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Original Article

Effects of cross-cultural nursing in foreign patients

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Abstract: Objective: To explore the effects of a cross-cultural nursing model in foreign patients. Methods: Retrospectively analyzed diagnosis and treatment data of 296 foreign patients before and after receiving cross-cultural nursing. Problems found under the conventional nursing mode were analyzed, and the scores of nursing ability questionnaire, treatment satisfaction score, treatment compliance, and complaint rate between the cross-cultural nursing group and the conventional nursing group were compared. Results: The main issues of the conventional nursing model for foreign patients were religious beliefs (67 cases, 52.76%), language communication (56 cases, 44.09%), and privacy protection (41 cases, 32.28%). Compared with the conventional nursing group, the satisfaction scores of patients in the cross-cultural nursing group were significantly higher (4.47 ± 0.48 vs. 4.31 ± 0.69; P<0.05) while the complaint rates of patients in the cross-cultural nursing group were significantly lower (3.55% vs. 11.81%; P<0.05). Treatment compliance was also statistically significant different between groups (P<0.05). Conclusion: Cross-cultural nursing can effectively improve the medical service quality in foreign patients.

Keywords: Cross-cultural nursing, foreign patients, compliance, nursing model

Introduction

With social progress and economic development, human migration has greatly impacted the world more than ever before. According to the United Nations, there were 244 million international migrants living outside their birthplace in 2016, the number of which was increased by 41% compared to that in 2000 [1]. China is currently experiencing a flow of international and domestic immigration, related to large-scale economic expansion and urbanization [2]. Therefore, patients from different countries and regions, with different religious beliefs, cultural backgrounds and living habits, make a higher demand for foreign-related nursing.

The theory of cross-cultural care was put forward by Leininger, which has been gradually practiced in clinical nursing in china since the end of the 20th century [1, 2]. According to patients' nationalities and cultural customs, different nursing methods were adopted to establish a personalized and trustworthy pattern. This study retrospectively analyzed the nursing quality of a cross-cultural nursing model on foreign patients, and discussed its application effects in the diagnosis and treatment of foreign patients. The report is as follows.

Materials and methods

General information

A retrospective analysis was made on the relevant data of foreign patients before and after receiving cross-cultural nursing in the First Hospital of Jilin University from April 2016 to December 2019. This study was approved by the ethics committee and informed consent was obtained from the research subjects. The conventional nursing group consisted of 127 foreign patients admitted from April 2016 to March 2017. There were 86 male patients and 41 female patients aged 29-57 years with an average age of 42.6 ± 13.7 years. The cross-cultural nursing model group consisted of 169 patients admitted from January 2019 to December 2019, of which there were 113 males and 56 females aged 25 to 63 years old with an average age of 41.4 ± 14.7 years.

Methods

The conventional nursing group followed the doctor's instructions according to previous nursing processes.

The cross-cultural nursing group adopted multicultural and cross-cultural nursing, with improvement in six different aspects: (1) assessment of religious beliefs, cultural education, health status, health needs, etc.; (2) strengthening communication ability, improvement of nonverbal communication levels by training nursing staff or staffing volunteers with translation; (3) kind introduction of the diagnosis and treatment procedures as well as the hospital environment to the patients for easier understanding; (4) focus on psychological care, bilingual media imaging materials were provided for psychological support, and thoughtful gifts were offered for special occasions; (5) respect to patients' privacy, dietary habits, customs, and taboos in life care; (6) communication and visits before treatment to check if there are contraindications or requirements during the operation, and necessary guidance upon discharge.

Outcome measures

The data of patients admitted from April 2016 to March 2017 in the conventional nursing group was collected in April 2017. The data of patients admitted from January 2019 to December 2019 in the cross-cultural nursing group was collected in January 2020. Meanwhile, the efficacy was evaluated. The evaluation indicators mainly included: (1) the problems in the conventional nursing model; (2) the scores of nursing ability questionnaire both in the conventional nursing group and the cross-cultural nursing group. The nursing ability questionnaire contained 55 items, in which the average score of the 3 dimensions and 7 sub-dimensions were separately calculated [3]; (3) the treatment satisfaction score, treatment compliance, and complaint rate of patients in the conventional nursing group and the cross-cultural nursing group [4]. Treatment compliance = number of (complete compliance + partial compliance)/total number of cases * 100%. Complaint rate = number of complaints/total number of cases * 100%.

