


Professional Identity of Male Nursing Students in 3-Year Colleges and Junior Male Nurses in China

American Journal of Men's Health
July-August 1–10
© The Author(s) 2020
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/1557988320936583
journals.sagepub.com/home/jmh


Yan Chen^{1,2} , Yichun Zhang², and Renmin Jin³

Abstract

Purpose: To investigate the changing tendency and influencing factors of the professional identity of male nursing students in 3-year colleges and junior male nurses in China.

Background: In China, the majority of nurses are 3-year nursing college graduates, among which male nurses are underrepresented. Many male nurses leave the profession 3 or 4 years after graduation. Little is known about the professional identity of Chinese male nursing students in 3-year colleges and junior male nurses.

Methods: This study included 237 male nursing students from a 3-year college and 33 junior male nurses with less than 3 years of experience in China. By using the data collected with the Professional Identity Questionnaire of Nursing Students and through in-depth semistructured interviews from November 2019 to April 2020, *t*-test, and ANOVA analysis in SPSS22.0 were conducted and thematic analysis was applied to interviews.

Results: Compared with undergraduate nursing students, Chinese male nursing students in 3-year colleges had a better professional identity, displaying a declining tendency with grades. Junior male nurses reported the lowest professional identity. Demographic factors such as family residence and presence of relatives in medical service were positively related to professional identity. Low professional identity was related to heavy workload as well as gender stereotypes. Two unique contextual factors influenced the professional identity: (a) curriculum setting and (b) nurse exams.

Conclusion: College education and initial working experience were critical to professional identity formation for male nurses. Appropriate measures need to be taken to improve professional identity and promote gender diversity.

Keywords

nurse shortage, professional identity, junior male nurses, male nursing students in 3-year colleges, China

Received February 27, 2020; revised May 13, 2020; accepted May 20, 2020

Nurse shortage is a problem being experienced around the world. This shortage can be attributed to both fewer individuals seeing nursing as an ideal profession and an increasing number of nurses leaving the profession every year (Yang et al., 2017), among which the newly graduates constitute a high proportion (Jin et al., 2013).

The nursing profession continues to be a female-dominated profession and the percentage of men remains underrepresented. Regardless of the actual figure in individual countries, men in nursing are clearly in a minority (Margaret, 2015). This gender imbalance presents a problem since it ignores diversity which, as O'Lynn (2013) argues, is crucial in the nursing workforce. There has been a steady demand for male nurses (Aynaci & Gulmez, 2019; Younas et al., 2019; Zheng et al., 2018).

Some studies indicated significant advantages for men in nursing, including the potential to achieve higher technical skills in intensive care units and operating theatre, rapid decisions, and physical strength compared with female nurses (Gedzyk et al., 2019; Saleh et al., 2019).

¹Department of Foundation Courses, Anhui Medical College, Hefei, China

²Department of Education Science, Nanjing Normal University, Jiangsu, China

³Department of International Education, Anhui Administration Institute, Hefei, China

Corresponding Author:

Renmin Jin, Department of International Education, Anhui Administration Institute, Wangjiang Road, Hefei 230061, China.
Email: 790628155@qq.com



By the year 2019, 4.09 million people registered as nurses in China, among those, male nurses only accounted for 2.3% (National Health Commission of China, 2020). Research on male nursing graduates indicated that only 28% males chose to work as a nurse (Wang et al., 2011), and the majority of male nurses leave the profession only 3 to 4 years after graduation (Enberg et al., 2007; MacIntosh, 2003; Li & Wang, 2008).

Prior research argues that low professional identity is contributing to nurses leaving the profession (Öhlén & Segesten, 1998). Professional identity is the professional self or self-concept of nursing that represents how nurses or nursing students perceive the nursing profession (Benner et al., 2010). It is theorized to be a key factor in nurses' ability to provide high-quality care to improve patient outcomes (Cronenwett et al., 2007; Hensel & Laux, 2014; Jahanbin et al., 2012) and is thought to improve clinical performance (Cowin & Hengstberger-Sims, 2006) and job retention (Cowin et al., 2008; Deppoliti, 2008).

Comparatively, the professional identity level of nurses is significantly lower than those of other jobs and the identity crisis of male nursing students is particularly apparent (Megginson, 2008). Nursing college and internship are critical periods when professional identity is formed (Cheng et al., 2016; Chu, 2014; Henry & Paul, 1993). Nursing college is where men are likely to experience professional nursing for the first time (Ellis et al., 2006). The learning experience of male nursing students, both in the classroom and in the clinical placement, influences their perceptions toward the nursing profession and their decision to stay in or leave nursing (Yang et al., 2017). An investigation on 100 male nurses demonstrated that the more the years of working experience, the higher the professional identity level (Tao et al., 2016). The professional identity of junior nurses with less than 4 years of working experience is more susceptible to changes (MacIntosh, 2003).

Studies on the professional identity of male nurses and male nursing students in China are far from enough. Less than 20 papers have been retrieved from the Chinese Core Collection and Chinese Social Sciences Citation Index. Extant research in China has carried out studies either on male nurses in large cities or male nursing undergraduate students in 4-year universities, and indicated that professional identity was influenced by personal factors and social factors. Parents' educational background (Li, 2016; Wang et al., 2019; Yun, 2017), family residence (Meng, 2018; Wang et al., 2019; Zhang et al., 2019), number of siblings (Wang et al., 2019; Yao et al., 2016; Yun, 2017; Zhou, 2015), and presence of relatives in medical service (Meng, 2018; Wang et al., 2019; Yun, 2017; Zhang et al., 2019) were major demographic factors positively correlated with professional identity. Gender stereotypes (Li,

2016; Meng, 2018; Wang et al., 2019; Yun, 2017; Zhang et al., 2019) and heavy workload (Li, 2016; Meng, 2018; Wang et al., 2019; Zhang et al., 2019) were reported to be common negative influencing factors.

