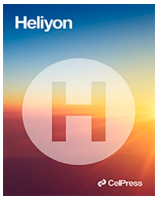
Heliyon 10 (2024) e28507

Contents lists available at ScienceDirect

Heliyon

journal homepage: www.cell.com/heliyon



Research article

Exploring work readiness: A qualitative descriptive study of self-perceptions among new graduate nurses

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ARTICLE INFO

Keywords:
Humanistic care
New graduate nurses
Qualitative study
Work readiness

ABSTRACT

Background: Reduced work readiness is associated with elevated turnover rates, necessitating efforts to enhance the positive work readiness of newly graduated nurses to alleviate the shortage in the nursing workforce. Research into the work readiness of recent nursing graduates in China is still in its infancy. Most studies employ quantitative research methods, and further exploration of the self-perception of work readiness among new nurses in China is required.

Objectives: This study aimed to investigate genuine experiences and self-perceptions of work readiness among new graduate nurses.

Design: A qualitative descriptive study.

Methods: Sixteen new nurses from a provincial tertiary hospital in China were included in this study, which adhered to the consolidated criteria for reporting qualitative research (COREQ) checklist for reporting. The data collection process involved conducting semi-structured interviews from September to October 2021. Inductive content analysis was employed to analyze the interview data.

Results: The study identified four themes encompassing new nurses' real-life experiences and self-perceptions of work readiness: psychological stress, emotional conflict, empathy fatigue, and ethical dilemmas. Psychological stress comprised three subthemes: knowledge and skill deficits, communication barriers, and fear. Empathy fatigue was primarily characterized by psychological and physical symptoms. Ethical dilemmas involved conflicts over differences in values and between clinical reality and standardized nursing practice.

Conclusion: Drawing from the self-perceptions of work readiness among new nurses found in this study, nursing administrators and educators must enhance the existing transition support program for new nurses. Additionally, the establishment of individualized training programs is recommended to further improve the work readiness of new nurses.

1. Introduction

The World Health Organization has published a report on the global nursing workforce, projecting a potential shortage of approximately six million nurses by 2030 [1]. Despite a rise in the number of newly graduated registered nurses worldwide, a disparity persists relative to the expanding population. The surge in elderly nurses in the workforce and the heightened demand for healthcare

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https://doi.org/10.1016/j.heliyon.2024.e28507
Received 6 September 2023; Received in revised form 19 March 2024; Accepted 20 March 2024
Available online 25 March 2024

professionals, driven by the impact of the new coronavirus pneumonia, underscores the critical role of newly graduated nurses referred to hereinafter as "new nurses." This group serves as a vital human resource and a primary contributor to addressing the existing shortage of nursing personnel [2,3].

In their first year of employment, new nurses undergo a challenging transition from a structured classroom setting to the dynamic and high-stakes environment of healthcare [4]. The move to clinical nursing exposes them to the stress of role transition, patient workload, insufficient nursing competencies, and the disparity between theoretical knowledge and practical application, collectively contributing to a sense of overwhelm during their first year in the profession [5]. Consequently, new nurses exhibit a high turnover rate during this period [6]. Variations in turnover rates are evident across countries. The study highlighted that the first-year turnover rates for newly graduated nurses in the United States, South Korea, and Japan were 17%, 25%, and 41%, respectively [7–9]. In China, the turnover rate for new nurses ranges from 0.64% to 12.71% [10]. The heightened turnover of nursing staff not only compromises the stability of the nursing workforce but also exacerbates the shortage, impacting healthcare organizations in terms of recruitment and operational costs, with potential implications for patient safety [11].

Work readiness, defined as preparedness for future work, reflects the extent to which new nurses fulfill their expectations upon entering nursing positions [12]. Given the complexity of nursing and the heightened expectations of rapid adaptation within healthcare organizations, new nurses must be adequately prepared for clinical practice [13]. Healthcare organizations anticipate that new nurses possess diverse skills, knowledge, and the ability to navigate the professional challenges associated with transitioning to a healthcare environment [14]. Furthermore, work readiness serves as a gauge of a new nurse's capacity to work effectively and potential for career advancement [12,15]. However, Kavanagh and Szweda note that only 23% of new nurses exhibit entry-level work readiness, indicating a need for improvement in most new nurses [16]. The work readiness of new nurses positively influences job satisfaction, professional identity, and retention intentions. Therefore, enhancing the work readiness of new nurses is crucial in mitigating the escalating nursing shortage crisis, subsequently enhancing patient safety and reducing recruitment and operational costs for healthcare organizations [11].

