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Perception and needs: a qualitative study on sense of job security among nurses in central and western China

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ABSTRACT

Aims To explore nurses' perceptions of sense of job security and their needs to improve it.

Design A descriptive qualitative study employed an in-depth, in-person interview from February to April in 2021. The data analysis software NVivo V.11.0 was used to assist with the data organisation, and content analysis methods were conducted to explore key concepts.

Setting Three tertiary hospitals in central and western China were selected by convenience sampling method.

Participants A total of 20 nurses participated in this study.

Results Four categories and 13 subcategories were extracted. The four main categories included: (1) enrich connotation of sense of job security; 2) challenges to sense of job security; (3) consequences of a sense of insecurity; and (4) the need to improve nurses' sense of job security.

Conclusions Nurses expressed a multidimensional perception of a sense of security about the nursing profession, and they highlighted the importance of communication skills training and supervisors' humanistic care and support. It is necessary to improve the training system for nurses' ability improvement, a harmonious work environment, policies and psychological health support to enhance their sense of job security.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ The key strengths of this study is to deeply explore the perception of sense of job security in nursing clinical practice from nurses selected by the principle of maximum diversity, enhancing its representative and generalisable.
⇒ The analysis results might be influenced by semi-structured interviews and researchers, and some potential factors were not found.
⇒ The addition of nurses at different levels hospitals could add useful insights.

INTRODUCTION

Maslow's Hierarchy of human motivation pointed out that safety needs, as one of the fundamental needs for humans, include personal safety, financial safety, health and well-being, which was written in 1942, and yet still seemed up to date and prescient in its content,[1] and they become more important than physiological requirements because of their close association with mental illnesses such as anxiety, sadness and post-traumatic stress disorder.[2] With the deepening of research on the neighbourhood of security, Brockner *et al*[3] defined job security as the feeling of power and ability in controlling events in a job setting, feeling peace and having a job future, and it included not only job position, wages and salaries, workload, relationships with colleagues but also the security feeling in 1992. In 2004, the Chinese scholars Zhong and Lijuan[4] not only defined the sense of security as a premonition of potential physical or psychological danger or risk, as well as an individual's sense of strength/powerlessness in response and disposal, mainly manifested as a certainty and control, but also preliminarily developed a safety scale, which is commonly used in Chinese studies. As one of the safety needs in Maslow's hierarchy of human needs, job security plays a key role in work performance, job satisfaction and turnover intention.[5 6]

A sense of job security is especially crucial for nurses' career development and health status. A cross-sectional survey in Saudi Arabia revealed that the job security among nurses was closely associated with job turnout, and job satisfaction mediated this relationship.[6] Nurses' high perceptions of job safety could increase job satisfaction and improve mental well-being,[7] while those who always felt insecure about their job and feared litigation had significantly more severe depression, anxiety and stress than those who felt safe.[8] Another survey in China revealed that medical healthcare had a relatively low level of job security, particularly among nurses, whose job security was lower than that of other medical healthcare (eg, doctors, pharmacists), and it found that many risk factors, such as job position, workplace violence and job satisfaction,

influenced job security.[9] Notably, it has been reported that job security was lower for female medical workers than for male medical workers, probably due to the type of job contact and employers preferring to hire male workers.[10]

Furthermore, the sense of job security among clinical nurses may be affected by work-related violence, workload, occupational injury and workplace conflicts, which may affect their sense of job security. Previous study reported that nearly 60% of nurses experienced at least one type of workplace violence mainly from their managers and colleagues, and workplace bullying was associated with high stress and burnout, eventually leading to physical and mental health problems and decreasing quality of life and care quality.[11] Nevertheless, workload was another main cause of poor job security among hospital workers. According to a recent survey, weekly overtime hours of more than 15 hours among medical healthcare were significantly related to a low level of job security, while less than 5 hours per week were closely related to a high level of job security.[9] The Occupational Safety and Health Act of 1970 (OSH Act), signed into law for the first time, also appealed to society to focus more on the occupational safety and health of medical services and to implement interventions to prevent and treat occupational injury and illness.[12] A multilevel investigation revealed that higher occupational safety among a medical team was associated with a lower occupational injury rate, and it was also closely positively associated with patient safety.[13] However, compared with other medical workers, nurses have a greater risk of occupational injury and illness, such as musculoskeletal injuries. In addition, one review revealed that some major public safety incidents, such as the COVID-19 pandemic, leading to changes in nurses' working roles, working tasks, working environments and hospital policies, might also make nurses feel mistrust and a poor sense of job security, and they cannot cope with mental illness, for example, anxiety, depression, insomnia and others.[14]

Although previous studies were designed to use quantitative methods to investigate nurses' sense of job security and its risk factors, they did not deeply explore nurses' perceptions, experiences and needs. Therefore, this qualitative study was designed to explore their sense of job security and the needs to promote it through an in-depth interview.