According to China Health Statistics (2019), 85.4% of nurses were 3-year nursing college graduates. However, research on male nursing students from 3-year colleges was scant. Prior studies demonstrated the significance of nursing college and internship for professional identity formation, and instability of professional identity of junior male nurses, but little research has been done specifically on these groups of male nursing students and male nurses. This study, by a mixed quantitative and qualitative method, focused on all the male nursing students in a 3-year nursing college in a medium-sized city in China, among which grade 3 students are under internship, and male nurses with less than 3 years of experience in a major hospital in the same city who graduated from the above-mentioned college. This study aims to investigate the changing tendency of the professional identity of male nursing students in 3-year colleges and junior male nurses in hospitals whose professional identity formation is at critical periods, and explore the influencing factors of the professional identity of these particular groups, thereby serving as a reference for relevant authorities to roll out measures to provide individualized training and guidance, in order to maintain the stability of male nursing staff. Studying the professional identity of male nursing students and male nurses in China may also provide valuable insights into the training and retention of male nurses in other countries.

Methods

Design and Participants

A nonexperimental, quantitative, and qualitative design was used for this study. A convenience sample of the male nursing students and male nurses within the same nursing college and health system was utilized. Participant recruitment began via QQ, a social media platform in China, with a brief description of the study, all necessary study disclosures, and a direct link to Professional Identity Questionnaire of Nursing Students (PIQNS) in Wenjuanxing, an online survey application, after receiving approval from both the college and the health system's review boards. We also conducted semistructured interviews.

The study was performed among all the 240 male nursing students from grades 1 to 3 in Anhui Medical College in Hefei, China, among which the third-year students are under internship. This college was chosen because it is the only 3-year college with a nursing major in the city. In addition, 33 male nursing graduates from Anhui Medical College with less than 3 years of

experience were also included in the study, who worked in the Hospital Affiliated to University of Science and Technology of China, a top-three hospital in the city. The hospital was selected because of the presence of a larger number of male nurses who have graduated from Anhui Medical College. Approval for this study was obtained from Anhui Medical College (Decision no: 2019. 21.10) and Hospital Affiliated to University of Science and Technology of China (Decision no: 2019. 23.10), respectively. Written informed consents were obtained from all the participants.

Instruments

Professional Identity Questionnaire of Nursing Students (PIQNS), a well-received measurement tool that has been used in prior studies in China, was used in this study. It was developed by Doctor Yufang Hao in 2011 with satisfactory credibility. Reliability coefficient of the total scale is 0.926, and the reliability coefficients of all the subscales are larger than 0.7 (Hao, 2011). Previous studies indicated that the PIQNS test was recommended to evaluate the professional identity level of nursing students in China (Cheng et al., 2016; Chu, 2014; Gu and Tang, 2017; Liu, 2014; Zhang et al., 2019).

PIQNS includes two sections: (a) basic information, covering which grade (or at work), single child or not, family residence, parents' educational background, reasons for choosing nursing major, the overall impression of the nursing profession, etc.; and (b) 16 items for professional identity, falling into career choice motive, career perception, emotion identity, career benefit and satisfaction, and career planning. The 16 items are ranked on a five-point Likert scale of which 1 is negatively stated (with 1 = *strongly disagree* to 5 = *strongly agree*). The higher the score, the more positive the professional identity.

A semistructured interview was also conducted with willing participants for qualitative data collection. The following questions were included: (a) Why did you choose nursing profession?; (b) What do you think of nursing profession?; (c) What are the things that you dislike about being a male nurse?; and (d) What courses or measures help you change your perception of nursing profession?

Data Collection

The data were collected from November 2019 to April 2020. Prior to data collection, complete study information and informed consent were provided to all the participants. The interviewer reminded the participants of their right of withdrawal during data collection. The link of PIQNS was sent to all the participants via QQ, a social

media platform in China. Of the 240 male nursing students invited to participate, 227 male students (102 grade 1 students, 69 grade 2 students, and 56 interns were at grade 3) responded to the survey. Questionnaire-reclaiming efficiency was 93.9%. All 33 male nurses responded to the survey.

On scale completion, participants were invited to participate in a 30-min semistructured interview. The final 20 volunteers (5 male nurses and 15 male nursing students) were interviewed through QQ. All the interviews were recorded upon these interviewees' approval.

Data Analysis

Descriptive statistics, *t*-test, and analysis of variance (ANOVA) were used for the quantitative data analysis in SPSS 22.0. The total professional identity scores were calculated by recoding items under each scale and then summing the scores. The qualitative data of the semistructured interview were analyzed using thematic analysis: data transcription, initial coding, theme search, theme review, and theme defining (Braun & Clarke, 2006).

Results

Quantitative Findings

Approximately 60% of male nursing students and males nurses were from rural area. Only 27.6% chose nursing major out of personal interest. Most of the respondents had relatives in medical service, with 77.31% reckoning that males have strengths over female counterparts. However, 40.77% were reluctant to admit they were male nurses in front of new friends. Only 10.2% gave a definite answer to whether to remain in the nursing profession.

