

## Current Status and Influencing Factors of Psychological Contract Breach among ICU Nurses: Postprint

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### Abstract

**Objective:** To investigate the current status and influencing factors of psychological contract breach among ICU nurses in Guangzhou. **Methods:** Convenience sampling was used to select 176 ICU nurses from 7 tertiary grade-A hospitals in Guangzhou, Guangdong Province, between April and June 2022 as study participants. Data were collected using a general demographic questionnaire and a psychological contract breach scale via the “Wenjuanwang” platform. **Results:** Of the 176 electronic questionnaires distributed, 167 valid responses were collected. The total score on the psychological contract breach scale was  $(69.13 \pm 11.75)$ , with an average item score of  $(3.29 \pm 0.56)$ . Multiple linear regression analysis revealed that highest educational level, doctor-nurse collaboration in the department, and participation in career planning lectures or activities organized by the employing institution were significant influencing factors of psychological contract breach ( $P < 0.01$ ). **Conclusion:** The level of psychological contract breach among ICU nurses is moderate. Nursing administrators should implement targeted interventions to regulate nurses’ emotional control abilities, cultivate their emotional management skills, enhance job embeddedness, strengthen their sense of responsibility and loyalty to the organization, foster a positive organizational climate, and reduce psychological contract breach.

### Full Text

#### Analysis on the Current Situation and Influencing Factors of Psychological Contract Violation Among ICU Nurses

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## Abstract

**Objective:** To investigate the status quo and influencing factors of psychological contract violation among ICU nurses in Guangzhou. **Methods:** Using convenience sampling, ICU nurses from Grade III, Class A hospitals in Guangzhou, Guangdong Province were selected as study subjects. An online survey was conducted via the “Wenjuanwang” platform using a self-designed general information questionnaire and the Psychological Contract Violation Scale. **Results:** A total of e-questionnaires were completed, and valid e-questionnaires were recovered. The total score on the Psychological Contract Violation Scale for nurses was ( ) points, with an average item score of ( ). Multiple linear regression analysis revealed that highest education level, doctor-nurse collaboration in the department, and participation in career planning lectures or activities organized by the unit were influencing factors of psychological contract violation ( $P < .05$ ). **Conclusion:** The level of psychological contract violation among ICU nurses is moderate. Nursing managers should implement targeted intervention measures to regulate nurses’ emotional control abilities, cultivate their capacity to manage emotions, enhance job embeddedness, strengthen their sense of responsibility and loyalty to the unit, foster a positive organizational climate, and reduce psychological contract violations.

**Keywords:** intensive care unit; psychological contract violation; emotion; influencing factors

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## Introduction

With the advancement of science and technology and the deepening of healthcare service reform, modern hospital development has placed higher demands on the quantity, quality, and structure of nursing talent, necessitating comprehensive improvement in nursing discipline to meet the needs of the new era. Nursing is an emotionally labor-intensive industry with high rates of work fatigue. Due to the fast-paced, high-intensity nature of their work and the special patient population they serve, ICU nurses face particularly high requirements for technical skills and clinical adaptability, making their mental health especially important.

Psychological contract violation refers to a subjective emotional experience formed by individuals based on the perception that an organization has failed to fulfill its psychological contract obligations, leading to feelings of organizational betrayal or unfair treatment, and emotional hurt. This perception primarily

arises from inability to deliver on promises, intentional breach, or misunderstanding, resulting in inability to maintain effective healthy relationships in the practice environment. Research indicates that changes in nurses' psychological contracts affect their work attitudes and behaviors; the greater the perceived psychological contract violation, the higher the experience of negative emotions, the lower the sense of organizational justice, and the more likely they are to develop work alienation. Currently, Chinese scholars are gradually conducting research on psychological contract violation among nurses, but there are few reports on the current status of psychological contract violation specifically among ICU nurses. In view of this, this study aims to investigate the current status of psychological contract violation among ICU nurses and analyze its influencing factors, providing a reference basis for nursing managers to accurately grasp the current situation and develop targeted mental health management strategies.

