Nursing Students' Perceptions on Professional Identity for Nursing Health Education Course

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ABSTRACT

Following the change in human lifestyle and behaviour, the disease spectrum has changed. Systematic health education activities have gained more attention and recognition. In China, for the last decade, colleges and universities have paid more attention to the importance of health education courses in nursing science. As a humanities nursing course, students professional nursing value is an important aspect in course design and teaching practice. However, we do not know this course has an impact on students' professional identity, and what aspects of professional identity it will affect. This study analyses nursing students' professional identity after the Nursing Health Education course and discusses the need to implement the course in nursing. From December 2021 to February 2022, we collected data by the Chinese Version of the Nurses' Career Identity Scale (NCIS). 582 nursing students who participated the course, were surveyed from a vocational college and interviewed 24 students one by one individuals. For data analysis, we employed the SPSS 26.0 software package and content analysis. According to the research data analyze and result, it present the professional education is an important stage for the formation of nursing students' professional identity. The Nursing Health Education course helps nursing students build a positive professional identity.

The faculty of nursing should serve as a role model and assist students in clarifying their personal and professional values.

1. INTRODUCTION

1.1 Background

Since World War II, with the improvement in behavioral science, health education has developed rapidly. Systematic health education activities have gained more attention. Nurses, as an important part of the health service system, should play a pivotal role in the system. Health education for nurses garnered attention in the 1980s (Syred, 1981). Consequently, more developed countries introduced health education into the nursing discipline, with Hong Kong, Taiwan, the United States, and Canada at the forefront (Bastable, 1998). These countries have health education courses in medical schools and made them compulsory for public health and nursing students.

According to the seventh national census, China is a large population country, with 1443 billion people (National Bureau of Statistics, 2021). With the rapid development of China's economy and the substantial improvement of living standards, the demand for health services is increasing. Health needs are moving from the treatment of diseases to comprehensive health. In July 2019, the Healthy China Action (2019–2030), as a national policy, was issued by the National Health Commission of the People's Republic of China (National Healthy Action Promotion Committee, 2019). This issue detailed the planning of the health work in the next decade, guiding health-related areas, with health education of nurses becoming one of the core competencies. The issue will broaden the nursing profession and trigger an important revolution in nursing teaching courses and teaching content in China.

Under the health policy change and nursing science developing trend, health promotion and prevent disease becoming a new work aspect in nurse. However, In China, school education focuses on disease education—diagnosis and treatment of diseases for a long time. Therefore, prevention-related courses are scarce, prompting nursing students to consider their role as helping doctors to cure diseases rather than promoting health. They also regard the important work of nurses merely as operational skills in a hospital. This deficiency of prevention-related courses may affect the formation of the professional self-concept of nursing students; other studies suggest that this is the most important factor affecting the level of professional identity (Gao, 2012). Many nursing students believe that nurses do not have decision-making rights and initiative in clinical practice because they do not have prescription rights and are not independent (Ding et al., 2007). If the work of nurses is only affiliated with the doctor, their value should be limited. Thus, they lack the enthusiasm to learn and professional identity for the discipline.

Enhancing professional identity and understanding the real connotation of nursing will help nursing students serve more people in practice. China is prioritizing professional identity in nursing education. We conducted this study, hoping to explore the course on students' professional identity and learning value and make us much better in this course.

1.2 Research problem and research gap

Professional identity is one of the nursing humanities course contributions, and it is a key course value for nursing courses. Empirical research demonstrated humanities courses can enhance the professional identity of diploma students (Lan et al., 2022). However, nursing health education as a new course in China, which can affect nursing students' professional identity, has not been confirmed by studies. In this research, we hope to explore the course value for students' professional identity.

1.3 Research questions

RQ1: What is the student's Nurse's Career Identity Scale (NCIS) score after finishing the course?

RQ2: How does a nursing health education course affect the development of professional identity among nursing students?

2. LITERATURE REVIEW

Professional identity, which originated from ego identity, is an essential concept in psychology. In nursing area, professional identity containing skills and functions; knowledge values and ethics; personal identity; group identity; and the influence of the context of care (Fitzgerald., 2020), some scholars consider it should include self-efficacy; professional value; self-determination; professional identification;grasp of the role and so on (Yukie & Katsuya, 2006), and developed the nurses professional identity scale according to these concept. Whatever the concept definition and contains, it all about nurse values. Previous research prove the professional identity plays an important role in the individual's career development (Gao et al., 2011). In nursing, professional identity refers to affection for nursing and the perception of the value of nursing work. Recently, improving professional identity has been regarded as the entry point to stabilize the nursing workforce because it will help raise nurses' retention rate (Cowin et al., 2008; Deppoliti, 2008) and improve the quality of care (Hensel & Laux, 2014; Jahanbin et al., 2012). Other nursing students may be discouraged from choosing nursing as a life-long career owing to the lack of professional identity. This can also cause job burnout and a high turnover rate and impact the stability of the nursing team (Chen et al., 2015). Johnson et al. (2012) indicated that the formation of professional identity was started before nursing education and developed throughout their nursing careers. Professional values should be promoted and continue from student to nurse over the years (Bijani et al., 2019). Previous research suggested educators should integrate educational intervention in courses to assist and engage students' professional identity development is useful (Kay et al., 2019). Therefore, it is

necessary to establish identity formation as an educational objective (Cruess et al., 2019). That's why nursing teachers should pay attention to professional identity in course design.