METHODS

Study design

The descriptive qualitative research in this study was conducted with a semistructured, in-depth interview from February to April 2021 in China, and a content analysis method was used to extract categories and subcategories.

Theoretical framework

The theoretical framework in this study was provided by Maslow's hierarchy of needs theory, which showed that once physiological needs are met, safety emerge, including personal safety, financial safety, health and well-being,[15] as well as a sense of job security. Therefore, the hierarchy of needs theory was used in this study to explore nurses' conceptions of and needs for a sense of job security.

Sampling and recruitment

In this study, multistage stratified sampling and the principle of maximum diversity were used to select participants in central and western China. In the first stage, three tertiary general hospitals in Sichuan, Guizhou and Hunan provinces were selected by the convenience sampling method. Purposive sampling method, as the common and useful sampling methods, in qualitative study is used to obtain participants with rich information for the purposes of study.[16] In the second stage, a purposive sampling method was used to select participants with different sociodemographic characteristics, such as gender, age, marital status, job position and clinical department. The inclusion criteria for participants were as follows: (1) aged ≥18 years old, (2) registered nurse working full-time in a tertiary general hospital, (3) had at least 1 year of clinical nursing experience and (4) voluntarily participated in this study. Nurses who were experiencing diagnosed psychological distress were excluded. The researchers contacted the nurse managers from the three tertiary hospitals through WeChat or telephone, and explained to them the content of this study and the inclusion and exclusion criteria of participants. Then, the managers sent messages to the nurses' WeChat group, inviting eligible participants to voluntarily participate in the interview and informing them that they can withdraw from the interview at any time and that only the interview data were used for the research. Subsequently, voluntary and eligible participants were invited into a private room to conduct the interview with the researcher.

Sample size and power

The sample size is determined by the principle of data saturation because saturation is the most fundamental aspect of data adequacy in qualitative research. A previous study revealed that 9–17 interviews or 4–8 focus group discussion in qualitative research could reach data saturation.[17] In this study, a total of 20 participants were enrolled, in which no new issues emerged and data saturation was reached.

Data collection

First, the interview outline was confirmed by reviewing the literature and discussing it with the research team, which included a clinical nursing expert with a doctoral degree, three experienced nurses, and two nursing postgraduates, as follows:

1. What do you think is the sense of job security in nursing clinical practice? If participants do not know what job security is, explain the definition of job security.
2. What factors do you think affect your sense of job security while working?

3. Do you have some experience with job insecurity? What are the details? What happens if your sense of job security is threatened?
4. How do you think you can improve your sense of job security? What is your need to improve it?

Second, semistructured, in-depth interviews were conducted from February to April 2021. To avoid conflict of interest, the interviewer, who was not a management status, is the researcher to contact and interview the participants, and the interview data were kept closely and only used for the research. In the private room on nurses' working ward without other people, face-to-face or video interviews were conducted by the researcher. Prior to each interview, participants were informed of the objective and content of this study, voluntarily signed the informed consent form or provided oral consent if the interview was by video, and completed detailed demographic materials. With the participants' permission, the interview process was recorded by a voice recorder, and the interviewees' expressions and non-verbal behaviour were recorded by the interviewer. The interview time ranged from 22 to 70 min, and during this process, each participant was allowed to express their perceptions and experience enough, and the interviewer avoided attempting any hypotheses. Finally, a total of 20 participants were enrolled in this study, in which it reached data saturation without no new topics emerging, and the data collection was ending.

