

# Holistic nursing care among operating room nurses: Strengthening the standard of practice in Saudi Arabia

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## Abstract

**Background:** Holistic practices have been found beneficial for patients as well as nurses. They increase both the nurses and the patients' health-promoting behaviors, spirituality, and interpersonal relationships.

**Objective:** This study aimed to determine holistic nursing care and compare its differences based on individual characteristics.

**Methods:** This study employed a quantitative-cross sectional approach. It was conducted at the hospitals of Hail region, Kingdom of Saudi Arabia, from February 2020 to March 2020. Selected through convenience sampling, 154 operating room nurses participated in the study. Frequency and percentages were used to analyze the demographic information, and *t*-tests and analysis of variance were used to test for differences.

**Results:** Holistic nursing dimensions such as physiological ( $4.72 \pm 0.40$ ), socio-cultural ( $4.53 \pm 0.45$ ), psychological ( $4.66 \pm 0.32$ ), and spiritual aspects ( $4.22 \pm 0.73$ ) were consistently carried out in the operating room. On the physiological dimension, no significant differences were found in years of experience [ $(t) -0.073$ ;  $p > 0.942$ ], gender [ $(t) -1.113$ ;  $p > 0.27$ ], or age [ $(F) 0.558$ ;  $p > 0.57$ ], but there was a significant difference with nationality [ $(t) -3.328$ ;  $p < 0.001$ ]. On the socio-cultural dimension, the length of experience [ $(t) 0.599$ ;  $p > 0.550$ ], gender, [ $(t) -1.420$ ;  $p > 0.158$ ], and age [ $(F) 0.148$ ;  $p > 0.862$ ] were not significant, but a significant difference was found with nationality [ $(t) -7.516$ ;  $p < 0.001$ ]. Regarding the psychological dimension, the length of experience [ $(t) -1.101$ ;  $p > 0.276$ ], gender [ $(t) -1.545$ ;  $p > 0.129$ ], and age [ $(F) 1.259$ ;  $p > 0.287$ ] were not significant, but there was a significant difference with nationality [ $(t) -5.492$ ;  $p < 0.001$ ]. Finally, with the spiritual dimension, no significant difference was found on length of experience [ $(t) -1.101$ ;  $p > 0.276$ ] or age [ $(F) 0.584$ ;  $p > 0.559$ ], but there were significant differences on gender [ $(t) -3.890$ ;  $p < 0.001$ ] and nationality [ $(t) -3.653$ ;  $p < 0.001$ ].

**Conclusion:** Nationality is a causal factor to physiological, socio-cultural, psychological, and spiritual dimensions, while gender is significant to spiritual aspect. Regardless of nationality or gender, nurses must be knowledgeable regarding the significance of adopting holistic care to improve the quality of their care to their patients.

## Keywords

holistic nursing; operating room; nursing; spirituality; Saudi Arabia

Caring has been continually regarded as the heart of the nursing profession. Nurses are expected to provide professional and competent nursing skills with exceptional care and compassion for patients. Accordingly, nurses

integrate compassionate behavior with the condition of the patients by supporting those patients, forming mutual relationships, and making a difference in their lives, thus portraying nursing as both an art and a science (Henry,

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2018). It is assumed that it always transforms to quality care when nurses engage in professional principles and the application of professional expertise. To Kinchen (2015), caring in nursing traditionally employs a holistic approach. Holistic nursing care goes back to the time of Florence Nightingale when the healing process was influenced by the patient's environment. This concept has expanded as aspects of the physical, social, psychological, and spiritual have been taken into consideration (Tjale & Bruce, 2007). Holistic nursing care is integrally composed of therapeutic interactions by the nurse and the patient, the communication patterns, and the patient preference (Dossey, 2009). According to Mariano et al. (2013), holistic nursing heals the whole person with the incorporation of caring. Holistic practices are beneficial for the patients and the nurses, increasing the health-promoting behaviors, spirituality, interpersonal relations, and nutrition (Mcelligott et al., 2010).