Nursing health education is a discipline that combines nursing science and health education. It can promote lifestyle and living environment by improving health aspects, helping people establish healthy behavior, and elevating health levels. Nurses working in clinics and communities are the closest health staff to patients; therefore, they can help them establish healthy behaviors. Owing to it being an interprofessional course and containing more disciplines, teaching and learning is a challenge for teachers and students. On the one hand, it requires more skills and competency for nurses; on the other hand, rebuilding the nurse's role in the healthcare area and healthcare work. It may change the nurses' impression of the healthcare profession. Although the course is beneficial for nursing professional competency, only a few nursing schools have offered these courses. Owing to the framework for teaching materials, syllabus, and curriculum frameworks are scarce in China (Dai & Tian, 2016). While most clinical nurses recognize their role as health education providers, they lack professional knowledge (Yu & Liu, 2017). As a nursing humanities course, the course should improve skill competency and enhance the humanities for students at the same time; in other words, humanities may be more important than competency in the course contribution. Professional identity is one of the essential literacy in nursing humanities, which is the first and foremost humanities attention to nursing educators. However, most nursing courses pay attention to skill competencies and ignore the humanities in China. In the course, researchers and educators talk about teaching approaches and satisfactions, such as service learning patterns (Tang, 2003), participatory teaching method (Chen et al., 2010), reflection learning, and group discussion method (Mo et al., 2011), anchor teaching method (Qiao & Wu, 2017), experiential teaching method (Geng et al., 2018), it has not researched on professional identity in the course.

This research focuses on describing the nursing students' professional identity in the course and explores the course and how it affects their professional identity, as well as the key to professional identity formation. It should benefit nursing teachers to design and implement the new course.

3. RESEARCH METHODOLOGY

3.1 Design and Participants

A quantitative and qualitative approach is used in this study. The sample selected criteria is: 1) participated the course and completed all the course teaching content and assignments; 2) the major is nursing and midwife; 3) vocational education level. In the last class, we sent a link to the questionnaire to all participants and explained the objectives. Participants consented to participate in the study, and we assured them of the confidentiality of their personal information. We also conducted semi-structured interviews with 24 volunteers one by one individually, and ensure the interview environment was private, everyone did not know others interview.

3.2 Instruments

We used the Nurse's Career Identity Scale (NCIS), a 21-item scale developed by the Department of Nursing, University of Tokyo; the instrument is used in Japan, Sweden, and other countries. The Japanese version of NCIS was translated into Chinese by Zhao (Zhao et al, 2010). The scale contains seven dimensions: self-efficacy, career value, grasp of the role, self-determination, professional identification, influence on the organization, and influence on the patients. Each item was rated on a 7-point Likert scale ranging from 1 (totally disagree) to 7 (entirely agree). Total scale scores ranged from 21 to 147, with higher scores indicating better professional identity. Cronbach's alpha value for the scale was found to be .84, and for the sub-scales, it ranged from .69 to .84. The content validity was .92.

In semi-structured interviews, we asked the following questions.

(a) After finish the course, what do you think is the meaningful of nursing w ork? talk about it.

(b) What have you learned about the nurse role through this course? Do you understand what is nurse's responsibility?

(c) After you finish this course, what changes do you notice in yourself such as knowledge and values?

3.3 Ethical aspects

The study was approved by IRB of the First Affiliated Hospital of Jinan University, approved No.KY-2021-072. Participants consented to participate in the study, and we assured them of the confidentiality of their personal information. Before the interview, our study purpose, voluntary participation, and confidentiality were informed to participants. All participants provided informed consent to be recorded by audio after being told their rights of confidentiality, anonymity, and voluntary participation.

3.4 Data collection

We collected data from December 2021 to February 2022. To ensure the response rate, we displayed the QR code of the questionnaire at the end of the NHEHP course. A total of 582 responses were collected, resulting in 565 valid questionnaires of NCIS.

3.5 Data analysis

To analyze data, we used SPSS 26.0. software. All the quantitative data calculated means, present it by M±SD, and Using t-test to analyze grade different. $P<0.05$ is significant. And the interviews were recorded and transcribed verbatim. Two researchers (researcher 1 and researcher 2) familiarised themselves with the data and generated main opinions from students by using mind-mapping for induction and integration, and finally, form topics and sub-topics. Finally, data were interpreted and revised by other researchers and students participating in the interview.

