

Progress in the Application of Reflective Education on Undergraduate Nursing Interns

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Abstract: *Objective:* To explore the implementation methods and effects of reflective education, and to provide references for the development of reflective education in Chinese nursing schools. *Methods:* Relevant literature was searched from China National Knowledge Infrastructure, Wanfang Database, Wipro Chinese Science and Technology Journal Database, and PubMed Database, and the included studies were analyzed descriptively. *Results:* The implementation of reflective education included work-site education, group discussion, video teaching, self-reflection, and expert lectures; the interventions mainly included study groups, role-playing, individual instruction, peer cooperation, demonstration and observation, field simulation, and video presentations. The implementation of reflective education can improve the sense of professional identity and professional competence of nursing interns, and reduce nursing errors and adverse events. *Conclusion:* Currently, nurses in China lack self-awareness and critical thinking skills, it is recommended that reflective education be incorporated into the teaching content of undergraduate nursing students during their internship in order to promote the development of professionalism and humanistic caring skills of nursing students.

Keywords: Reflective education; Undergraduate nursing students; Interns; Education; Practice; Educational innovation

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1. Introduction

The nursing internship is an important transition from school to hospital for nursing students, and it is a key link to cultivating their practical skills. However, at present, nursing interns have problems such as low recognition of professional value, low clinical skills, and poor combination of theory and practice, resulting in unsatisfactory internship results. Therefore, improving the professionalism and professional skills of nursing interns and reducing adverse events has become an urgent problem to be solved.

Reflective education originated in Western countries in the 1980s, aiming to guide students to reflect on their learning experiences and activities and acquire new knowledge from them, and to promote cognitive, affective, and behavioral changes in students so as to improve their problem-solving skills. In recent years, nursing schools in China have also begun to apply reflective education methods to their teaching. In 2014, the Affiliated High School of Renmin University of China carried out an innovative curriculum reform based on

reflective education; in 2016, the Department of Medicine of Peking University offered a professional degree program in medical education based on reflective education; in 2017, the West China College of Stomatology of Sichuan University opened innovative talent cultivation for dentistry based on reflective education system; in the same year, Zhongshan Medical College of Sun Yat-sen University offered the teaching reform of general medicine graduate degree program based on reflective education, etc. This study reviews the current situation of reflective education in nursing school interns and residents (hereinafter referred to as “nursing students”) at home and abroad, and provides references for the development of reflective education in nursing schools in China.

2. Literature search strategy and data screening criteria

The search period was from the establishment of the database to December 31, 2023. Search terms included undergraduate nursing students, reflective education; search formula was (Nursing) undergraduate students [thesis title], or (Nursing) undergraduate students [Chinese title]. Manual searches were conducted in China National Knowledge Infrastructure and Wanfang database, and then full-text searches were conducted in Wipro Chinese Science and Technology Journal Database with “undergraduate” as the keyword and “reflection” as the subject word.

The criteria for selection were: (1) the target population was undergraduate nursing students; (2) the type of literature was nursing education; (3) the literature was published from the date of the database to December 31, 2023; (4) the included literature was in line with the definition of reflective education; (5) the literature provided the methods of implementing reflective education; (6) the conclusion of the literature reflected the positive impact on practicing nursing students; (7) there was no clinical study related to the literature; (8) the literature had an English-translated version; (9) at least one of the authors of the literature was Chinese; and (10) the literature utilized a quantitative research design. Exclusion criteria included: (1) reviews that did not meet the above requirements; (2) literature that did not clearly state the purpose of the study; and (3) books that did not meet the above requirements.

3. Concept of reflective education and current research status

Reflective education is a model in which people improve their self-development by thinking about their behavioral patterns and environmental factors in learning, work, and daily life ^[1]. Its core elements include reflecting on events that have occurred and making constructive comments and actively engaging in practical activities rather than passively accepting or implementing decisions made by others ^[2].

Reflective education originated in the 1970s and is based on “reflection,” emphasizing personal experience and holistic connections. It was initially used in the healthcare industry as an effective way to improve the quality of care and patient safety, and was implemented in many hospitals in the United States in the 1990s and gradually extended to other disciplines. In recent years, China has also begun to pay attention to and emphasize the application of reflective education in clinical work, and some scholars have tried to carry out relevant research by drawing on successful cases abroad and combining them with the actual situation in China. At present, there is no uniform standard on the definition of reflective education, and there are differences in the conceptual understanding of different scholars. Chen *et al.* ^[3] believed that reflective education refers to the professional context, where the teacher guides nursing students to review, analyze, and evaluate their own behavioral performance and consequences; through in-depth analysis of the reasons that led to the emergence of adverse consequences, and then measures are taken to reduce or avoid recidivism, so as to achieve the purpose

of improving the clinical competence of nursing students.