Professional identity of 237 male nursing students in 3-year colleges and 33 junior male nurses with less than 3 years of experience scored (83.22 ± 12.68). It revealed that male nurses' professional identity was above average, and career perception and career choice motive ranked high, whereas career benefit and satisfaction ranked the lowest (Tables 1 and 2).

A significant difference was detected between grades ($p = .01$), and the scores of professional identity decreased. The professional identity of junior male nurses scored the lowest. There was a significant difference concerning emotion identity, professional benefit and satisfaction, and career planning. However, career perception was not statistically different according to grade ($p = .198$) (Table 3).

No statistically significant difference could be detected when the participants were evaluated according to whether they were the only child in the family. No association was detected for paternal or maternal education. Evaluation

Table 1. Total Professional Identity of Male Nursing Students and Male Nurses.

Items	Total Mean Value	No. of Items	Item Mean Value
Career choice motive	21.66 ± 3.36	3	3.61 ± 0.47
Career perception	15.48 ± 3.36	2	3.87 ± 0.76
Emotion identity	20.75 ± 3.25	4	4.15 ± 0.59
Satisfaction	14.12 ± 2.80	4	3.53 ± 0.67
Career planning	13.52 ± 2.80	3	3.38 ± 0.64
Total	83.22 ± 12.68	16	3.62 ± 0.49

Table 2. Descriptive Analysis of Quantitative Findings.

Factors and Items	Mean ± SD
F1 Career Choice Motive	
My understanding of the career is solely from friends, relatives, teachers, etc.	3.272 ± 1.158
I have tried to know about different professions in order to firm my belief	3.426 ± 0.967
External factors are to be considered when choosing a job	3.296 ± 0.931
F2 Profession Perception	
I desire to know stories about successful nursing professionals	3.389 ± 1.03
I hope to communicate with experienced nursing professionals	3.721 ± 1.007
F3 Career Emotion Identity	
I am willing to be a nurse	3.564 ± 1.108
I love my major and I am ready to work hard on it	3.606 ± 0.993
I will feel depressed if I leave the profession	3.141 ± 1.097
I will be proud of nursing job	3.535 ± 1.055
F4 Career Benefit and Satisfaction	
I can display my strength and ability in nursing	3.452 ± 1.003
I can use my creativity in nursing	3.295 ± 0.986
It makes me pleasurable to be a nurse	3.487 ± 1.004
I am sure I can be successful in nursing profession	3.585 ± 1.006
F5 Career Planning	
I have invested too much money/time in it, so I don't want to change a job	3.492 ± 1.083
I will not change my profession	3.425 ± 0.993
I often plan my future	3.714 ± 0.967

according to family residence revealed that male nursing students and male nurses whose families were located in the rural areas had a higher level of professional identity. Comparison according to whether there were any relatives engaging in medical service yielded a significant result. Those who had relatives in medical service tended to have a better professional identity (Table 4).

Statistical difference was identified when the participants were evaluated according to whether they have attended off-campus nursing-related activities during holidays. Association was also detected between professional identity and active involvement in the courses related. Similarly, those who attended lectures or activities tailored for males at schools or in hospitals had a better professional identity. However, there were few tailored lectures or activities for male nursing students or male nurses (Table 4).

Qualitative Findings

Reasons Why Male Nurses Chose the Nursing Profession. As to the motives to choose the nursing profession, 77.8% of respondents indicated that better job opportunity and stability are the primary reasons. For example, one of the male nursing students said:

My first choice was clinical medicine. But I switched to nursing major because I had heard that it was much easier to land a job with a nursing diploma in today's competitive job market.

Another student stated that:

My aunt is a nurse. She recommended me to work as nurse, because nursing job was stable. (Grade 2 male nursing student)

Table 3. Professional Identity of Male Nursing Students and Males Nurses at Different Periods.

Factors	Grade 1 (N = 102)	Grade 2 (N = 69)	Grade 3 (n = 56)	On the job (n = 33)	p
Career choice motive	3.65 ± 0.59	3.51 ± 0.62	3.65 ± 0.67	3.2 ± 0.57	.000
Career perception	3.74 ± 0.83	3.64 ± 0.96	3.54 ± 1.05	3.47 ± 0.96	.198
Emotion identity	3.56 ± 0.76	3.41 ± 0.81	3.44 ± 1.01	3.27 ± 0.9	.000
Satisfaction	3.59 ± 0.77	3.42 ± 0.87	3.33 ± 0.93	3.11 ± 0.8	.003
Career planning	3.72 ± 0.74	3.58 ± 0.91	3.43 ± 0.76	3.41 ± 0.7	.000
Profession identity	3.65 ± 0.62	3.49 ± 0.78	3.48 ± 0.75	3.28 ± 0.6	.010

In addition, male nurses had physical advantages, mental toughness, and fewer family obligations, so they were reported to have more promotion opportunities (Wang & Yu, 2019). All the five male nurses said that they were given more attention and provided with more training opportunities.

Perception of Nursing Profession. Over half of the respondents held negative perceptions toward the nursing profession, pointing out nurses had lower social status and the job was laborious.