4. RESULTS

4.1 Quantitative findings

A total of 565 nursing students responded to the NCIS survey. Table 1 indicates the demographic characteristics of the participants. The average age of the participants was 18.68 years, with a range between 17 and 27 years. Most of them were female (n=511, 90.4%). Among them, 79 (14%) were in their first grade and 486 (86%) were in their fourth grade. As there is an extremely uneven ratio of gender and age, we found no significant difference between the two variables. Bivariate analysis showed correlations is no significant difference between the NCIS scale and grade.

Table 2 shows that the mean value for the NCIS was 103.10 (n=565, SD=16.23). Further, professional value (M=5.04, SD=0.89) and self-concept (M=5.14, SD=0.92) ranked high.

Table 1 Correlation between NCIS and participants' characteristics

Demographics	N (%)	NCIS (M±SD)	*t*-test/F-test	*P* value
Age(years)				
<18	10	105.50±7.76		
18–27	555	103.05±16.34		
Gender				
Male	54	108.07±19.40		
Female	511	102.57±15.79		
Grade			-0.383	0.702
Year 1	79	103.75±18.52		
Year 4	486	102.99±15.84		

NCIS=Nurse's Career Identity Scale，M=mean, SD = standard deviation

Table 2 Descriptive statistical measures of the NCIS factors

NCIS	Ranking	M(n)	SD	Theoretical score range	Average scoring rate (%)
self-efficacy	5	4.94(3)	0.98	1–7	70.57%
professional value	2	5.04(3)	0.89	1–7	72.00%
self-determination	7	4.65(3)	1.01	1–7	66.43%
professional identification	3	5.02(4)	0.98	1–7	71.71%
grasp of the role	1	5.14(3)	0.92	1-7	73.43%
influence on the organization	6	4.40(2)	1.05	1-7	62.86%
influence on the patients	4	4.99(3)	1.06	1-7	71.29%
Total		103.10	16.23	21–147	70.14%

NCIS=Nurse's Career Identity Scale, M=mean, n=number of entries,

SD = standard deviation.

4.2 Qualitative findings

Table 3 lists the general information of the interview volunteer: 3 male and 21 female students participated, aged between 18 and 21 years.

Table 3 General information of the interview volunteer

Number	Educational background	Age	Gender	Grade	Area
No. 1	Vocational education	19	Female	Year 4	Nursing
No. 2	Vocational education	18	Female	Year 4	Nursing
No. 3	Vocational education	19	Female	Year 4	Nursing
No. 4	Vocational education	19	Male	Year 4	Nursing
No. 5	Vocational education	18	Male	Year 4	Nursing
No. 6	Vocational education	18	Female	Year 4	Nursing

No. 7	Vocational education	18	Female	Year 4	Nursing
No. 8	Diploma	19	Female	Year 1	Midwife
No. 9	Vocational education	19	Female	Year 4	Nursing
No. 10	Vocational education	18	Female	Year 4	Nursing
No. 11	Vocational education	21	Female	Year 4	Nursing
No. 12	Vocational education	18	Female	Year 4	Nursing
No. 13	Vocational education	18	Female	Year 4	Nursing
No. 14	Vocational education	19	Male	Year 4	Nursing
No. 15	Vocational education	18	Female	Year 4	Nursing
No. 16	Vocational education	18	Female	Year 4	Nursing
No. 17	Diploma	19	Female	Year 1	Midwife
No. 18	Diploma	19	Female	Year 1	Midwife
No. 19	Diploma	20	Female	Year 1	Midwife
No. 20	Diploma	20	Female	Year 1	Midwife
No. 21	Diploma	19	Female	Year 1	Midwife
No. 22	Diploma	19	Female	Year 1	Midwife
No. 23	Vocational education	18	Female	Year 4	Nursing
No. 24	Vocational education	19	Female	Year 4	Nursing

The diploma is a 3-year program; Vocational education is a 5-year program.

We used Colaizzi's 7-step method in Phenomenology as the coding strategy, three themes contain 9 viewpoints to extract.

4.2.1 New understanding of nursing work after learning the course

Viewpoint 1 The importance of nursing work is no longer limited to following the doctors.

"When I am an intern at community hospitals, I repeat the same dull work, such as taking blood pressure and filling a prescription; it's so boring. But for now, I know there are various things I can do, such as health education." (student No.9)

"I used to feel that the midwife was a mother, just giving birth to the child, not taking care of the mother's mood and needs. Since I learned this course, I knew midwives have much more work, and this work is very meaningful." (student No.20)

Viewpoint 2: After recognizing the role of a nurse, students have new perspectives about nurses.

