



Research progress on overqualification of clinical nurses

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Abstract: The overqualification of nurses refers to the subjective perception of individual nurses that their qualifications are higher than the needs of their positions. This perception can motivate more positive work behaviors, but neglecting its management will hinder nurses from realizing their professional values and lead to burnout and even the loss of nursing talent. This paper reviews the concept, measurement tools, research status, and influencing factors of nurses' overqualifications. It proposes corresponding strategies, aiming to provide nursing managers with a reference for effectively managing overqualified nurses.

Keywords: overqualification; Nurse; influencing factors; Review

1. Introduction

With the development of the medical field and the growing desire for a healthy life, the demand for high-level nursing personnel has increased, and the postgraduate nursing workforce has been further expanded to improve the composition of the nursing team. and enhance the quality of care^[1]. The number of nursing graduate students has increased, optimizing the educational backgrounds of nurses and strengthening their ongoing education. Meanwhile, in response to the pressures of aging populations, experienced nursing personnel have helped address the shortage of nurses in certain countries^[2]. However, when hospital resources are allocated unevenly, it can lead to the ineffective utilization of highly skilled nursing personnel. Additionally, when the supply of nursing professionals exceeds the demand for their services, it may result in potential issues, such as nurses feeling overqualified. This perception of overqualification can lead to various negative outcomes affecting employees' work attitudes and behaviors^[3,4]. These outcomes may include heightened negative emotions^[3], reduced job satisfaction^[4], the emergence of professional compromise^[5], and adverse effects on nurses' innovative behaviors^[6], ultimately impacting the quality of nursing care and the stability of nursing teams^[7]. Despite these concerns, there

is limited research on nurses' perceptions of overqualification, both domestically and internationally. Therefore, this paper aims to review the relevant literature regarding clinical nurses' perceptions of overqualification, with the goal of promoting high-quality nursing care and stabilizing nursing teams.

2. The concept of a sense of nurse overqualification

Overqualification consists of objective overqualification and subjective overqualification. Objective overqualification refers to the objective fact that an employee's educational background, abilities, and skills exceed the requirements of their job position. Objective overqualification refers to the objective fact that an employee's educational qualifications, abilities, and skills surpass the requirements of their job position^[8]. The perception of overqualification, alternatively known as subjective overqualification, as defined by Maynard et al. (2006), refers to an individual's subjective awareness that their educational attainment, skills, and abilities surpass those required for their current job position^[9]. This definition has been widely accepted and recognized. Objective overqualification is an objective state based on the actual matching degree between job requirements and employee qualifications. In contrast, the feeling of overqualification stems from employees' subjective perceptions, emphasizing their psychological awareness of the disparity between their qualifications and the content of their work. Objective overqualification serves as a foundation for the experience of overqualification. When employees' qualifications significantly exceed the job requirements, they are more likely to experience a sense of overqualification. The perception of overqualification is primarily derived from two conceptual dimensions: the dimension of "educational overqualification" associated with underemployment and the dimension of "skills or experience exceeding job requirements"^[10]. The complexity of overqualification primarily focuses on individuals' subjective experiences and is more likely to influence employees' work attitudes and behaviors^[11]. Consequently, the prevailing understanding of nurses' perception of overqualification in China is that they subjectively believe their educational level, professional skills, experience, and other attributes significantly exceed the actual requirements of their current job positions. Over the past 30 years, overqualification has emerged as a prominent research topic in organizational behavior and related fields.

3.1 Scale of Perceived Overqualification (SPOQ)

The scale was developed by Maynard et al.^[9] and is widely utilized in China. The original scale has a Cronbach's alpha coefficient of 0.89, indicating good internal consistency. Yang's translation is the most frequently employed by nursing scholars in China^[12]. This scale comprises nine items that assess overqualification based on various dimensions, including education, knowledge, experience, and overall capacity. Examples of the items include, the level of education required for my job being lower than my current level of education, and previous work experience is not very relevant to my job. on a 5-point Likert scale, ranging from 1 to 5, with 1 indicating a higher total score reflects a greater degree of overqualification.

