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Article

The implementation of humanistic care by male nurses from the perspective of social gender

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Abstract: Under the new medical model, humanistic care is crucial to nursing work, and the proportion of male nurses is gradually increasing. However, they face challenges in implementing humanistic care due to the influence of traditional gender stereotypes and biomechanical demands inherent in nursing tasks. A mixed study method was used to investigate 601 male nurses in Anhui province, integrating social gender perspectives with biomechanical principles. The results showed that the years of nursing work, whether the department or the hospital had carried out humanistic care ability training, the degree of care at home and the workplace, and whether the male nurses had suffered from serious diseases were related to the implementation of humanistic care. Additionally, biomechanical factors, including physical strain, ergonomic workspace design, and repetitive motion injuries, were identified as critical barriers to effective care delivery. In order to improve the humanistic care ability of male nurses, interventions should integrate biomechanical optimization with social gender strategies. This includes incorporating biomechanical principles into school education and clinical practice, improving ergonomic design in the workplace, reducing physical strain through assistive technologies, and fostering a supportive atmosphere that minimizes gender stereotypes. Strengthening team support and communication ability and biomechanical training can promote gender equality in the nursing industry and establish an efficient, sustainable nursing team.

Keywords: social gender; male nurses; humanistic care; influencing factors; nursing education

1. Introduction

Under the influence of the new medical model "bio-psycho-social medical model" [1], American nurses Madeleine Leininger and Jean Watson both proposed that "caring is the essence of nursing" [2]. The implementation of a comprehensive humanistic care nursing service can improve the quality of life of patients and their families and lay a solid foundation for the establishment of harmonious doctor-patient relationships [3]. Optimizing the structure of the nursing team and improving the quality and service capacity of nursing staff can meet the development needs of economic society and health care. In recent years, the proportion of male nurses has also been increasing throughout the development of the nursing team [4]. By the end of 2021, male nurses accounted for 3% of the more than 5 million nurses in China [5]. Compared with many countries in the world, there is still considerable room for growth of men engaged in nursing in China. Some scholars believe that actively encouraging men to engage in nursing work can alleviate the problem of insufficient nursing manpower [6]. At the same time, due to the male identity of male nurses, in the relationship with the medical team, they can adopt an authoritative or equivalent way to communicate and coordinate with doctors or other departments to improve the

social status and professionalism of the nursing profession [7]. However, under the influence of traditional gender stereotypes in China, male nurses often face gender conflict when they are engaged in female-dominated work [8], especially in nursing work with humanistic care as the core, and even face embarrassing situations at the moment of nursing humanistic care, which affects male nurses' professional identity. At present, many international scholars and experts have discussed and studied the history and current situation of male nurses, the role tension caused by gender stereotypes, the reasons for choosing to be a nurse, and the experience of engaging in clinical nursing work [8,9]. The research on humanistic care of male nurses at home and abroad tends to be single-level, paying more attention to professional identity and the level and factors of humanistic care and rarely analyzing the differences in gender differences, occupational dilemmas, professional spirit attitudes, and the different influences of different factors on humanistic care from the perspective of social gender, which will play an important role in the professional development of male nurses [10]. Most of the reasons for the incomplete research are that the research methods are not comprehensive, and there is no systematic separation of the status quo, influencing factors, and diversification strategies of humanistic care of male nurses.

Therefore, it is of great significance to study how male nurses implement humanistic care for insight into the future development trend of the nursing industry. This study uses mixed research methods to investigate the current situation of humanistic care ability of male nurses in Anhui Province from the perspective of social gender to understand the current level of humanistic care ability of male nurses in Anhui Province, China. To explore the challenges and difficulties faced by male nurses in the practice of humanistic care, to provide a reference for diversified training of humanistic care ability of male nurses, and at the same time, to promote gender equality in the nursing workplace and provide a basis for establishing a balanced, harmonious and efficient nursing team.