Statistical processing

SAS 9.4 software was used to process the data, and GraphPad Prsim 7.0 was used to illustrate the figures. Measurement data conforming to a normal distribution were expressed as mean ± standard deviation ($\bar{x}$ ± sd), and t test or Wilcoxon rank sum test were used. Counting data was represented by the number of cases (percentage, n%), which was tested by Pearson χ^2 or Fisher exact probability method. $P<0.05$ indicated that the difference is statistically significant.

Results

General characteristics

A total of 296 subjects were studied, including 199 males (67.23%) and 97 females (32.77%), with an average age of 41.8 ± 14.1 years. The United States (59 cases, 19.93%), Japan (53 cases, 17.91%) as well as Hong Kong, Macao and Taiwan in China (48 cases, 16.22%) ranked top three as the origin places of the research subjects. There was no statistically significant difference in age, gender, length of hospital stay, source area, and admission department between the two groups (both $P>0.05$). See **Table 1**.

Problems of conventional nursing models

The top three major issues that emerged in the conventional nursing model were religious belief (67 cases, 52.76%), language communication (56 cases, 44.09%), and privacy protection (41 cases, 32.28%). See **Table 2** and **Figure 1**.

Nursing ability

In comparison with the conventional nursing group, the cross-cultural nursing group showed higher average scores of each item (all $P<0.05$), except for "cultural nursing skills" and "cultural nursing practice and evaluation" ($P>0.05$). See **Table 3**.

Treatment satisfaction score, compliance and complaint rate

The cross-cultural nursing group showed a significantly higher satisfaction score (4.47 ± 0.48 vs. 4.31 ± 0.69; $P<0.05$), but a significantly

Table 1. General information

Item	Conventional nursing group (n=127)	Cross-cultural nursing group (n=169)	χ^2/t	P
Age (years)	42.6±13.7	41.4±14.7	0.710	0.478
Gender			0.024	0.877
Male	86 (67.72%)	113 (66.86%)		
Female	41 (32.28%)	56 (33.14%)		
Hospitalization time (days)	7.36±2.51	6.94±2.68	0.875	0.381
Source area			0.801	0.938
America	25 (19.69%)	34 (20.12%)		
South Korea	16 (12.60%)	19 (11.24%)		
Japan	25 (19.69%)	28 (16.57%)		
China Hong Kong, Macau and Taiwan	19 (14.96%)	29 (17.16%)		
Others	42 (33.07%)	59 (34.91%)		
Admission department			0.708	0.871
Obstetrics and Gynecology	30 (23.62%)	39 (23.08%)		
Surgery	34 (26.77%)	51 (30.18%)		
Internal medicine	41 (32.28%)	48 (28.40%)		
Other departments	22 (17.32%)	31 (18.34%)		

Table 2. Problems of conventional nursing models

Problem Category	Number	Percentage
Religious belief	67	52.76%
Language communication	56	44.09%
Privacy protection	41	32.28%
Eating habits	34	26.77%
Social etiquette	32	25.20%
Visiting environment	19	14.96%
Reception process	17	13.39%
Custom taboo	15	11.81%

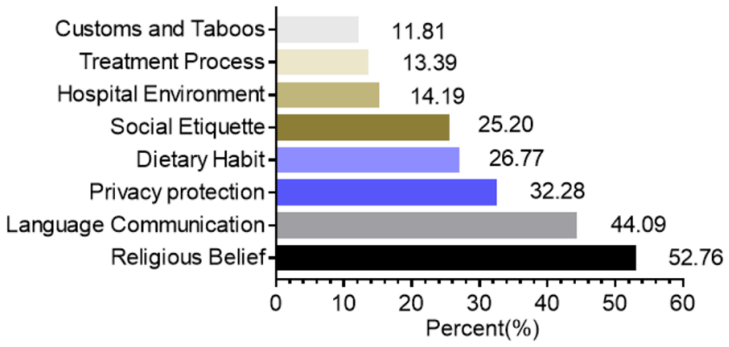

Figure 1. Problems of conventional nursing models.

lower complaint rate than the conventional nursing group (3.55% vs. 11.81%; P<0.05). Better treatment compliance was obtained in the cross-cultural nursing group. See **Tables 4-6**.

