matter of preference but a growing societal expectation. The increasing number of Sharia hospitals reflects efforts to meet this demand, aiming to offer holistic care that integrates medical, ethical, and spiritual components. These hospitals are accredited not only by the Ministry of Health but also by the Indonesian Ulema Council (Majelis Ulama Indonesia/MUI), which ensures compliance with Sharia principles in clinical and administrative practices. The concept of Sharia hospitals emerged in the early 2000s, aiming to provide holistic healthcare that integrates the spiritual, ethical, and cultural dimensions of Islam into patient care (Riset *et al.*, 2022; Astiwara, 2024). Unlike conventional hospitals, Sharia hospitals offer services that include same-gender health personnel for sensitive procedures, prayer facilitation, halal medication and food, and religiously appropriate end-of-life care (Padela *et al.*, 2012). This distinction reflects a broader goal to enhance patient satisfaction not only through clinical excellence but also through the fulfilment of spiritual and moral expectations. However, despite the observed increase in the number of these institutions, patient dissatisfaction persists as a salient concern. Empirical investigations have demonstrated that a substantial proportion of patients in Indonesian hospitals, including those adhering to Sharia principles, report dissatisfaction due to deficiencies in nursing care, inadequate spiritual support, and unmet cultural expectations (Fimaulidina, 2020; Ramie, Kesehatan Banjarmasin and Selatan, 2022). Given that nursing services constitute approximately 90% of hospital-delivered care, the quality of nursing services has a direct and significant impact on overall patient satisfaction (Zhao *et al.*, 2023). Therefore, the enhancement of nursing care through an integrative model that synthesises Islamic values with evidence-based caring frameworks is essential. One promising approach is to equip nurses with the capacity to deliver care grounded in Islamic principles, further reinforced by Swanson's theory of caring (Joung *et al.*, 2020; Madhavanprabhakaran, Francis and Labrague, 2022). Previous scholarly work has also highlighted that high-quality nursing care is best achieved when clinical practice aligns with both religious values and structured caring models (Bakar et al., 2022; Dingman et al., 1999; Landes et al., 2019; Swanson, 1991), reinforcing the need for a culturally congruent nursing framework in Sharia-based institutions.

Hospitals prioritise providing healthcare services to patients, with a particular focus on the delivery of continuous and comprehensive nursing care. This necessitates hospitals to offer top-notch services to guarantee patient satisfaction and achieve ideal outcomes. Sharia-based hospital healthcare services prioritize patient satisfaction, optimal outcomes, and adherence to Islamic values. For instance, patient placement and examinations need to be conducted in distinct and tailored settings. It is necessary to have distinct patient care facilities for males and females to maintain privacy, particularly to prevent the exposure of intimate body parts to unrelated individuals(Talibo, Kurniati and Widakdo, 2019; Amal *et al.*, 2021; Meliasari, Widianti and Rahayu, 2022). Caring is a crucial element in nursing practice because it encompasses humanistic values, respects individual freedom, focuses on enhancing capabilities and independence, increasing knowledge, and valuing each person(Turkel, Watson and Giovannoni, 2018; Oluma and Abadiga, 2020; Jaastad, Ueland and Koskinen, 2022; Zhang *et al.*, 2022). Swanson's theory of caring provides a structured framework that emphasizes compassion, respect, and the nurse's commitment to being emotionally and professionally present in the patient's experience (Swanson, 1991; Bernick, 2004). These principles closely align with Islamic ethics, which view caring as an act of worship grounded in values (Sadat-Hoseini and Khosropanah, 2017). Both perspectives highlight the centrality of human dignity and moral responsibility, reinforcing the idea that caring is not merely a clinical task, but a holistic, value-driven interaction that empowers both patients and caregivers.