For example, one of the first-year students stated that:

I heard that nursing job mainly involved life care and basic nursing. It can be repetitive and boring. It seemed to me that males were not suitable for it. (Grade 2 male nursing student)

Another student said that:

Nurses can only obey doctors' orders and do as instructed. Nursing job is not considered important on the part of patients, receives little respect and enjoys low social status. I did not want to tell others I am a male nurse. (Grade 3 male nursing student)

Reasons for Disliking the Nursing Major/Profession. Tight curriculum, intense pressure, and irregular working hours were the main reasons. In China, students in 3-year nursing colleges usually attend 40–50 hr of lessons a week and have to pass nationwide nurse exams in the third year to become a registered nurse. Nurses are in serious shortage in China and generally have heavy workloads. In most Chinese hospitals, nurses have to work 40 hr a week (Zhang et al., 2019). Over half of the respondents reported that they had too many courses in school, often worked night shifts, and had little time to spend with girlfriends or family. They experienced intense pressure from study, work, and life. One respondent working in the ICU shared his experiences as follows:

My girlfriend broke up with me last month. As I just started working for the first year, I was really stressful at work, which had negatively influenced my mental health. I lost my

temper easily. In addition, due to irregular working hours, I couldn't had dates as my girlfriend expected because our spare time just couldn't match.

Furthermore, due to gender stereotypes, male nurses may experience discrimination from the patients, family members, and friends (Wang & Yu, 2019). Most respondents reported that they had been teased and discriminated, and were concerned that the stereotypical images may negatively impact their marriage prospects. One interviewee shared his story as follows:

I just had a girlfriend, but she never told her friends that I was a nurse in gynaecology department because she feared her friends may make fun of me.

Courses or Activities Shaping Professional Identity. Both the male nursing students and male nurses responded that Nursing Ethics, Nursing Etiquette, and Career Planning had effectively changed their perception of the nursing profession. Nursing specialty courses delivered by male teachers were reported to be helpful in shaping their professional identity. Their perception of the nursing profession has also changed through clinical observation, internship, and special activities organized for males, such as lectures, speech contests, or salons. A male nursing student said that:

Almost all our nursing teachers were females, but our college invited a male nurse to teach us surgical nursing this term. I really liked it when he shared his experience in hospital with us. It helped me to see the great potential of being a male nurse. And on May 12, our college organized a lecture on career development for male nursing students. It was also helpful.

One male nurse described:

In fact, only by working in the hospital can you had a better understanding of the job. Our hospital started a salon for male nurses in 2019. We could attend lectures, informal discussions or speech contests every two months. I thought it was a good way to improve male nurses' job satisfaction and professional identity.

Table 4. Comparison of Professional Identity Score of Male Nurses and Male Nursing Students With Different Demographic Features.

Factors	Category	Number	Career Choice Motive	Career Perception	Emotion Identity	Satisfaction	Career Planning	Profession Identity
The only child	Yes	61	3.59 ± 0.68	3.67 ± 0.95	3.39 ± 0.89	3.43 ± 0.91	3.63 ± 0.85	3.52 ± 0.74
	No	199	3.53 ± 0.61	3.65 ± 0.94	3.49 ± 0.86	3.46 ± 0.84	3.62 ± 0.81	3.54 ± 0.7
		t	0.803	0.108	-0.953	-0.302	0.091	-0.211
		p	.422	.914	.341	.763	.927	.833
Father's education	Primary school	96	3.54 ± 0.68	3.69 ± 0.91	3.48 ± 0.82	3.47 ± 0.81	3.59 ± 0.79	3.54 ± 0.65
	Middle school	152	3.51 ± 0.63	3.66 ± 0.91	3.44 ± 0.87	3.43 ± 0.86	3.61 ± 0.83	3.51 ± 0.71
	College or above	23	3.7 ± 0.73	3.58 ± 1.17	3.53 ± 0.99	3.52 ± 0.97	3.77 ± 0.87	3.61 ± 0.82
		t	1.572	0.241	0.257	0.232	0.821	0.383
		p	.219	.783	.771	.793	.436	.681
Mother's education	Primary school	97	3.586 ± 0.63	3.63 ± 0.94	3.44 ± 0.83	3.43 ± 0.79	3.61 ± 0.81	3.51 ± 0.66
	Middle school	162	3.586 ± 0.63	3.7 ± 0.92	3.48 ± 0.86	3.46 ± 0.88	3.63 ± 0.82	3.55 ± 0.72
	College or above	12	3.47 ± 0.61	3.53 ± 1.1	3.45 ± 1.09	3.55 ± 1.06	3.61 ± 0.95	3.52 ± 0.89
		t	0.621	0.558	0.101	0.283	0.036	0.179
		p	.536	.571	.904	.754	.965	.836
Family residence	Rural	191	3.54 ± 0.58	3.69 ± 0.85	3.53 ± 0.77	3.51 ± 0.78	3.61 ± 0.75	3.63 ± 0.74
	City	69	3.42 ± 0.51	3.43 ± 0.91	3.28 ± 0.74	3.28 ± 0.71	3.43 ± 0.69	3.42 ± 0.65
		t	2.527	2.533	2.942	2.595	1.973	2.985
		p	.011	.012	.004	.011	.043	.003
Relatives in medical service	Yes	191	3.55 ± 0.64	3.72 ± 0.91	3.51 ± 0.86	3.49 ± 0.84	3.64 ± 0.83	3.56 ± 0.71
	No	69	3.33 ± 0.61	3.38 ± 1.02	3.29 ± 0.89	3.28 ± 0.93	3.56 ± 0.81	3.39 ± 0.71
		t	2.244	2.778	2.84	2.874	0.679	2.781
		p	.022	.006	.000	.000	.497	.000
Whether attend off-campus nursing-related activities during holidays	Yes	190	3.55 ± 0.64	3.72 ± 0.91	3.51 ± 0.86	3.49 ± 0.84	3.64 ± 0.83	3.56 ± 0.71
	No	70	3.33 ± 0.61	3.38 ± 1.02	3.29 ± 0.89	3.28 ± 0.93	3.56 ± 0.81	3.39 ± 0.71
		t	2.244	2.778	2.84	2.874	0.679	2.781
		p	.022	.006	.000	.000	.497	.000
Whether attend lectures or activities tailored for males at school or in hospital	Yes	40	3.54 ± 0.58	3.69 ± 0.85	3.53 ± 0.77	3.51 ± 0.78	3.61 ± 0.75	3.63 ± 0.74
	No	220	3.42 ± 0.51	3.43 ± 0.91	3.28 ± 0.74	3.28 ± 0.71	3.43 ± 0.69	3.42 ± 0.65
		t	2.527	2.533	2.942	2.595	1.973	2.985
		p	.011	.012	.004	.011	.043	.003
Whether attend any courses related to professional identity at school or in hospital	Yes	202	3.49 ± 0.61	3.66 ± 0.94	3.46 ± 0.95	3.48 ± 0.92	3.62 ± 0.86	3.53 ± 0.76
	No	58	3.42 ± 0.63	3.53 ± 0.91	3.28 ± 0.84	3.28 ± 0.83	3.44 ± 0.72	3.33 ± 0.61
		t	2.263	2.623	2.229	2.484	2.162	2.378
		p	.026	.000	.032	.000	.041	.038