Although care is essential in all nursing fields, the operating room poses the most difficulty in terms of rendering holistic nursing care. The operating room is a fast-paced hospital area; in constant change, it is highly demanding and schedule-driven. These characteristics present a challenge for perioperative nurses to possess good critical thinking and decision-making skills while simultaneously delivering holistic nursing care (Cohen, 2008). Consequently, in managing operating room employees, nursing managers must strategize for an excellent workforce (Alshammari et al., 2020; Gunawan et al., 2020). Operating room nurses face numerous challenges in the operating room arena; they are pressured physically, mentally, and emotionally, which leads to increased pressure and high medical risks (Higgins & Macintosh, 2010). A range of different problems (e.g., technical, equipment/patient) results in an increase in stress to operating room personnel, ultimately affecting their performance and care (Arora et al., 2010). Communication failures among the surgical team and equipment problems result in procedure delays and inefficiencies (Halverson et al., 2011). Incontrovertibly, perioperative nurses have a multitude of concerns that compromise the value of the care given to the patient. Patient safety breaches, for instance, have been the result of system failures, including failure of the equipment due to design and use, inadequate staffing, miscommunication, and poor team coordination inside the operating room (Van Beuzekom et al., 2012).

Since holistic nursing care in the operating room context starts from the time the patient consents for surgery until his or her discharge in the hospital, the Joint Commission established steps to prevent surgical errors and promote patient safety (Joint Commission, 2009). Perioperative nurses aim to avert physical and psychological complications related to surgery and assist in the resumption of the patient to normal (Selimen & Andsoy, 2011). Albaqawi et al. (2017) note that the diversity of cultures poses a difficulty for nurses in achieving holistic caring expectations in the Arab context.

These problems are due to values considerations, gender segregation among the patients and staff, and family and tribal relationships. Jasemi et al. (2017) postulated that holistic care is an unfamiliar concept in Iran and that a philosophical shift is needed to encourage nurses to reflect on their roles. This is both within the healthcare team, and it is to enhance their contributions to patient care beyond that of being assistants to doctors. To Holt-Waldo (2011), an observable change in the interventional methods can be seen once holistic nursing is employed. While holistic care is assumed to be an all-inclusive context, previous studies demonstrate that nurses do not apply holistic care well (Zamanzadeh et al., 2015).

This study is important because it deals with the determination of holistic care practice in the Arab context. Exploring the holistic care employed by the nurses helps to determine what needs to be improved in their caring practices that use this model. To this end, the nurses engaged themselves in using holistic care in examining themselves through this study. The study aimed to determine holistic nursing care and to compare its differences based on individual characteristics.

## Methods

### Study Design

This study employed a quantitative-cross sectional design.

### Setting

The study was conducted in the operating rooms of the hospitals of the Hail region of Saudi Arabia. The researchers utilized the total population sampling for the hospitals. The hospitals were King Khalid Hospital, Hail General Hospital, Maternity Hospital, King Salman Hospital, and Saudi German Hospital.

### Participants

The study participants were operating room nurses, 154 in total. The researchers set the inclusion criteria as nurses who had been assigned to the operating room permanently and who had direct contact with the patients for surgery. Intern nurses, regular employee nurses who were on leave, and nurses who were not willing to participate were excluded from the study. The non-probability sampling, specifically convenience sampling, was utilized in this investigation due to participants' accessibility. The Raosoft sample size calculator ([http://www.raosoft.com/sample\\_size.html](http://www.raosoft.com/sample_size.html)) was used to determine the sample needed in this study. Through convenience sampling, using a 5% margin of error and a 95% level of confidence, of 254 operating room nurses, only 154 served as participants.

