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#### Research article

# Male nursing students' experiences of their clinical internships: A qualitative study

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#### ABSTRACT

*Background:* Nursing has traditionally been a predominantly female profession; however, there has been a gradual increase in the proportion of male nursing students in recent years. Male nursing students may encounter distinct challenges within clinical settings, potentially impacting their physical and mental well-being.

Aim: This study aims to explore the clinical internship experiences of male nursing students and provide them with adequate support for their successful adaptation to clinical roles.

*Methods*: This study used a descriptive design and qualitative approach. The participants were enrolled using a convenience sampling method. Data were collected using individual face-to-face semi-structured interviews.

Results: Male nursing students' experiences of their clinical internships were described through the following themes: (1) dynamics of working as a nurse, (2) not just a male nursing student, (3) gender-based stereotypes, (4) balance between forte and failing, (5) difficulties and challenges when working in hospitals, and (6) lessons learned and knowledge needs.

Conclusions: Our research findings have significantly enhanced our comprehension of male nursing students' experiences and offered valuable recommendations for both nursing education and clinical practice. Simultaneously, these results provide essential information support for nursing educators and hospital administrators.

# 1. Introduction

Although nursing has long been a female-dominated profession, in the early stages of care, men mostly provided nursing care [1]. In the fourth and fifth centuries, men played an important role in mental nursing care, infectious diseases, and war because of their strength [2]. However, since the era of Florence Nightingale, there has been a significant decline in the representation of men within the nursing profession [3]. This phenomenon can be primarily attributed to the influence of Nightingale, which led to a significant influx of women into the nursing profession [2]. The contribution of male nurses to nursing was erased, and for a long time, male nurses were restricted or directly refused to participate in this profession [4].

According to the World Health Organization (2020), men account for approximately only 10 % of the world's nursing staff.

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Throughout North America, the average proportion of male nurses in various countries is 5.8 %, compared to 10 % in the UK and 4.9 % in Japan [1,5]. In the United States, the percentage of male nurses increased from 8.8 % in 2004 to 13.6 % in 2014, significantly surpassing the proportion within the same region [6]. Previous studies showed that the number of male nurses and the clinical need for male nurses have increased every year [7]. This may be due to the current decline in the birth rate and lack of recruitment in the nursing field, which has shaken the landscape of the nursing profession dominated by women [2].

Even if the demand for male nurses increases, men who pursue a career in nursing are still influenced by prevailing stereotypes, which explains the limited number of male students in China opting for nursing as their preferred major after the college entrance examination [1,8]. Nursing education primarily trains students through a combination of teaching theories and clinical internships [9]. Internships are clinical training required for nursing students in their final year of undergraduate nursing studies [10]. Clinical internships are a basic indicator of the outcomes of nursing education [11]. The goals of the nursing internships are to enable students to learn basic skills and create conditions for the connection between theory and practice and transition to professional nurses [12]. Clinical practice serves as a valuable platform for nursing students to gain advanced insights into the profession and refine their skills [13]. The learning environment facilitates the acquisition of nursing knowledge and skills, enabling the students to effectively communicate with patients [13]. As an important part of nursing education, the practical experience of male nursing students needs to be understood [14]. However, significant disparities persist in the quality and standard of nursing education across the six regions designated by the World Health Organization (WHO), even within a single nation [15,16].

Studies showed that male nursing students often feel stressed and confused in clinical practice [11,12], this is because their change in identity and environment gives them the appearance of being inexperienced, due to changes in the environment in school and hospital. Buthelezi [17] mentioned that new nurses are more vulnerable in clinical education and training. Kaur [18] proposed that the learning self, understanding self, value of social support, and relationship with clinical tutors are four important aspects for nursing students in clinical practice. In addition, the results suggest that the challenges faced by male nurses in clinical practice may be more prominent [11,12]. Most previous studies focused on nursing students; however, few studies focused on male nursing students and few studies were conducted on male nursing students' experiences in clinical practice. Therefore, we believe that it is crucial to investigate the clinical practice experiences of male nursing students to enhance our understanding of this unique cohort. At the same time, it also provides support for future research on improving the quality of nursing education.

#### 2. Aim

This study aims to explore the clinical internship experiences of male nursing students and provide them with adequate support for their successful adaptation to clinical roles.

#### 3. Methods

#### 3.1. Design

The study used a descriptive design and qualitative approach [19].