"I love to teach others. It can bring me confidence when I go on the platform (to give science popularisation education) ... I used to dislike nursing, but now I don't. " (student No.11)

"It provides an entirely new understanding (with the nurse); (nursing) is complex and tiring but sacred. " (student No.17)

"I once thought that (besides nursing knowledge) nothing was important at all for me, but while taking this course, I found there are a lot of things I need to learn. " (student No.18)

"I feel that I need to learn more... It will be a long process, and I have so much to learn in the process. "(student No.19)

Viewpoint 3: There is a new understanding of the essence of nurse work.

"I used to hold the one-sided view that nursing is only about the nursing technical operation. However, after finishing this course, I find that communication with patients can also help patients a lot." (student No.16)

"As a medical staff, health education is an indispensable part of our work, which might improve patients' trust. This course could help me devote myself to nursing." (student No.24)

"I thought working in a big hospital was guarding the ICU or the emergency department every day. But after taking this course, I recognized that nurse work should be more than that; it is not only technology and operation. " (student No. 5)

4.2.2 Evaluation and Experience of the Course

Viewpoint 1: NHEHP course is 'useful.'

"... how to make them know more about healthy living habits and healthy diet, which can help them prevent the disease." (student No.1)

"... now I can answer others' questions about health... that was very useful in life, and they said I finally worked after learning nursing for so many years. "(student No.11)

Viewpoint 2: The NHEHP course is an essential part of nursing.

"I take for granted that health education simply goes through the motions, whether the patients understand it or not...Health education is our job responsibility. Without this course, I wouldn't know the importance and complexity of health education." (student No.2)

"After completing this course, I realized the importance of health education for the nursing profession. By studying this course, we can know how to carry out health education in detail." (student No.4)

Viewpoint 3: This course provides methodological guidance on how to apply knowledge rather than simply absorbing it.

"In my opinion, other classes repeat what the book says, which is very boring and rigid knowledge. In this class, I feel that I can gain more knowledge, and it is more practical." (student No.20)

"This course is close to life. In college, it is best to put what you learn to use." (student No.19)

Viewpoint 4: This course is interesting and provides real-life examples.

"Those examples in lessons are more vivid and real, and let us transfer our thoughts more quickly." (student No. 3)

"I think boring or not is mainly due to the teacher, if you take examples from your own life experiences, it's the best way." (student No. 4)

4.2.3 Review of the teacher

Viewpoint 1: The teacher was impressive and interesting.

"I feel good humor in class; it's very attractive; the class and atmosphere are also good." (student No. 20)

"I like the teacher's class, especially because she speaks more vividly and reflects the patient's psychological diversification through her own experience (smile) and then combines something in the textbook. The teacher is also more flexible and humorous." (student No. 4)

"I think the teacher is very suitable for health education. During the lecture, she spoke very well. "(student No. 5)

Viewpoint 2: The teacher used other methods to help us understand this course

"She does not like to use such technical terms, but with the young people's idiom, we can understand what she says." (student No. 7)

"The teacher's spoken style is special and is very distinctive from someone else, and we have a very deep impression." (student No. 11)

5. DISCUSSION

The professional identity scores of nursing students in this study are at a medium level, Meanwhile, the qualitative findings can explain how this course affects the students' professional identity and why they appreciated it.

5.1 Understanding the nurse's role and responsibility should be considered in course content

The highest dimension score of NCIS denotes a higher understanding of the roles and responsibilities of nurses, suggesting that the course content and teaching design should focus on how students understand and agree with the nurse's role and responsibilities. Understanding responsibility and accountability as a key element to forming professional identity (Rhodes et

al., 2012) and the development of these are largely associated with classroom learning (Simmonds et al., 2020). Before clinical practice and as an intern, students recognize the nurse role from movies or imagination, which may not be clear. Educators should provide workplace simulation or other ways to rebuild the nurse's role, to improve the professional identity.

5.2 This course encourages students to realize the professional value

Professional value influences nurses' attitudes and decision-making (Schmidt, 2016). Professional values form the basis of a nurse's professional identity and are an integral part of professional socialization. They guide nurses' long-term growth and prosperity and are also essential to high-quality nursing care.

Some students from medical families have a clear understanding of the nursing profession, while most students do not understand clinical work. The cognition of nurses mainly comes from television or literary works, in which the image of the nurse is considerably different from reality. Society believes that nurses are affiliated with doctors and lack professional characteristics.

Contrary to medical doctors, whose main purpose is to cure diseases, nurses can play a more significant role in maintaining health and preventing diseases. In China, clinicians mainly focus on developing disease treatment programs and daily contact with the patient for a limited period. Consequently, patients may struggle to understand doctors, thus leading to poor treatment; this can occasionally lead to conflicts between patients and doctors. With the improvement of nursing education, nurses need to do more than just execute orders; they should understand the reasons behind each treatment step. As the nurse spends the most time with the patients, patients will understand treatment information; this will improve trust between nurses and patients.