Data analysis

In this study, NVivo V.11.0 computer software was used to analyse the data.[15] The processes of content analysis suggested by Lindgren *et al*[18] were as follows: (1) the interview materials were transcribed verbatim into Microsoft Word 2003 documents within 24 hours of each interview; (2) two researchers independently read the document, understood the content and added notes and headings to the margins to identify meaningful statements; (3) initial coding was conducted. The researchers separately encoded important and repetitive statements and developed potential themes; (4) clustering themes: codes with similar meanings were grouped into subcategories; and (5) subcategories were grouped into main categories; (6) creating a basic framework: provide detailed descriptions of coding details, representative quotes, subcategories and categories; (7) the authors together compare the code, identify similarities, resolve differences and adjust the entire coding process to determine the final draft. If there were still differences during this process, we invited a third party (corresponding author) to negotiate and resolve them; (8) verification of basic structure: to enhance the trustworthiness of the findings, participants were informed at the end of the interview that we would contact them again to confirm their original meaning if necessary or have any questions, and participants were also given the opportunity to review and verify the accuracy of their interview transcripts through phone contact. Furthermore, categories, subcategories and representative quotes were translated into English by two researchers and checked and modified by a third researcher. During this process, researchers also avoided attempting any hypothesis.

Ethical considerations

Each participant was informed of the purpose, content and interview time of the study, and voluntarily signed a written informed consent form or provided oral consent if the interview was by video. All data were confidential and were only used for research.

The identity information of interviewee only appears with informed consent. During formal interviews, each interviewee's name is replaced by a code to ensure anonymity. When all the research data are kept confidential for 5 years, the electronic data (eg, recording data, word documents, and hardcopies) will be completely deleted and the paper data will be shredded with a shredder.

Rigour

The scholars Guba and Lincoln mentioned that the validity of the qualitative study could be replaced by trustworthiness, and in this study, the validity and trustworthiness were assessed using their criteria for credibility, confirmability, dependability and transferability.[19]

Credibility

Semistructured interviews with open-ended and the peer reviewed questions were conducted to maintain the credibility. Moreover, the interviews were recorded to show the expressions and non-verbal behaviour of participants to ensure the credibility. The research team for this study had prior experience in qualitative research and sufficient academic background.

Confirmability

The transcribed document, interview transcripts, and data collection and analysis steps were used to ensure the confirmability.

Transferability

The materials were transcribed verbatim into documents within 24 hours after each interview. The findings were reported through thick descriptions and representative quotes to ensure the transferability.

Dependability

Two researchers verbatim read the transcribed document and in the data analysis, continuous comparison and revision were used to maintain dependability. If necessary, we contacted the interviewee again to confirm the original intention.

Patient and public involvement

Patients were not involved in the design and planning of the study. Healthcare professionals participated in the design of the topic lists for the semi-structured interviews.

Table 1 Sociodemographic characteristics of the participants (n=20)

Characteristics		N	%
Age (mean±SD, min to max)		32.90±6.83 (22–51)	
Gender	Female	16	80.00
Clinical work experience (mean±SD, min to max)		11.25±7.43 (2–31)	
Marital status	Married	15	75.00
Have children?	Yes	14	70.00
Education level	College degree	3	15.00
	Bachelor's degree	17	85.00
Job title	Primary	7	35.0%
	Intermediate	11	55.00%
	Senior	2	10.00%
Work department	Neurology department	1	5.00
	NICU	1	5.00
	ICU	4	20.00
	Oncology department	3	15.00
	Intervention room	3	15.00
	EICU	1	5.00
	Emergency department	2	10.00
	Psychiatry department	1	5.00
	Infectious diseases department	2	10.00
	General practice department	2	10.00
Interview style	Face-to-face	18	90.00
	Video interview	2	10.00
Interview time (mean±SD, min to max, minutes)		35.07±10.73 (22–70)	

EICU, emergency intensive care unit; ICU, intensive care unit; NICU, neurology intensive care unit.

RESULTS

Sociodemographic characteristics

In total, 20 participants were enrolled in this study, including 18 face-to-face interviews and two video calls. The average interview time was 35 min (ranging from 22 to 70 min). The demographic characteristics of the participants are presented in table 1.

The following four categories were extracted from the data analysis: (1) enrich connotation of sense of job security; (2) challenges to sense of job security; (3) consequences of sense of job insecurity; and (4) the need to improve nurses' sense of job security, as shown in table 2. The coding details, representative quotes, subcategories, and categories shown in online supplemental table 1.