In Islamic nursing care, patient satisfaction is defined as the patient's perceived level of fulfilment, assessed by comparing their actual healthcare experiences with their initial expectations (Wahdatin, Puspita and Abdurrouf, 2020; Hastomo Putra *et al.*, 2021; Rahman *et al.*, 2023). For Muslim patients, these expectations are shaped not only by clinical needs but also by religious and cultural values. Therefore, patient satisfaction in this context depends on both clinical effectiveness and the degree to which healthcare services align with Islamic beliefs and practices. This alignment has become increasingly significant in Indonesia, a country with the world's largest Muslim population. In recent years, the nation has experienced rapid growth in Sharia-based hospitals, reflecting a rising public demand for healthcare services that are consistent with Islamic principles. This expansion is primarily driven by growing consumer awareness and expectations, particularly related to the fulfilment of spiritual needs in healthcare settings (Talibo, Kurniati and Widakdo, 2019). To respond to these expectations and ensure compliance with Islamic guidelines, Sharia hospitals in Indonesia are required to obtain formal Sharia certification. This certification confirms that religious values have been meaningfully incorporated into hospital policies and practices, thereby offering Muslim patients a sense of security, trust, and reassurance in the care they receive (Lemonne *et al.*, 2013; Latifah, 2020; Mardiyati and Ayuningtyas, 2021).

Despite the positive growth of Islamic health care services, however, the empirical investigation of Sharia-based nursing care regarding patient satisfaction remains limited. While prior studies have shown positive correlations between nursing skill development and patient satisfaction (Parinussa and Molle, 2021), and other studies affirm the beneficial effects of Sharia-aligned nursing care on satisfaction outcomes (Nuriyati et al., 2020; Puspitasari *et al.*, 2020), these findings often consider Sharia values and caring practices in isolation. There remains a significant gap in the literature regarding the integration of Sharia-based nursing care with established theoretical frameworks such as Swanson's caring theory. Addressing this gap, therefore, is essential to develop a more comprehensive and culturally congruent model of patient-centered care that holistically enhances satisfaction outcomes in Muslim populations.

To address this gap, the present study investigates ShariaSwanCare, a nursing model that synthesizes Islamic principles with Swanson's caring theory. This model is predicated on two principal components: fundamental Islamic values and Swanson's five caring processes. The fundamental Islamic values incorporated within *ShariaSwanCare* underscore spiritual integrity, professional ethics, and social responsibility. These values encompass robust faith (salimul aqidah), rigorous worship practices (shahihul ibadah), steadfast character (matinul khuluq), intellectual acumen, and physical fortitude (Qowiyul jismi). Furthermore, nurses are expected to exhibit financial autonomy, a methodical approach to tasks, restraint of deleterious desires, efficacious time management (haritsun'ala waqtihi), and a dedication to altruism (nafiun lighoirihi) (Adityani et al., 2020; Fatmawati et al., 2020; Ningsih et al., 2020; Puspitasari et al., 2020; Sari et al., 2018; Widodo et al., 2020). Meanwhile, Swanson's caring theory is classified as a middle-range theory, comprising five basic processes developed from the focus of 'Swanson's caring theory within the caring model,' namely knowing, being with, doing for, enabling, and maintaining belief (Gürsoy & Yeşildere Sağlam, 2021).

The expansion of Sharia-based hospitals highlighted a critical need for theoretically grounded, evidence-based nursing models that addressed not only clinical outcomes but also patient satisfaction. While Islamic healthcare practices had been increasingly integrated into hospital operations, empirical models that systematically aligned religious values with established caring frameworks remained limited. This study proposed and evaluated ShariaSwanCare, a structured intervention grounded in Islamic principles and Swanson's Caring Theory as a culturally responsive approach to improving patient satisfaction within Sharia-compliant healthcare settings.

Materials and Methods

Design

This study utilized a quasi-experimental pre-posttest design incorporating a control group, conducted in accordance with the Transparent Reporting of Evaluations with Nonrandomized Designs (TREND) guidelines (Des Jarlais DC, Lyles C and Crepaz N, 2025). The study was conducted from April to August 2023. The intervention group was administered the *ShariaSwanCare* model, while the control group maintained the standard hospital-provided nursing care, absent of supplementary interventions.

