

# Empirical Study on the Relationship Between Quality of Nursing Services and Postoperative Satisfaction of Patients with Acute Appendicitis: Intermediation Based on Information Flows

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## ABSTRACT

This study investigated the relationship between nursing care and patient satisfaction, with a specific focus on postoperative satisfaction in patients with acute appendicitis. The shift in China's medical model from a biomedical approach to a biopsychosocial framework emphasizes patient-centered care, with patient satisfaction becoming a key indicator of service quality. The study used a survey-based approach to collect data from 384 patients in hospitals in Guangxi, China. Through statistical analysis, the study explores how the quality of care services, doctor-patient communication processes, and information exchange affect patient satisfaction. The research results show that there is a significant positive correlation between the quality of nursing services and patient satisfaction. In particular, the professional level and effective communication skills of nursing staff significantly improve patient satisfaction. This study provides practical recommendations for enhancing the training process in clinical settings.

## KEYWORDS

Nursing service quality; Communication flow; Information flow; Patient satisfaction

## 1. INTRODUCTION

With the reform of China's medical system and the gradual opening of the medical service market, the medical model has changed from a "biomedical" model to a "biopsychosocial" model, and from a "disease-centered" treatment model to a "patient-centered" medical service model. As the medical model changes from a "biomedical" model to a "biopsychosocial" model, and from a "disease-centered" treatment model to a "patient-centered" medical service model, patient satisfaction, as a core indicator for measuring the quality of medical services, has been emphasized by medical service providers and health administrators [1]. Patient satisfaction is an evaluation of health care services based on people's expectations about health, illness, and quality of life [2]. Patients are not only the ultimate recipients of healthcare outcomes, but also the validators in assessing the quality of healthcare delivery [3]. Quality of care and patient communication as determinants of patient satisfaction [4]. Effective communication allows patients to listen patiently to caregivers' problems and engage in more compliant behaviors [5], but poor communication triggers negative emotions in patients, leading to a poor visit experience, which in turn leads to decreased patient satisfaction [5].

Researchers conducted an extensive survey of patient satisfaction in terms of meeting patient needs and improving communication skills.

Acute care surgery (ACS) refers to specific surgical services dedicated to the urgent assessment and treatment of patients with general surgical emergencies, and in China this model of care delivery is usually focused on optimizing the treatment of patients with non-traumatic intra-abdominal crises [6]. Appendectomy has been the standard treatment for acute appendicitis for more than a century and is one of the most common surgical procedures performed each year [7]. Surgical management of acute appendicitis is under intense research, and important aspects such as patient preference and satisfaction, quality of life (QOL), and joint decision-making have only recently been recognized [8]. In previous studies of patient satisfaction, there are two points of consensus among researchers: Satisfaction surveys should be based on patients' needs [9].

In clinical care, nursing staff need to raise the level of attention to the details of nursing work, evidence-based nursing practice, reduce the risk of nosocomial infections; at the same time, they should also pay attention to the needs of patients, optimize the nursing process, and improve the quality of professional nurse services [10]. Research confirms that when patients have high expectations, they engage in positive health treatment and illness coping behaviors, which are more likely to contribute to health recovery and high treatment satisfaction [11]. The purpose of pre-service standardized training is to enable new nurses to rapidly improve their skills and adapt to clinical work as soon as possible; the training will have a significant impact on the quality of their future care and their ability to plan their careers [12]. The traditional pre-service training mainly consists of theoretical lectures and operational skills training for new nurses, and the model is based on pre-course preparation, independent learning, discussion and classroom teaching, supplemented by multimedia and other traditional teaching methods. Single teaching methodology, lack of comprehensiveness and flexibility, and unsatisfactory teaching results [13]. We pioneered more advanced pre-service nursing training techniques and hope that this study will explore whether optimizing pre-service training to improve the quality of nursing care can increase patient satisfaction and thus improve postoperative recovery in patients with acute appendicitis.

## **2. METHODOLOGY**

### **2.1. Participants and Procedures**

From November 2019 to January 2020, we used a random sampling method to select 500 patients from public hospitals in Guangxi, and their disciplinary composition is shown in Table 1. All subjects volunteered to take the test and completed the questionnaire by answering online. After manual data entry and proofreading, questionnaires with response times outside plus or minus three standard deviations of the mean response time were excluded and 384 valid questionnaires were randomly selected. The effective recovery rate was 86.4%. Among them, 46.7% were male patients and 53.3% were female patients. Permission for this study was obtained from the Academic Committee of Guangxi Medical University.