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## 1. Materials and Methods

### 1.1 Study Design and Participants

Using convenience sampling, ICU nurses from Grade III, Class A hospitals in Guangzhou, Guangdong Province were selected for an online questionnaire survey. Inclusion criteria: ICU nurses currently on duty (with working years); holding a valid nursing license; voluntary participation and signed informed consent. Exclusion criteria: trainee nurses and nursing students. This study complies with the requirements of the Declaration of Helsinki.

### 1.2 Instruments

**General Information Questionnaire:** Designed by the researchers, including gender, marital status, highest education level, professional title, working years, ability to actively cope with work stress, doctor-nurse collaboration relationship in the department, participation in career planning lectures or activities organized by the unit, participation in regular specialized skills training organized by the unit, difficulty level of position competition, and alignment between current development and career planning.

**Psychological Contract Violation Scale:** Adopted from Fang Hang's Psychological Contract Violation Scale, including three dimensions: transactional violation ( items), relational violation ( items), and developmental violation ( items), totaling items. Using a Likert scale, the total score ranges from to . Scores from "strongly disagree" to "strongly agree" are assigned points. Higher scores indicate lower perception of psychological contract violation. The scale's overall Cronbach's  $\alpha$  coefficient is , with Cronbach's  $\alpha$  coefficients of for each dimension.

### 1.3 Data Collection

After obtaining approval from the hospital authorities, the online questionnaire was distributed to eligible nurses through “Wenjuanwang.” The questionnaire used uniform instructions and was completed voluntarily and independently by participants. Subjects completed the questionnaire during their spare time and submitted it immediately upon completion. Before formal distribution, the researcher invited ICU nurses for pre-testing to provide feedback on the questionnaire design. During distribution, the researcher monitored response status through the client terminal. After recovery, the researcher retrieved survey results through the official website backend. Questionnaires were automatically numbered according to completion order. Two researchers verified and excluded invalid questionnaires with logically confused or regularly patterned responses. Based on the calculation of sample size as times the number of items, the sample size was determined to be . Accounting for attrition, the final sample size was . A total of e-questionnaires were completed, and after excluding invalid questionnaires, valid e-questionnaires were recovered, yielding an effective recovery rate of .

### 1.4 Statistical Methods

SPSS software was used for data analysis. Normally distributed continuous data were expressed as mean  $\pm$  standard deviation ( $\bar{x} \pm s$ ), with inter-group comparisons using t-test or ANOVA. Categorical data were expressed as frequency and percentage (%), with inter-group comparisons using  $\chi^2$  test. Multiple linear regression analysis was used to identify influencing factors of psychological contract violation among ICU nurses. The test level was set at  $\alpha = 0.05$ .

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## 2. Results

### 2.1 Psychological Contract Violation Scores

The total psychological contract violation score for the ICU nurses was ( ) points, with an average item score of ( ). Details of each dimension's scores are shown in .

Psychological Contract Violation Scores of ICU Nurses (n=167)

### 2.2 Comparison of Psychological Contract Violation Scores

Statistically significant differences were found in psychological contract violation scores across different genders, highest education levels, marital statuses, ability to actively cope with work stress, doctor-nurse collaboration relationships, and participation in career planning lectures or activities organized by the unit ( $P < 0.05$ ). Details are shown in .

Comparison of Psychological Contract Violation Scores Among ICU Nurses with Different Characteristics (n=167)

### 2.3 Analysis of Influencing Factors

Using the total psychological contract violation score as the dependent variable, variables with statistical significance in the univariate analysis of ICU nurses' general information were entered as independent variables into multiple linear regression analysis. Variable assignments: gender (male = 1, female = 2), highest education level (technical secondary school and below = 1, junior college = 2, undergraduate = 3, master's degree and above = 4), ability to actively cope with work stress (yes = 1, no = 2), marital status (married = 1, unmarried = 2), doctor-nurse collaboration relationship (very harmonious = 1; not harmonious = 2), participation in career planning lectures or activities organized by the unit (yes = 1; no = 2). The results showed that highest education level, doctor-nurse collaboration relationship, and participation in career planning lectures or activities were influencing factors of psychological contract violation among ICU nurses ( $P < 0.05$ ), with adjusted  $R^2 = .$  Details are shown in .

