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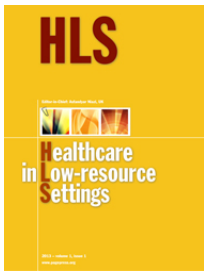

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Exploring to improve patient satisfaction through organizational factors consolidation of sharia-based nursing care

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Patient's consent for publication: written informed consent was obtained for anonymized patient information to be published.

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Abstract

Organizational factors determine patient satisfaction, since nursing care depends on organizations, in which the majority of actions involve nurses to provide holistic nursing care. Spirituality can be an important key, because patients feel all needs are fulfilled, making Sharia-

Based Nursing Care (SBNC) a mediator of organizational factors for patient satisfaction. The aim of this paper is analyzing the role of organizational consolidation factors and SBNC model to determine patient satisfaction in Sharia hospitals. This analytical correlation study used a cross-sectional design and cluster sampling technique on 260 respondents as the samples, consisting of nurses and patients in patient rooms in X Islamic Hospital, Indonesia. The variables of this study, the organizational factors, SBNC, and patient satisfaction were collected using a questionnaire; all variables were assessed through the use of a questionnaire, and permission to modify or employ the instrument was obtained from the original authors, and analyzed using Smart Partial Least Squares (SmartPLS). Organizational factors have significant influence on SBNC (p-value=0.000; β-value=0.786; t-value>1.96), organizational factors have moderately significant influence on patient satisfaction (p-value=0.000; β-value=0.508; t-value>1.96), SBNC has significant influence on patient satisfaction (p-value=0.000; β-value=0.430; t-value>1.96), the consolidation of organizational factors with SBNC influences patient satisfaction (p-value=0.001; β-value=0.338; t-value>1.96). Nurses with good leadership, culture, and who give appropriate rewards can shape the quality of the profession by implementing SBNC; patients feel all needs are fulfilled, especially the spiritual aspect, and satisfaction with the nursing services.

Introduction

A Sharia hospital is a hospital that provides health services in accordance with Sharia principles or, in other words, applies *maqashid Sharia* in hospital governance. The characteristics of Sharia hospitals that distinguish them from other hospitals are understanding related to the basic principles of Sharia, the principles of *halal* and *haram*, the *muamalat* principle, the

application of the concept of quality in Islam, and upholding Islamic values in hospital organizations.[1] The strongest organizational foundation is required for surviving competition in the health industry, since organization is a key player in developing human resources such as nurses, since nurses are one of the most important and largest resources in hospitals.[2] In addition, nurses' performance determines a hospital's quality of nursing care and services, so if their nurses' performance of nurses is good, so is the hospital's management. Hospital governance is one of the service priorities, given hospitals' increasingly fierce competition.[3-7] The Indonesian Muslim population is 237,531,227, about 96.5%, as in Central Java alone, the population is 35,607,889.[8] Muslim population as the second largest population in the world is an opportunity for hospitals to improve their services for Muslims. It is possible to develop Islamic-based nursing services, since nurses are the key to service quality.[9] Nursing services are an important part of a hospital's quality and safety of services and the determining factor of patient satisfaction of treatment outcome, thus nursing care is important to determine patient satisfaction.[10-20]

Competition between hospitals greatly relies on the service quality aspect, consequently, hospitals are developing services with an Islamic system or Sharia hospital, because of the growing demand for *halal* products and *halal* services, particularly hospital and Sharia-based healthcare services.[4] Islamic hospitals with Sharia standards have many positive impacts on patients with regard to patient satisfaction. Patient satisfaction is an important goal of service quality in that it reflects the quality of existing services.[21] In general, Sharia nursing care comprises five nursing processes: assessment, diagnosis, intervention, implementation, and evaluation, on the basis of Islamic-based intellectual, physical, ethical, moral, and spiritual. This conforms to the concept of *maqashid Sharia*, referring to Imam Syatibi, comprised of maintaining religion (*khifdz ad-diin*), preserving soul (*khifdz an-nafs*), maintaining offspring (*khifdz an-nasl*), maintaining reason (*khifdz al-aql*), and maintaining property (*khifdz al-mal*).[22]

Maqashid Sharia is a Sharia hospital with nursing care that has a *maqashid Sharia* spirit, but there has been no research related to patient satisfaction with nursing care in Sharia hospitals and whether these organizational factors can increase patient satisfaction,[5] so this should be studied further.[7] Patient satisfaction, in addition to Islamic nursing care's influence, are related to organizational factors. Nurses and organizational factors in hospitals are an integral part since nurses are competent, motivated, and trained, also because of the existing organizational policies in hospitals. Therefore, the organizational factors contributing to determining hospital quality and patient satisfaction include leadership, organizational culture, goals or vision and mission, rewards, and training and development. Since nurse performance influences organizational performance, hospital leaders should take nurse performance into consideration.[13] Leadership influences nurse performance through organizational factors that it is capable of measuring the nurse-organization framework.[14] Islam believes leadership is a mission; the responsibility is not only for leading nurses, but also for Allah SWT.[15] Organizational culture is also correlated with nursing care, framed in Islamic values as norms, beliefs, and values applied in an organization. In Islamic teaching, comprising the Qur'an and Hadith, Islamic organizational culture is a factor that enhances a Sharia nurse's character.[16] Sharia nurses' performance is influenced by the element of organizational goals expressed in the products and services offered, in which a nurse is a hospital's extension in translating the vision and mission of nursing service provision.[17] Patient satisfaction is influenced by nursing care provision and various nursing care models have been developed, one of which is nursing care based on Islamic values and considered appropriate for application in Sharia hospitals.