Table 2 Description of categories and subcategories of sense of job security

Categories	Subcategories
Enrich connotation of sense of job security	To ensure patient safety
	Nurses' physical and psychological safety
	Work environment safety
	Realising professional values
Challenges to sense of job security	Challenge of nurses' clinical competence
	Challenge of psychological resilience
	Lack of organisational support
	Lack of social support
Consequences of sense of job insecurity	Changing their work attitudes
	Unhealthy psychological conditions
The needs to improve a sense of job security	Improvement in communication ability
	Needs for supervisor and organisational support
	Needs for policy support

Category 1: enrich connotation of sense of job security

Participants had their own views on the sense of job security, including to ensure patient safety, to ensure nurses' physical and psychological safety, to ensure work environment safety, and realising professional value.

To ensure patient safety

Participants believed that a sense of job security should first ensure the safety of patients, including medical safety, pharmacovigilance and observing and dealing with changes in the disease over time. Nurses put patient safety as their primary responsibility at all times and they ensure medical safety through strict check systems, correct nursing behaviours and nursing records. However, these became difficult when there were excessive workloads and busy schedules.

> I think the nurses' sense of job security is the safety of the nursing process, the patients' safety and medicine safety. (P3)

> I am worried that the patient's condition would suddenly deteriorate. (P6)

Nurses' physical and psychological safety

Nurses' sense of job security in nursing clinical practice should ensure their physical and psychological safety. Most of nurses described that only when they are healthy, can they provide better care for patients. Medical care workers are at high risk of occupation exposure, particularly nurses who are more vulnerable to obtain infection,

such as HIV, hepatitis B virus (HBV), needle stick injuries and workplace violence. Therefore, due to the ubiquity of these dangers in clinical environment, most participants usually feel a threat to their health, especially those infected with HIV, which might lead to psychological problems and poor sleep quality. Sometimes nurses suffer from unpredictable violent injuries from patients with excessive alcohol, mental disorders, or psychological retaliation.

> The most frightening thing is being infected by blood-borne diseases, such as HIV, syphilis…once it happened, it is very terrible. (P14)

Work environment safety

Work environment safety is one aspect of job security and includes doctor–nurse, nurse–supervisor, nurse–nurse and nurse–assistant relationships, and the safety of the physical environment. Some nurses described that the disrespect of doctors and the lack of attention from department directors seriously affected their sense of job security, because they often think that nurses are just executors and lack thinking. Sometimes, doctors still refused to positively communicate with nurses, especially when on duty at night, and patients vented their dissatisfaction with medical treatment, heavy economic pressure, and the deterioration of their condition on nurses.

> Work environment safety includes the relationships between colleagues, especially doctor-nurse relationships and doctors' attitudes toward nurses and patients. (P13)

Realizing professional values

The participants stated that the realisation of professional value, including saving patients' lives and helping them solve problems, as well as professional identity, was the embodiment of a high level of job security, which directly benefited nurses' job satisfaction and occupational development. Meanwhile, front-line clinical nurses have small career development space, limited post settings and few learning and self-improvement opportunities, which cannot meet their needs for career development and realisation of professional value. Some nurses hope more chance to study in a good hospital, attend specialised nurse training or academic conferences, which will help them constantly improve professional knowledge, broaden career horizons, and increase scientific research ability.

> The work should provide us with enough chances to realize professional value and obtain professional identity from leaders, co-workers and patients. (P16)

Category 2: Challenges to sense of job security

Challenge of nurses' clinical competence

Nurses' clinical competence include knowledge, attitudes, decision-making abilities and handling challenging situations.[20] Some younger participants reported that nurses who had just entered their jobs for less than 1 year might not have had rich clinical experience, specialised knowledge or the capacity to cope with emergency events. In the nursing process, worrying about making mistakes made them feel nervous, less safe and more likely to make errors. Meanwhile, they mentioned that good communication skills were important to address nurse–patient relationships and clinical problems, but they were difficult to obtain it. Lack of training and poor confidence will make nurses afraid to communicate with patients or their family members, or even with doctors.

> If the communication skills were poor, it might lead to some nurse-patient relationship problems…Sense of job security is directly related to our own communication ability. (P1)

Challenge of psychological resilience

Psychological resilience is the capacity for adaptation in the face of trauma, adversity, tragedy or even substantial persistent stressors.[21] In clinical working, nurses' psychological resilience often was challenged by patient safety and their negative attitude and emotion. Some participants stated that they have to check medicine orders several times before the nursing behaviours to ensure patient safety, especially when nursing interruption happen, and they were cautious about everything at all times when working.