Discussion

This study sought to provide insight on the professional identity of male nursing students in 3-year colleges and junior male nurses with less than 3 years of experience in China. Our findings highlighted four themes.

Professional Identity of Male Nursing Students in the 3-Year Colleges Is Above Average but Declining Along Grades

Professional identity score of male nursing students in 3-year colleges was lower than those of other professions, which was consistent with prior studies (Jin et al., 2013; Tao et al., 2016; Zheng, 2018). Previous research indicated that the higher the educational background, the lower the professional identity in the nursing profession (Cheng et al., 2016; Li & Wang 2008; Zhang et al., 2019). This study also revealed that the professional identity of male nursing students in 3-year colleges was higher than that of undergraduate male nursing students in universities in China. One of the primary reasons was that nurses with a degree aspired to study further and avoid heavy clinical nursing tasks (Zheng, 2018). In addition, nurses with diploma and degree perform the same duties and have similar salaries in most Chinese hospitals with approximately US\$50 difference (Zheng, 2018), which may frustrate nursing students with degrees.

Furthermore, different from findings on male nursing students in 4-year universities (Liu et al., 2011; Xu et al., 2013), the professional identity of male nursing students in 3-year college was decreasing with grade. In 3-year nursing colleges in China, students learn theoretical courses at school for the first 2 years and go to hospitals for internship in the third year. Grade 1 students are provided with foundation courses such as anatomy and physiology. Nursing specialty courses are included in the curriculum for grade 2 students, and grade 3 students have internships in hospitals for the whole year. The first-year students had little contact with the nursing profession, and their perception of the nursing profession was somewhat idealistic (Sun et al., 2017; Zhang et al., 2019), so their professional identity tended to be the highest. While the third-year students faced the pressure of internship, job hunting, and nationwide nurse license exam (passing rate was around 40%), they often reported a lower professional identity than grade 1 and 2 students (Sun et al., 2017).

Professional Identity of Junior Male Nurses With Less Than 3 Years Working Experience is the Lowest

This study indicated that the professional identity of new male nurses who work for less than 3 years was much

lower than male nursing students. Prior studies (Liu, 2014; Rudman, 2014; Tao et al., 2016) also revealed that the first 3 to 4 years were critical periods when the junior nurses displayed the highest level of pressure and burnout and had the lowest professional identity. In most hospitals in China, the nurses will change departments every 3 to 4 months for clinical rotation during the first year, which can be challenging and stressful (Liu, 2014; Tao et al., 2016). The new nurses are required to participate in nationwide exams (passing rate is around 80%) to acquire senior nurse certificates in the third year. Most respondents described their work as fully occupied and difficult: heavy workload, frequent night shifts, working overtime, discrimination from patients and the general public, and little personal time for socializing or dating.

Family Factors Are Less Important. Practical Concerns Over Job Opportunity and Security Are Primary Positive Factors. Intense Pressure and Gender Stereotypes Are the Key Negative Factors

This study indicated that family factors are less important. Different from previous findings (Gu and Tang, 2017; Wang et al., 2019; Zhou, 2015), the professional identity of male nursing students in 3-year colleges and junior male nurses was not positively correlated with whether they had any siblings or parents' educational background. However, those who were from rural areas or have relatives in medical service reported higher professional identity.

With China's increased enrollment of college students and a growing number of graduates flooding the job markets, such practical concerns as employment opportunity, job stability, and career development have become priority considerations when choosing majors. Nursing, ranked Top 10 in terms of employment rate for a successive 5 years in China (Zheng, 2018), therefore, has attracted many students. This is consistent with the findings by Zamanzadeh et al. (2013), Zhou (2015), and Wang and Yu (2019).