2. Methods

2.1. Participants

We conducted a cross-sectional study between July and November 2023. A total of 601 male caregivers from tertiary hospitals in Anhui province were selected for participation by random convenience sampling, including tertiary hospitals in the provincial capital city, Hefei, and prefecture-level cities. Then, according to the stratified sampling method, several departments were selected in each hospital, and male nurses in the departments were selected as the survey objects to participate in this study. Inclusion criteria: Male nurses in tertiary hospitals in Anhui Province. After informing the purpose of the study, we are willing to cooperate with the investigation. Exclusion criteria: Nursing students, nurses, rotation nurses and other non-undergraduate nursing staff; Nurses on vacation or business trips; and those unwilling to cooperate after being informed of the purpose.

2.2. Selection of factors related to the implementation of humanistic care

Studies have shown that the caring behavior of nurses is affected by many factors, including personal characteristics, age, education, working years, religious belief, and humanistic care training [11]. Although there were differences in the scores of these factors of caring behavior among different studies, most studies used therapeutic services as the main means of emotional care [12]. However, Bakarl's study found no significant difference in the correlation between nurses' characteristics and educational background and nursing behavior [13].

3. Theoretical construct

In the 1870s, the concept of gender was first proposed. With the rise of feminism, this concept gradually became the core concept of feminism and was widely used in the issue of gender equality [14]. It refers to a socially recognized behavior pattern consistent with a specific gender, which is socially defined according to a person's biological characteristics and aims to help people better adapt to the social environment and cultural background [15]. The origins of this study can be traced back to the 1980s, when the nursing profession was dominated by women and the proportion of male nurses was relatively low. In recent years, the proportion of male nurses has been increasing throughout the development of the nursing workforce [9]. Therefore, it is of great significance to study how male nurses implement humanistic care for insight into the future development trend of the nursing industry. The study found that, partly due to the gender bias against male nurses in the "different male nurses", the embarrassing situations caused by male nurses' professional identity were very rich. Some scholars have shown that the role and status of male nurses in society may affect their understanding of humanistic care, which may lead to differences in their expression of humanistic care [16].

4. Measurements

4.1. General information questionnaire

Socio-demographic characteristics, life and work-related information, such as age, gender, whether the only child, childhood growth environment, political status, department, professional title, whether to hold a position, employment form, religious belief, education, the form of obtaining the highest education, working years, marital status, children, and other related information.

4.2. Caring ability inventory (CAI)

In order to better evaluate the humanistic care ability of nurses, we used the CAI written by Nkongho [17] and the Chinese version translated by Xu et al. CAI assesses the level of caring ability of nurses in an indirect way according to their recognition of the behavior or things of others. Its theoretical framework comes from the related literature of humanistic care, Nkongho's four theoretical hypotheses, and Mayeroff's eight critical elements of caring. It has become the most widely used and authoritative humanistic care ability assessment scale in Europe and the United States. It has been translated into Igbo, Japanese, and other languages and used in non-English-speaking

countries and regions. It is suitable for the study of the humanistic care ability of clinical nurses, nursing students, clinicians, and pharmacists. The scale consisted of 37 items in three dimensions and was a Likert 7 scale. The answers ranged from "strongly disagree" to "strongly agree" and were calculated as 1 to 7 points, including 13 reverse scoring items. The total CAI score ranged from 37 to 256, with higher scores indicating greater caring ability. Validity tests showed that the Cronbach's α coefficient of the total scale was 0.71 and each dimension.

5. Analysis

The data were imported into R3.1.1 software for statistical analysis. Statistical description was used to describe the general information of the respondents. One-sample t test was used to compare the scores of each dimension of humanistic care ability with the international norm. The correlation between humanistic care ability score and external care degree was tested by Spearman correlation test. Multiple stepwise regression analysis was used to analyze the statistically significant factors according to $\alpha x = 0.05$, $\alpha g = 0.01$. The test level $\alpha = 0.05$, $P < 0.05$ was considered statistically significant. The *T*-test for independent samples is a test for the significance of the difference between the two-sample means. In the *t*-test of the mean equation, if Sig is less than 0.05, the difference between the two-sample means is significant. In this study, the only child, birthplace, political status, position, employment form, religion, training, children, and serious illness were tested by this method. One-way analysis of variance (one-way ANOVA) is used for the comparison of multiple samples means with a completely random design. The statistical inference is to infer whether the overall means represented by each sample are equal. If the *P*-value is less than 0.05, there is a significant difference.