The reflection on organizational factors' role shows that they influence the nursing care quality and the spiritual dimension also influences patient satisfaction, but there is no research related to Sharia-based nursing services, despite Muslims being the majority population in the world, thus Muslim patients' spiritual needs are also great. Indonesia boasts hospitals with Sharia-

based standards, such as those located in the Central Java Province. On this basis, this research was conducted in one of the Sharia-based hospitals in Islamic Hospital, with regard to the organizational factors, including leadership knowledge, organizational culture, goals, rewards or salaries, and nurse training and development toward Islamic nursing, in which there is no research related to this, especially those inspired by *maqashid Sharia*, and Sharia-based nursing care's (SBNC) role in patient satisfaction. The researchers were interested in examining the role of consolidation of organizational factors with SBNC in improving patient satisfaction, thus the aim of this study is exploring to improve patient satisfaction through organizational factors consolidation of SBNC.

Materials and Methods

Study design

This analytic observational research used a cross-sectional design; this design was chosen because this research is quantitative research that analyzes the relationship between cause and effect factors using an observation approach or data collection in one data collection. This study's exogenous variables are organizational factors, while the endogenous variables are SBNC and patient satisfaction, with five organizational factors indicators, comprised of leadership, organizational culture, goals, rewards or salary, and training and development. This study's endogenous variables are SBNC, five indicators of which are: assessment, diagnosis, intervention, implementation, and evaluation. Patient satisfaction has five indicators: Reliability, Assurance, Tangible, Empathy, and Responsiveness (RATER). Thus, the study has a total of 15 indicators referring to three latent variables. This study has three hypothetical paths: firstly, from organizational factors to SBNC; secondly, from SBNC to patient satisfaction; and thirdly, from organizational factors to patient satisfaction.

Participants

The research population comprised nurses and patients in the inpatient rooms of the Islamic hospital, the nurses' total population was 143. This study's total respondents were 260, comprised of 130 inpatient nurses and 130 patients treated in inpatient rooms, calculated with the maximum likelihood method, and seven inpatient rooms resulted from a calculation using a cluster sampling technique. The samples were selected using the cluster sampling technique, with one of the methods being random sampling (Table 1).

For patients, inclusion criteria were as follows: i) being inpatients, ii) being literate, iii) identifying as Muslims, iv) falling within the age range of 17 to over 65 years old. Patients meeting any of the following criteria were excluded: i) being outpatients; ii) receiving treatment in the intensive care unit, neonatal or pediatric rooms, or experiencing impaired consciousness. As for nurses, the inclusion criteria were: i) being assigned to inpatient rooms; ii) 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, and iii) identifying as Muslims. Nurses fulfilling any of the following criteria were excluded: being assigned to the intensive care unit or emergency unit.

Instruments

In quantitative research, the credibility of a study relies on the development of instruments used to measure the underlying concepts. The measurement of a variable is designed to achieve consistency, adequacy, accuracy, precision, uniformity, and comparability in assessing and explaining a specific concept. Therefore, the measurement approach encompasses testimony and confirmation variables that function as representations of constructs.[23] This study's exogenous variables are organizational factors, while the endogenous variables are SBNC and patient satisfaction, with five organizational factors indicators, comprised of leadership,

organizational culture, goals, rewards or salary, and training and development. This study's endogenous variables are SBNC, five indicators of which are: assessment, diagnosis, intervention, implementation, and evaluation. Patient satisfaction has five indicators: Reliability, Assurance, Tangible, Empathy, And Responsiveness (RATER). Thus, the study has a total of 15 indicators referring to three latent variables. All variables in this study were assessed through the use of a questionnaire, and permission to modify or employ the instrument was obtained from the original authors (Table 2).[24-29]

Upon the variables, a Likert scale was used for the nurses and Islamic nursing care factors, comprised of strongly disagree, disagree, neutral, agree, and strongly agree, while, for patient satisfaction, the answers were classified into very dissatisfied, dissatisfied, neutral, satisfied, and very satisfied. The variables were ordinally scaled with indicators ranging from 76-100% (good), 55-75% (enough), and lower than 55%. The study's data were collected using organizational factors, the questionnaire had 27 questions, divided into: questions 1-7 to measure leadership, 8-12 to measure organizational culture, 13-17 to measure purpose, 18-22 to measure reward or salary, and 23-27 to measure training and development. The questionnaire for patient satisfaction covered RATER, or RATER questionnaire, comprised of 23 questions, divided into: questions 1-6 to measure reliability, 7-9 to measure assurance, 10-14 to measure tangibility, 15-19 to measure empathy, and 20-23 to measure responsiveness. The variables of SBNC had 25 questions with five processes of SBNC, each process with only five questions. The validity test results for the organizational factors questionnaire have validity values of 0.716 to 0.996 and reliability of 0.876 to 0.990, and the results for the SBNC questionnaire have validity values of 0.656 to 0.993 and reliability of 0.879 to 0.975. The patient satisfaction questionnaire had scores of 0.552 to 0.876, and reliability of 0.851 to 0.906.