Global attention in the nursing field is centered on researching the work readiness of new nurses; however, the exploration of this aspect in China is still in its early stages. A literature review revealed the predominant use of quantitative methods in domestic studies, indicating insufficient exploration of work readiness among new nurses in China. Variations in the self-perceptions of new nurses' work readiness are observed globally and are influenced by factors such as culture, training models, and healthcare organizational systems. In response, we conducted a qualitative study to gain insights into the self-perceptions of work readiness among new graduates during their first year of employment. This study aimed to establish a theoretical foundation that could guide the development of intervention strategies to enhance the work readiness of new nurses, not only in China but also in other countries. The study's primary objective was to delve into new nurses' self-perceptions of work readiness through a qualitative approach, enriching the understanding of attributes associated with work readiness and informing the development of strategies aimed at retaining valuable nursing talent.

1.1. Conceptual framework

The concept of work readiness originated with Marlene Kramer, who coined the term "reality shock" to describe the realization of undergraduate nursing students who inadequately prepared for their jobs [17]. As the discipline of nursing has evolved, extensive research on work readiness, also known as readiness to practice, has emerged, each offering distinct insights into associated attributes; this study aligns with Walker et al.'s conceptualization of work readiness [13,18,19]. Work readiness is defined as a blend of competencies and attributes that graduates should possess upon entering the workforce [20]. The conceptual framework of work readiness encompasses four key attributes: personal characteristics, stress management, and psychological resilience; work competencies, clinical skills, technical knowledge, and experience; social intelligence, including teamwork, support-seeking, and interpersonal communication; and organizational sensitivity, professional development opportunities, and awareness of workplace policies and procedures. This framework is designed with consideration for both hospital needs and graduates' experiences during job transitions and success, emphasizing not only specialized skills and knowledge but also personal attributes. However, prevailing notions of work readiness within high-quality healthcare practices exhibit a bias toward the technical aspects of the nursing role, lacking a humanistic perspective [18]. Consequently, this study extends the conceptual framework of work readiness to explore the interaction between new nurses and the clinical environment from a human characteristics perspective.

2. Methods

2.1. Study design

Employing a qualitative descriptive design, this study analyzed self-perceptions of work readiness among new graduate nurses. The chosen qualitative descriptive design is marked by low-inference descriptions, aligning with its suitability for eliciting direct and unembellished responses to questions of particular significance to decision-makers [21]. To ensure comprehensive and transparent reporting, this qualitative study adhered to the COREQ checklist, as outlined in Appendix S1, [22].

2.2. Study setting and participants

The study was conducted across various wards of a Chinese hospital from September to October 2021. This tertiary hospital boasts a

capacity of 1141 beds and is dedicated to strategic development guided by the principles of "higher quality, more excellence, more respect, and more dreams," with a vision to establish a world-class international medical center reflecting Chinese characteristics. A purposive sampling technique was employed to select new graduate nurses from different wards, and maximum variation sampling aided in understanding their self-perceptions regarding work readiness. The inclusion criteria comprised individuals with less than one year of professional experience, registered nurses possessing a nursing license, and those who provided informed consent for voluntary participation. Trainee nurses were excluded from the study. Participants were continuously recruited until data saturation was achieved, and no further novel information emerged [23]. Notably, all 16 new nurses from different wards who were invited to participate in the study remained engaged without any dropouts.

2.3. Interview guide

Two new nurses participated in the pilot testing of the interview guide. Based on the results and feedback obtained from the interviews, revisions were made to the interview guide. The main modifications involved reordering the sequence of interview questions, removing redundant inquiries, and enhancing the clarity and simplicity of the questions. The final version of the interview guide, reflecting these adjustments, is presented in Table 1.