> When I made medicine for patients, I usually doubted myself and checked the doctor's order several times. (P5)

Patients' negative attitudes directly affected nurses' working quality, and a lack of confidence and less psychological resilience could also make nurses nervous, anxious and less safe. Some patients and their relatives do not respect and trust nurses enough, resulting in verbal violence and even physical violence. Most participants had experienced verbal violence from patients or relatives, such as abuse and denigration.

> I worked very hard to help a patient find ways to prevent falls and pressure injuries. However, when the delicate skin on him hands was broken accidentally, he blamed me because of mistakenly thinking I caused it. It made me sad and felt like I was not understood and recognized, then depression emotion coming. (P1)

Lack of organisational support

Perceived organisational support can actively improve nurses' work engagement and intrinsic motivation, reduce the work stress and increase job satisfaction.[22] Some participants described that they did not receive timely assistance or protection when accidents occurred. There was not enough support from the supervisor or

organisation; rather, they faced problems alone, which made them feel lonely and unsafe.

> When an accident happens, supervisors should care for us in time but not push us to the peak of dispute to face the questions alone. (P16)

Lack of social support

Unfortunately, some people have negative attitudes towards healthcare workers. In particular, in some low-income cities, nurses' social status is not ideal, which makes nurses feel cautious and insecure. There still are some people who evaluate nurses as waiters and servant, and who think nurses are less educated and attached to doctors. Some participants described that they were reluctant to reveal themselves as medical workers outside the home because they felt animosity from people. The possible reason was that some people associated the high medical costs and inevitable prognosis of patients with the medical staff.

> I usually don't expose myself as a health worker outside the home because I always feel that people are unfriendly to us. (P16)

> The social status of nurses was still low in our city. Even patients or their relations used to call us "Miss" ("Miss" is often used as a derogatory and impolite term in informal situations) and waitresses, and think they were our god. (P17)

Category 3: consequences of a sense of job insecurity

Changing their work attitudes

Different nurses have different attitudes in the face of incidents of job insecurity. When injured, most participants showed negative attitudes towards their work: not wanting to work, negatively dealing with problems, being apathetic towards patients, reviewing career choices and even resigning. These negative attitudes increase their mental stress, reduce their job satisfaction and highly affect work engagement. Nevertheless, there were also some participants who became more cautious and had a stronger awareness of self-preservation in their work. Through reflection and introspection, they will analyse the problem deeply, identify the inadequacies and formulate improvement measures to prevent problem recurrence.

> Accident, made me more mentally stressed and insecure. I was more cautious and increased the frequency of overseeing the ward around to find potential problems when I was on duty alone. (P18)

Unhealthy psychological conditions

Unhealthy psychological conditions can affect nurses' work enthusiasm, nursing quality and even patient safety. Some nurses experienced negative moods and complained about work, and others experienced self-doubt and a greater level of mental stress. They described that a lack of sense of job security might make them absent-minded, nervous and diffident and fail to complete work on time, which further leads to the occurrence of adverse events, such as giving the wrong medicine. In these process, there are lack of psychological consulting and support to help them relieve mental stress.

> My female colleagues were usually in poor moods after suffering violent injuries. They even complained about work and doubted about their own abilities: Why didn't I do it well?…Was it because I did not communicate well with patients or others? (P18)

Category 4: the need to improve a sense of job security

Improvement in communication ability

Communication ability, as known, plays a core role in handling conflicts, improving the quality of care and strengthening the construction of medical team. Most participants suggested that nurses should boost their confidence and job security by improving their professional abilities, including their clinical operation ability, theoretical knowledge, adjustment of their mind and emotions and their communication ability. However, communication abilities are also affected by one's personality, and extroverts may have better communication skills than introverts. Nursing managers should construct scientific and effective clinical communication skills courses, and base on different personality characteristics strengthen the communication ability of front-line nurses, especially junior nurse.