3.2 Perceived Cognitive Overqualification Questionnaire (PCOQ)

The scale was developed by Fine and Nevo^[13] based on a two-dimensional framework established by their predecessors^[14]. It primarily assesses employees' perceptions of excessive cognitive abilities. The scale consists of two dimensions: the sense of cognitive mismatch and the sense of cognitive no-growth, comprising a total of nine items. The cognitive mismatch items include statements such as, 'level of intelligence exceeds my job qualifications who are not as smart as I am can still perform my job well.' no-growth items include statements like, 'need to solve difficult problems at work (reverse scored) and 'job is not mentally challenging. on a 5-point Likert scale, yielding an overall Cronbach's α coefficient of 0.86. Compared to the SPOQ scale, this scale has a more limited scope of application. As research has progressed, some scholars argue that the sense of overqualification should focus solely on the sense of mismatch, leading to its less frequent use. This scale has not been applied in the nursing field, suggesting an opportunity for future research to develop measurement tools tailored for the nursing population based on this framework.

4. Research status

Most current studies on nursing staff's sense of over-qualification are cross-sectional. By examining the sense of over-qualification among nurses in various departments and regions, we can gain insights into the current state of nursing staff's over-qualification, analyze the influencing factors, and explore the relationships with other variables. Almagharbeh's survey of 379 Jordanian nurses revealed a high level of over-qualification, which may be linked to the country's healthcare environment and the changes in the human resource structure of nurses in healthcare units following the epidemic.^[15] A study conducted in Australia^[16] analyzed 4,520 nursing graduates through retrospective observation and found that the overall level of overqualification among nursing graduates was moderately low during two distinct periods. This finding may be attributed to the high demand for nursing professionals in Australia. However, the study also highlighted that the oversupply of graduates within a short timeframe poses a latent issue. The results of various surveys conducted by Chinese scholars on clinical nurses exhibit some variation; nevertheless, the majority indicate that Chinese nurses' perception of overqualification is at a medium or moderately low level. For example, Long^[17] conducted a survey study involving 394 nursing staff at a tertiary hospital, revealing that the nursing staff's sense of over-qualification scored (23.33 ± 8.55), indicating a moderately low level. This finding aligns with the results of a study by Shang et al. In contrast, Cai et al.^[18] surveyed 269 ICU nurses and found that their sense of over-qualification scored (31.38 ± 7.19), which was slightly higher than the findings of Han et al.^[19], who surveyed ICU nurses at a tertiary hospital in Shaanxi Province. This discrepancy may be attributed to the differing populations of nurses sampled in the two studies. Additionally, Yao^[20] showed that postgraduate nurses had an over-resourcefulness score of (31.11 ± 6.79), and their level of over-qualification was slightly higher than that of some

studies, suggesting that hospitals should pay attention to the status of over-qualification of highly educated nurses.

The results of the study conducted in Jordan differ significantly from those in the other two countries, which may be attributed to the country's limited medical resources. Jordan's healthcare system is relatively underdeveloped, and as it faces increasing medical pressures, it struggles to effectively formulate and implement policies for the efficient management of nursing staff. Additionally, during the pandemic, there was a rapid and hasty expansion of nursing positions. However, the medical system lacks the flexibility and inclusiveness necessary to integrate these newly added nursing staff in the long term. Consequently, Jordan is more likely to experience a mismatch between available staff and job requirements, resulting in a sense of overqualification among caregivers. Furthermore, the research methodologies and sample selection in different countries may also influence the outcomes. For instance, studies in Jordan may prioritize the feelings and experiences of currently employed nurses, while research in Australia may focus more on retrospective observational analyses of nursing graduates. This discrepancy can introduce a specific bias in the study results between the two countries. In contrast, the Chinese study provides a more detailed approach to population selection and is also influenced by various confounding factors, such as demographic characteristics, which reveal distinct differences and further identify the factors contributing to the overqualification of nursing staff. Despite these variations, all studies consistently highlight the issue of nurse overqualification. They emphasize the need to address this concern in light of the current developments in the medical field and the evolving employment landscape across different countries. It is essential to implement measures to effectively manage and mitigate the overqualification of nursing personnel.