# 3.2. Sampling method and participants

Sampling was carried out according to convenience sampling [19]. The researcher contacted the male nursing students through the supervisor and class teacher and obtained their email addresses. Male nursing students at a university who had just finished their clinical internships and gained clinical experience were included in the study. Seven male nursing students who had just finished their clinical internships volunteered and were included in the study. Information duplication began with these participants, so no further recruitment was completed. The inclusion criteria were (1) male nursing students who had just finished their final year of clinical internships and had a complete clinical placement and rotated more than five departments. (2) male nursing students willing to participate in the study.

The exclusion criteria were (1) female nursing students and (2) male nursing students not in their last academic year. Their average age was 23 years (range: 22–24). They started their internship in July 2021 and finished it in March 2022. According

# Table 1 Interview guide.

- 1 Background information (age, duration of internship, and so on.)
- 2 What is your perspective on the role of nurses?/How do you perceive your role as a male nurse?
- 3 Could you provide a detailed account of your activities throughout the day at the hospital? Please in detail.
- 4 Tell me about your clinical teacher/mentor (How does he/she work with you?). What do you mostly focus on when you work together, knowledge, skills, or abilities? In addition to learning from clinical teachers/mentors, do you engage in other modes of learning? Please elaborate.
- 5 How does your clinical teacher evaluate your learning?
- 6 What have you learned from the clinical practice? Or what are your new views on the profession of nursing after your clinical internship?
- 7 During your clinical practice, did you have different experiences depending on the gender?
- 8 Do you feel stressed and troubled in your clinical learning? Please describe the challenges./How do you deal with these troubles and pressures?
- 9 Do you have any suggestions for clinical internship or hospital?

to the requirements of the school, they did internships in internal medicine, surgery, ICU, emergency department, operating room, obstetrics, gynaecology, and paediatrics.

#### 3.3. Data collection

A semi-structured interview guide with open-ended questions was used [19]. The interview guide (seen in Table 1) was used during the whole interview process. The interviews were conducted individually through face-to-face communication and the whole process was recorded.

#### 3.4. Procedure

Six male nursing students accepted the invitation after they were sent the information letter in the first round. In addition, one student contacted us by the other students. So finally, seven students were interviewed. This information letter explained the purpose of the study. Interview information and basic contact information of the authors and supervisor were provided to the participants to guide them on what to do and whom to contact if they had any questions. The interviews were conducted in a quiet classroom at the university after the participants agreed to participate. The interviews were tape-recorded and lasted for 29–61 min. During the interviews, the participants' facial and body expressions were observed and written down.

#### 3.5. Data analysis

The inductive approach and thematic analysis, as described by Graneheim and Lundman [20], were applied in this study. First, the authors transcribed the data verbatim into text format. Second, the authors listened to the recording repeatedly and revised the text. Finally, the authors translated the text into English, discussed the ambiguities with each other, and then reached an agreement with the supervisor through consultation. The authors then divided the content into different sections according to the aims of the study. In Table 2, an example of the data analysis is provided.

#### 3.6. Ethical considerations

There was no prior relationship between the interviewer and the interviewee. Before starting the study, we obtained permission from the ethics committee of the Lishi University on September 28, 2022 (IIT-20220908-0288-01). Efforts were made to prevent the interviewees from feeling stressed about participating when information was given by interviewers [20,21]. P1-7 represents different code names of participants. All the participants signed the written informed consent.

# 4. Results

According to the content analysis of the interview data, six themes emerged: (1) dynamics of working as a nurse, (2) not just a male nursing student, (3) gender-based stereotypes, (4) balance between forte and failing, (5) difficulties and challenges when working in hospitals, and (6) lessons learned and knowledge needs. The findings are described in the coming sections and are supplemented with quotes. Table 3 shows the categories and themes.

# 4.1. Dynamics of working as a nurse

The participants articulated their rationales and motivations for selecting nursing, although in certain instances it was not a first choice. They made this decision after synthesizing the internal and external factors.

#### 4.1.1. Realistic choice: more popular

All the participants expressed varying degrees of knowledge of the nursing profession, and based on their knowledge, their view was that male students were more popular in the nursing profession and better able to find jobs in the future. One respondent said:

'The salary is high. At that time, it was said that boys were popular. It sounds reasonable, and then I made it'. P(5)

 Table 2

 Examples of meaning units, codes, categories and themes from the content analysis.