2.4. Data collection

Data collection involved conducting semi-structured open-ended face-to-face personal interviews, facilitated by YH and CLX. YH, a registered nurse with a master's degree, led the interviews, while CLX, also a registered nurse, observed, took notes, and intervened when necessary. The authors maintained no prior communication or interaction with the interviewees before data collection. The interviews were conducted in a quiet and undisturbed department library, and an SR302 iFLYTEK recorder captured the conversations. Throughout the interview, careful observation of the interviewees' body language and expressions occurred, with additional observation notes recorded. Each interview session had an average duration of 36.5 ± 3.88 min. To safeguard the privacy of the new nurses, each interview was recorded anonymously. Interview notes and recordings were systematically numbered from N1 to N16 based on interview order.

2.5. Data analysis

Inductive content analysis was employed to examine the interview content, involving data reduction, grouping, and conceptualization to enable the researcher to address research questions in terms of concepts or themes [24]. Thematic analysis was applied to the transcribed interview data [25], which encompassed familiarization with transcripts, initial coding, and the inductive development of themes from the code [26]. YH and LJH transcribed and coded the original data independently, repeatedly listening to the recordings, integrating them with observation notes, and cross verifying the data using CLX. Verbatim transcripts were converted into Microsoft Word documents within 24 h of the interviews. The six-step thematic analysis process included familiarization with the data, generating initial codes, developing themes, reviewing themes, defining, and naming themes (as outlined in Table 2), and writing a report [25]. The Nvivo12 software was used for data management.

2.6. Rigor and Trustworthiness

Lincoln and Guba's four evaluation criteria (credibility, transferability, dependability, and confirmability) were employed to establish the credibility of the study [27]. To ensure credibility, the results of the interviews were cross-checked with the participating members. The details of this study have been described in as much detail as possible to enhance its transferability. Researchers who

Table 1
Interview gudine development process.

Original Interview Guide	Process	Final Interview Guide
How do you feel about nursing?	Revise: making the interview questions clear and easy to understand	As a new nurse, do you believe you possess the necessary readiness to embark upon clinical practice? how do you view clinical nursing work?
How did you feel as a new nurse entering the clinic?	Revise: making the interview questions clear and easy to understand	What are your feelings when entering the clinical nursing position?
What are the difficulties you encountered in clinical nursing work? How did you deal with them?		What are the difficulties you encountered in clinical nursing work? How did you deal with them?
What was the work experience that touched you the most?	Revise: making the interview questions clear and easy to understand	What was your most profound work experience? How did it affect you?
What was the most disappointing work experience for you?	Remove	
	Expand	Do you have anything else to add to this interview?

Table 2
Main themes and sub-themes of the analysis process.

Main theme	Sub-theme
Psychological stress	Self-recognition of knowledge and skill deficiencies
	Communication barriers
	Fear
Emotional conflict	
Compassion fatigue	Psychological symptoms
	Physical symptoms
Ethical dilemma	Value-based ethical conflicts
	Ethical conflicts arising from disparities between clinical and standardized nursing practices

were not involved in the research process were invited to verify both the process and results of the study, thereby increasing the reliability of the study. In this study, observer triangulation was employed, in which the interview data were analyzed and coded continuously and iteratively by two researchers. Themes were extracted, results were proofread against the original data, and disagreements were submitted to the research team for discussion to enhance the conformability of the study. The content and perspective of the interviews were influenced by the background and stance of the researchers. To mitigate research bias, the study was designed to promote reflexivity through the inclusion of multiple researchers [28]. The interview team was led by a senior nurse and a postgraduate student who had systematically studied theories related to descriptive phenomenological qualitative research. Affiliations between participants and researchers that could introduce bias were avoided [29].

3. Results

3.1. Characteristics of the participants

This study included 16 new nurses, and their demographic characteristics are presented in Table 3.

3.2. Theme 1: psychological stress

3.2.1. Self-recognition of knowledge and skill deficiencies

New nurses commonly acknowledged the realization of their knowledge and skill deficiencies when faced with real patient care, highlighting the disparity between theoretical learning in school and the realities of nursing practice. Specifically, they identified challenges with chart writing, considering it a skill not adequately covered during their academic training.

> "The difficulty encountered during the transition from school to the hospital, expressing the need to learn how to write medical records, a skill not acquired in school." (N3).

The nurses emphasized the necessity of bridging the gap between theoretical knowledge and practical operations, citing instances where their lack of expertise became clear during patient assessments and procedures.