> The communication skills with patients were often appeared in book…You had to constantly practice in work for many years to enhance them, Communication skills were poor among new nurses. It would be better if the hospital had training courses on communication skills for us. (P8)

Needs for supervisor and organizational support

Adequate supervisor and organisational support makes it easier for nurses to get through the tough days. Some participants had strong needs for supervisors' humanistic care, especially when medical disputes occurred or when there was a high level of work-related stress. A harmonious working atmosphere could make nurses feel a sense of belonging and job security. They suggested that team building should be a kind of professional training to cultivate the concepts of teamwork and cooperation and integrate them into work. In addition, female nurses might need more humanistic care from supervisors and organisations than males, probably because they are psychologically more vulnerable than males.

> After female nurses suffer from violence, they need more supervisors' humanistic care, while males might not care so much…Male nurses might be stronger than female nurses in self-regulation, especially for the ability to bear grievances. (P18)

Needs for policy support

Work policies and procedures need to be further perfected to ensure work quality and patient safety. Although the nursing administration has formulated some working systems and procedures, nursing managers should optimise the working procedures according to the characteristics of the department's work, so as to better ensure the quality of nursing and the safety of patients. A nurse leader mentioned that before making some changes, she always organised the nurses to discuss and brainstorm, so that the nurses can actively make some good suggestions:

> As a nurse leader, when there is a need to make some changes, I would ask for the nurses' opinions and combine their views with clinical practice…Only when the policies and procedures are in the line with the clinical practice, would it decrease unnecessary workflows and improve the quality and efficiency of work. (P15)

Moreover, some participants noted that the protective measures or security training among medical workers are deficient. When some emergencies occur, in addition to calling the security department, they do not know what they can do and how to ensure their own safety and patient safety before the security workers arrive at the scene. Therefore, managers should strengthen the security training for all hospital workers and the construction of security teams, and provide more convenient alarm systems.

> I hoped the hospital could strengthen the security team…And nurses could wear an alarm. If an accident occurred, nurses could connect to the alarm in a timely manner. (P16)

DISCUSSION

In this study, we extracted four categories, including multidimensional perceptions of sense of job security, challenges to sense of job security, consequences of sense of job insecurity and the need to improve a sense of job security. Compared with the previous definition of job security,[10] nurses highlighted that the sense of job security in the nursing profession was the requirement of having a healthy body, a harmonious working environment and the opportunity to realise one's professional values. Moreover they expressed a stronger need for a sense of job security, particularly under high stress and workload, and emphasised the importance of communication ability, humanistic care and support from supervisors and organisations.

Nurses' perceptions of job security highlighted their desire for a healthy body, a harmonious working environment and the realisation of professional value. Common occupational injuries and illnesses were caused by infectious diseases such as HIV or syphilis, but there were still some long-term, chronic physical injuries that did not occur, such as varicose veins or musculoskeletal injuries. To a certain extent, these health problems reduced nurses' sensitivity to a sense of security. A conceptual pattern with respect to the work environment, work attitude and work outcome emphasised that perceptions of workplace safety and organisational support in the work environment could be seen as supervisors' and organisations' humanistic care for workers' safety and well-being.[23] Without a sense of job security, some nurses have a negative attitude towards work, such as not wanting to work, reducing work enthusiasm, negatively dealing with work-related problems, being apathetic for patients and even resigning. Low work enthusiasm was closely associated with low work engagement; previous studies revealed that work engagement further directly affected job satisfaction,[24] and meanwhile, it played a mediating role in the relationship between nurses' sense of security and turnover intention.[25] In this study, nurses described that a low sense of security might increase the occurrence of nursing errors, which in turn would affect the sense of security. Previous studies showed that chronic job insecurity led to changes in one's personality, such as increased neuroticism, decreased conscientiousness and agreeableness,[26] and it indirectly affected job behaviour through intrinsic motivation. Notably, only a few nurses who had strong coping ability and psychological resilience stated that when suffering poor job security, they would reflect on themselves, become more careful of their work and further increase their awareness of precaution. In addition, the realisation of professional values and professional identity were also associated with a sense of job security. The professional values model revealed that both nurses' professional values and their individual values significantly impacted their job satisfaction as well as patients' satisfaction.[27] Nurses were aware that their daily work attitudes and behaviours were influenced by professional values, which helped them make precise nursing decisions, reduce burnout and turnover intentions, improve nursing care quality and increase job satisfaction,[28 29] further resulting in satisfying the need for a sense of job security.