6. Results

6.1. Socio-demographic characteristics of participants

The majority of the male nurses are 31–35 years old (30.2%), and the least number of male nurses are above 46 years old (8.1%). 394 are married (67.7%); a lesser number of nurses (216) don't have kids (**Table 1**).

Table 1. Socio-demographic characteristics of the respondents.

Variables	*N* (%)	CAI	*t/F*	*P*
Age			1.361	0.246
≤ 30	135 (23.2)	193.85 ± 29.19		
31–35	176 (30.2)	188.57 ± 31.13		
36–40	154 (26.5)	190.68 ± 30.28		
41–45	70 (12.0)	185.93 ± 32.04		
46	47 (8.1)	184.04 ± 34.96		
Residence			0.376	0.707
rural	361 (62.0)	190.05 ± 30.84		
city or town	221 (38.0)	189.05 ± 31.17		

Table 1. (*Continued*).

Variables	*N* (%)	CAI	*t/F*	*P*
Marital status			−0.451	0.652
unmarried	165 (28.4)	188.55 ± 31.70		
married	394 (67.7)	189.84 ± 30.74		
other	23 (4.0)			
Have children			0.009	0.993
yes	366 (62.9)	189.68 ± 30.90		
no	216 (37.1)	189.66 ± 31.08		
Professional title			2.298	0.077
nurse	352 (60.5)	188.39 ± 30.36		
primary nurse	152 (26.1)	188.85 ± 31.67		
nurse-in-charge	56 (9.6)	194.21 ± 31.26		
Deputy director or head nurse	22 (3.8)	204.32 ± 31.66		
Employment form			0.515	0.607
contract nurse	177 (30.4)	190.67 ± 29.68		
establish nurses in public institutions	405 (69.6)	189.23 ± 31.51		
Religious belief			0.456	0.649
yes	43 (7.4)	191.74 ± 34.25		
no	539 (92.6)	189.51 ± 30.69		
Education level			0.868	0.134
special school	34 (5.8)	183.91 ± 31.07		
junior college	188 (32.3)	189.68 ± 31.48		
undergraduate course	300 (51.5)	188.7 ± 31.02		
postgraduate	60 (10.3)	197.77 ± 27.95		
Years of nursing work			6.160	< 0.001
≤ 5	90 (15.5)	182.91 ± 30.72		
6–10	164 (28.2)	188.93 ± 28.40		
11–15	127 (21.8)	188.06 ± 32.05		
16–19	111 (19.1)	186.85 ± 32.42		
≥ 20	90 (15.5)	203.56 ± 28.65		
Character type			2.577	0.077
extroversion	350 (60.1)	191.15 ± 31.39		
introversion	206 (35.4)	186.17 ± 29.53		
other	26 (4.5)	197.54 ± 33.93		
Whether the department or hospital has ever carried out humanistic care ability training			2.916	0.004
yes	456 (78.4)	191.625 ± 29.86		
no	126 (21.6)	182.603 ± 33.78		
How much your family cares about you			11.672	< 0.001
rare	100 (17.2)	177.38 ± 31.87		
general	159 (27.3)	188.48 ± 30.21		
frequent	323 (55.5)	194.06 ± 30.01		

Table 1. (*Continued*).

Variables	*N* (%)	CAI	*t/F*	*P*
How much do your workplace care about you			13.923	< 0.001
Rare	116 (19.9)	178.76 ± 31.40		
general	180 (30.9)	187.08 ± 29.09		
frequent	286 (49.1)	195.73 ± 30.55		
How much do your colleagues care about you			8.150	< 0.001
rare	114 (19.6)	179.72 ± 31.17		
general	185 (31.8)	190.12 ± 30.48		
frequent	283 (48.6)	193.39 ± 30.38		
Have you ever had a serious illness			2.341	0.020
yes	119 (20.4)	195.57 ± 31.10		
no	463 (79.6)	188.16 ± 30.75		

6.2. Humanistic care dimension scores of participants

The total average score of CAI was (189.67 ± 30.94). In this study, the scores of humanistic care of male caregivers were ranked from high to low as follows: cognitive dimension (74.33 ± 13.17), courage dimension (60.22 ± 19.03), and patience dimension (55.12 ± 8.57).