Discussion

With economic development, especially the proposal of the "Belt and Road" strategy, China has attracted a large flow of foreign workers, visitors, travelers and residents. Although the source area and disease spectrum of foreign patients in different hospitals are slightly different, overall, the number of foreigners and its proportion have increased significantly [5]. In this study, the number of people in the cross-cultural nursing group has increased compared with the conventional nursing group, and the source countries or regions were also wider. With the rapid development of globalization and urbanization, China's nursing services are confronted with different cultural needs in practice. To meet this demand, it is required to improve nursing methods for foregin patients.

Our study on the nursing needs of foreign patients and the status of cross-cultural nursing has been reported. Medical personnel were interested in cross-cultural nursing, a considerable number of whom expressed confidence in

Table 3. Results of the nursing ability questionnaire survey

Dimension/Subdimension	Entry	Average Score		t	P
		Conventional nursing group (n=127)	Cross-cultural nursing group (n=169)		
Cultural care awareness	15	3.98±0.53	4.13±0.36	2.896	0.004
Cultural sensitivity	6	4.31±0.49	4.47±0.38	2.352	0.019
Cultural understanding	9	4.25±0.60	4.43±0.55	2.680	0.008
Cultural care knowledge	13	4.14±0.54	4.31±0.36	2.920	0.004
Health-related social and cultural knowledge	4	4.18±0.39	4.43±0.24	2.238	0.026
Search for knowledge of healthy behavior	9	3.37±0.51	3.52±0.32	2.772	0.006
Cultural care skills	27	3.57±0.67	3.68±0.52	1.590	0.113
Cultural assessment and diagnosis	13	3.41±0.53	3.57±0.47	2.401	0.017
Cultural care plan	1	3.61±0.66	3.76±0.43	2.028	0.045
Cultural care practice and evaluation	13	3.34±0.58	3.47±0.46	1.816	0.077

Table 4. Comparison of treatment satisfaction scores

Item	Score
Conventional nursing group (n=127)	4.31±0.69
Cross-cultural nursing group (n=169)	4.47±0.48
T	2.352
P	0.019

their ability to meet the needs of multicultural customers [6]. Most subjects seem to view cross-cultural education from the perspective of "cultural awareness". Effective cross-cultural care claims to have corresponding cultural knowledge and communication skills. However, most residents only receive informal learning instead of systematic training to acquire cross-cultural skills during their stay in the hospital. One survey from the University of Minnesota found that 54.22% of medical staff in internal medicine and pediatric department was not satisfied with their knowledge about the culture and health care of immigrants and refugees, specifically manifested in the terms of language communication (81.98%), cultural barriers (76.92%), time constraints (60.72%) and limited knowledge of tropical medicine (57.69%) [7]. More than half of medical school teachers, who participated in low-level cross-cultural nursing theory training at home and abroad, agreed that time constraints, language barriers and lack of knowledge were the main obstacles to acquire cross-cultural nursing ability, and express their desire to include more training [8].

In a multicultural society, different religions and cultures lead to different behaviors and attitudes. In this study, nursing problems caused by different religious beliefs accounted for up to 52.76% of issues. Studies on children with cancer have shown that mothers with higher religious attitudes had higher levels of social support and were more optimistic [9]. This is especially important when children needed hospice care [10]. Al-Yateem discussed the cultural and religious educational needs of overseas nurses for Muslim patients. For nurses working with Muslim Arab patients around the world, specific cultural and religious topics need to be an integral part of vocational education, including basic Islamic principles (5 days' prayer, Ramadan fasting, time management skills), kinship and social factors (family structure, gender related issues and social support system) and basic Arabic skills [11].