Sample

Seven nurses as participants were recruited from two inpatient wards at a hospital in Indonesia. One ward was assigned as the intervention group, where nurses implemented caring-based nursing care, while the other served as the control group, applying standard nursing practices. Both wards provided care for Class 1 and Class 2 patients. Although the wards differed slightly in bed capacity, their overall patient demographics and operational characteristics were considered comparable to other wards within the hospital. The assignment of intervention and control conditions was determined through collaborative consultation with the hospital's management team.

The participants of this study were 76 patients, including 38 in the intervention group and 38 in the control group. The inclusion criteria for patients were as follows: 1) newly admitted hospitalized patients who were receiving 5 days of treatment following the therapeutic pathway at Qadr Hospital for illnesses such as hypertension, diabetes mellitus, stroke, pulmonary tuberculosis, pneumonia, and HIV; 2) patients with Compo's mentis consciousness (fully conscious and oriented); *and* 3) Patients who were not discharged until the completion of all research procedures. The exclusion criteria were applied to inpatients who were transferred to a different ward or who had just been transferred from another ward. The sampling method employed was nonprobability sampling, which is a more precise form of purposive sampling. This method was chosen to intentionally select participants who met predetermined characteristics relevant to the study objectives, ensuring that the sample accurately represented the target population. The sample size determination for this study was conducted using Arikunto's formula (Arikunto, 2013). This formula incorporates the population size, a confidence level represented by a Z-score of 1.96, and proportions p and q, each set at 0.5. The application of this formula yielded a required sample size of 38 respondents per group.

Measurement tools

The patient satisfaction questionnaire was fully developed by the research team and is both valid and reliable. It comprises 30 items categorized into 5 subscales: reliability, assurance, tangibles, empathy, and responsiveness. The questionnaire assessment employs a Likert scale with the following values: 1 = very dissatisfied, 2 = dissatisfied, 3 = satisfied, and 4 = very satisfied. The questionnaire has strong validity and reliability, with an r-value of 0.374 surpassing the expected table r-value and a reliability score of 0.984. The total score, ranging from 30 to 120 points, serves as the basis for interpretation, wherein elevated scores indicate increased patient satisfaction. Scores are categorized into three levels: low satisfaction (30–59), moderate satisfaction (60–89), and high satisfaction (90–120). Notwithstanding these categorical interpretations, the principal analysis within this study employs mean and standard deviation to facilitate rigorous statistical comparison across groups.

Intervention

During the intervention, the 7 nurses were trained in *ShariaSwanCare* program. The 7 nurses who participated in the intervention group were all registered nurses (RNs) with at least a diploma (D3) or bachelor's degree in nursing (Ners) and had a valid Indonesian Nursing Practice License. All nurses had a minimum of one year of clinical experience in inpatient care. Before the intervention, they received five days of structured training on the *ShariaSwanCare* model, delivered by the research team in collaboration with experts in Islamic nursing and certified Swanson's caring trainers. The intervention involved the delivery of spiritual and culturally aligned nursing care based on the *ShariaSwanCare* model, including key activities such as educating patients about Islamic health values, assisting with ablution (wudhu), facilitating prayer, offering spiritual support during illness or hospitalization, guiding end-of-life care according to Islamic principles, delivering health education embedded with Islamic teachings, and documenting all actions by Sharia nursing standards. The intervention was conducted across five consecutive days (5 × 24 hours) for each patient, beginning after a pre-intervention patient satisfaction measurement was taken within the first two hours of hospital admission. All nursing care activities were delivered within the intervention ward assigned by hospital management. The nurses applied the intervention using a standardized *ShariaSwanCare* guideline learned during their prior five-day structured training, which included two days of theory, two days of practice, and one day of competency testing. Only those who achieved a 100% passing score on both written and practical exams were authorized to deliver care. Throughout the intervention, the nurses used structured observation checklists and patient satisfaction questionnaires to evaluate outcomes systematically. The *ShariaSwanCare* intervention comprises the following:

1) Sharia nurses possess the following essential characteristics: (1) strong faith (*salimul aqidah*), (2) correct worship practices (*shahihul ibadah*), (3) firm character (*matinul khuluq*), (4) intellectual thinking, (5) physical strength (*Qowiyul jismi*), (6) financial independence, (7) systematic approach to activities, (8) control over negative desires, (9) effective time management (*Haritsun'ala waqtihi*), and (10) always beneficial to others (*Nafiun Lighoirihi*).