In addition, in the course, some ethnic minority students created hand-painted posters or short videos in their national language. In this process, students recognize and find their talents. This will contribute to their nursing practice in ethnic areas in the future. There are three ethnic minority students' works (Fig1-3).
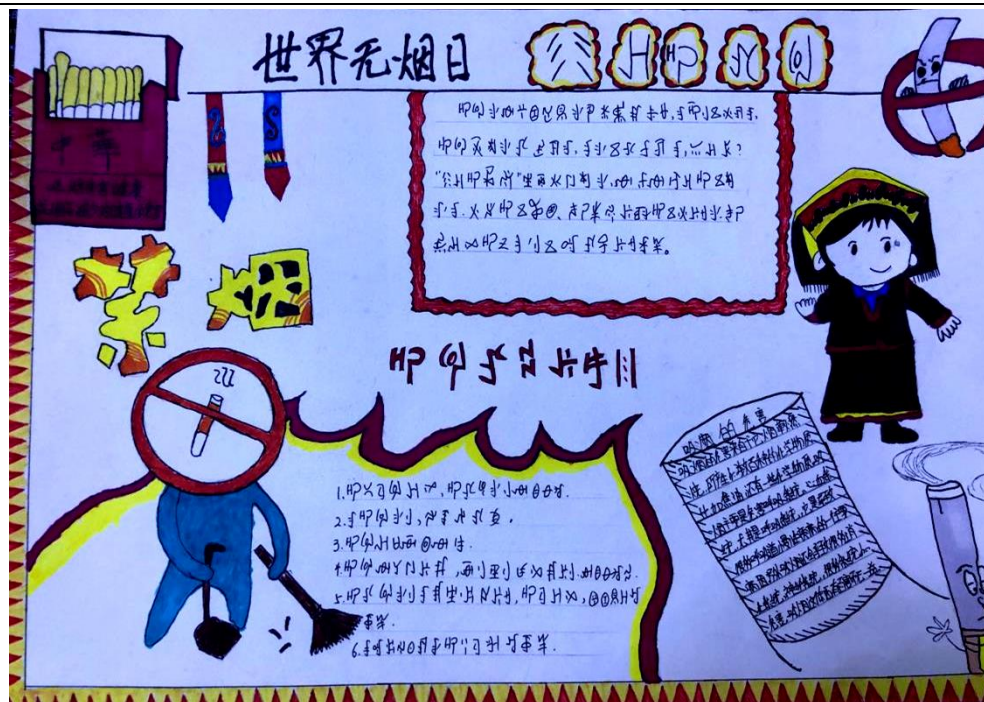
Fig 1. Poster about World No Tobacco Day（Chinese - Yi）

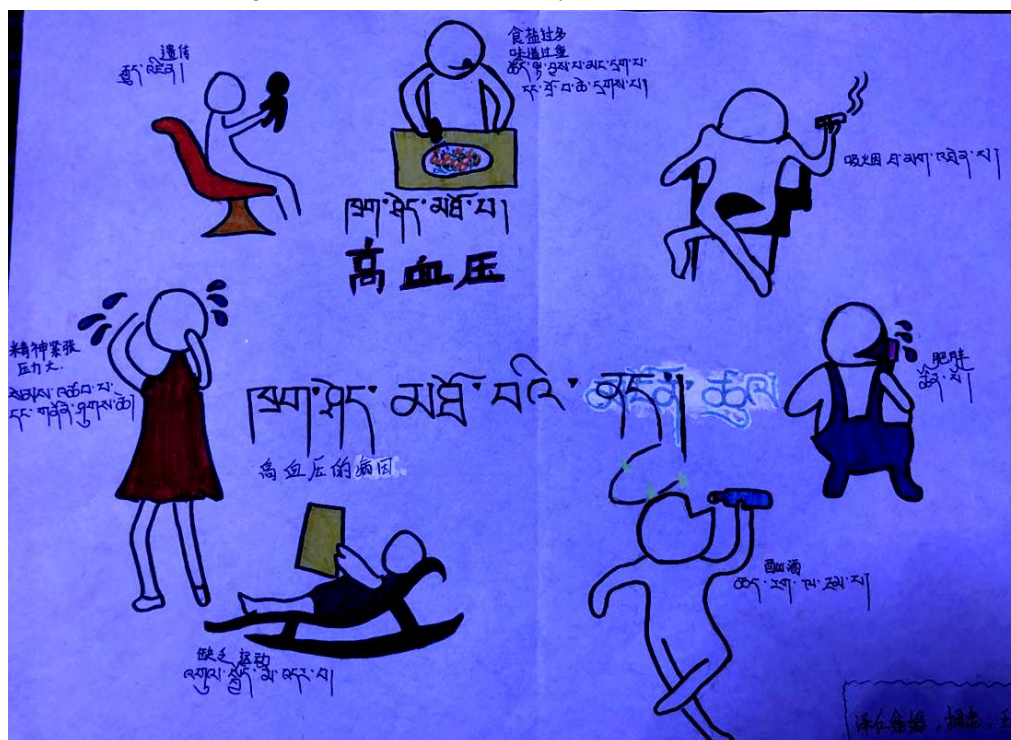Fig 2. Poster about fire safety (Chinese - Tibetan)