The ability of cross-cultural communication affects the progress of the diagnosis and treatment of foreign patients. In this study, 44.88% of foreign patients were faced with the problem of language barrier communication with the nursing staff. In Krupić's survey, most of the 18 interviewed anesthesiology nurses who had worked for 6 to 28 years still required the help of interpreters, although the meetings with foreign patients were very brief [12]. In order to facilitate language communication, some doctors believe that professional real-time translation is the best way. Patients in the Pacific Island country of Micronesia Chuukese (Chuukese) thought that family members or friends help the most, especially for those with low English language levels or during a short stay in Hawaii [13]. In Ankara, Turkey, only

Table 5. Comparison of treatment compliance

Group	Complete compliance	Partial compliance	Non-compliance
Conventional nursing group (n=127)	81 (63.80%)	25 (19.69%)	21 (16.54%)
Cross-cultural nursing group (n=169)	134 (79.29%)	29 (17.16%)	6 (3.55%)
Z	3.326		
P	0.001		

Table 6. Comparison of complaint rates between two groups

Item	Complaint cases
Conventional nursing group (n=127)	15 (11.81%)
Cross-cultural nursing group (n=169)	6 (3.55%)
χ^2	7.507
P	0.006

29.97% of volunteer nurse students had received cross-cultural nursing education. Foreign languages are very important for these students who provide medical care to refugees [14]. In order to bring high-quality professional nursing practice to an increasingly diverse population, awareness, skills and knowledge are all essential abilities of nurses [15]. Nkulu et al. clarified the complex challenges faced by health care providers in caring for an immigrant population, and emphasized to multiple approaches to improve medical services: (a) adapting care to meet personal needs; (b) translating key documents and information in acceptable format and language for immigrants; (c) training interpreters and nursing staff to better communicate with immigrant groups and understand their needs; (d) improving health literacy of immigrants through strategies such as community education [16].

With the increasing emphasis on privacy and autonomy, a great importance has been attached to privacy protection and information awareness for patients. Kim et al. conducted investigations on inpatients and nursing staff at the same time. The nurses recognized their duty to protect patients' privacy and provide sufficient information, but failed to give good performance. In contrast, patients posed higher demands for privacy protection and access to sufficient information [17]. Another study shows that 91.77% of patients think that nurses have moderate or good privacy protection, and only 6.48% think it is excellent. The privacy protection status of public hospitals and emergency departments is not satisfactory [18].

Personalized and refined nursing is an important reflection of the quality of nursing, since details can be the key to the success of nursing. Different departments have different precautions. Bein found that in intensive care units, foreign cultures and religious attitudes were of great importance. In the event of brain death, organ donation and dying decisions, there were huge differences in the goals of treatment, life value, and the organization of dying rituals between patients of different cultures and ethnicities. Therefore, without cross-cultural nursing competence, nursing staff may have incorrect understanding and expression in communication and actions [19]. The medical staff's cross-cultural nursing ability is directly related to their attitude and the degree of exposure to patients with different social and cultural backgrounds [20, 21]. This study demonstrated that cross-cultural nursing theory has improved the nursing ability of medical staff, while personalized service methods have improved patients' satisfaction and compliance, and reduced the rate of complaints. This was basically consistent with other research reports. Cross-cultural nursing theory is a powerful tool to improve the service quality and management effectiveness of foreign patients [2, 7, 19].

This study used a single-center, non-prospective, historical control design, which was less convincing than a multi-center, prospective study with parallel controls. Due to the limitation of sample size, factors such as disease type, department differences, and nursing level were not taken into consideration. In the future, in-depth and detailed analysis will be conducted based on more relevant data in order to seek for an effective way to improve the knowledge and ability of medical staff in cross-cultural services. At present, the teaching of intercultural nursing in China mainly relies on English or bilingual intercultural courses, which emphasizes the basic knowledge of intercultural medical language. There is a dif-

ference in the concept of nursing education in developed countries. Professional concepts, religious culture, moral human rights and personal privacy in a multicultural context are less involved [22, 23].

We conducted a questionnaire survey on 296 patients, and analyze the data of diagnosis and treatment, based on cross-cultural nursing theory and its core idea of patient's understanding and needs of health, disease, nursing and health care. The results confirmed that the cross-cultural nursing models can effectively improve the medical service quality for foreign patients and has good promotional value.

Disclosure of conflict of interest

None.

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