Condensed Meaning units	Codes	Categories	Themes
Because of their gender, they are often regarded as doctors. Patients often ask questions from doctors.	Be mistaken for doctors related to gender.	Be a "nurse doctor"	Gender-based stereotypes
They will answer the questions that they can answer according to the patients' questions.	Actively seek solutions to problems.	Positive self resilience (attitudes and coping strategies from the individual nurse)	

**Table 3**Themes and categories found in this study.

Themes	Categories		
Dynamics of working as a nurse	Realistic choice: more popular		
	External family factors		
	Confused choice		
Not just a male nursing student	Role of patient-centered care		
	Interaction with clinical teachers		
	Interaction with classmates		
Gender-based stereotypes	Being a "nurse doctor"		
	Positive self-resilience		
Balance between forte and failing	Willingly bearing the burden of hard work		
_	Working hard to address weaknesses		
Difficulties and challenges when working in hospitals	Poor preparation for the internships		
	Psychological burnout: preparing for job hunting or postgraduate entrance examination		
Lessons learned and knowledge needs	Need for clinical knowledge: desire to better combine practice and theory		
	Call for hospitals to pay attention to gender differences		

#### 4.1.2. External family factors

Many participants had supportive family members who wanted their children to have stable jobs and their relatives were healthcare workers. Many family members influenced their choices and gave relevant suggestions. One of them said:

'It was recommended by an experienced relative, and my parents thought it was good and wanted to find a stable job'. P(1)

#### 4.1.3. Confused choice

Most participants were lost after the college entrance examination because they thought their scores were not ideal. It is worth noting that in China, compared with other medical majors, the required scores of nursing majors are lower. In this situation, an inherent underlying motivation drove them to choose nursing. Participants perceived their college entrance examination results as suboptimal; however, in comparison to other disciplines, nursing emerged as their foremost preference.

'I feel so bad about myself that there is no way ...... The college entrance examination did not play well, the score is not enough, is very reluctantly'. P(6)

#### 4.2. Not just a male nursing student

The participants stated that they tried to focus on patients' health during their hospital internships but also needed to get along with their teachers and classmates. Participants perceived themselves as assuming a greater number of roles, for example, communication with clinical teachers and patients, as they are no longer just students and this is different from the experiences in the educational settings.

# 4.2.1. Role of patient-centered care

All the participants said that their communication skills improved after the internship and that they paid attention to this aspect. Due to the rarity of male nurses working in wards in China, they are typically found in specialized departments such as emergency, ICU, and operating rooms. As a result, many patients have never encountered male nursing students before and expressed curiosity towards them. Consequently, patients exhibited a heightened inclination to engage in effective communication with them.

'Some patients will keep asking you questions, such as .... ... Maybe they think male nurses are rare, and they are willing to talk more, especially some elderly people'. P(4)

#### 4.2.2. Interaction with clinical teachers

Most participants said they preferred female clinical teachers, whereas some preferred both. They stated that female teachers preferred male nursing students, treated them more leniently, were more willing to teach them, and had more knowledge. Female teachers were more concerned about the daily lives of male students; one of them said:

'They care about me very much. Even in the study guide, they usually give me a special class, talking about some common diseases in the ward and so on'. P(6)

#### 4.2.3. Interaction with classmates

All the participants said they struggled with a small group of female classmates because they were sometimes narrow-minded and haggled over simple questions. Girls were sometimes more difficult to get along with, while boys were usually more tolerant. One participant stated the following:

'Boys will be easier to get along with a bit, such as with colleagues, a quarrel, boys generally fine the next day. There may be a cold war between girls, in fact, boys will be more open-minded'. P(2)

#### 4.3. Gender-based stereotypes

Currently, nursing is a female profession. However, this idea influences how patients and female nurses view male nurses and male nursing students. In other words, there has always been a prejudice against men in the nursing profession.