Fig 3. Poster about the cause of hypertension (Chinese-Tibetan)

5.3 Recognise the importance of nursing academic education

With the improvement of nursing education standards, nurses have mastered more medical knowledge. The problem is that the clinical work of nurses has not changed significantly. People suggested the need for improving nursing academic qualifications. We found that educational background affects the professional identity of recruited nurses. Nurses with a bachelor's degree or above have a lower professional identity than those with a college degree (Yuan et al., 2018). Nursing students with higher educational backgrounds have higher professional expectations; however, the gap between the expected outcome and the reality of clinical nursing practice seriously thwarted nurses' sense of personal achievement and reduced their professional identity.

Students learned about the application of medical professional knowledge in the classroom through the NHEHP course. As health conditions are related to individual lifestyles and behavioral cognition, this course is designed to enhance student's ability to use different health

education methods by following people's aptitudes. Nurses need to use various methods of communication and health education as they encounter different people. However, this can be both challenging and creative. Nurses are affirmed by patients through effective health education. Meanwhile, conducting health education requires extensive knowledge of medicine, indicating the necessity of improving the education of nurses and their professionalism.

5.4 Improve social recognition of the nursing profession

The development of a nurse's professional identity is primarily influenced by their profession's collective professional identity (Browne et al., 2018). Nowadays, most people still consider nurses as caregivers with a low level of education. They do not recognize nursing as a scientific profession; consequently, they look down on nursing in comparison to medicine. Many nursing students also endeavor to become hospital administrators or rear service personnel rather than clinical nurse specialists because they lack cognition of nurse professional values. Professional nursing practice is possible if nurses can be aware of their professional values act accordingly (Lyneham & Levettjones, 2016), and represent the profession. In addition to the clinical care of patients, a nurse should apply specialty knowledge and skills to help people. Goodolf and Godfrey (2021) posit that professional identity in nursing, which denotes a sense of oneself and a relationship with others, is influenced by the characteristics, norms, and values of the nursing discipline, resulting in individual thinking, acting, and feeling like a nurse. If nurses do good for others, society might understand their contribution to public health.

5.5 Teachers' role model should be the focus of nursing education

The current research on nurses' career identity in China focuses on their professional identity level and influential factors. Studies have shown that the level of professional identity of clinical nurses is generally low (Shen et al., 2018). Van (2015) found that students in China constructed their professional identity mainly through clinical experience, faculty role models, and the caring culture of their nursing school. It is usually clinical faculty and nurse educators

who are the first nursing role models for students. Therefore, the low professional identity of clinical teachers may negatively impact nursing students' career identity.

Schmidt (2016) found that nursing students' core professional nursing values began to develop before they started the nursing program. These values may have developed in elementary and secondary schools when participating in daily activities, during family experiences with illness, or through previous experiences in healthcare or other settings. Meanwhile, nursing students' understanding of the professional nurse role was closely linked with self-concept (Browne et al., 2018). Individual nursing identity can change with professional activities and responsibilities, ongoing education, and individual experiences and expectations.

In this research, the course instructors, also known as developers and designers, understand the professional value of and love nursing. In the class, students presented real clinic cases through role-playing to discuss and reflect on situations of acceptable and unacceptable behaviors, that a nurse might encounter, and how to handle those situations. The teacher took the perspective of a professional nurse to provide explicit instruction that helps students recognize professional values and facilitates building professional identity. As students mentioned,

...this course serves as a kind of career enlightenment (student No.20)

I didn't like nursing before, but now I quite like it. (student No.11)

In the study about the effect of medical students' clinical practice on their professional identity (Helmich, 2010), all participants attributed their poor interpersonal relationships, negligence in respecting the patient's privacy, and weakness in accepting professional responsibilities and providing altruistic care to bad role models. We believe that the requirement to become a nursing teacher is a master's or doctoral degree or sufficient clinical experience. However, we suggest that professional identity and passion should be more important requirements. Therefore, education authorities and clinical managers should consider incorporating professional identity into the recruitment of college teachers and clinical faculty.

5.6 Limitations

There are notable limitations to this study, as students' professional identity was only analyzed at the end of the course, and the results of the level of nurses' career identity lack comparative analysis.