> "I admitted feeling unprepared and nervous when tasked with evaluating a patient with abdominal pain, leading to the realization of insufficient knowledge and skills. (Head down)" (N6).

Table 3
Demographic characteristic of participants.

Demographic characteristic	Participants n (%) or Mean (Range) n = 16
Age	24.2 years (23–26)
Sex	
Male	2 (12.5%)
Female	14 (87.5%)
Education level	
Bachelor	16 (100%)
Professional experience	6.6 months (6-10)
Department	
Department of Neurosurgery	2 (12.5%)
Department of Respiratory	2 (12.5%)
Department of General Outpatient Clinic	1 (6.25%)
Intensive Care Unit	2 (12.5%)
Infectious Diseases Clinic	2 (12.5%)
Department of Orthopedics	1 (6.25%)
Rehabilitation Department	1 (6.25%)
Emergency Department	3 (18.75%)
Department of Gastroenterology and Hepatology	1 (6.25%)
Department of Hematology	1 (6.25%)

3.2.2. Communication barriers

New nurses encountered communication barriers, primarily in their interactions with patients, family members, doctors, and lead teachers. Ineffective communication frequently occurs, leading to additional complexities in various situations. One new nurse described the challenges faced when communicating with patients, recounting instances where they misunderstood the nurse's instructions.

> "A seriously ill patient misunderstood safety precautions, believing that they had to leave the bed to urinate and defecate, creating potential hazards." (N8).

Another new nurse highlighted difficulties in communication with a lead teacher, emphasizing assumptions made by senior nurses about the new nurse's existing knowledge.

> "My tasked with obtaining blood from the blood bank without receiving essential information and precautions, feeling hesitant to seek clarification from the lead teacher." (N16).

3.2.3. Fear

A recurring theme emerged in the interviewees' descriptions, highlighting a common sentiment: fear. In the initial stages of their careers, new nurses find themselves grappling with numerous uncertainties due to their limited experience and skills.

> "A nerve-wracking experience when asked by the lead instructor to perform a puncture on a hospitalized patient, I feel both nervous and scared, with uncontrollable trembling of my hands." (N5).

Other new nurses expressed apprehension about adverse events that could compromise patient safety in the demanding and sometimes overwhelming clinical environment.

> "I am concerned about the challenges of managing multiple patients independently, expressing fear of adverse events, potential repercussions, and the risk of compromising patient safety." (N9).

3.3. Theme 2: emotional conflict

Emotional conflict emerged as a significant theme during the interviews, with a primary focus on conflict related to the new nurses' sense of self-worth. Despite entering clinical nursing with enthusiasm, a strong sense of professional identity, and confidence in their nursing capabilities, new nurses often grappled with conflicts that challenged their self-worth.

> "I recall the fulfillment experienced when successfully managing a patient with hyperkalemia until discharge." (N1).

> "I felt powerlessness and sadness during critical patient resuscitation, particularly when faced with the declaration of a patient's death and witnessing the family's grief at the bedside" (N14).

This conflict in self-worth highlights the emotional complexities encountered by new nurses in navigating diverse clinical situations.

3.4. Theme 3: compassion fatigue

The interviewees conveyed a significant theme: empathy fatigue, from which we derived two main sub-themes, namely psychological and physical symptoms, based on the interviews. Psychological symptoms included emotional apathy and a sense of powerlessness. Notably, emotional apathy and powerlessness emerged as a prevailing sentiment among new nurses.

> "I felt numbing effect in the intensive care unit, where interactions with acutely and critically ill patients became primarily task-oriented, devoid of deeper engagement." (N7).

> "I respond selectively to patients' needs based on personal assignments, overlooking unrelated call bells because of the pressure of pending treatments for my designated patients." (N9).

> "I witnessed the persistent pain and sadness of patients and families in emergencies, feeling helpless when families opted to discontinue treatment despite the nurse's efforts." (N5).

Physical symptoms included fatigue, sleep disturbances, and decreased physical functioning.

> "I felt tiredness and mental exhaustion, which were intensified by frequent night shifts and a demanding workload. Sleep quality reduced, accompanied by symptoms such as difficulty falling asleep, ringing in the ears, and headaches." (N12).