However, nurses' sense of job security is limited by their professional capacity, psychological resilience and organisational and social support. A lack of job security was significantly connected with depressive symptoms, especially in younger nurses who were more likely to suffer from mental health problems,[30] perhaps because of their lower ability to cope with a variety of conflicts, such as work–family conflict, nurse–patient/relative conflict or work–life conflict, and less psychological resilience to successfully cope with work-related stress. Major public incidents, such as the COVID-19 pandemic, still affect medical workers as well as patients, causing physical and mental pressure and burnout for nurses and ultimately lowering their job security. However, evidence revealed that front-line nurses during the COVID-19 pandemic had a high level of psychological resilience, which could likely be explained by hospital administrators paying more attention to and taking a variety of measures to strengthen nurses' psychological resilience, such as

psychological support programmes, relaxation training courses, physical exercise, supervisor humanistic care and organisational support.[31] Meanwhile, nurses also received enough support, understanding, and recognition from family and society.

Humanistic care and support from supervisors and organisations play a crucial role in nurses' sense of job security among nurses. An earlier study revealed that supervisors' humanistic care and organisational support could aid nurses in creating a workplace that fostered psychological safety, allowing them to shift from negative emotions such as blame or complaint to positive coping, directly or indirectly decreasing their turnout intention and maintaining the stability of the nursing team.[32] According to the theory of servant leadership behaviour, supervisors should base their decisions on nurses' needs and provide them with priority services and support to enhance their sense of belonging, considering that servant leadership style positively influences nurses' engagement in work.[33] Similarly, Smith and Plunkett[34] showed that a working environment where nurses were punished for 'mistakes' was not conducive to building a harmonious teamwork atmosphere. Furthermore, some participants described that female nurses might need more humanistic care than male nurses, perhaps due to their lower psychological resilience, self-regulation ability and ability to withstand pressure. A survey conducted during the COVID-19 pandemic revealed that female healthcare workers on the front line were more likely to suffer from stress-related psychological issues such as depression, anxiety and post-traumatic stress disorder, than males were.[35] Notably, coworker support was closely related to nurses' energy and motivation, and it could provide nurses with emotional support, effective relationships and collaboration, guidance and teaching.[36] Participants noted that they needed an effective doctor–nurse collaboration, particularly in the intensive care unit, because of the 24-hour medical coverage and patients' serious conditions. Moreover, doctor–nurse collaboration played a mediating role between nurses' working environment, work willingness and professional value.[37]

In addition, most participants highlighted the importance of communication ability in terms of job security as well as nurse–patient relationships, and they admitted that it was challenging to develop communication skills because of some objective elements, such as a lack of long-term clinical practice experience and communication skills training courses. Previous studies have shown that on the one hand, high-quality communication skills can improve patients' and their families' positive coping emotions, help patients obtain their trust and recognition in the caring process, reduce negative events and maintain a harmonious nurse–patient relationship.[38] On the other hand, they can enhance nurses' psychological resilience, develop their ability to resolve conflicts such as work–family conflicts, help them make accurate nursing decisions and increase their job satisfaction.[39 40] Hence, hospital administrators and nursing supervisors should base their decisions on the needs of nurses and patients and artificial intelligence technology to build a long-term, closed-loop training system for nurses' ability improvement, from assessment to implementing individualised interventions to effectiveness evaluation, and continuously update training content, including first-aid training, communication skills training, fire handing training, and psychological health courses.

Limitations of the study

There were several limitations in this study. First, although purposive sampling could result in selection bias, the principle of maximum diversity was used to control it. Second, due to the influence of semistructured interviews and researchers, the analysis results might not have been comprehensive enough, and some potential factors were not found. In addition, although all participants were from three hospitals in three provinces of China, they were from tertiary hospitals of the same level.

Recommendations for further research

We suggest that nurses at different levels hospitals should be recruited in the future to help improve the validity of the study.

CONCLUSION

Nurses expressed a multidimensional perception of sense of job security, which came from themselves, superiors, teams, the work environment and patients, and emphasised the importance of communication ability and supervisors' humanistic care and support. A sense of job security greatly affects nurses' working attitudes, job satisfaction and mental health. In this study, we also found that nurses hoped to enhance their sense of job security through self-improvement, emotional support, teamwork, policy support and patient understanding. It made recommendations to hospital administrators, based on the needs of nurses and patients, to create good work environments to strengthen nurses' sense of job security and job satisfaction, and further ensure care quality and patient safety.

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