2) Cycle of *ShariaSwanCare*: (1) Pre-admission: Sharia Nursing Care Information; (2) Patient admission: a) Sharia nursing care regulations for patient care, patient information provision regarding treatment, Sharia-compliant activities related to home health; b) Patient admission to the Emergency Department Installation."; (3) Nursing spiritual care interventions consist of 7 components: a) Sharia-compliant patient admission regulations to the Emergency Department, b) Sharia nursing care regulations in the Emergency Department, and c) the provision of nursing care in the Emergency Department: oxygenation, fluids, nutrition, elimination, safety and comfort, and patient spiritual well-being. d) Service in the resuscitation room, e) Service for death accident, f) Sharia service for patients who passed away in the Emergency Department; (4) Guidance for praying for patients: Guidelines for praying in a seated position, praying in a slightly reclined position, praying while lying down, praying for immobile patients, and praying for mobile patients; (5) The following prayers were used during hospitalization: preoperative and postoperative prayers, and daily prayers; and (6) Providing instructions for ablution: Before prayer, a Muslim is required to purify themselves from major or minor impurities. A Janabah bath is used to purify significant pollutants, whereas ablution (wudhu) is used to purify minor impurities. Patients with persistent impurities from catheters or colostomy bags should thoroughly cleanse themselves. They should also receive instructions on ablution, including dressings and head coverings for female patients, as well as guidance on dying (sakaratul maut).

3) The dimensions of the *ShariaSwanCare*: (1) Understanding involves attempting to comprehend events in an individual's life by avoiding preconceptions, focusing on one patient, conducting a thorough assessment, looking for clues, and establishing relationships; (2) Collaborating or being with one requires emotional engagement through direct interaction, displaying caregiving skills, sharing emotions without overwhelming the individual, and managing one's own emotions; (3) Doing for others is offering protection, comfort, demonstrating abilities, anticipating needs, and showing trust as one would for oneself; (4) The capacity to assist an individual in

navigating life transitions such as delivery, grief, or unforeseen circumstances is enhanced by explaining, encouraging, offering choices, concentrating, and giving feedback; (5) Addressing belief through confidence entails trusting, keeping hope, providing realistic beliefs, and helping the patient derive meaning from challenges.

Research Procedure

In this study, the researchers used a pre- and post-intervention design to evaluate the impact of administering *ShariaSwanCare* in enhancing patient satisfaction in a hospital setting. The number of participants assessed for eligibility, excluded, withdrawn, and included in the final analysis is presented in the TREND Flow Diagram (Figure 1). This diagram aids in ensuring transparency and clarity in reporting the flow of study participants, consistent with TREND guidelines. By providing information about the number of participants at each stage of the study, the diagram helps readers understand the progression of the research and estimate potential biases that may arise.

Before the caring theory was applied to both the intervention and control groups, nurses administered a written pretest on *ShariaSwanCare***.** Following the pretest, the intervention group received two rounds of instruction. Each wave had 14 nurses who underwent a 5-day training program. The training involved 2 days of theoretical instruction on *ShariaSwanCare***,** followed by 2 days of practical training in caring and Sharia nursing. The program concluded with a post-training examination, which included both a written and a practical test. The posttest was considered successful if the score achieved was 100% accurate. The control group also took a posttest, with results similar to those of the pretest. Not all participants in the intervention group scored 100% on the first posttest. Remedial sessions were held until all participants achieved 100% accuracy.