Data collection

This research was conducted at an Islamic hospital, in Indonesia. The data were collected in August 2022. To mitigate potential research bias, various measures were implemented, including the application of multiple inclusion and exclusion criteria aimed at reducing biases and ensuring respondent eligibility. The researcher collected the primary data for this study. A total of 260 questionnaires were distributed in August 2022. The data were collected in the following steps: i) conduct research permits in hospitals, ii) after obtaining permission for the ethical process at the an Islamic Hospital Ethics Committee Institute, iii) pass the ethical test, the data collection process for inpatient patients who met the inclusion and exclusion criteria, patients first received an explanation from researchers about the research carried out in full, an explanation carried out orally and in writing; after the patient understands the research being conducted, the researcher requests written informed consent and then the patient who agrees to be a respondent can sign the informed consent sheet, which is in accordance with the ethical principles of research, namely informed consent, anonymity, confidentiality, fidelity, and autonomy; the process of filling out the patient's questionnaire will be accompanied by the family, because a complete explanation regarding this research from the enumerator is not only given to the patient but also given to the family as the patient's guardian or guardian, so that in the process of filling in the patient is accompanied by the family, the filling does not have to be completed at one time, because the patient is given 24 hours to fill out the questionnaire, so the questionnaire can be filled in according to the patient's wishes, but if the patient does not have family to look after him then he will be accompanied by an enumerator, after 24 hours the enumerator will take the questionnaire back, but before taking it he will check whether it is completely filled in or not, if it is not all filled in then the patient is asked to complete it, and if it is complete it will be collected by the enumerator for further data analysis process.[4] The data that have been collected are then checked for completeness and then processed with Smart Partial Least Squares (SmartPLS).

Data analysis

The descriptive test uses a frequency distribution test with analysis using SmartPLS. For inferential analysis, a variation and component-based structural equation model was used called Partial Least Squares Structural Equation Modeling (PLS-SEM),

PLS-SEM is recognized as an alternative to Covariance-Based Structural Equation Modeling (CB-SEM) in cases where assumptions cannot be met or when the proposed model is exploratory in nature, lacking substantial empirical evidence. PLS-SEM also facilitates testing the relationships between constructs within the conceptual model. SmartPLS 3.2.8 was employed to execute the PLS-SEM method. This software offers diverse options for generating both outer and inner models to compute latent variable scores within research models. Nonetheless, it is important to note that PLS-SEM has faced criticism from experts regarding its consistency and potential bias.[30] 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.[31] SmartPLS has the advantage that it is powerful, since it does not require the data to have a certain measurement scale. Small samples can also be used to confirm the theory, and allow testing a series of relationships between relatively complicated variables simultaneously. SmartPLS analysis was carried out using the SmartPLS software covering the measurement model (outer model), structural model (inner model), and hypothesis test. Therefore, in view of SmartPLS's advantage, it is very suitable that SmartPLS was used as the device for data processing in this research. Based on the guidelines on the outer model or validity test, an indicator is considered valid if its Average Variance Extracted (AVE) value >0.5 or showing all outer loading variable dimension values >0.5. The second test was the structural or inner model test, carried out to predict the causal relation between latent variables.

The structural model was evaluated assuming the percentage of the variances explained by R^2, (R square) for the dependent variable, and the predicted relevance test (Q-square) called Stone-Geisser was used to measure how well the values observed, produced by the model, are and also the parameter estimates. A Q-square value higher than 0 (zero) indicates that the model has predictive relevance or shows relevance when applied in different areas. On the other hand, a Q-square value lower than 0 (zero) has less predictive relevance, and a bootstrapping procedure was performed to observe the structural path coefficient or latent variable's relation or influence. The hypothesis was tested by testing the t-statistic or bootstrapping the significance of the hypothesis was obtained by comparing the t-table and t-statistic values. The t-statistic value was higher than the t-table or $t > 1.96$ and p-value≤ 0.01.[32]

Ethical considerations

This research has passed the ethical clearance test by 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, and has obtained the respondents' consent through informed consent, thus patients first received an explanation from researchers about the research carried out in full, an explanation carried out orally and in writing. After the patient understands the research being conducted, the researcher is given informed consent in writing, and then the patient who agrees to be a respondent can sign the informed consent sheet, which is in accordance with the ethical principles of research, namely informed consent, anonymity, confidentiality, fidelity, and autonomy.

Results

Sample characteristics

The results show that by age, most of the nurses are from 26 to 35 years old or in their late adulthood (70%) and by educational level, most of the nurses have associate degrees in nursing education (67.78%). The nurses' highest age (late adulthood) ranges from 36-45 years old (24.6%), and most of them have a secondary school education level (53.8%) (Table 3).

The frequency distribution test shows that most of the variables studied have good levels (Table 4). This is reflected in the results, showing that most of the nurses have good leadership (70%). The organizational culture variable also has a good level (72.3%). For the third variable, organizational goals, most of them have good level (72.3%), and most of them have good level of reward or salary (66.2%); the SBNC variable shows that most of the nurses have good level of assessment (73.8%), and most of the nurses have good level of diagnosis (67.7%), intervention (73.1%), implementation (69.2%), and evaluation indicator (72.3%). Patient satisfaction's five indicators show that most of the nurses have good reliability (75.4%) and reality indicator (71.5%), most have good assurance (70%), most have good empathy (71.5%), and good responsibility (73.8%) (Figure 1, Table 5).