> "I had to resort to medication to help me sleep due to the stress and exhaustion caused by my intense work." (N10)

The interplay between decreased physical functioning and heightened psychological symptoms underscored the complex nature of empathy fatigue among new nurses, where fatigue impeded their ability to empathize with patients and manage their own negative emotions at work, creating a reciprocal relationship between the two domains.

3.5. Theme 4: the ethical dilemma

3.5.1. Value-based ethical conflicts

While analyzing the interview data, a crucial theme emerged: ethical conflicts arising from differences in values. The medical staff's primary duty is to save lives; however, in clinical practice, instances arise where patients' families opt for Do not Resuscitate orders, causing new nurses to grapple with conflicting feelings about respecting the families' decisions.

> "I have encountered family members who voluntarily opted for Do not Resuscitate (DNR), had to face the conflict between respecting the family's wishes and the nurse's belief in doing everything possible to save the patient's life." (N6).

> "I am instructed to keep a patient's specific condition confidential, leading to internal conflict regarding the patient's right to know, despite the obligation to provide humanistic care." (N11).

These ethical dilemmas underscore the challenges faced by new nurses in navigating conflicting values in the complex realm of clinical care.

3.5.2. Ethical conflicts arising from disparities between clinical and standardized nursing practices

The interviewees expressed instances of ethical conflicts arising between actual clinical work and standardized nursing practice, offering insights into their experiences.

> "when I performed infusions, diligently adhering to the prescribed process of three and seven checks, yet facing criticism from the instructor for perceived slowness and inefficiency, with patients expressing dissatisfaction over repeated inquiries about names." (N7).

The demands of a heavy clinical workload often prioritize efficiency and quality in real nursing scenarios, which contrasts with the perceived cumbersome nature of standardized operations. Some new nurses perceived adherence to norms as crucial for averting adverse events.

> "I think that standardized nursing operations can avoid medication administration errors and ensure patient safety." (N12).

These narratives illustrate the nuanced ethical challenges encountered by new nurses as they navigate the tension between practical efficiency and adherence to standardized protocols in their clinical practice.

4. Discussion

This study investigates the experiences of new graduate nurses within their first year of professional entry, specifically focusing on their self-perceptions of work readiness from a human characteristics perspective. By concentrating on these aspects, the research sought to broaden and enrich the existing understanding of work readiness. Kenny et al. argued that a new nurse's entry into a novel work environment signifies a learning and adaptation process to a different culture [30]. The transition from a supportive student environment to the clinical practice of a professional nurse involves variations in how new nurses learn and adapt during this transitional phase, which impacts their readiness for future work. In addressing new nurses' self-perceptions of work readiness, four overreaching themes were identified: psychological stress, emotional conflict, empathy fatigue, and ethical dilemmas.

During the transition period, new nurses encountered increased psychological stress characterized by challenges such as inadequate knowledge and skills, communication barriers, and fear, as revealed in our findings. This aligns with the findings of See et al. [31]. Labrague et al.'s review underscored the daunting and stressful nature of the transition from nursing student to licensed practical nurse, which is influenced by the demands of the hospital environment, work patterns, and the dynamic nature of the workforce [32]. The study highlighted that nursing students, with limited clinical exposure during their academic years, often lack essential clinical skills, such as taking vital signs and assessing patients, thus hindering their ability to apply theoretical knowledge to practical tasks in the workplace [33–35]. The disparity between classroom teaching and clinical nursing practice exacerbates this challenge [33]. New nurses struggle with the realization that theoretical knowledge alone is insufficient for managing nursing tasks, emphasizing the need for effective communication skills in their interactions with patients, families, colleagues, and interdisciplinary team members. Communication barriers arising from a lack of knowledge, skills, experience, confidence, and fear were evident in the new nurses, as identified in our interviews. Studies have emphasized the importance of communication skills in meeting patients' psychological needs, but fatigue often hinders new nurses from providing adequate humanistic care [36]. In China, new nurses typically undergo a six-to eight-month rotation in a unit during the transition period, facing stressors such as adapting to a new environment, unfamiliar colleagues, and concerns about adverse events [37]. Interviews indicated that new nurses may feel hesitant to perform tasks because of skill deficiencies and worry about jeopardizing patient safety. The interplay of inadequate knowledge and skills, communication barriers, and fear contributed to the psychological stress experienced by new nurses. To address these challenges, Yi et al. suggested increased training for new nurses in stress management and communication skills, emphasizing the role of nursing managers in enhancing professional knowledge, clinical skills, psychological resilience, and communication skills to facilitate successful transitions [38].