Before implementing the *ShariaSwanCare*, 7 nurses in the intervention group were instructed to temporarily refrain from applying the model. This pause lasted for approximately two hours after each patient's admission to the inpatient unit, during which the pre-intervention patient satisfaction assessment was conducted. Immediately after this baseline measurement, nurses began applying the *ShariaSwanCare* intervention. The intervention continued for a period of five consecutive days (5 × 24 hours)**,** during which patient satisfaction measurements were conducted once every 24 hours, resulting in a total of five post-intervention assessments. This 5-day duration was selected to align with the standard length of inpatient treatment for the majority of cases included in the study, such as hypertension, diabetes, and pneumonia, and to ensure adequate exposure to the *ShariaSwanCare* model across various phases of care (admission, treatment, and discharge preparation). Thus, the intervention officially started two hours post-admission and ended after the fifth 24-hour cycle of care, marking the completion of the intervention phase for each patient. For the control group, participants received routine nursing care in accordance with the hospital's standard procedures, without any modifications or additional components such as the administration of *ShariaSwanCare*. All actions in the control group were delivered based on existing clinical protocols and service standards to maintain comparability with the intervention group, excluding the influence of faith-based or caring-theory-informed practices.

Data Analysis

Data analysis was conducted using IBM SPSS version 22, encompassing both univariate and bivariate analyses. A paired samples t-test will be applied to assess within-group differences in patient satisfaction before and after the intervention, for both the intervention and control groups. Meanwhile, an independent samples t-test will be used to compare post-intervention satisfaction scores between the two groups, as the intervention and control groups consist of different participants. The significance level for all statistical tests will be set at $p < 0.05$. These methods were selected due to their appropriateness for evaluating pre-post changes within the same group and between-group comparisons in quasi-experimental designs.

Ethical Considerations and Informed Consent

Ethical Considerations that this research has passed ethical review by Institute for Research and Community Service, Muhammadiyah University, Jakarta No: 022/F.9-UMJ/I/2023. This study adhered to established ethical research principles through the implementation of a rigorous informed consent protocol. Before participation, all individuals were required to provide informed consent. The consent process was meticulously structured to facilitate a comprehensive understanding of the study's objectives, methodological procedures, potential benefits, and associated risks. A detailed consent document was provided to each participant, delineating their rights, including the unencumbered right to withdraw from the study at any juncture. To ensure clarity and comprehension, researchers presented the study information using accessible language, thereby enabling participants to pose questions and make informed decisions. Participant confidentiality was safeguarded through the anonymization of personal information, utilizing coded identifiers.

Furthermore, all consent forms were securely archived with access restricted to authorised personnel only. In the event of any modifications to the study design that could potentially influence participant decision-making, participants were promptly notified, and renewed consent was obtained as necessary. These procedural measures were implemented to ensure the

Table 1. Characteristics of the respondents in the intervention and control groups (n=76 individuals; 38 in the intervention group and 38 in the control group).

Variable	Category	Group			
		Intervention		Control	
		n	%	n	%
Sex	Male	20	52.6%	22	57.9%
	Female	18	47.4%	16	42.1%
Age (year)	17-25	6	15.8%	4	10.5%
	26-35	4	10.5%	4	10.5%
	36-45	6	15.8%	4	10.5%
	46-55	14	36.9%	8	21.1%
	56-65	4	10.5%	10	26.3%
	>65	4	10.5%	8	21.1%
Marital Status	Single	2	5.3%	6	15.8%
	Married	36	94.7%	26	68.4%
	Widow/Widower	0	0%	6	15.8%
Education	Elementary	8	21.1%	18	47.4%
	Junior High School	4	10.5%	8	21.0%
	Senior High School	22	57.9%	6	15.8%
	Diploma 3year	0	0%	2	5.3%
	Undergraduate	4	10.5%	4	10.5%
Occupation	Private sector	6	18.7%	0	0%
	Pension	0	0%	4	11.8%
	Others occupations	32	81.2%	34	88.2%
Length of Treatment	5 Days	20	52.6%	16	42.1%
	6 Days	10	26.3%	10	26.3%
	7 Days	4	10.5%	4	10.5%
	8 Days	2	5.3%	6	15.8%
	9 Days	2	5.3%	0	0%
	10 Days	0	0%	2	5.3%

consistent respect for participants' privacy, rights, and autonomy throughout the research.