#### 4.3.1. Being a 'nurse doctor'

All the participants had the experience of being recognized as doctors, especially many elderly patients. In their concept, doctors are men, and several participants mentioned how they were perceived in the clinic:

'Basically, they treat me like a doctor, not a nurse ... Some patients actually know I'm a nurse, but she's used to seeing a man in a white coat as a doctor.' P(6)

#### 4.3.2. Positive self-resilience

The status of male nursing in China is still relatively low. All the participants said that although they often encountered stereotypes, they handled them well. Several participants described how they were treated by patients and other staff members, with one recounting:

'No one usually notices me ... But some of the girls' eyes just mean something else. They thought I was a clinician at first ... There's something weird about the way they look at me. But I adapted, and it was good ... '. P(1)

One participant expressed his determination to fulfill his duties regardless of how he was treated, while emphasizing the importance of challenging social stereotypes surrounding male nursing students.

#### 4.4. Balance between forte and failing

Male nursing students deliver a unique performance in clinical practice, and their advantages and disadvantages are obvious; therefore, they should seek a balance between them. Perhaps through the process of achieving this equilibrium, it was plausible that certain stereotypes could be mitigated.

#### 4.4.1. Willingly bearing the burden of hard work

The participants unanimously acknowledged their evident physical advantages in clinical practice, assuming a substantial number of physical responsibilities within the department. Moreover, they noted that male students exhibited greater flexibility compared to their female counterparts. One participant articulated:

'Sometimes when it comes to first aid, basically the boys go to help, and then the girls look around'. P(5)

In addition, participants thought that girls were generally better at theoretical knowledge, this is in sharp contrast with the shortcomings of male nursing students. One participant gave the following example:

'The first People's Hospital of Ningbo recruited men and women separately. He knew that the boys would not perform as well as the girls, so the boys took exams together with the boys'. P(5)

#### 4.4.2. Working hard to address weaknesses

The participants reported that their weaknesses could be overcome with more practice, or experiencing more different things, especially in emotional control. Despite the training, stress was inevitable. One participant said:

'You can't do anything but keep doing it and keep learning from it'. P(2)

#### 4.5. Difficulties and challenges faced by male nursing students

The participants said that they experienced various difficulties and challenges in clinical practice related to not only inadequate preparation for internships but also psychological burnout.

# 4.5.1. Poor preparation for internships

The participants said that although they had prepared a lot at school, clinical practice left them feeling powerless. Many of the operations were not taught at school. Patients hesitated when male nursing students were giving injections daily as one participant said:

'Some patients don't think male nurses can give injections'. P(4)

#### 4.5.2. Psychological burnout: preparing for job hunting or postgraduate entrance examination

Several participants said they were stressed professionally and psychologically. Approaching graduation, they were also faced with the choice between postgraduate entrance examination and job hunting. One participant said:

'I was preparing for the editing exam. I had to work during the day and read books at night, so I had no time to relax and relieve the pressure, so I felt very tired'. P(4)

#### 4.6. Lessons learned and knowledge needs

The participants provided meaningful suggestions based on their valuable experiences. Detailed guidance for male nursing students can provide a better environment for them in schools and hospitals. These meaningful lessons also provide guidance for hospitals and schools on the education as well as the perception of male nursing students in the future.

# 4.6.1. Need for more clinical knowledge: desire to better combine practice and theory

All the participants said that, after entering clinical practice, they found that what they had learned in school was far from enough. They needed more practice at school. Real knowledge comes from practice, and theoretical studies should be combined with practice. One participant said:

'Of course, school is very important ... but school teaching is not so vivid, but in the clinic some knowledge is vivid'. P(7)

#### 4.6.2. Call for hospitals to pay attention to gender differences

All the participants said that male nursing students were different from other medical staff members in the clinical department. Almost no male nursing locker rooms were available. As the number of male nursing students in a hospital may not even be ten, few hospitals have paid attention to this group. However, this group tends to be more clinically visible, which some see as a positive thing, whereas others do not.

'It's just that they have a vision, and they're alert, so I'm scared to go in, and then I stand behind my teacher every time I go in. I can't read her eyes, either. She's just looking at you'. P(1)

#### 5. Discussion

The participants described their motivations for choosing nursing. They all said that, during their clinical practice, they assumed many other identities other than being male nursing students. Moreover, they encountered gender-based stereotypes, especially from patients. Male nursing students have unique advantages and disadvantages that need to be balanced. However, they face difficulties and challenges in life and work but are willing to do more. After they did their internships, they provided suggestions for hospitals and schools.