Results of Multiple Linear Regression Analysis on Influencing Factors of Psychological Contract Violation Among ICU Nurses (n=167)

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## 3. Discussion

### 3.1 Current Status of Psychological Contract Violation Among ICU Nurses

This study reveals that the level of psychological contract violation among ICU nurses is moderate. As shown in , the total psychological contract violation score for ICU nurses was ( ) points, with an average item score of ( ), indicating a moderate level. This result is higher than Wang's research findings, with the main reason being the difference in hospital levels. All ICU nurses in this study were from large tertiary Grade A hospitals with higher modern medical technology levels, where ICU patients receive more diverse advanced life support, resulting in better cure rates and post-discharge quality of life. Consequently, ICU nurses have stronger professional pride. Additionally, tertiary Grade A hospitals have more comprehensive nursing management systems, professional title promotion systems, continuing education systems, and employee logistics support and psychological care, providing ICU nurses with greater perceived organizational support and thus lower perceived psychological contract violation.

In this study, the three dimensions of the Psychological Contract Violation Scale scored from low to high as follows: relational violation, developmental violation, and transactional violation. Relational violation scored the lowest. The reason may be that ICU nursing is highly specialized, with new protocols, equipment,

and technologies constantly emerging. ICU nurses must not only complete high-load nursing work but also continuously update their knowledge of the latest critical care developments, creating considerable occupational stress and making it difficult for them to perceive adequate work support from the hospital. Moreover, (%) of ICU nurses in this study had undergraduate degrees or higher, possessing strong personal agency and rights awareness, and placing greater emphasis on self-value realization and fulfillment of hospital commitments. When they feel the hospital fails to honor its promises, negative emotions easily arise, leading to deviant behaviors and job neglect, which can seriously compromise ICU nursing quality and result in high perceived psychological contract violation.

Transactional violation refers to the disruption of the limited and tangible exchange relationship where the hospital provides economic and material benefits to nurses while nurses fulfill basic job requirements for the hospital. The highest score in this dimension indicates high satisfaction with hospital performance management and compensation incentives among ICU nurses. A scientific compensation and performance system increases trust between the hospital and ICU nurses, forming a reciprocal exchange model that promotes psychological bonding and reduces feelings of psychological contract violation. This suggests nursing managers should pay attention to manifestations of psychological contract violation among ICU nurses and promptly curb its occurrence. When ICU nurses show signs of alienation, timely communication and coordination should be strengthened, along with motivation, trust, and care. Managers should emphasize high-level spiritual needs such as respect and self-actualization, transforming external control into self-control through equal guidance and communication, thereby fostering spontaneous loyalty and responsibility to the hospital and aligning personal value realization with organizational development to reduce psychological contract violation.

### 3.2 Influencing Factors of Psychological Contract Violation Among ICU Nurses

**Highest Education Level:** ICU nurses with higher education levels perceive lower psychological contract violation. ICU nurses with bachelor's degrees or higher have longer education duration and more comprehensive integrated nursing education, demonstrating high acceptance of information technology-driven nursing models and strong adaptability in integrating advanced nursing concepts with real clinical practice, resulting in lower psychological contract violation. Master's degree nurses in this study were mostly key personnel in their departments with clear career goals and high job recognition. The stronger the identification with their work, the higher the job satisfaction and more positive professional values, leading to lower perceived psychological contract violation. This suggests nursing managers should adopt competency-based management concepts to properly guide nurses' career planning and promote steady enhancement of their personal abilities. Junior college nurses in this study were mostly

senior nurses with solid specialized knowledge and skills, strong health education abilities, and good communication with patients, earning deep trust and cooperation from patients and families. However, they remain somewhat dependent on traditional nursing models and struggle to grasp the wave of modern nursing education via the internet. Additionally, as undergraduate education becomes increasingly popular and nursing human resources continuously optimize, highly educated nursing personnel continuously enter clinical practice, intensifying industry pressure and resulting in higher psychological contract violation among lower-educated ICU nurses. Nursing managers should fully leverage and integrate the strengths of both groups by establishing offline nursing work discussion groups and nursing psychology teams combining high and low education levels, conducting experience exchange meetings, and building online ICU nurse communication platforms and psychological counseling lectures. Through dual online and offline coaching, managers can promote ICU nurses' competency improvement and alleviate current psychological contract violation.