5. Factors influencing the perception of nurse overqualification

5.1 Demographic factors

Existing studies on Perceived Overqualification (POQ) indicate that factors such as nurses' age, education, income satisfaction, highest degree, training method, title, and personal traits significantly impact their levels of overqualification. The study^[17] demonstrated that nursing staff with intermediate and higher titles experienced greater levels of overqualification, which may be attributed to a mismatch between their current continuing education content and the rapidly evolving healthcare environment. At the academic level, individuals with higher educational qualifications often experience a greater sense of overqualification. This feeling may be linked to the employment gap that arises from the inability to utilize one's academic strengths, which can be attributed to the demanding and exhausting nature of clinical nursing work.^[17] Yao^[20] demonstrated that higher income satisfaction correlates with a lower sense of overqualification among nurses. Additionally, full-time postgraduate nurses exhibited a greater awareness of overqualification compared to those who obtained their degrees through on-the-job training. This difference may be attributed to the fact that doctoral students have more experience in clinical work environments and are better adapted to their nursing roles, leading to a diminished sense of overqualification^[20]. At the younger age level, graduate nurses tend to feel a greater sense of overqualification, which may be linked to their

high expectations in the workplace^[20]. At the personal trait level, nurses who possess a high sensitivity to fairness are more attuned to unfair situations in the workplace. This heightened awareness influences their motivation and sense of identification with their work, ultimately enhancing their perception of overqualification^[20].

5.2 Organisation and Organisational Climate Perception

Perceptions of organization and organizational climate encompassed hospital grade, leadership behavior, and perceptions of the nursing organizational climate. The level of hospital ranking influenced perceived nurse overqualification, which was found to be higher in primary hospitals compared to tertiary hospitals. This discrepancy may be attributed to the fact that primary hospitals typically have a larger proportion of repetitive primary care tasks and a less defined career development system. Jiang^[21] also noted that a platform leadership style can influence nurses' sense of overqualification, ultimately affecting their work engagement. This research confirms that an optimistic leadership style can diminish nurses' feelings of overqualification and subsequently impact their work behaviors. Therefore, it is recommended that hospitals encourage nursing leaders to adopt positive leadership styles, provide employees with the opportunity to fully develop their talents, and prioritize their professional growth. Additionally, nurses' perceptions of the organizational climate significantly affect their sense of overqualification; a greater sense of organizational fairness^[20] and a lower perception of organizational politics^[22] correlate with a reduced likelihood of nurses feeling overqualified, while a higher perceived level of organizational managerial support enhances their overall job satisfaction.^[22] Organizational political cognition refers to organizational members' subjective evaluation and attribution of the extent to which self-interested behaviors of colleagues and leaders occur in the work environment^[23], and both organizational political cognition and feelings of over-qualification result in the accumulation of negative emotions, which are highly likely to hurt the work.

5.3 Factors influencing the ending

Table 1. Factors influencing the ending

Source	negative influence
emotion	Increase surface play in emotional labor ^[3]
attitude towards work	Increase job alienation ^[6]
	Reduce job satisfaction ^[4]
	Increase propensity to leave ^[7,17]
	Decrease in harmonious passions, increase in compulsive passions ^[24]
Work behaviour	Exacerbate burnout ^[25]
	Weaken innovative behaviour ^[6]
	Increase knowledge hiding behaviour ^[15]
	Aggravate occupational compromise ^[26]

6. response strategy

Organizational climate^[22], leadership style^[21] [24], and personal traits^[20] all affect the level of nursing staff's sense of overqualification. To mitigate the nursing staff's feelings of

overqualification, reduce its adverse effects, and enhance the organizational support system, appropriate coping strategies will be proposed at the individual, organizational, and societal levels.

6.1 Individual level

The sense of over-qualification is both an honor and a pressure for caregivers. It attests to the caregiver's excellence and depth of attainment in their professional field, but it also implies that they are not satisfied with their current work environment and tasks, and look forward to achieving greater self-worth. Nursing staff should face up to their sense of overqualification and look for suitable ways to fulfill their potential and abilities. For instance, they can actively engage in research projects, pursue professional training, and participate in academic exchanges to enhance their professionalism and overall competence. Conversely, the feeling of overqualification can trigger a range of negative emotions, necessitating an improvement in the emotional adjustment skills of nursing staff. This can be achieved by enhancing self-awareness of emotions, developing positive emotional coping strategies—such as seeking support from family, friends, or professionals, and actively pursuing solutions—and cultivating co-emotional regulation skills through techniques like meditation and positive thinking^[15]; Additionally, setting realistic expectations is crucial, as performance often tends to be goal-oriented^[27], which can mitigate the negative effects of feeling overqualified.