The participants described their motivation for choosing a nursing major. The common reasons for choosing nursing were job security, scarcity of male nurses, and family support. These findings are consistent with those of previous studies on the reasons why men choose to become nurses [22,23]. However, the participants said that one of the most important reasons for choosing nursing was that college entrance examination scores were not ideal. Against this background, they comprehensively considered choosing a nursing major. In China, the college entrance examination holds significant weight as a crucial selection process, with its outcomes serving as the foundation for university major choices [24]. Nursing programs tend to have comparatively lower admission scores than other medical majors, and prevailing social stereotypes pose challenges in positioning nursing as the primary preference for male students [1,24]. The remaining reasons are more consistent with the researchers' results, and there is little difference [5,21]. In describing their internship experiences, apart from contact with patients, they mostly communicated with clinical teachers. Clinical teachers teach, and after teaching, nursing students are allowed to practice, which shows the resource power and opportunity power of structural authorisation. During the interviews, it was found that female teachers did not differentiate male nursing students and communicated with them easily. This result has rarely been reported in previous studies. Structural empowerment [25] has a significant impact on nurses' engagement. For male nursing students, direct authorisation comes from clinical teachers, and it is undoubtedly a good thing to have a better relationship with them. Effective communication between nurses and leaders embodies the meaning of informal empowerment and creates a harmonious and efficient work environment. According to the interviewees' descriptions, many people still have preconceived ideas about the nursing industry, especially stereotypes about gender issues, that it is rare for a man to opt for the nursing profession [1]. This is similar to the confusion over nursing role and identity in other studies [20,21].

In addition, male nursing students know their strengths and weaknesses, and physiological advantages are the most common view. However, this is not the embodiment of nursing quality, which is also supported by other studies [20,26]. Despite their efforts to adapt, it is obvious that the result is not good, and they still feel mentally and physically exhausted. In addition to the common problems faced by all nurses, male nursing students have to consider their own identity. The obvious distrust from patients also creates male nursing students' distrust of themselves. Chan [21] et al. also put forward a similar result, which shows that male nursing students pay attention to gender differences; they constantly compare their abilities with those of female nurses, which enlarges the gender differences [20]. In this study, the participants attributed one of their problems to the lack of preparation in school, or beyond male nursing students' expectations. Not everyone can adapt quickly to a hospital's working environment. The participants in this study, as

well as female nursing students, faced pressure to find a job or take the postgraduate entrance examination and prepare for it. In the face of these difficulties, structural empowerment had a direct positive impact on the work-life domain, which in turn had a direct negative impact on emotional exhaustion [26]. The difficulties and challenges faced by male nursing students were similar to those mentioned in other studies [5,20–23].

This study aimed to describe the clinical practice experiences of male nursing students. The knowledge gained might be valuable for universities teaching nursing and hospitals responsible for clinical internships. School administrators, nursing educators, and hospital administrators can obtain information about the experiences of male nursing students in clinical practice from the research results. Based on the response received, they can suggest appropriate locations, and resources to manage male students and provide comprehensive knowledge and training for male nursing students to improve their internship experiences. Even hospital administrators can initiate improvements by addressing fundamental amenities, such as establishing adequate facilities for male staff members [27]. This study suggests that we should further investigate clinical practice experiences, learning experiences, needs and feelings of male students in other regions so that more men feel encouraged to enter the nursing profession. In this study, seven male nursing students experienced many things they had never encountered before during the internship, which we can call difficulties or challenges, but most of them showed a sense of responsibility and mission that should be expected of the nursing staff. Even when they took on some of the difficulties and stress and were confused and tired, they could adapt and change for the better.

#### 6. Limitations

This study has some limitations. The seven participants in this study were from Zhejiang Province and all were nursing students from the same university. On the other hand, there may be regional differences in the views of male nursing students. Considering the regional limitations and clinical environment differences, the results of this study should be used with caution. No longitudinal study was conducted, such as interviewing male nursing students before their internship. Researchers use the convenience sampling method to select samples according to their experience and judgment, which inevitably brings selection bias.

#### 7. Conclusion

Our research findings have significantly enhanced our comprehension of male nursing students' experiences and offered valuable recommendations for both nursing education and clinical practice. Simultaneously, these results provide essential information support for nursing educators and hospital administrators.

#### **Ethics statement**

The study obtained permission from the ethics committee of the Lishi University, the approval number: (IIT-20220908-0288-01). All participants provided informed consent before they participated in the study.