**Table 1.** Basic information of the respondents

	Project	Number of People	Proportion (%)
Genders	male	179	46.6%
	female	205	53.4%
Education level	Non-formal education	26	6.8%
	secondary school	68	17.7%
	middle school	123	32.0%
	senior high school	106	27.6%
	University and above	61	15.9%
Careers	start a career	213	55.5%
	unemploy	59	15.4%
	retired	55	14.3%
	Student	19	4.9%
	other	38	9.9%
marital status	single person	109	28.4%
	married	209	54.4%
	divorced	21	5.5%
	widowed	15	3.9%
	other	30	7.8%

## 2.2. Survey Questionnaire

### 2.2.1. Nursing Service Quality Questionnaire Form

The composition of nursing service quality dimensions, as an important service content affecting the doctor-patient relationship, many scholars have distilled the factors for measuring nursing service quality from different dimensions such as quality of nursing communication, doctor-patient conflict handling, timeliness, communication accuracy, convenience, personalized service, value of nursing care, level of medical care, and coverage of services [14]. Based on the previous literature review and the characteristics of medical care in China, this paper proposes four issues that affect the quality of nursing services perceived by patients in medical care: How professional do you think caregivers are? How competent are caregivers in providing care? How sympathetic are the caregivers to your situation? How satisfied were you with the overall care you received? The scale has good internal consistency, with a Cronbach alpha coefficient of 0.846, which is above the acceptable level of the 0.80 indicator.

### 2.2.2. Communication Flow Questionnaire Form

Good communication skills are essential for working with your fellow nurses and colleagues from other disciplines. This is also important for patient-centered care [15]. Nurses who take the time to listen and understand each patient's concerns are better prepared to address issues as they arise, resulting in better patient outcomes [16]. On the other hand, miscommunication or lack of communication in healthcare may lead to patients misunderstanding instructions and not complying with treatment regimens. It can also lead to interruptions in workflow within the team, which can lead to medical errors. A Joint Commission report found that miscommunication in health care during patient transfers leads to 80 percent of serious medical errors [17]. Based on the previous literature review and the characteristics of Chinese healthcare, this paper proposes six issues affecting the communication flow perceived by patients in healthcare: How clear is the information provided by the caregiver? How timely is the caregiver communication? How complete is the information you receive about your caregiver? How responsive are caregivers to your questions and concerns? How effective are caregivers in communicating changes in care? How satisfied are you with the overall

communication of your caregivers? The scale has good internal consistency, with a Cronbach alpha coefficient of 0.904, which is above the acceptable level of the 0.80 indicator.

### 2.2.3. Questionnaires for information flow

Integrated care is recognized as supporting patients with multiple long-term and complex conditions. Transparency in the provision of information is key to shared decision-making and shared care provision [18]. The ubiquitous flow of information in healthcare environments is critical for coordination and collaboration between multidisciplinary clinicians distributed in space and time [19]. Therefore, nurses working on different shifts must work together to ensure that all necessary information is communicated so that patient care can proceed properly. Efficient information flow is an important factor in patient satisfaction. Based on the previous literature review and the characteristics of Chinese healthcare, this paper proposes five issues affecting the flow of information perceived by patients in healthcare: How quickly did the nursing staff respond to your questions after you asked them? How responsive are caregivers when you need help? Do you have quick access to the health information you need? Did the nursing staff keep you informed of any changes in the plan of care? Are caregivers able to relay information quickly in the event of an emergency? The scale has good internal consistency, with a Cronbach alpha coefficient of 0.894, which is above the acceptable level of the 0.80 indicator.

## 3. CONCLUSION

This study demonstrates the strong link between quality of care and patient satisfaction, particularly in the postoperative care of patients with acute appendicitis. The shift of China's healthcare system toward a patient-centered model highlights the importance of high-quality care services and effective communication as determinants of patient satisfaction. The positive relationship between nursing care quality and patient satisfaction demonstrates that well-trained nurses who are proficient in clinical skills and communication can significantly improve patient experiences and outcomes. Therefore, medical institutions should pay attention to pre-job training of nursing staff and ensure the improvement of the quality of nursing services through standardized training and continuing education, thereby improving patient treatment outcomes and satisfaction. Future research can analyze whether there are significant differences in the impact of nursing service quality on patient satisfaction among patient groups of different ages, genders, cultural backgrounds, and diseases. This will help identify the special needs of specific patient groups, thereby optimizing personalized strategies for care delivery.

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