6. CONCLUSION

The research provides insights into the effects of the NHEHP course on changes in the development of the professional identity of nursing students. The results suggest that students can acquire specialist medical knowledge from this course; therefore, it may help them understand the contribution of nurses to public health. By providing health education to help people understand diseases or maintain health, nurses can feel the value of their profession and be respected by society. Simultaneously, providing health education is based on extensive knowledge, which helps nursing students realize the importance of academic education and stimulate their learning enthusiasm. Moreover, nurse faculties should serve as role models and assist students in clarifying their personal and professional values, which is essential in nursing education to improve retention for the future healthcare workforce. Therefore, the NHEHP course helps nursing students understand the professional value of nursing and thus operationalize a clear understanding of their professional identity. In addition, nurses' roles, professional impressions, and responsibilities should be more attention in teaching practice, it could improve students' professional identity through teacher's role models. Introducing novice nurses to expert nurses facilitates the professional values of new nurses (Sibandze & Scafide, 2018). In nursing school, nursing educators are experts, and nursing students are novices; enhancing students' professional identity should require teachers' professional impression.

REFERENCES

Bastable, S. B. (1998). Nurse as educator: Principles of teaching and learning. *The American Journal of Nursing,* 98 (6), 16L.

Bijani, M., Tehranineshat, B., & Torabizadeh, C. (2019). Nurses', nursing students', and nursing instructors' perceptions of professional values: a comparative study. *Nursing Ethics*, 26(3), 870–883.

Browne, C., Wall, P., Batt, S., Bennett, R. (2018). Understanding perceptions of nursing professional identity in students entering an Australian undergraduate nursing degree. *Nurse Education in Practice,* pp. 32, 90–96. DOI: 10.1016/j.nepr.2018.07.006

Chen, L., Jin, S., & Li, A. (2010). Application effect of participatory teaching method in "Nursing and Health Education." *Nursing Journal of Chinese People's Liberation Army*, *27*(12A), 1822-1823.

Chen, H.Z., Zhang, C.Y., Ban, J.J., Zhang, P.(2015). Research status quo and related factors of nurses' professional identity. *Modern Clinical Nursing* 14 (7), 77–80. DOI: 10.3969/j.issn.1671-8283.2015.07.021

Chen, J.F.(2011). Study on the mode of community nursing practice curriculum and its evaluation by nursing postgraduates in China. *Central South University*, Hunan.

Cowin, L. S., Johnson, M., Craven, R. G., Marsh, H. W.(2008). Causal modeling of self-concept, job satisfaction, and retention of nurses. *International Journal of Nursing Studies,* 45 (10), 1449–1459. DOI:10.1016/j. ijnurstu.2007.10.009

Cruess, S. R., Cruess, R. L., & Steinert, Y. (2019). Supporting the development of a professional identity: General principles. *Med Teach*, *41*(6), 641-649. https://doi.org/10.1080/0142159X.2018.1536260

Deppoliti, D.(2008). Exploring how new registered nurses construct professional identity in hospital settings. *The Journal of Continuing Education in Nursing,* 39 (6), 255-262. DOI:10.3928/00220124-20080601-03

Ding, X.F., Xia, H.H., Zhang, M.(2007). Discussion and research on prescribing rights of nurses in China. *Modern Medicine & Health,* 23 (12), 1875-1876. DOI: 10.3969/j.issn.1009-5519.2007.12.134

Fitzgerald A. (2020). Professional identity: A concept analysis. *Nursing forum*, 55(3), 447–472. DOI: org/10.1111/nuf.12450

Gao, H.(2012).An investigation of professional identity and related factors in nursing students and nurses. *Fudan University*, Shanghai.

Gao, Y., Qiao, Z. H., Song, H. T.(2011). Review of research on career identity. *Journal of Beijing Normal University (Social Sciences)* 4. DOI:10.3969/j.issn.1002-0209.2011.04.006

Geng, H., Li, B., Wang, Y., & Dou, D. (2018). The application research of experiential teaching in "health education." *New curriculum research*(01), 19-21.

Goodolf, D. M, Godfrey, N.(2021). A think tank in action: Building new knowledge about professional identity in nursing. *Journal of Professional Nursing,* 37 (2), 493–499. DOI:10.1016/j.profnurs.2020.10.007

Hensel, D., Laux, M.(2014). Longitudinal study of stress, self-care, and professional identity among nursing students. *Nurse Education,* 39 (5), 227-231. DOI:10.1097/ NNE.0000000000000057

Jahanbin, I., Badiyepeyma, Z., Sharif, F., Ghodsbin, F., Keshavarzi, S.(2012). The impact of teaching professional self-concept on clinical performance perception in nursing students. *Life Science Journal*, 4 (9). DOI: 10.7537/marslsj090412.100

Johnson, M., Cowin, L. S., Wilson, I.(2012). Professional identity and nursing: Contemporary theoretical developments and future research challenges. *International Nursing Review,* 59 (4), 562–569. DOI:10.1111/j.1466-7657.2012.01013.x

Kay, D., Berry, A., & Coles, N. A. (2019). What Experiences in Medical School Trigger Professional Identity Development? *Teaching and Learning in Medicine*, *31*(1), 17–25. https://doi.org/10.1080/10401334.2018.1444487

Lan, Y., Yao, Z., & Zhao, S. (2022). An Empirical Study of "Curriculum Humanities" to Promote the Professional Identity of Higher Education Nursing Students. *Modern vocational education*.