The interpretation of the measurement model in this test is valid since the indicator's reliability for each part of the outer loading is higher than 0.7. The AVE value for all variables is higher than 0.7. The reliability test in this study used a reference to the value of composite reliability and Cronbach's alpha, in all variables showing values higher than 0.7, all results of which are very reliable in that they are higher than 0.80. In the Fornell-Larcker matrix, the square root of AVE (diagonal) is higher than all values, and the HTMT value is lower than 1, thus we may conclude that the measurement model's discriminant validity is confirmed.

This study's coefficient of determination shows that the organizational factors determine SBNC by 0.618 (0.618x100=61.8%), thus 61.8% of SBNC is predicted or determined by the organizational factors, while the remaining 38.2% (100-61.8%=38.2%) is determined by other factors. The next coefficient of determination is the SBNC and organizational factors' value in

determining patient satisfaction, showing the results 78.7% or (0.787x100=78.7%), while the remaining 21.3% (100-78.7%=21.3%) is determined by other variables beyond this study.

This study's results show the path coefficients and the level of significance. The path coefficients were used to test the hypothesis; the path coefficient test shows a significant correlation between organizational factors and SBNC (Table 6). Organizational factors and SBNC has positive, strong, and significant influence (p-value=0.000; β-value=0.786; t-value>1.96). Organizational factors and patient satisfaction have positive, moderate, and significant influence (p-value=0.000; β-value=0.508; t-value>1.96), and SBNC and patient satisfaction have positive, moderate and significant influence (p-value=0.000; β-value=0.430; t-value>1.96). The consolidation of organizational factors with SBNC on patient satisfaction shows that there is influence and can increase patient satisfaction (p-value=0.001; β-value=0.338; t-value>1.96). These results show that patient satisfaction can be increased quickly through special methods or strategies, namely through consolidation or a combination of organizational factors with SBNC, so consolidation becomes a special strategy to increase patient satisfaction.

Discussion

This study investigated the indicators that shape organizational factors, SBNC, and patient satisfaction. In addition, this study also examines specific strategies to increase patient satisfaction, organizational factors that can influence SBNC, patient satisfaction, and the role of each organizational factor indicator, assesses SBNC that can increase patient satisfaction, and examines the role of each indicator of SBNC in increasing patient satisfaction. In-depth findings regard the consolidation of organizational factors with SBNC on patient satisfaction, which is the most important factor in increasing patient satisfaction.

The study results indicate that organizational factors significantly influence SBNC and patient satisfaction. This study's results also show that organizational factors are shaped by the indicators: leadership, culture, goal, reward, and training and development. This is in line with the research that organizational characteristics and nurses' behavior influence patient's perception of the care they receive.[33] Organization is an important factor not only serving as part of the administrative process, but also a challenge to nursing services, since a nursing model is selected depending on how the organization establishes it, besides the fact that the quality of nursing care for patients reflects health service organization.[34]

A health service organization plays an important role in leadership, as stated by Specchia *et al*. (2021), that leadership plays a key role in effective and efficient care provision and positively influences the nursing profession, environment, and patient. Leadership is defined as the ability to influence others in achieving goals or works through good communication, motivation, leadership ability, and decision-making.[35] Leadership greatly influences the success of SBNC; in providing nursing services, nurses must comply with the *maqshid Sharia* guidelines, thus a leader plays an important role in directing, creating cooperation, and evaluating nurses' performance for them to comply with the five elements of *maqshid Sharia*. A nurse leader's leadership style directly or indirectly determines the quality of nursing care, since good leadership determines the right steps to achieve goals, and good and competent leadership will improve nursing care quality and patient satisfaction, but achieving these two things, in addition to leadership, also requires well-established organizational culture.[36]

Organizational culture is a set of shared mental models reflecting a group's life: perspective-making, problem-solving, and emotional reaction to what we feel.[37] Organizational culture plays an important role in creating a work environment that may support nurses in the avoidance of negative organizational attitudes, nurse job satisfaction, and patient satisfaction.[38] This study result shows that organizational culture is the indicator forming organizational

factors in determining SBNC and patient satisfaction in that, as stated by Bakar *et al.* (2022), organizational culture can shape a nurse's professionalism in their work environment and enhance cooperation between nurses. Work culture is related to the quality of a nurse's work, as work quality depends on the culture applied, and a hospital's understanding of a sustainable organizational culture helps improve nurse performance in the long run.[40]

Organizational goals are expressed in the products and services offered, the needs addressed, and the community groups served through the values obtained and through the aspirations and ideals for the future, called vision. Nurses are a hospital's extension in translating its vision and mission, thus nurses must understand and implement the organization's vision and mission in providing nursing services.[41] SBNC is a service objective implemented in Sharia hospital services, and nurses here play an important role in their performance, since, as stated by Mukisi & PPNI (2019), the nursing profession has ethics aimed at patient safety as part of service quality besides knowledge and skills, and additional terms or codes of conducts for nurses from the Qur'an and Hadith are needed in Sharia-based nursing implementation, thus a health service organization's (hospital) goals or vision and mission play an important role in SBNC implementation, patient satisfaction, and nurse job satisfaction.