Furthermore, a prevalent emotional conflict among new nurses was identified in this study, characterized by a struggle over their sense of self-worth. Particularly, when engaged in critical patient resuscitation, new nurses perceived themselves as inadequately prepared for acute and critical patient care, which intensified the emotional conflict. Existing literature underscores that new nurses,

lacking prior experience in emergency care, face significant challenges when responding to emergencies in a clinical setting during their first year of employment [39,40]. The fast-paced and urgent healthcare environment exposes new nurses to notable vulnerabilities in medical communication, medication administration, resuscitation equipment operation, and sedation management [36]. The failure experienced by new nurses in handling critically ill patients shapes their self-perception as nurses, with frustration leading to a denial of self-worth [40,41]. While caring for general patients, successful experiences in patient care stimulate a range of emotions, including positive ones such as satisfaction or professional fulfillment, encouraging new nurses to affirm their professional selves [42]. The statements of the new nurses in this study align with this perspective. To address these challenges, nursing administrators and clinical instructors are encouraged to clarify the competencies required of new nurses and include simulation exercises in the clinical transition, allowing new graduates to practice dealing with emergencies in a setting closely resembling real clinical scenarios.

This study underscores that compassion fatigue is an emotional experience prevalent among new nurses during their first year of employment, manifesting in both psychological and physical symptoms. Johnson defines compassion fatigue as the emotional, physical, and psychological exhaustion experienced by healthcare workers due to prolonged exposure to a stressful environment [43]. Despite the importance of cultivating compassion in a nurse's professional identity, the intricate healthcare environment often challenges new nurses to adhere to ethical principles learned in school. In the early stages of their careers, new nurses may prioritize procedural care over empathic care. However, patients not only seek information about treatment options and technical aspects of their care but also desire psychological and spiritual support [44,45]. Newham et al. asserted that empathy involves the perception and alleviation of pain [46]. However, new nurses face work-related stressors such as knowledge gaps, communication barriers, fear, and inexperience, which reduce their empathy and lead to compassion fatigue [47]. This study aligns with Finley et al.'s findings that nurses experiencing compassion fatigue tend to withdraw from patients requiring emotional support [48]. Our study aligns with these findings, revealing that new nurses opt to overlook the nursing needs of patients not directly under their care when confronted with such situations. Empathy fatigue, characterized by deep exhaustion, cannot be easily alleviated through conventional means, and new nurses engaged in shift work under intense nursing and perceived stress experience low energy, decreased physical functioning, and difficulties managing negative emotions, further exacerbating empathy fatigue [49]. While empathy is influenced by a nurse's personality and personal traits, implementing strategies to empower new nurses to navigate challenging practice environments is imperative. Nursing administrators should establish a flexible scheduling system to balance new nurses' work, personal life, and recreation. In addition, nursing managers and instructors must prioritize the psychological well-being of new nurses and offer proper guidance to foster the development of correct values.

New nurses often experience ethical dilemmas, primarily in the form of ethical conflicts related to differences in values and conflicts between actual clinical practice and standardized nursing practice. According to the American Association of Critical Care Nurses (AACN), an ethical dilemma is a situation in which the nurse identifies an appropriate action but is unable to execute it, leading to actions that conflict with one's professional values [50]. Ethical standards emphasize that healthcare professionals should act ethically based on the standards of their profession, guided by intrinsic motivation to adopt unfamiliar behaviors [51]. Due to the unique challenges of the clinical environment and limited resources, new nurses find themselves in situations where the ideal "best practices" learned in nursing education clash with the reality of clinical practice [52]. The sensitive nature of dealing with terminally ill patients and the ethical implications of resuscitation decisions create internal conflicts for new nurses. Henderson et al. highlighted that the lack of a support system makes patient death a significant challenge for new nurses [53]. Nursing administrators and lead instructors must be attuned to the ethical dilemmas faced by new nurses, establish supportive systems in clinical practice, and guide them in recognizing and positively responding to such challenges. Simultaneously, healthcare organizations should enhance the ethical decision-making mechanism in clinical nursing to facilitate the active participation of new nurses in ethical considerations.