### Instrument

The researchers utilized a researcher-made tool because there is no explicit tool available to determine the holistic practices of nurses in the operating room. The composition of the tool was based on the holistic care theory, literature from similar studies, and the opinions of experts. The tool

was composed of a 20-item statement that was divided into four dimensions. These included the physiological dimension with five statements (e.g., Do you identify the patient for operation accurately?), the socio-cultural with five statements (e.g., Do you respect cultural differences that may affect opinions, values, and beliefs of the patient and his or her family?), the psychological dimension with five statements (e.g., Do you assess the patient's knowledge and understanding of the surgery?), and the spiritual with five statements each (e.g., Do you encourage patients to pray before surgery?). These statements were rated using a five-point Likert scale with the corresponding verbal interpretations: 5 – Every time, 4 – Almost every time, 3 – Sometimes, 2 – Almost never, and 1 – Never. Higher mean scores indicate a consistent demonstration of holistic care. The scale measurement and verbal interpretations utilized in the analysis of data were 1–1.5 (Never), 1.51–2.5 (Almost never), 2.51–3.5 (Sometimes), 3.51–4.5 (Almost every time), and 4.51–5 (Every time).

Since most nurses can comprehend and speak English, the researcher-made questionnaire was in the English language. The tool was subjected to face validity by five experts in the field. Two had a doctorate in psychology and work as psychometricians in a university; one is a doctor of nursing practice working in the hospital, and the other two are nursing directors of continuing nursing education. Suggestions were implemented in the final draft. Content validity was conducted, resulting in 0.77 for the relevance score of 0.78 for clarity. These results indicate a high level of content validity. The tool was tested with 15 operating room nurses for reliability, resulting in a reliability coefficient of 0.70. This means that the tool was reliable.

### Data Collection

With the approval of the hospital authorities, the researchers conducted a face-to-face orientation with the operating room nurses to explain the purpose of the study, their rights, the benefits, and the extent of their participation. The researchers personally handed the questionnaires to the participants, and they were given two days to answer it considering the nature of their work and their schedule. The data was gathered from February 2020 through March 2020.

### Data Analysis

The data were examined using SPSS version 25. The normality test using the Kolmogorov-Smirnov test revealed 0.73, which means that data are normally distributed. The frequency distribution and percentages were used to determine the demographic profile of the respondents. The weighted mean was used to determine the holistic nursing care practices of the respondents in the operating room. The *t*-test and the analysis of variance (ANOVA) were used to determine the presence of a significant difference, if any, between the holistic nursing care practices of the respondents when grouped according to the demographic variables included in the study.

### Ethical Consideration

This research received ethical clearance from the University of Ha'il. Written informed consent was included in the survey instrument, which the participants need to sign before they can proceed to answer. The rights, benefits, anonymity, and confidentiality of the participants were all fully ensured throughout the entire course of the research process.

## Results

Most of the participants were in the age range of 31 to 35 (48.7 %), followed by 36 years and above (31.8%). The majority were female (83.1%); 50 percent were Saudi, and 50 percent were non-Saudi. Regarding the length of experience, 76 percent of the participants had six or more years of experience (Table 1).

**Table 1** Demographic information of the participants

Demographic Information	Frequency	Percentage
<b>Age (years)</b>		
25-30	30	19.5
31-35	75	48.7
36 and above	49	31.8
<b>Gender</b>		
Male	26	16.9
Female	128	83.1
<b>Nationality</b>		
Saudi	77	50
Non-Saudi	77	50
<b>Length of experience (years)</b>		
Less than five years	37	24
Six years and above	117	76

The participants perceived that holistic dimensions such as physiological ( $4.72 \pm 0.40$ ), socio-cultural ( $4.53 \pm 0.45$ ), psychological ( $4.66 \pm 0.32$ ), and spiritual ( $4.22 \pm 0.73$ ) were consistently carried out in the operating room (Table 2).