Nurse job satisfaction is a factor influencing the quality of nursing care since a nurse's good job satisfaction will boost the quality of nursing care, and nurse job satisfaction is influenced by salary or reward. Salary or compensation is an appreciation, as Nursalam (2020) defined as a statement explaining what the organization desires in the long run in developing and expecting policies, practices, and appreciation processes that may support achieving their goals and meeting their needs. Reward is also a stimulus to improve nurse performance in providing nursing care, thus reward is an organization's important indicator, and nurse performance can also be improved through training and developing human resources.

Training and development in this study are proven to be an indicator influencing organizational factors, in conformance to the statement by Bhatti *et al.* (2021) that, in aiming at developing skills and knowledge, hospitals can provide training programs. Training is a useful educational method in the short run as a coherent and systematic way of learning for nurses. Training, in Sriviboon and Jermsittiparsert (2019), shows a strong influence on improving nursing and organizational resources. Therefore, hospitals should train nurses in an effort to develop this resource for better organizational performance, quality of nursing care, and patient satisfaction. Improving patient satisfaction through SBNC requires efforts in improving organizational factors, which can be improved through improved leadership, organizational culture, improved goal setting, optimized reward, and training and development for nurses. Hospitals can hone nurse leadership, improve organizational culture, and set goals in accordance with *maqshid Shariah* principles, since goal honing and setting according to Sharia principles can help optimize a nurse's performance of SBNC. In addition, hospitals also need to optimize nurse reward, since the reward is proven capable of increasing nurse job satisfaction, increasing their loyalty to the hospital, and nurse performance, which can lead to improving nurse performance in providing SBNC and increasing patient satisfaction. Training is also needed to increase nurse's knowledge, skills, and abilities with regard to SBNC. So that patient satisfaction can be increased quickly through special methods or strategies, namely through consolidation or a combination of organizational factors with SBNC, consolidation becomes a special strategy to increase patient satisfaction.

Strengths

The results draw the novel contributions of organizational factors with SBNC to increase patient satisfaction in Islamic hospitals; the effect of the consolidation relationship between organizational factors and SBNC on increasing patient satisfaction hasn't been published. It is

important because this research provides a model to clarify how the consolidation of organizational factors with SBNC can significantly increase patient satisfaction. In addition, SBNC is a new model developed by the authors themselves, so it has an important update for the world of nursing, considering that the population of Muslims is the largest in the world and the need for spiritual needs is also increasing so that when a hospital wants to expand or enlarge, it is necessary to improve the quality of service. This improvement can be seen in this model, namely by developing SBNC and applying it; the organizational factor consolidation model with SBNC shows that it can strengthen patient satisfaction; when patient satisfaction increases, patient loyalty will also increase, which will later attract consumers or patients to continue to return to the hospital if they need a service or recommend others.

Implications

This research also has a positive impact on nursing students, nurses, student nursing practitioners, and nurse practitioners, and, because it is closely related to the service system, it also has benefits for nursing managers and directors. This is because it can provide very adequate information to nurses to become the basis for leadership and organizational culture, and always improve their knowledge in order to provide the best nursing services for patients so as to provide satisfaction to patients. This research also had a positive impact on health facilities because it is known that nurses have it. However, by increasing the nurse factor, patient satisfaction can be determined; thus, when the patient is satisfied, patient loyalty can increase, which is beneficial for health services. Thus for society. In addition, this study has undergone several updates.

Hospital managers and nursing managers should realize that organizational factors have a positive impact on SBNC and that the consolidation of organizational factors and SBNC can

increase patient satisfaction; thus, SBNC can be implemented in Islamic hospitals as a key hospital expansion.

Limitations and recommendations for future research

It is essential to acknowledge the limitations of this study. The findings of this study are context-specific and may not be universally applicable. Future research should consider broader samples and more diverse settings to enhance the generalizability of the results. Several recommendations for future research were proposed. Researchers should conduct longitudinal studies to explore the long-term impact of organizational factors and SBNC on patient satisfaction. Additionally, investigating the influence of contextual factors, such as nursing and specific cultural and religious contexts, on nursing practice and patient satisfaction is warranted. Comparative studies across different healthcare settings and populations could further expand our understanding.

Conclusions

Nurses with good leadership and an appropriate organizational culture, and giving of appropriate rewards can shape the quality of professional nursing performance so that they are in line with hospital organizational goals by implementing SBNC; thus, patients feel that all their needs are met, especially the spiritual aspect, patients feel comfortable, and have patient satisfaction with the nursing services. Thus, a SBNC model is the key mediator to patient satisfaction, indicating that organizational factors have a strong influence in determining SBNC. SBNC strongly and significantly influences patient satisfaction, thus consolidation of SBNC and organizational factors increases patient satisfaction in Sharia hospitals.