Lyneham, J., Levettjones, T.(2016). Insights into registered nurses' professional values through the eyes of graduating students. *Nurse Education in Practice,* 17, 86-90. DOI: 10.1016/j.nepr.2015.11.002

Helmich, E., Derksen, E., Prevoo, M., Laan, R., Bolhuis, S., Koopmans, R.(2010). Medical students' professional identity development in an early nursing attachment. *Medical Education,* 44 (7), 674-682. DOI：10.1111/j.1365-2923.2010.03710.x

Mo, W., Zhang, P., Wu, Y., Li, J., He, P., & Hu, L. (2011). Application of the teaching of health education. *Journal of Nursing Administration*, *11*(07), 505–507.

National Bureau of Statistics. (2021). The Seventh National Census Bulletin (Second) - National population situation. Retrieved from

http://www.stats.gov.cn/tjsj/tjgb/rkpcgb/qgrkpcgb/202106/t20210628_1818821.html.

National Healthy Action Promotion Committee. (2019). National Healthy Action (2019-2030), Retrieved from

http://www.nhc.gov.cn/guihuaxxs/s3585u/201907/e9275fb95d5b4295be8308415d4cd1b2.sht ml.

Nehari, M., Bender, H.(1978). Meaningfulness of a learning experience: A measure for educational outcomes in higher education. *Higher Education,* 7 (1), 1-11.

Qiao, C., & Wu, W. (2017). Application and effect of Anchor teaching approach in nursing health education. *China Higher Medical Education*(04), 74–75. https://doi.org/10.3969/j.issn.1002-1701.2017.04.037

Rhodes, M. K., Schutt, M. S., Langham, G. W., & Bilotta, D. E. (2012). The journey to nursing professionalism: a learner-centered approach. *Nurs Educ Perspect*, *33*(1), 27-29. https://doi.org/10.5480/1536-5026-33.1.27

Schmidt, B.J.(2016). Core professional nursing values of baccalaureate nursing students who are men. *Nursing Ethics,* 23 (6), 674-684. DOI: 10.1177/0969733015579310

Sibandze, B. T., & Scafide, K. N. (2018). Among nurses, how does education level impact professional values? A systematic review. *International Nursing Review*, *65*(1), 65-77.

Simmonds, A., Nunn, A., Gray, M., Hardie, C., Mayo, S., Peter, E., & Richards, J. J. N. E. T. (2020). Pedagogical practices that influence professional identity formation in baccalaureate nursing education: A scoping review. *Nurse Education Today, 93*, 104516.

Shen, Z., Zhong, Z., Zheng, F.(2018). Relationship between nurses' moral distress and professional identity. *Nursing Journal of Chinese People's Liberation Army,* 35 (18), 34-38. DOI: 10.3969/j.issn.1008-9993.2018.18.007

Syred, M. (1981). The abdication of the role of health education by hospital nurses. *Journal of Advanced Nursing,* 6 (1), 27-33. DOI: 10.1111/j.1365-2648.1981.tb03092.x

Tang, Y. (2003). Applying the service learning pattern to the Nursing Health Education course teaching. *Chinese Journal of Nursing*, *38*(05), 327–329.

Van, I.K. (2015). The impact of a nursing program on the formation of nursing students' professional identity. PhD Thesis. *The Chinese University of Hong Kong*. ProQuest LLC, Missouri, USA.

Wang, C.(2005). Discussion about teaching system of health education of nursing. *Journal of Nursing Science*, (17), 58-59, DOI: 10.3969/j.issn.1001-4152.2005.17.029

Yuan, C., Cao, Y., Xu, X.(2018). Influence of health-related information in the media on professional identification of new nurses. *Journal of Nursing Science,* 33(8), 48-50. DOI: CNKI:SUN:HLXZ.0.2018-08-019

Yukie, T., Katsuya, K.(2006). Research on quality improvement of nursing using nursing information. Quality improvement of risk management and nursing. Development of

carrier identity scale (revision) in nursing. Tokyo, *The University of Tokyo*, 105-114

Zhao, H., Lu, T., Zhang, C.(2010). Testing for Reliability and Validity of Chinese Version of The Nurse's Career Identity. Chinese Nursing Management, 10(11), 49-51. DOI: 10.3969/j.issn.1672-1756.2010.11.018