**Table 2** Overall mean and standard deviation of the holistic dimension

Holistic Dimension	Mean	SD	Remarks
Physiological	4.72	0.40	Every time
Socio-cultural	4.53	0.45	Every time
Psychological	4.66	0.32	Every time
Spiritual	4.22	0.73	Every time

*SD= standard deviation*

Table 3 shows the differences in the demographic information of the participants regarding the physiological, socio-cultural, psychological, and spiritual dimensions. On the physical dimension, no significant differences were found in years of experience [ $(t) -0.073$ ;  $p > 0.942$ ], gender [ $(t) -1.113$ ;  $p > 0.27$ ], or age [ $(F) 0.558$ ;  $p > 0.57$ ], but there was a significant difference regarding the nationality of the participants [ $(t) -3.328$ ;  $p < 0.001$ ].

Regarding the socio-cultural dimension, the length of experience [ $(t) 0.599$ ;  $p > 0.550$ ], gender, [ $(t) -1.420$ ;  $p$

0.158], and age [(*F*) 0.148; *p* > 0.862] were not significant. However, a significant difference was found regarding the nationality [(*t*) -7.516; *p* < 0.001] of the participants.

Regarding the psychological dimension, there were no significant differences regarding length of experience [(*t*) -1.101; *p* > 0.276], gender [(*t*) -1.545; *p* > 0.129], or age [(*F*)

1.259; *p* > 0.287], however, there was a significant difference with nationality [(*t*) -5.492; *p* < 0.001].

With the spiritual dimension, no significant difference was found on the length of experience [(*t*) -1.101; *p* > 0.276] or age [(*F*) 0.584; *p* > 0.559], but there were significant differences on gender [(*t*) -3.890; *p* < 0.001] and nationality [(*t*) -3.653; *p* < 0.001].

**Table 3** Differences on the demographic information as to physical, social, psychosocial, and spiritual dimension

		Mean	SD	Test Value	df	p
<b>Physiological dimension</b>						
Length of experience (years)	Less than five years	4.72	0.44	(t) -0.073	152	0.942
	Six years and above	4.72	0.39			
Gender	Male	4.63	0.51	(t) -1.113	30.82	0.274
	Female	4.74	0.37			
Nationality	Saudi	4.62	0.47	(t) -3.328	129.54	0.001*
	Non-Saudi	4.83	0.29			
Age	25-35	4.71	0.44	(F) 0.558	153	0.573
	36-45	4.76	0.36			
	46 and above	4.68	0.44			
<b>Socio-cultural dimension</b>						
Length of experience (years)	Less than five years	4.57	0.44	(t) 0.599	152	0.550
	Six years and above	4.52	0.46			
Gender	Male	4.42	0.45	(t) -1.420	152	0.158
	Female	4.56	0.45			
Nationality	Saudi	4.77	0.33	(t) -7.516	140.77	0.001 *
	Non-Saudi	4.53	0.32			
Age	25-35	4.58	0.42	(F) 0.148	153	0.862
	36-45	4.52	0.47			
	46 and above	4.53	0.45			
<b>Psychological dimension</b>						
Length of experience (years)	Less than five years	4.73	0.29	(t) 1.463	152	0.145
	Six years and above	4.64	0.33			
Gender	Male	4.59	0.24	(t) -1.545	46.45	0.129
	Female	4.68	0.34			
Nationality	Saudi	4.53	0.32	(t) -5.492	152	0.001*
	Non-Saudi	4.80	0.28			
Age	25-35	4.62	0.34	(F) 1.259	153	0.287
	36-45	4.70	0.29			
	46 and above	4.62	0.36			
<b>Spiritual dimension</b>						
Length of experience (years)	Less than five years	4.09	0.86	(t) -1.101	51.57	0.276
	Six years and above	4.26	0.69			
Gender	Male	3.73	0.78	(t) -3.890	152	0.001*
	Female	4.32	0.69			
Nationality	Saudi	4.01	0.78	(t) -3.653	145.15	0.001*
	Non-Saudi	4.43	0.63			
Age	25-35	4.21	0.69	(F) 0.584	153	0.559
	36-45	4.29	0.75			
	46 and above	4.22	0.74			