The very nature of nursing job and gender stereotypes, including heavy workload, irregular working hours, and bias from patients and the general public, are the primary factors negatively influencing male nurses' professional identity, which was in line with prior studies (Wang & Yu, 2019; Zhang et al., 2019; Zheng, 2018; Zhou, 2015). Nurses were seriously lacking in China and generally had heavy workloads (Zhang and Tu, 2020). Junior nurses in this study reported that they worked more night shifts, and experienced great stress from work, study, and life. They had little time to socialize or date. In addition, nurses' perceptions of public stereotyping not only influence the development of

self-concept and self-esteem, but this can also subsequently influence job satisfaction and performance (Browne et al., 2018). Due to gender stereotypes, nearly half of respondents were reluctant to admit they were male nurses in front of new friends, and working as a male nurse, especially in departments such as gynecology and obstetrics, negatively influenced their marriage prospects. All these led to low career benefit and satisfaction as demonstrated in Table 1.

Courses or Activities Improving Professional Identity of Male Nurses

As indicated in the investigation, courses, lectures, or activities tailored for males were positively correlated with their professional identity. The semistructured interview revealed that humanity courses closely related to nursing had effectively changed male nursing students' perception of the nursing profession, including Nursing Ethics, Nursing Etiquette, and Career Planning. Further nursing specialty courses delivered by male nurses were reported to be helpful in shaping male nursing students' professional identity, which is consistent with previous studies (Jin et al., 2013; Liu, 2014). Special activities organized for males, such as lectures, contests, or salons were also proven to be useful (Gu, 2017).

Conclusion

Through investigations on male nursing students in a 3-year nursing college and male nurses with less than 3-year working experience in hospitals in China, who are at a critical stage of professional identity formation, it has been revealed that family factors such as residence or presence of any relatives in medical service still exert influence on professional identity, but parental education and number of siblings do not impact the professional identity of male nursing students pursuing diploma and male nurses with less than 3 years of experience. Male nursing students in 3-year colleges had a declining professional identity, and junior male nurses with less than 3 years of experience reported the lowest professional identity. Whether the schools or hospitals have organized special activities, courses, and training for males has a positive influence on male nurses' professional identity formation. Employment opportunity, job security, and career development are chief motives for career choice. Tight curriculum, pressure from nurse exams, irregular working hours, and discrimination from the general public are key factors negatively affecting professional identity.

Implications

In order to improve the professional identity of male nurses and retain more male nurses in the profession,

regulatory bodies, hospitals, and nursing education providers are supposed to take joint measures. Regulatory bodies should advocate for the recruitment of more males in educational programs and practice (Younas & Sundus, 2018). It is crucial for hospitals to rationally allocate assignments and shifts. Faculty role models, supportive mentorship systems and continuous training programs are also important for the elevation of the professional identity of male nurses.

It is essential for educational institutions to design individualized curriculum and programs to support the ongoing development of professional identity in nursing students of different genders. Adequate attention should be given to the special needs and characteristics of male nursing students, recruiting more male teachers or inviting male nurses to deliver courses, organizing tailored activities for male students, and arranging earlier exposure to clinics.

Limitations and Future Research

To investigate the unique features and changing tendency of the professional identity of male students pursuing a diploma in nursing and junior male nurses, this study focused on male nursing students in a 3-year nursing college and male nurses who graduated from the college with less than 3 years of working experience. As the college investigated is the only 3-year college with a nursing major in the city, the sample is relatively small and limited. We expect that future research can fill in the gap by studying male nursing students in a more broad range of educational institutions and hospitals.

Based on the findings, it is recommended that more research should be done to nursing students in 3-year colleges and junior nurses who constitute the majority of the workforce and whose professional identity is prone to change. Additional studies among male nurses of these particular groups can be conducted with a larger population. Studies should be done to identify and evaluate strategies to recruit more male students and assist male students to become successful nurses. Male students indicated the need for more male mentors and tailored courses and lectures; therefore, institutions can develop curriculum and mentorship programs accordingly, which is an open area for further research.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by Anhui Ministry of Education

[grant number 2020zdxsjg178];Anhui Medical College[grant number 2019ahyzjyxm011]; Anhui Ministry of Education[grant number gxyq2017168]

Ethical Approval Obtained

The study protocol was approved by the ethics review board of Anhui Medical College (Decision no: 2019. 21.10) and Hospital Affiliated to University of Science and Technology of China (Decision no: 2019. 23.10). All of the procedures were performed in accordance with the Declaration of Helsinki and relevant policies in China.

Informed Consent Obtained for Research

All participants provided written informed consent prior to enrolment in the study.