6.2 Organisational level

Hospitals should establish a scientific and equitable performance appraisal and salary distribution system for nurses. Management must enhance their own review processes and impose constraints on themselves and their supervisors. A robust training program for nurse researchers should be implemented to provide organizational support, enabling research nurses to take on leadership roles in their field. The perception of overqualification among nursing leaders positively influences team innovation^[28], suggesting that hospitals should recognize the potential value of overqualified leaders. Furthermore, in the context of improving hospital conditions and environments, it is essential to attract more of these talented individuals and equip them with a strong team. This approach will allow them to fully utilize their skills and strengths, ultimately achieving mutually beneficial outcomes for both individuals and the hospitals. Nurse managers' styles, attitudes, and management strategies significantly influence the organizational climate^[21]. It is essential for nursing managers to be aware of the prevailing sense of overqualification among their nursing teams and to encourage nurses to share constructive feedback regarding workflow, management, and other areas. For nurses who experience a strong sense of overqualification—particularly those with advanced education and titles—personalized management approaches should be implemented. This includes customizing clear career development paths that align with their specialties and strengths, as well as providing professional guidance and ample resources. Such efforts aim to foster a positive working environment for nurses and enhance the overall performance of the team. For instance, young nurses often exhibit overconfidence in their

qualifications and education^[7]. Nursing managers should guide new nurses in career planning and help them identify their professional positioning. Additionally, they should provide clinical training and encourage participation in research, teaching, and other activities. Highly educated nurses should be motivated to pursue further education, with a focus on developing their research skills. This can be achieved by offering opportunities for continued learning and establishing appropriate incentive programs. When managing senior nurses with advanced titles and extensive experience, it is essential to conduct regular evaluations and provide constructive feedback. This approach allows for the timely identification of issues and the implementation of suitable solutions. Encouraging senior nurses to share their experiences and teach their skills can enhance the overall competency of the team while also promoting their development as specialist nurses. Furthermore, nurse managers should respect individual perspectives, actively foster relationships with nurses, treat each nurse equitably, and encourage their involvement in decision-making processes. By creating an environment characterized by a mentor-protégé relationship, a positive internal cycle can be established, which reduces knowledge hiding and promotes the effective utilization of highly qualified personnel.

6.3 social support

The regulation and training of nursing personnel are becoming increasingly stringent, leading to an improvement in the professionalism and comprehensive skills of nursing graduates. However, traditional perceptions of nurses still persist in society. To enhance the social status of nurses, it is essential to foster a sense of pride within the profession, thereby alleviating feelings of over-qualification. This can be achieved through the effective use of media and social networks to highlight the critical roles nurses play in specialized care and health education, while also challenging outdated stereotypes. Additionally, establishing a robust social support system is crucial. This could include the creation of mutual-aid groups for prosthetic support and psychological counseling centers within communities and hospitals. Encouraging family members to engage more actively in the daily lives and responsibilities of nurses can also help alleviate their stress.

7. Conclusions

The study indicates that the overall perception of overqualification among nurses is at a medium-low level. Nursing managers should categorize the management of nurses based on their varying levels of education and qualifications. In clinical nursing management, greater attention should be directed toward young, highly educated, and highly credentialed nurses. The sense of overqualification can be alleviated by enhancing organizational support, fostering a fair and harmonious work environment, and improving nurses' emotional regulation skills. However, there is a scarcity of assessment tools specifically designed for the nursing population, and most existing studies are cross-sectional, lacking longitudinal and qualitative research. Therefore, it is recommended that future research collect descriptions and expressions related to the overqualification of nursing staff through literature reviews, expert interviews, focus group discussions, and other methods.

Additionally, a measurement tool for nurses should be developed based on the specific characteristics of the nursing profession. Simultaneously, the study should incorporate relevant theoretical models to examine the influencing factors of nurses' overqualification and the mechanisms by which these factors affect their emotions, attitudes, and behaviors. Currently, most studies focus on the negative aspects of overqualification, with only one study addressing the impact of nursing leaders' overqualification on team innovation. This research emphasis has resulted in a limited understanding and exploration of the positive aspects of nurse overqualification in both academic and practical contexts. Future research should prioritize the positive dimensions of nurses' overqualification, such as investigating how it can foster innovation, enhance work performance, and improve teamwork dynamics. By shifting the research perspective, a more comprehensive understanding of the impact of nurse overqualification can be achieved. Reason: Improved clarity, vocabulary, and technical accuracy while maintaining the original meaning.

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