4. The implementation method of reflective education

Foreign studies show that the implementation of reflective education mainly includes on-site experiential education, video teaching, group discussion, self-reflection, expert lectures, reflective diaries, workshops, simulation teaching, case discussions, etc. ^[4-10], and there is only one study that applies workshops as a method of reflective education to undergraduate internship nursing students, i.e., Lewandowski *et al.* ^[11] used a workshop to train nursing students in “learning how to solve problems” for four months, which aimed to help nursing students think effectively when facing work challenges and promote them to actively explore new ways to solve problems. Some colleges and universities in China have tried to incorporate reflection education into the nursing education system, such as Southwest Medical University and Huazhong University of Science and Technology, which have changed the twice-weekly group practical training to monthly comprehensive practical training, encouraging students to independently design and implement a small project, and requiring students to complete the entire experimental process in a team, which is important for improving students’ critical thinking skills and innovation ability ^[12]. At present, a few schools in China have begun the work of practical exploration, but in general, China’s clinical nursing education model has not yet completely freed itself from the influence of the traditional teaching model, so it is possible to draw on the advanced experience of foreign countries, combined with the national conditions, to explore a reflective education model suitable for Chinese characteristics.

5. Interventions in reflective education

Reflective education is implemented through a series of interventions, including group discussions, role-playing, individual coaching, peer collaboration, demonstration and observation, field simulation, and video case presentations. In particular, a study group is a group in which multiple nursing students discuss a topic or case study ^[13]. Role-playing refers to playing the role of a patient or family member in a real situation, where the nurse communicates and interacts with them to understand their needs and solve problems ^[14]. Individual coaching is when an experienced senior nurse or nurse manager provides individual coaching to the nursing interns so that he/she learns the correct approach and response ^[15]. Peer collaboration refers to the formation of a team of two or more people to work together on a particular job or task. Demonstration and observation refer to nurses leading interns to observe clinical practice activities so that they can learn proper nursing techniques ^[16]. Field simulation refers to the live demonstration and explanation of a particular technique, which facilitates nursing interns to master the key points of the skill ^[17]. Video case presentations refer to the use of video technology to record the performance of interns during teaching visits, professional education activities, case discussions, clinical practice, etc., which serves as a basis for teachers to evaluate and improve teaching methods ^[18].

6. Evaluation of the impact of reflective education on nursing interns

Liang *et al.* ^[18] showed that the implementation of continuous reflective education before and during the internship can improve nursing students’ sense of identity and competence in the nursing profession, as well as reduce the incidence of nursing errors and adverse events. Chen ^[19] compared the learning outcomes of interns in Yunnan Cancer Hospital who did not implement reflective education with those who did, and the results

showed that the time required to complete the internship was the same between the two groups, but the latter scored higher on average; the study also found that the implementation of reflective education could enable nursing students to better master nursing knowledge, enhance clinical skills, improve patient satisfaction, and effectively reduce interns' poor work behaviors. Yang *et al.* [20] conducted a 1-month intervention trial in which 10 undergraduate nursing students were randomly selected to be taught in a “reflective” or “non-reflective” manner. The results showed that in the experimental group where “reflective” teaching was implemented, the themes regarding the psychological experience of undergraduate nursing students during their internship were low professional identity, discrepancy between what they learned in the classroom and clinical practice, low awareness of safety and protection, weak awareness of scientific research, and the need to strengthen interpersonal communication and humanistic caring skills. During the internship, reflective education not only helped the nursing interns consolidate their basic nursing skills but also enhanced their professionalism by prompting them to continuously learn and master new nursing skills through challenges and difficulties in practice.

7. Discussion and conclusion

Reflective education aims to make nursing students understand the various aspects of nursing work, familiarize them with the nursing work environment and clinical practice process through training before clinical internship, and improve their self-knowledge ability. At present, domestic undergraduate colleges and universities are gradually carrying out the reform of undergraduate and specialist nurse education, emphasizing the combination of theory and practice, and integrating the cultivation of professional quality into practical teaching.

Based on the results of the literature search and the previous research results of the group, this study summarizes the relevant research on reflective education in undergraduate nursing schools in China and provides references for the promotion of reflective education in undergraduate nursing schools in China.

Due to the lack of a unified and standardized outline of reflective education, there are some differences in the methods of reflective education carried out by various researchers, and the research subjects are mainly juniors, seniors, or graduate students, with fewer relevant studies on undergraduate nursing students. In addition, the conclusions of the studies on the effects of reflective education on undergraduate nursing students' work attitudes, job satisfaction, and communication skills are inconsistent, and their specific mechanisms need to be further explored.

Disclosure statement

The authors declare no conflict of interest.

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