ORCID iD

Yan Chen  <https://orcid.org/0000-0002-4029-4627>

References

- Aynaci, G., & Gulmez, H. (2019). Looking at male nurse discrimination among nursing students with O'Connor's finger dexterity test: future of gender discrimination. *Journal of Men's Health, 15*(2), 30–39. <https://doi.org/10.22374/jomh.v15i2.131>
- Benner, P., Sutphen, M., Leonard, V., & Day, L. (2010). Educating nurses: A call for radical transformation. *Wiley, San Francisco, 51*(4), 183–184. <https://doi.org/10.3928/01484834-20120402-01>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- 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, 33*(32), 90–96. <https://doi.org/10.1016/j.nepr.2018.07.006>
- Cheng, J. L., Sun, Y. M., Shi, H. R., & Dong, X. J. (2016). Survey on status of professional identity in undergraduate nursing students. *Chinese General Practice Nursing, 14*(03), 217–225 (in Chinese). <https://doi.org/10.3969/j.issn.1674-4748.2016.03.001>
- Chu, J. (2014). *Professional identity during internship and facilitating strategies*. [Doctoral Dissertation of No. 2] Military Medical University (in Chinese).
- Cowin, L. S., & Hengstberger-Sims, C. (2006). New graduate nurse self-concept and retention: A longitudinal survey. *International Journal of Nursing Studies, 43*(1), 59–70. <https://doi.org/10.1016/j.ijnurstu.2005.03.004>
- 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. <https://doi.org/10.1016/j.ijnurstu.2007.10.009>
- Cronenwett, L., Sherwood, G., Barnsteiner, J., Disch, J., Johnson, J., Mitchell, P., & Warren, J. (2007). Quality and safety education for nurses. *Nursing Outlook, 55*(3), 122–131. <https://doi.org/10.1016/j.outlook.2007.02.006>
- Deppoliti, D. (2008) Exploring how new registered nurses construct professional identity in hospital settings. *Journal of Continuing Education in Nursing, 39*(6), 255–262. <https://doi.org/10.3928/00220124-20080601-03>
- Ellis, D. M., Meeker, B. J., & Hyde, B. L. (2007). Exploring men's perceived educational experiences in a baccalaureate program. *Journal of Nursing Education, 45*(12), 523–527. <https://doi.org/10.3928/01484834-20061201-09>
- Enberg, B., Stenlund, H., Sundelin, G., & Ohman, A. (2007). Work satisfaction, career preferences and unpaid household work among recently graduated health-care professionals: A gender perspective. *Scandinavian Journal of Caring Sciences, 21*(2), 169–177. <https://doi.org/10.1111/j.1471-6712.2007.00453.x>
- Gedzyk-Nieman, S. A., & Svoboda, G. (2019). Exploring attitudes of acceptance of males in nursing among registered nurses. *Journal of Nursing Management, 27*(3), 647–654. <https://doi.org/10.1111/jonm.12723>
- Gu, Y. P., & Tang, Y. H. (2017). Professional identity of male nursing students in three-year colleges. *Chinese Evidence-based Nursing, 3*(6), 695–696 (in Chinese). <https://doi.org/10.3969/j.issn.2095-8668.2017.06.040>
- Hao, Y. F. (2011). *Study of the model of self-education in enhancing the level of professional identity and professional self-efficacy in nurse students*. The Second Military Medical University (in Chinese).
- Henry & Paul. (1993). Effectiveness of career-development courses for nontraditional premedical students: improving professional identity. *Psychological Reports, 73*(3), 915–920. <https://doi.org/10.2466/pr0.1993.73.3.915>
- Hensel, D., & Laux, M. (2014). Longitudinal study of stress, self-care, and professional identity among nursing students. *Nurse Educator, 39*(5), 227–231. <https://doi.org/10.1097/NNE.0000000000000057>
- Jahanbin, I., Badiyepyma, Z., Ghodsbini, F., Sharif, F., & Keshavarzi, S. (2012). The impact of teaching professional self-concept on clinical performance perception in nursing students. *Life Sciences, 9*(4), 653–659. <https://doi.org/10.7537/marslsj090412.100>
- Jin, X. Q., Sun, H. M., Wu, Z. Q., & Yu, C. (2013). Turnover intention and its influencing factors among male nurses in 3-level general hospitals. *Chinese Journal of Health Psychology, 021*(004), 568–570 (in Chinese). <https://doi.org/10.13342/j.cnki.cjhp.2013.04.046>
- Li, J. (2016). *Career planning and influencing factors of male nursing students in Henan*. Doctoral dissertation of Henan University (in Chinese).
- Liu, M. X. (2014). Professional burnout of nurses. *Inner Mongolia Medical Journal, 46*(9), 1075–1078 (in Chinese).
- Liu, Y. (2014). Comparative studies into nursing students in different grades. *China Education Innovation Herald, 000*(011), 141,143 (in Chinese).
- Li, H. R., & Wang, H. X. (2008). Investigation and analysis into career planning of male nursing students. *Nursing Practice and Research, 17*, 125–126 (in Chinese) <https://doi.org/10.3969/j.issn.1672-9676.2008.17.084>