Results

The data in Table 1 show that most patients in both groups were men, with the largest age group being 46-55 years old. The majority of patients were married and aged between 45 and 56 years. The intervention group predominantly consisted of individuals with a high school education, whereas the majority of participants in the control group had completed only primary school. The majority of patients have different jobs, and the typical length of treatment is 5 days.

To assess the impact of the ShariaSwanCare intervention on patient satisfaction, a paired samples t-test was conducted separately within the intervention and control groups. The results of this analysis are presented in Table 3, which compares pre- and post-intervention satisfaction scores in each group.

Table 2 shows that in the intervention group, there was a statistically significant increase in patient satisfaction (Mean difference = -4.658, SD = 7.138), with a t-value of -5.689 (df = 37, $p < 0.001$). Similarly, the control group also experienced a significant but smaller increase in satisfaction (Mean difference = -1.526, SD = 3.783), with a t-value of -2.487 (df = 37, $p = 0.018$). These results indicate that the implementation of ShariaSwanCare with the Swanson caring model concept had a stronger effect on improving patient satisfaction compared to standard care.

Table 3 presents the results of an independent t-test comparing patient satisfaction between the intervention and control groups following the implementation of ShariaSwanCare. The mean satisfaction score in the intervention group was 111.95 (SD = 1.02), while the control group had a mean of 80.95 (SD = 22.42), with both groups comprising 38 participants. Before conducting the t-test, Levene's test for equality of variances yielded a p-value of 0.205, indicating that the assumption of equal variances was met ($p > 0.05$). The t-test revealed a significant difference in patient satisfaction between the two groups, $t(74) = 8.52$, $p < 0.001$, with a mean difference of 31.00 and a 95% confidence interval ranging from 23.74 to 38.26. These findings suggest that the implementation of ShariaSwanCare substantially improved patient satisfaction compared to the control group.

Discussions

The *ShariaSwanCare* intervention is a specialized nursing care approach that integrates Islamic Sharia principles with Swanson's Caring Theory to enhance the quality of patient care. This model emphasizes compassionate, ethical, and holistic nursing by aligning medical care with religious and cultural values, ensuring that patients receive treatment that respects their beliefs and spiritual needs. Swanson's Caring Theory provides

Table 2. Paired t-test examining the effect of the implementation of ShariaSwanCare, within the intervention and control groups.

Group	Pre	Pos	Mean Difference	SD	t	df	P-Value
Intervention	107.292	111.95	-4.658	7.138	-5.689	37	<0.001
Control	79.42	80.95	-1.526	3.783	-2.487	37	0.018

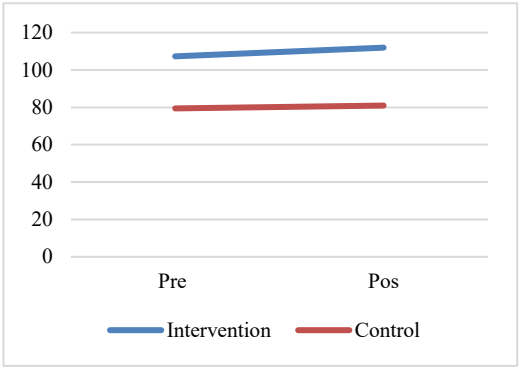

Figure 1: The comparison between the intervention and control groups based on pretest and postest