6.3. Univariate analysis

The results of univariate analysis (**Table 1**) indicated that demographic and socioeconomic factors in this study were statistically associated with the implementation of humanistic care for male caregivers. For demographic factors, there were significant differences in the implementation of humanistic care for male nurses in years of nursing work ($F = 6.160$, $P < 0.001$). Moreover, having been trained in humanistic care competencies from the department or hospital, family, and workplace cares about, ever having had a serious illness was statistically correlated with the implementation of humanistic care in male nurses ($P < 0.001$).

The implementation of humanistic care by male nurses is significantly associated with the training of humanistic care skills provided by departments or hospitals ($P < 0.001$). Male nurses who have undergone such training exhibit higher scores in humanistic care, indicating that professional development can effectively enhance their awareness and proficiency in delivering humanistic care. This training not only clarifies how to integrate humanistic principles into nursing practice but also plays a crucial role in guiding their daily work.

The level of support from both family and workplace environments positively correlates with the implementation of humanistic care by male nurses ($P < 0.001$). Greater support from these sources fosters a positive emotional experience, which may encourage male nurses to extend care to patients and improve their overall humanistic care performance. Additionally, this suggests that a supportive environment facilitates male nurses' ability to better express humanistic care in their work.

Male nurses who have experienced serious illness themselves score higher in humanistic care implementation ($P = 0.020$). This could be attributed to their firsthand

experience with illness, leading to a deeper understanding and empathy for patients' suffering, thereby enabling them to provide more compassionate and considerate care.

6.4. Multivariable analysis

Six variables that exhibited significant differences in univariate analysis were screened and included in the multivariate regression analysis to determine potential associated factors for the implementation of humanistic care in male nurses. There was no multicollinearity among the chosen variables with the evidence of all variance inflation factor (VIF) values <5. The multivariable analysis results were shown in **Table 2**.

Table 2. Multivariable analysis of the implementation of humanistic care among male nurses.

Domain	*B*	*SE*	*β*	*t*	*P*
	184.139	9.689		19.006	0.000
Years of nursing work	2.534	0.952	0.107	2.662	0.008
How much do your workplace care about you	5.276	2.043	0.133	2.583	0.010
Whether the department or hospital has ever carried out humanistic care ability training	−7.861	2.935	−0.105	−2.679	0.008
Have you ever had a serious illness	−7.630	3.001	−0.100	−2.543	0.011
How much your family cares about you	4.766	2.093	0.117	2.277	0.023
R^2	0.126				
adjusted R^2	0.115				
F	11.832 ($P < 0.001$)				

The results of multi-factor analysis showed that the years of nursing work, the degree of caring in the workplace, whether the department or the hospital carries out humanistic care ability training, whether the patient has been seriously ill, and the degree of family care—all these factors affected the implementation of humanistic care for male nurses. Among them, the regression coefficient of workplace caring degree was 5.276 ($\beta = 0.133$, $P = 0.010$), indicating that the humanistic care score of male nurses increased by about 5.276 points with each increase of one unit of workplace care, which highlighted the importance of workplace care to the play of humanistic care ability of male nurses. A good working atmosphere can effectively encourage male nurses to provide better humanistic care services.

The regression coefficient for departments or hospitals to carry out humanistic care ability training is −7.861 ($\beta = -0.105$, $P = 0.008$). Although the coefficient is negative, it does not mean that training plays a negative role, which may be because hospitals and departments that carry out training often have higher requirements for nursing work. Before the training, the level of humanistic care of male nurses was relatively low, and although it was improved after the training, the overall score change showed a negative coefficient compared with that of male nurses with excellent performance in hospitals without training.

The regression coefficient of the degree of family care was 4.766 ($\beta = 0.117$, $P = 0.023$), indicating that family care had a positive impact on the implementation of

humanistic care for male nurses. As an important social support system, family care could enhance the psychological toughness of male nurses and make them more motivated to practice humanistic care in their work.

7. Discussion

The Quality-Care Model states that health care professionals need to have the professional knowledge, attitudes, and behaviors to promote the recovery or maintenance of the patient's health [18]. Humanistic care involves not only the "heart" but also the "knowledge" [19]. The concept of humanistic care is the core of the quality of humanistic care, which is the internalization of humanistic knowledge and has long-term stability. Therefore, to deepen the concept of humanistic care of nurses, we should start from school education, systematically learn the knowledge of humanistic care, and experience and feel humanistic care in the school caring atmosphere; implement humanistic care in clinical practice, and accept the continuing education of humanistic care; and deepen the knowledge into the concept in the process of subconsciousness, forming a stable value [20].