- MacIntosh, J. (2003). Reworking professional nursing identity. *Western Journal of Nursing Research*, 25(6), 725–741. <https://doi.org/10.1177/0193945903252419>
- Margaret, H. (2015). *Men in nursing: A quantitative study from the perspective of West Australian nursing students*. The University of Western Australia.
- Megginson, L. A. (2008). RN-BSN education: 21st century barriers and incentives. *Journal of Nursing Management*, 16(1), 47–55. <https://doi.org/10.1111/j.1365-2934.2007.00784.x>
- Meng, W. (2018). Professional identity of nurse interns and influencing factors. *China Modern Nursing Journal*, 24(1), 1727–1729 (in Chinese). <https://doi.org/10.3760/cma.j.issn.1674-2907.2018.14.031>
- Ohlén, J., & Segesten, K. (1998). The professional identity of the nurse: Concept analysis and development. *Journal of Advanced Nursing*, 28(4), 720–727. <https://doi.org/10.1046/j.1365-2648.1998.00704.x>
- O'Lynn, C. (2013). *A man's guide to a nursing career*. New York: Springer Publishing Company.
- Rudman, A., Gustavsson, P., & Hultell, D. (2014). A prospective study of nurses' intentions to leave the profession during their first five years of practice in Sweden. *International Journal of Nursing Studies*, 51(4), 612–624. <https://doi.org/10.1016/j.ijnurstu.2013.09.012>
- Saleh, M. Y., Al-Amer, R., Al Ashram, S. R., Dawani, H., & Randall, S. (2019). Exploring the lived experience of Jordanian male nurses: A phenomenological study. *Nursing Outlook*, 68(3), 313–323. <https://doi.org/10.1016/j.outlook.2019.10.007>
- Sun, J. Y., Su, J. J., & Mai, M. T. (2017). Career identity of nursing students in different stage of internship and its influence factors. *Journal of Nursing*, 024(018), 1–4 (in Chinese). <https://doi.org/10.16460/j.issn1008-9969.2017.18.001>
- Tao, Y. R., Jia, Y. X., Ma, Y., Zhang, N. N., & Jia, H. P. (2016). Investigation on current condition and influencing factors of male nurse professional identity in a three-level, first-class hospital. *Chinese Journal of School Doctor*, 30(02), 117–119 (in Chinese).
- Wang, J. B., Sun, H. M., Huang, R. R., Zhang, X. X., & Chen, G. R. (2019). Status quo and influencing factors of undergraduate male nursing students in Guizhou. *Nursing Journal*, 26(12): 6–9 (in Chinese). <https://doi.org/10.16460/j.issn1008-9969.2019.12.006>
- Wang, M. Q., Li, D. F., & Wang, A. R. (2011). Investigation on male nursing students' satisfaction with life after graduation and influencing factors. *Journal of Nursing Science*, 21(05), 72–74 (in Chinese). <https://doi.org/10.3870/hlxz.2011.05.068>
- Wang, Y. Q., & Yu, H. (2019) Qualitative studies into professional perception of male nursing students. *Modern Nurses*, 26(01), 4–6 (in Chinese). <https://doi.org/10.3969/j.issn.1006-6411.2019.01.003>
- Xu, H. B., Zhao, P., Dong, C. Q., Zhu, L. L., & Zhou, L. S. (2013). Investigation into professional identity of nursing students with different educational backgrounds. *Chinese Journal of Practical Nursing*, 30(15), 15–19 (in Chinese). <https://doi.org/10.3760/cma.j.issn.1672-7088.2013.15.006>
- Yao, Y., Zhu, L. B., & Wang, Y. Y. (2016). Adaptability and influencing factors of male nursing students. *Journal of Hubei Technology Institute*, 30(5), 438–440 (in Chinese). <https://doi.org/10.16751/j.cnki.2095-4646.2016.05.0438>
- Yang, C.-I., Yu, H.-Y., Chin, Y.-F., & Lee, L.-H. (2017). There is nothing wrong with being a nurse: The experiences of male nursing students in Taiwan. *Japan Journal of Nursing Science*, 14(4), 332–340. <https://doi.org/10.1111/jjns.12162>
- Younas, A., & Sundus, A. (2018). Experiences of and satisfaction with care provided by male nurses: A convergent mixed-method study of patients in medical surgical units. *Journal of Advanced Nursing*, 74(11), 2640–2653. <https://doi.org/10.1111/jan.13785>
- Younas, A., Sundus, A., Zeb, H., & Sommer, J. (2019). A mixed methods review of male nursing students' challenges during nursing education and strategies to tackle these challenges. *Journal of Professional Nursing*, 35(4), 260–276. <https://doi.org/10.1016/j.profnurs.2019.01.008>
- Zamanzadeh, V., Valizadeh, L., Negarandeh, R., Monadi, M., & Azadi, A. (2013). Factors influencing men entering the nursing profession, and understanding the challenges faced by them: Iranian and developed countries' perspectives. *Nursing & Midwifery Studies*, 2(4), 49–56. <https://doi.org/10.5812/nms.12583>
- Zhang, H., & Tu, J. (2020). The working experiences of male nurses in china: Implications for male nurse recruitment and retention. *Journal of Nursing Management*, 28(1), 441–449. <https://doi.org/10.1111/jonm.12950>
- Zhang, J., Zhang, Y., Zhou, Y., Zhao, W. T., Zhang, F., & Shi, H. R. (2019). Status quo and influencing factors of professional identity among male nursing students. *China Health Industry*, 16(14), 78–82 (in Chinese). <https://doi.org/10.16659/j.cnki.1672-5654.2019.14.183>
- Zheng, P. P., Liu, H., Tao, X. B., Yuan, T., Yuan, L. P., Jiang, H. J., Zhang, Z. Y., Lin, W. F., & Li, Y. Z. (2018). Investigation on the status quo of the turnover intention of 116 male nurses in Anhui province and analysis of influencing factors. *Journal of Changzhi Medical University*, 32(06), 415–419 (in Chinese). <https://doi.org/10.3969/j.issn.1006-0588.2018.06.006>
- Zhou, J. L. (2015). Correlation of professional attitude and social support of male nursing students in three-year colleges. *Nursing Management Journal*, 15(12), 874–875 (in Chinese).