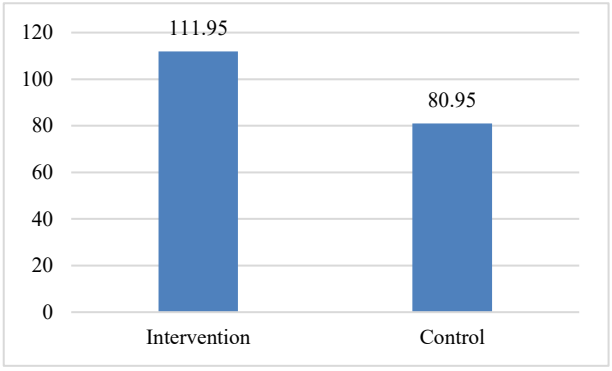

Figure 2: The Comparison Between the Intervention and the Control Group

the theoretical foundation for this intervention, focusing on five key caring processes: knowing, being with, doing for, enabling, and maintaining belief. These elements align well with Islamic teachings on care and compassion, reinforcing the importance of empathy, sincerity, and personalized attention in nursing. By integrating both scientific nursing principles and faith-based values, the *ShariaSwanCare* intervention provides a comprehensive and patient-centered model, fostering greater trust, comfort, and satisfaction among patients and their families.

The research findings demonstrated a statistically significant elevation in patient satisfaction within the intervention group, relative to the control group, which did not receive the intervention. Notably, patient satisfaction levels exhibited an initial increase, culminating in the most substantial increment at the fifth measurement. This pronounced increase in patient satisfaction, particularly observed at the fifth measurement, implies a cumulative effect attributable to the *ShariaSwanCare* intervention. It is posited that patients require a period of acclimatization to the novel care paradigm, the establishment of trust with nursing personnel, and a thorough understanding of the benefits of compassionate, culturally congruent nursing care. This delayed yet substantial augmentation aligns with Swanson's Caring Theory, which underscores the importance of progressive emotional rapport and consistent caring behaviors. Consequently, this observation underlines that caring-based interventions necessitate a temporal dimension to attain optimal efficacy, thereby reinforcing the significance of sustained and culturally sensitive nursing care in the enhancement of patient satisfaction. These results are congruent with extant literature, which indicates the pivotal role of compassion-centered nursing care in augmenting patient satisfaction (Alharbi et al., 2023a; Ariani and Aini, 2018; Wolf et al., 1998). Empirical evidence substantiates a positive correlation between enhanced nursing care behaviors and elevated satisfaction among patients and their families utilizing these services (Amaliyah, Milawati and Akhmadi, 2020; Suprajitno, Sari and Anggraeni, 2020). Furthermore, a plethora of studies have corroborated the capacity of caring-based nursing care integration to refine caring behaviors in clinical practice and to foster the humanistic dimensions of nursing (Fu and Deshpande, 2014; King *et al.*, 2019; Mau, Limbong and Yetti, 2020). Given the salient influence of nurses' behavior on patient satisfaction, the provision of patient-centered, affable, timely services, congruent with available resources, cultivates a more salutary healthcare experience(Ghanbari-Afra et al., 2022; Handayani and Kuntarti, 2022).

Patient satisfaction serves as a pivotal indicator of healthcare quality, exhibiting sensitivity to a multitude of influencing factors. Empirical investigations have demonstrated that sociodemographic characteristics, educational attainment, marital status, employment status, and the duration of hospital stays significantly impact patient satisfaction(Alharbi et al., 2023b). Complementarily, Inocian et al. (2021) identified education, field of responsibility and position, age, and religious affiliation as salient determinants of satisfaction (Inocian *et al.*, 2021). Within the specialized context of Sharia-based nursing care, these aforementioned factors assume heightened relevance. Consequently, the attainment of maximal patient satisfaction necessitates the judicious consideration of age, gender, marital status, and education during the implementation of culturally and spiritually tailored healthcare services (Adityani, Abdurrouf and Sari, 2020). Consistent with this assertion, healthcare services predicated upon Sharia principles have been shown to correlate positively with enhanced patient satisfaction. This research trajectory aligns with prior studies, notably that of Widodo et al. (2020), which advocated for the integration of Sharia-based nursing care as a strategy to elevate healthcare quality (Widodo, Sulisno and Suryawati, 2020). Further

Table 3: Independent T test of patient satisfaction between the intervention and control groups after the implementation of ShariaSwanCare.