**Doctor-Nurse Collaboration Relationship:** Harmonious doctor-nurse collaboration effectively mitigates psychological contract violation among ICU nurses. Medicine and nursing are two disciplines that are both independent and interconnected. The specialized development of medicine drives the advancement of clinical nursing, and a high-quality specialized medical environment creates favorable conditions for clinical nursing specialization. Doctor-nurse collaboration is a specific colleague relationship established during medical and nursing processes for patients, representing both a working relationship and a comradely cooperative relationship. As an advanced life support venue, ICU patients' conditions develop rapidly, making timely information transmission, identification of potential risk factors, and crisis intervention for sudden situations all crucial aspects that demonstrate the importance and uniqueness of ICU nursing work. Consequently, ICU nurses gain more recognition and respect from their departments and hospitals, achieving great professional pride and lower perceived psychological contract violation. Domestic scholar Ren's research found that harmonious doctor-nurse collaboration effectively promotes nurses' work engagement, reduces patient mortality, and decreases adverse prognosis incidence among patients transferred out of ICU. High work engagement enables ICU nurses to maintain healthy relationships with the organization and adopt more positive coping strategies when facing complex work environments. This positive coping is typically reflected in patient-perceived nursing quality; higher patient-perceived nursing quality brings greater praise and reputation to the department, stronger collective cohesion and centripetal force, and lower perceived psychological contract violation. However, in real clinical practice, a minority of doctors still exhibit less cooperative behavior and willingness than nurses in specific diagnostic and treatment activities, failing to meet nurses' expected level of collaboration, resulting in low doctor-nurse cooperation experience and satisfaction among nurses. This inevitably affects doctor-nurse collaboration and may even cause conflicts within the department. Both doctors and nurses should reasonably recognize, control, and regulate

their emotional responses to effectively ease the work atmosphere, promptly resolve conflicts, and strive to create harmonious and cohesive doctor-nurse collaboration relationships. Managers should create more communication platforms and spaces, improve doctor-nurse communication skills, strengthen information exchange, enhance nurses' participation, and strengthen collective honor. Managers themselves should fully recognize the importance of the ICU nurse role in patients' rapid recovery, making ICU nurses feel the unit's trust and support, and promoting the transformation of doctor-nurse relationships from "dominant-subordinate" to "parallel-complementary." Timely provision of motivational factors and full utilization of nurses' work autonomy promote self-value realization and reduce psychological contract violation formation.

**Career Planning Lectures or Activities:** Participation in career planning lectures or activities effectively reduces perceived psychological contract violation among ICU nurses. Research indicates that scientific career planning is an influencing factor in reducing nurses' psychological contract violation, including not only courses during school but also continuing education courses after employment. Such activities enhance ICU nurses' organizational identification and belonging, so ICU nurses who have participated in career lectures or activities perceive lower levels of psychological contract violation. This suggests ICU nurses should make personal career plans, accumulate work experience, keep pace with the times, achieve career success, and demonstrate self-worth. A nurse's career is a dynamic process from novice nurse to advanced nurse to nursing expert. At each stage, various doubts and bottlenecks in career development may be encountered. Therefore, conducting career education courses or lectures is necessary. This also reminds managers to apply scientific leadership concepts and management methods to build a regular high-quality career planning training system, provide one-on-one employee assistance program services and psychological contract management, advocate for diversified organizational forms, and thereby improve ICU nurses' career achievement, job satisfaction, and optimism about the hospital's development prospects. Based on humanistic management concepts, managers should clarify ICU nurses' career development paths, broaden career development space, and improve psychological contract violation levels.

In summary, this study found that psychological contract violation among ICU nurses is at a moderate level, with highest education level, doctor-nurse collaboration, and career planning lectures or activities being influencing factors. Therefore, nursing managers should attach importance to psychological contract construction among ICU nurses, closely monitor manifestations of psychological contract violation, timely intervene in work alienation, and enhance work belonging. This study only included ICU nurses from some hospitals in one city, limiting the survey scope. Future research should expand the sample size and survey range and conduct further studies on nurses in different departments.

**Conflict of Interest Statement:** The authors declare no conflict of interest.

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