References

1. Abdurrokhman M, Sulistiadi W. Sharia hospital as an added value: a systematic review. 2019. Available from: https://media.neliti.com/media/publications/310086-sharia-hospital-as-an-added-value-a-syst-dacacf8a.pdf
2. Alhowaymel F, Abaoud A, Alhuwaimel A, et al. COVID-19 patients' satisfaction levels with nursing care: a cross-sectional study. SAGE Open Nurs 2022;8:1-8.
3. Sarumaha A, Girsang E, Eliza Putri Lubis Y, Wahyuni Nasution S. The effect of characteristic, psychological and organizational factors on nurse performance at Royal Prima Hospital. Int J Heal Pharm 2022;3:249-53.
4. Windasari NA, Azhari NPD, Putra IF. Assessing consumer preferences on halal service: the emergence of Sharia hospitals for Muslim consume. J Islam Mark 2023;14.
5. Kamassi A, Hazilah N, Manaf A, Omar A. The need of international Islamic standards for medical tourism providers: a Malaysian experience. J Islam Mark 2021;12:113-23.
6. Fouly H, Zaghloul MG, Alshiekh I, Masoud A. A Simple Awareness for Women About (SAWA) stages of labor on women's childbirth experience using the childbirth roadmap tool: a quasi-experimental study. J Ners 2023;18.
7. Floren J, Rasul T, Gani A. Islamic marketing and consumer behaviour : a systematic literature review. J Islam Mark 2019;11:1557-78.
8. Statistic Center. Jumlah Penduduk Menurut Kabupaten/Kota dan Agama yang Dianut di Provinsi Jawa Tengah Tahun 2020. 2021. Available from: https://jateng.bps.go.id/statictable/2021/04/09/2249/jumlah-penduduk-menurut-kabupaten-kota-dan-agama-yang-dianut-di-provinsi-jawa-tengah-2020.html
9. Kouloutbani K, Karteroliotis K, Politis A. The effect of physical activity on Social Isolation in Elderly. Acta Med Indones Indoensian J Int Med 2021;53:423-31.

10. Nisa SNU, Hussain M, Afzal M, Gilani SA. Quality of nurse patient therapeutic communication and overall patient satisfaction during their hospitalization stay. Int J Med Sci Public Heal 2017;6:1.
11. Aboosalehi A, Kolivand PH, Jalali A, et al. Clients' satisfaction with services provided by ambulances and motor ambulances of tehran emergency medical services: a cross-sectional study. Med J Islam Repub Iran 2022;36.
12. Fashi FM. Studying the relationship between spiritual intelligence of nurses and patients ' satisfaction with nursing care. Bali Med J 2017;6:539-42.
13. Asiabar S, Mehr K, Arabloo J, Safari H. Leadership effectiveness of hospital managers in Iran. Leadersh Heal Serv 2020;33:43-55.
14. Aqtash S, Alnusair H, Brownie S, et al. Evaluation of the impact of an education program on self-reported leadership and management competence among nurse managers. SAGE Open Nurs 2022;8:1-10.
15. Faris N, Abdalla M. Leadership in Islam. Palgrave Macmillan Cham; London, UK; 2017. 207 pp.
16. Ekawati E, Bangsawan S, Yuliansyah Y, et al. Organization culture oriented on Islamic principle and company performance. Rev Integr Bus Econ Res 2019;8:301-12.
17. Ardian I, Nursalam, Ahsan, et al. Investigating the complex relationships between nurses' work factors, Sharia-based nursing care, and patient satisfaction in an Islamic hospital: a PLS-SEM approach. Belitung Nurs J 2023;9:530-8.
18. Sapar LC, Oducado RMF. Revisting job satisfaction and intention to stay : a cross sectional study among hospital nurses in the Philippines. Nurse Media J Nurs 2020;11:133-43.
19. Saleh MO, Eshah NF, Rayan AH. Empowerment predicting nurses' work motivation and occupational mental health. SAGE Open Nurs 2022;8:1-12.

20. Bakar A, Nursalam, Adriani M, et al. The development of islamic caring model to improve psycho-spiritual comfort of coronary disease patients. Indian J Public Heal Res Dev 2018;9:312-7.
21. Hwang EJ, Sim IO. Structural equation modeling for public hospital quality of care, image, role performance, satisfaction, intent to (re)visit, and intent to recommend hospital as perceived by community residents. J Korean Acad Nurse 2016;46:118-27.
22. Mukisi, PPNI. Pedoman Standar Pelayanan Keperawatan Rumah Sakit Syariah. 2019. Available from: https://mukisi.com/download/buku/Pedoman-Pelayanan-Keperawatan-Rumah-Sakit-Syariah.pdf
23. Hair JF, Brunsveld N. Essentials of business research methods. Routledge; New York, USA; 2019. 507 pp.
24. Hasibuan MS. Manajemen Sumber Daya Manusia. Bumi Aksara; Jakarta, Indonesia; 2019.
25. Umar H. Metode Penelitian untuk Skripsi dan Tesis Bisnis. RajaGrafindo Persada; Jakarta, Indonesia; 2008.
26. Chasanah N, A.H AA. Management by objectives MBO dalam pengembangan organisasi Yayasan Masjid Al- Falah Surabaya. Dakwah; Surabaya, Indonesia; 2005.
27. Kandou EE. Pengaruh Pelatihan Dan Pengembangan Karyawan Terhadap Produktivitas Kerja Karyawan. J Chem Inf Model 2013;53:1689-99.
28. DSN-MUI, Mukisi. Standar dan Instrumen Sertifikasi Rumah Sakit Syariah. 2017. Available from: https://mukisi.com/download/buku/Buku-Standar-1441H%20-isi.pdf
29. Nursalam. Metodologi Penelitian Ilmu Keperawatan Edisi ke-5. Penerbit Salemba Med; Jakarta, Indonesia; 2020.
30. Afthanorhan A, Awang Z, Majid NA, et al. Gain more insight from common latent factor in structural equation modeling. J Phys Conf Ser 2021;1793.