A survey by O'Lynn of 111 male nurses in 90 different nursing colleges found that 30.9% of female nursing teachers ignored the needs and expectations of male nursing students; 53.6% said they did not have enough time to discuss how to better care for men [21]. Meanwhile, some personalized guidance on humanistic care strategies should be offered, and diversified teaching methods should be adopted, including the role model demonstration method, narrative education method, guided discernment method, group discussion method, problem-centered teaching method, situational experience method, artistic expression method, etc. [22]. The medical school should carry out more cultural activities, organize more humanistic clubs, and increase social practices. For example, volunteering in hospitals or communities may help the students to not only "know" but also "understand". Through perception, experience, and practice, humanistic care can progress from perceptual understanding to rational understanding and humanistic knowledge into humanistic spirit, and gradually cultivate the concept of humanistic care in nursing students.

The caring ability of nurses stems from the combined effect of personal qualities, educational conditions, and external environment. If we can focus on creating a school environment from respect, care, trust, morale, and other aspects, it will be very conducive to the perception, understanding, and internalization of humanistic care by nursing students [23]. Humanistic care perception is the driving force of the concept of care; only first perceive the patient's care needs in order to provide the appropriate care, including the caregiver's own perception and the perception of the care object. According to Lindenfeld's study, the factors causing problems for male nurses also include their workplace environment and the atmosphere of the department [24]. In order to deal with these problems, managers can adopt some strategies, such as appropriate workplace space planning and optimizing the professional clothing design of male nurses so as to reduce their problems in changing clothes, working, and confirming their identity. The results of Inoue et al. [25] show that in settings that help them, male caregivers can be more open to sharing their experiences in difficult situations, which is critical to their career growth. Therefore, we need to improve the

communication and cooperation between teams, break the stereotype of medical workers in the nursing industry, and create a humanitarian social atmosphere conducive to male caregivers so as to improve their professional identity and reduce their problems in the process of work.

Through relevant authoritative channels, the advantages and roles of male nursing personnel are introduced and popularized so as to strengthen the public's recognition and acceptance of male nurses and to reduce the barriers to male nurses in their work (e.g., female patients' resistance, lack of understanding by the patient's family, etc.) [26,27]. Providing male nurses a good working environment by strengthening peer support and hospital support and giving reasonable incentives. A healthy work atmosphere will help to attract more young people who have the will to work to join the team of male clinical nurses and to give full play to the advantages of men's qualities. Through interviews, it was found that male nurses being cared for by others would affect their work enthusiasm and pride. In order to ensure that male nurses successfully perform their duties, nursing managers need to deeply understand the actual situation of male nurses, strengthen the support and help for male nurses, and provide necessary hardware facilities so that male nurses can get enough love and care [7].

Strengthening the assistance of the male nurse team is also a strategy for them to more effectively deal with difficulties, ease their troubles and enhance their professional identity. Martínez-Morato et al. [28] showed that male nurses can reduce and release negative emotions through communication and communication between teams. Through mutual communication and support, it can help them build a positive understanding of the embarrassing events, thus alleviating the resulting negative emotional feelings.

In the clinic, the awkward situations caused by gender will be very common for male nurses, so it is necessary to strengthen their communication ability training in the awkward environment. Managers can also help them cope with embarrassing situations through targeted skills training and other methods. Compared with the embarrassing events in daily life, the embarrassing situations faced by male nurses in clinical work are mostly predictable, which provides the possibility for their communication skills training in an awkward environment. Therefore, we can use various educational means, such as situational education, case studies, and experiential education, to help male nurses understand and reflect on the difficulties they may encounter in academic life, daily life, and medical practice in the future and also to develop effective communication strategies for them [29]. In addition, we can also use role-play methods to imitate and reshape the difficult scenarios that male nurses may face so as to cultivate their ability to use resonance, listening, inquiry, and other communication skills to learn to actively face these difficulties.

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