Nurses play diverse roles in healthcare organizations, serving as caregivers, communicators, and educators. The effective response to various professional nursing needs of patients requires new nurses to possess multidimensional competencies and attributes, contributing to improved care quality and patient safety [19,42]. If new nurses lack relevant competencies and attributes, inadequate work readiness can negatively affect patient safety, such as increasing the incidence of adverse events and increasing the length of hospitalization of patients [54]. Therefore, there is a need to assess whether new nurses are adequately prepared for practice when they begin their independent clinical careers and to remedy their deficiencies by providing additional education and management to help them successfully acclimatize to the clinical field. This study expands the meaning of new nurse readiness and provides a theoretical basis for assessing new nurse readiness.

4.1. Limitations

Several noteworthy limitations are associated with this study. First, the predominant educational background of newly graduated nurses in China is at the undergraduate level, with fewer nurses possessing a master's degree. Although the inclusion of new nurses with a bachelor's degree in this study reflects most new nurses in China, it may not fully capture the experiences of those with advanced degrees. This study focuses on the context of Chinese higher education institutions that generally adopt an engineering-integrated teaching method and involve an internship period of eight to ten months before graduation. The recruitment process in Chinese hospitals typically includes interviews, written tests, and skill operations for new nurse applicants. After joining a hospital, new graduate nurses undergo a two-year transition period, rotating through different departments to acquire nursing knowledge and skills in various specialties [55]. While this provides a certain level of homogeneity among new graduate nurses within the broader educational context, the study's exclusive focus on one hospital limits the generalizability of self-perceptions of work readiness among new nurses in different hospitals and provinces. Furthermore, to prevent potential coercive feelings from senior nurses toward new nurses, the confidentiality of interview content was assured, possibly influencing the candidness of responses. Given these limitations,

caution is advised when interpreting the study results. Future research endeavors should consider conducting interviews with new nurses, specialists, and those with postgraduate degrees to comprehensively analyze the self-perceived characteristics of work readiness among new nurses. In addition, designing studies with robust research methodologies and using work readiness measurement instruments, such as the Casey–Fink Graduate Nurse Experience Survey, would contribute to a more comprehensive understanding of the transition experience of new graduate nurses and allow for the collection of more nuanced data.

5. Conclusion

This study delved into the self-perceptions of work readiness among new graduate nurses during their first year of employment, elucidating a nuanced understanding of work readiness that encompasses psychological stress, emotional conflict, empathy fatigue, and ethical dilemmas. The insights gained contribute to a more comprehensive delineation of the attributes associated with work readiness in new nurses, offering valuable suggestions for enhancing the transitional process and devising effective retention strategies. This study underscores the importance of nursing administrators and educators giving due consideration to the emotional experiences and self-perceptions of new nurses. To facilitate a successful transition for new nurses, it recommends emphasizing joint training, fortifying support mechanisms, and conducting thorough assessments of new nurses' work readiness. By adopting these strategies, healthcare institutions can better address the multifaceted aspects of new nurses' work readiness and foster a more supportive and conducive environment for their professional development.

Ethics declarations

This study was reviewed and approved by Human Research Ethics Committee, the Fourth Affiliated Hospital of Zhejiang University School of Medicine, with the approval number: K2020213 (Date of Issue: December 31, 2020). All participants provided informed consent to participate in the study. All participants provided informed consent for the publication.

Funding

This work was supported by the Yiwu Scientific Research Program [grant numbers: 20-3-231].

Data availability statement

The data associated with this study are not deposited in publicly available repository. Data included in article/supp. Material/referenced in article. The data that support the findings of this study are available on request from the corresponding author.

CRediT authorship contribution statement

Heng Yang: Writing – review & editing, Writing – original draft, Software, Methodology, Investigation, Conceptualization. **Lili Yang:** Writing – review & editing, Visualization, Methodology. **Lixia Chen:** Writing – original draft, Project administration, Investigation, Data curation. **Jinheng Liu:** Methodology, Investigation, Conceptualization. **Shaomei Cui:** Supervision, Resources, Investigation. **Liyan Zhang:** Supervision, Resources, Investigation.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:Lili Yang reports financial support was provided by the Yiwu Scientific Research Program. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgments

We were grateful to all nurses who participated in the project interviews.

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