31. Mansor M, Ibrahim RM, Afthanorhan A, Salleh AMM. The mechanism of anger and negative affectivity on the occurrence of deviant workplace behavior: an empirical evidence among Malaysian nurses in public hospitals. Belitung Nurs J 2022;8:115-23.
32. Ghozali I. Partial Least Square Konsep, Teknik Dan Aplikasi Menggunakan Program SmartPLS 3.2.9 Untuk Penelitian Empiri. Edisi 3. Badan Penerbit Universitas Diponegoro; Semarang, Indonesia; 2021.
33. Zaghini F, Fiorini J, Piredda M, et al. The relationship between nurse managers' leadership style and patients' perception of the quality of the care provided by nurses: Cross sectional survey. Int J Nurs Stud 2020;101:103446.
34. Moura ECC, Lima MB, Peres AM, et al. Relationship between the implementation of primary nursing model and the reduction of missed nursing care. J Nurs Manag 2019;28:1-10.
35. Specchia ML, Cozzolino MR, Carini E, et al. Leadership styles and nurses' job satisfaction. Results of a systematic review. Int J Environ Res Public Health 2021;18:1-15.
36. Kiwanuka F, Nanyonga RC, Sak-Dankosky N, et al. Nursing leadership styles and their impact on intensive care unit quality measures: an integrative review. J Nurs Manag 2021;29:133-42.
37. Wirdawati, Gunawan H, Betan A, et al. Implementation of organizational culture and work discipline to patient satisfaction through quality of health services in Indonesia. 2021. Available from: https://www.ieomsociety.org/singapore2021/papers/1275.pdf
38. Pedrosa J, Sousa L, Valentim O, Antunes V. Organizational culture and nurse's turnover: A systematic literature review. Int J Healthc Manag 2021;14:1542-50.
39. Bakar RM, Khaerah Y, Hidayati N, Hamid AN. The role of organizational culture in moderating effect of emotional labor strategies on nursing professionalism. Nurse Media

J Nurs 2022;12:122-32.

40. Christian H, Cahya YF, Meilani P. Effect of organizational culture , mobbing , organizational justice , and professional attitude towards hospital nurse work performance. Budapest Int Res Critics Inst J (BIRCI Journal) 2021;5:8690-700.

41. Nursalam. Metodologi Penelitian Ilmu Keperawatan. 5th ed. Salemba Madika; Jakarta, Indonesia; 2020.

42. Bhatti MK, Soomro BA, Shah N. Predictive power of training design on employee performance: empirical approach in Pakistan's health sector. J Econ Adm 2021;1.

43. Sriviboon C, Jermsittiparsert K. Influence of human resource practices on Thai pharmaceutical firm performance with moderating role of job involvement. Syst Rev Pharm 2019;10:234-43.

Table 1. Calculation of the number of samples with the cluster sampling technique.

No	Inpatient room name	Total (Ni)	$\sum n$ = Ni : N	Total sample ni = $(\sum n)\ x\ n$
1.	Inpatient room A	18	0.125	16
2.	Inpatient room B	27	0.188	25
3.	Inpatient room C	17	0.118	16
4.	Inpatient room D	19	0.132	17
5.	Inpatient room E	15	0.104	14
6.	Inpatient room F	28	0.195	25
7.	Inpatient room G	19	0.132	17
	Total	143		130

Table 2. Instrument source.

Variables	Indicator	Items	Sources
Organizational factors	Leadership	7	Hasibuan, 2019[24]
	Organization culture	5	Umar, 2008[25]
	Goals	5	Chasanah, 2005[26]
	Rewards or salary	5	Hasibuan, 2019[24]
	Training and development	5	Kandou, 2013[27]
Total		27	
Sharia based nursing care	Assessment	5	DSN-MUI, 2017[28]
	Diagnosis	5	DSN-MUI, 2017[28]
	Intervention	5	DSN-MUI, 2017[28]
	Implementation	5	DSN-MUI, 2017[28]
	Evaluation	5	DSN-MUI, 2017[28]
Total		25	
Patient satisfaction	Reliability	6	Nursalam, 2020[29]
	Assurance	3	Nursalam, 2020[29]
	Reality	5	Nursalam, 2020[29]
	Empathy	5	Nursalam, 2020[29]
	Responsibility	4	Nursalam, 2020[29]
Total		23	

Table 3. Demographic characteristics of nurse and patient.

Variable			f	%
Nurse	Age	21-25 years (Late adolescence)	14	10.8
		26-35 years (Early adult)	91	70
		36-45 years (Late adulthood)	24	18.5
	Education	Associate degree of nursing	88	67.7
		Nurse profession	42	32.3
Patient	Age	17-25 years (Late adolescence)	12	9.2
		26-35 years (Early adult)	20	15.4
		36-45 years (Late adulthood)	32	24.6
		46-55 years (Early seniors)	31	23.8
		56-65 years (Late elderly)	29	22.3
		>65 years old (Seniors)	6	4.6
	Education	Elementary (Elementary school)	44	33.8
		Secondary (Junior high school or senior high school)	70	53.8
		High (Bachelor or master)	16	12.3

Table 4. Distribution of variable frequency.