Variable	Mean	SD	N	Mean Difference (CI 95%)	df	t	P-Value
Intervention	111.95	1.02	38	31.00(23,74-38.26)	74	8.52	<0.001
Control	80.95	22.42	38				

scholarly endeavors have reinforced the proposition that the incorporation of Sharia principles into nursing practices facilitates the delivery of high-quality care (Sari, Abdurrouf and Rismawati, 2018). Substantiating these claims, empirical evidence derived from Al Islam Bandung Sharia Hospital, an accredited Sharia-compliant healthcare facility situated in West Java, has revealed that the consistent application of Sharia-based nursing care yields a statistically significant augmentation in patient satisfaction (Ningsih, Aisyah and Rahayu, 2020).

The findings of this study have significant implications for nursing practice, policy development, education, and training, particularly in Sharia-based hospitals. Integrating *ShariaSwanCare* into clinical practice can enhance patient satisfaction and overall quality of care, as it aligns with the cultural and religious values of Muslim patients and fosters a holistic healthcare approach. From a policy perspective, policymakers should consider incorporating *ShariaSwanCare* into healthcare policies and guidelines, ensuring that nursing practices remain culturally sensitive and meet the religious needs of patients. This could lead to the development of standardized protocols and accreditation criteria for Sharia-based hospitals, promoting consistency and excellence in care delivery. In terms of education and training, nursing curricula should include modules on Sharia-based nursing care and the application of Swanson's Caring Model. Additionally, continuous professional development programs can enhance nurses' competencies in providing *ShariaSwanCare,* ensuring they are well-equipped to meet the diverse needs of patients in Islamic healthcare settings.

Although extensive literature explores Swanson's Caring Theory and Sharia-based nursing care separately regarding patient satisfaction, studies integrating both frameworks remain limited. This synthesis offers a compassionate model that supports religious obligations in care delivery. However, the study has several limitations. Its single-site design restricts generalizability across diverse cultural and institutional settings. The non-random sampling method may have introduced selection bias, and the five-day minimum hospital stay excluded patients with shorter admissions. Moreover, the study focused solely on satisfaction outcomes, without assessing clinical, quality-of-life, or system-level impacts. Lastly, the absence of stakeholder perspectives limits insight into the feasibility and broader implementation of the ShariaSwanCare model. To address current limitations, future research should prioritise multi-centre studies in diverse Islamic hospitals to evaluate the scalability and long-term efficacy of ShariaSwanCare across varying institutional and demographic contexts. Longitudinal designs are needed to assess clinical outcomes, quality of life, and overall well-being beyond patient satisfaction. Broadening inclusion criteria to shorter hospital stays and outpatient settings will improve representativeness, while adopting randomised sampling will reduce bias and strengthen validity. Qualitative research involving healthcare providers, administrators, and patients can uncover practical challenges and inform optimal implementation strategies. Lastly, integrating structured training and standardised guidelines will ensure consistent, sustainable, and culturally congruent application of ShariaSwanCare across healthcare settings.

Conclusion

The implementation of the *ShariaSwanCare* intervention consistently improved patient satisfaction throughout the study period. The findings underscore the value of culturally congruent, spiritually aligned nursing care in promoting positive patient experiences. With appropriate training and standardisation, ShariaSwanCare has the potential to serve as a scalable model for faith-based healthcare institutions. Future multi-centre, longitudinal, and mixed-method studies are warranted to validate its efficacy, expand its applicability, and support its integration into nursing education, clinical protocols, and health policy frameworks.

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Availability of data and materials

The datasets generated and analyzed during this study are available from the corresponding author upon reasonable request. To ensure patient confidentiality, all data has been anonymized following ethical research guidelines.

Authors' contributions

MH and SM: Do Conceptualization, Methodology, Resources, Data Curation, Writing - Original Draft, Writing - Review & Editing; TLY, and EW: Supervision, Methodology, Investigation, Validation, project administration; Writing - Review & Editing; IH and RFK: Project administration, Formal analysis, resources, visualization, and software.

Declaration of Interest

None

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