\*significant at 0.05; df= degrees of freedom

## Discussion

This study aimed to determine the level of demonstration of holistic nursing among the staff nurses in the operating rooms of the hospitals of Hail, Saudi Arabia. Overall, the staff nurses perceived that holistic dimensions such as the physiological, socio-cultural, psychological, and spiritual were consistently demonstrated. This indicates that the staff nurses provide care to patients based on a mutual

comprehension of their physical, psychological, socio-cultural, and spiritual aspects. This supports a study conducted previously in which nurses received performance ratings of "very good" and "excellent" in their holistic care (Albaqawi et al., 2017). In this study, the nurses were mindful of the realities of physiological care and that nurses and patients collaborate on healthcare demands that lead to recovery.

Regarding the socio-cultural dimension, the nurses understood that reverence of culture is required for the

patients and their families. This validates the studies of both [Sevinç et al. \(2016\)](#) and [Almutairi et al. \(2015\)](#), wherein values, language, and norms are essential for the nurses to communicate and understand their patients. Since the patient is unconscious, the psychological aspects of holistic care may not be apparent in an operating room. Nevertheless, important concerns must be taken into consideration before the surgery. For instance, nurses conveyed the essential instructions regarding the post-operation management of pain ([Panlican et al., 2020](#)). In this context, nurses were obliged to enlighten the patients regarding their illness, to assess their psychological capacity, and to inform them of accessible alternatives to handling their illness ([Al-Mutair et al., 2014](#)).

Spiritual care focuses on the patients' belief that nurses are mindful of its importance in line with delivering holistic care. According to [Gore \(2013\)](#), addressing spiritual care includes active listening, therapeutic touch, and assistance on spiritual activities. The demographic traits, working environment, and educational system are the primary aspects when caring for a patient holistically. These provisions of holistic care have been demonstrated in earlier studies ([Shiao et al., 2019](#); [Zamanzadeh et al., 2015](#)). Such a finding indicates the need for closer attention to the educational system, including adjustment and modification of the course in the nursing curriculum to intensify the holistic care. In addition, nurses should create an atmosphere capable of providing holistic treatment, understand the socio-cultural and social condition of the patient, and be intimately familiar with their family and living environment. To develop holistic caring, the congruence between the identities of the nurses and their discipline, the development of their communicative abilities, and the promotion of involvement in the practice of nurses and nursing students must be appreciated. Nurses can utilize holistic nursing care to enhance the lives of the patients and their own lives. The key is not necessarily about how long the nurses spend interacting with a patient, but about how the nurses use their time with them.

In this study, no significant differences were found in the physiological, socio-cultural, or psychological with years of experience, gender, and age; however, a significant difference was found with nationality. The difference regarding nationality means that there could be a language barrier and marginalization in the system among the nurses or even among the patients. Studies found that, because of the immense diversity in culture, language barriers, and lack of support, nurses had difficulties understanding and remembering cultural preferences ([Hart & Mareno, 2014](#); [Mcfarland & Wehbe-Alamah, 2014](#)). Saudi Arabia's healthcare system relies heavily on immigrant nurses hired from over 52 countries ([Alyami & Watson, 2014](#)). Differences in faith, culture, social values, and language can build barriers between patients and immigrant nurses ([Al-Mahmoud et al., 2012](#)).

The nurses were consistently concerned with meeting language barriers ([Hadziabdic et al., 2015](#)). Communicating health information is additionally challenging in a

setting where the patients and healthcare professionals speak different languages, and English is the language of the healthcare practice. The findings on these dimensions provide awareness to nursing administration to create policies and procedures. Nurses who speak the language can, for instance, be partnered with nurses who are still learning it. This serves to provide consistent direction by eliminating misunderstandings and establishing a well-meaning working environment ([Atanga & Ayong, 2017](#)). It becomes easier to solve nursing care problems when protocols and guidelines are clearly followed by nurses and patients. Holistic nursing care should consider the principles and beliefs that affect people, families, and groups. To provide reliable, fulfilling, and culturally appropriate treatment, it must be focused on the patients' cultural way of life ([Zamanzadeh et al., 2015](#)). By understanding these differences, nurses will resist stereotyping and recognize that not all patients can react to the values or traditions of nursing care ([Mcfarland & Wehbe-Alamah, 2014](#)).