Variable		Category scale					
		Less		Enough		Good	
		f	%	f	%	f	%
Organizational Factors	Leadership	2	1.5	37	28.5	91	70
	Organizational culture	4	3.1	32	24.6	94	72.3
	Purpose	6	4.6	30	23.1	94	72.3
	Rewards or salary	8	6.2	36	27.7	86	66.2
	Training and development	7	5.4	32	24.6	91	70
Sharia-Based Nursing Care	Assessment	2	1.5	32	24.6	96	73.8
	Diagnosis	4	3.1	38	29.2	88	67.7
	Intervention	3	2.3	32	24.6	95	73.1
	Implementation	6	4.6	34	26.2	90	69.2
	Evaluation	6	4.6	30	23.2	94	72.3
Patient Satisfaction	Reliability	3	2.3	29	22.3	98	75.4
	Assurance	4	3.1	35	26.9	91	70
	Reality	1	0.8	36	27.7	93	71.5
	Empathy	1	0.8	36	27.7	93	71.5
	Responsibility	2	1.5	32	24.6	96	73.8

Table 5. Measurement model evaluation, coefficients of determination, and path coefficients.

Measurement model evaluation						
Latent variable	**Items**	**Convergent validity**		**Internal consistency reliability**		**Discriminant validity**
		Loadings	**AVE**	**Composite reliability**	**Cronbach alpha**	**HTMT <1**
Organizational Factors	OF1	0.862	0.734	0.932	0.909	Yes
	OF2	0.859				
	OF3	0.871				
	OF4	0.843				
	OF5	0.849				
Sharia-Based Nursing Care	SBNC 1	0.889	0.831	0.961	0.949	Yes
	SBNC 2	0.889				
	SBNC 3	0.918				
	SBNC 4	0.937				
	SBNC 5	0.912				
Patient Satisfaction	PS1	0.863	0.780	0.947	0.929	Yes
	PS2	0.908				
	PS3	0.904				
	PS4	0.856				
	PS5	0.884				

Coefficients of determination		
Variable	**R square**	**R square adjusted**
Sharia-Based Nursing Care	0.618	0.615
Patient Satisfaction	0.787	0.784

AVE, Average Variance Extracted

Table 6. Path coefficients.

Hypothesis	β	SD	t-value	ρ-value	Test result
Organizational Factors ➔ Sharia Based Nursing Care	0.786	0.050	4.394	0.000	Supported
Organizational Factors ➔ Patient Satisfaction	0.508	0.126	14.878	0.000	Supported
Sharia Based Nursing Care ➔ Patient Satisfaction	0.430	0.111	3.859	0.000	Supported
Organizational Factors ➔ Sharia Based Nursing Care ➔ Patient Satisfaction	0.338	0.102	3.299	0.001	Supported

SD, Standard Deviation

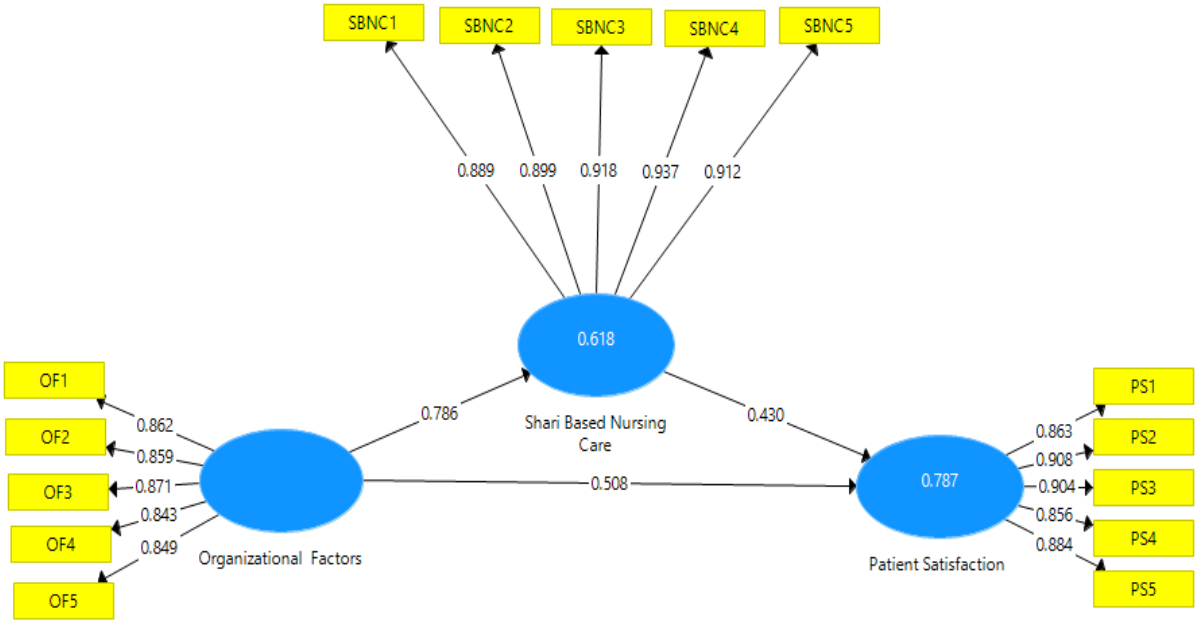

Figure 1. Measurement of the outer model.

OF, Organizational Factors; SNBC, Sharia-Based Nursing Care; PS, Patient Satisfaction

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