On the spiritual dimension, the length of experience and age were not significant. However, a significant difference was found in the nationality and gender of the participants. This difference was there because most of the nurses delivering health care are immigrant nurses and Christians, and they are assumed to adjust, especially regarding their religion. Saudi Arabia is known to be an absolute Muslim country where Christian nurses might have difficulty expressing their faith. [Almutairi et al. \(2015\)](#) pointed out that, while Saudi Arabia gives freedom to non-Muslims to practice their religion, it has to be in private. The significant difference in gender implies that the nurses' gender could create a deficiency in capability and confidence in them to provide spiritual care. This result may be attributed to the extreme working conditions and obligations of mothers and housewives, as determined by their culture ([Alshehry, 2018](#)). As [Almutairi et al. \(2015\)](#) maintained, spiritual care could be associated with personal features such as gender, which can lead to disparities in the nurses' capability to deliver spiritual care. These results could contribute to nursing education, provided that the development of an effective cultural and language training program is added before immigrant nurses leave their home country. Moreover, the introduction of guidance programs to help immigrant nurses benefit tremendously from the provision of spiritual care ([Alshammari et al., 2019](#)). Similarly, education curriculums can deal with gender disparities and inequality to provide nurses with practical learning opportunities ([Jradi et al., 2013](#)). Decreased levels of spiritual suffering are seen when spiritual demands are met ([Kitchener, 2019](#)). Moreover, there are reports that sufficiently attending to spiritual needs can enable healing ([Willemse et al., 2018](#)).

Overall, the implications of this study give a better perspective for nurses about the value of more comprehensive and structured treatment being implemented and provided. Indeed, the findings of this

study provide operating room nurses the need to continue offering systematic nursing, not just in Saudi Arabia but also in the international context, taking into account the beliefs, cultures, and viewpoints of patients. The findings of this study highlighted the causal factors affecting holistic treatment and prompting other nurses and nursing stakeholders globally to look for ways to improve holistic nursing further. This helps nurses to understand better the use of holistic care in improving the condition of their patients. Of note, regardless of the nurses' demographics, this research is a compelling reminder that holistic nursing improves the overall outcomes of care.

The authors acknowledged the limitations of this study. Some of the limitations include; the use of convenience sampling, which lacks clear generalizability, the non-inclusion of the construct validity, which may enhance to strengthen the instrument's validity, and the non-translation of the instrument to the Arabic version. These limitations can be addressed in future studies such that investigators will consider using probability sampling (e.g., simple random sampling) and re-validate the instrument within the investigator's locality with construct validity when using the developed tool. Translation of the instrument to include non-English speakers is highly recommended to future investigators conducting the same study focus.

## Conclusion

Nationality plays a role in the physiological, socio-cultural, psychological, and spiritual dimensions, while gender is a factor of the spiritual aspect. In addressing these variables in the continuing nursing education, it is assumed that nurses deliver more holistic and comprehensive care. Regardless of nationality or gender, nurses must be knowledgeable regarding the significance of adopting holistic care to improve the quality of their care to their patients.

### Declaration of Conflicting Interest

The authors declare no conflict of interest.

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### Author Contribution

HMA and VEB conceptualized and drafted the research, BSA and RDD performed data collection, data management, and analysis. PP focused in developing the questionnaire and validation. All of the authors read and approved the final draft.

### Data Availability Statement

The data that support the findings of this study are available upon request to the corresponding authors.

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