# Data availability statement

The data associated with this study have not been deposited in publicly accessible repositories. Data included in article. Considering the confidentiality of the interview data, qualified researchers may contact the corresponding author for access.

#### CRediT authorship contribution statement

**Yitao Zhou:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Lingyan Weng:** Writing – review & editing, Writing – original draft, Software, Methodology, Conceptualization. **Menglu Wang:** Validation, Methodology, Investigation, Data curation. **Ganying Huang:** Writing – review & editing, Visualization, Supervision, Methodology, Funding acquisition, Conceptualization.

# **Declaration of competing interest**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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We used the Grammarly for language improvement, it didn't change the content of the study.

#### References

[1] D. Feng, et al., The influence of perceived prejudice on willingness to be a nurse via the mediating effect of satisfaction with major: a cross-sectional study among Chinese male nursing students. Nurse Educ. Today 42 (2016) 69–72.

- [2] D.C. Mulkey, The history of men in nursing: pioneers of the profession, J. Christ. Nurs. 40 (2) (2023) 96-101.
- [3] B. Smallheer, B. Morgan, R. Stern, A historical look at men's involvement in nursing and leadership in GAPNA, Geriatr. Nurs. 41 (1) (2020) 52-53.
- [4] J. Evans, Men nurses: a historical and feminist perspective, J. Adv. Nurs, 47 (3) (2004) 321–328.
- [5] Y. Liu, et al., Perspective and experience of male nursing students in 3-year vocational college during their clinical practicum: a qualitative study in Shanghai, China Front Public Health 10 (2022) 905200
- [6] C.T. Kovner, et al., Diversity and education of the nursing workforce 2006-2016, Nurs. Outlook 66 (2) (2018) 160-167.
- [7] D. Terry, et al., Traversing the funambulist's fine line between nursing and male identity: a systematic review of the factors that influence men as they seek to navigate the nursing profession. Eur J Investig Health Psychol Educ 10 (3) (2020) 691–703.
- [8] H. Wang, et al., Perceptions of nursing profession and learning experiences of male students in baccalaureate nursing program in Changsha, China, Nurse Educ. Today 31 (1) (2011) 36–42.
- [9] S.H. Hamaideh, H. Al-Omari, H. Al-Modallal, Nursing students' perceived stress and coping behaviors in clinical training in Saudi Arabia, J. Ment. Health 26 (3) (2017) 197–203.
- [10] Y. Rezapour-Mirsaleh, M. Aghabagheri, The relationship between personality dimensions, spirituality, coping strategies and clinical clerkship satisfaction among intern nursing students: a cross-sectional study, BMC Nurs. 19 (2020) 76.
- [11] M. Yazdankhahfard, M. Ravanipour, K. Mirzaei, The gap in the clinical learning environment: the viewpoints of nursing students, J. Educ. Health Promot. 9 (2020) 311
- [12] X. Tan, et al., Determining the core competencies for international postgraduate nursing students in internship programs: a delphi study, Nurse Educ. Pract. 70 (2023) 103654.
- [13] C.A. Atakro, et al., Clinical placement experiences by undergraduate nursing students in selected teaching hospitals in Ghana, BMC Nurs. 18 (2019) 1.
- [14] H. Lee, et al., Factors influencing male nursing students' adaptation to college life in Korea, J. Nurs. Res. 30 (4) (2022) e220.
- [15] C. Baker, A.H. Cary, M. da Conceicao Bento, Global standards for professional nursing education: the time is now, J. Prof. Nurs. 37 (1) (2021) 86-92.
- [16] F.A. Shaffer, Ensuring a global workforce: a challenge and opportunity, Nurs. Outlook 62 (1) (2014) 1-4.
- [17] S.F. Buthelezi, et al., Clinical learning experiences of male nursing students in a Bachelor of Nursing programme: strategies to overcome challenges, Curationis 38 (2) (2015) 1517.
- [18] G. Kaur, W.M. Chernomas, J.M. Scanlan, Nursing students' perceptions of and experiences coping with stress in clinical practice, Int. J. Nurs. Educ. Scholarsh. 17 (1) (2020).
- [19] J. Thompson Burdine, S. Thorne, G. Sandhu, Interpretive description: a flexible qualitative methodology for medical education research, Med. Educ. 55 (3) (2021) 336–343.
- [20] U.H. Graneheim, B.M. Lindgren, B. Lundman, Methodological challenges in qualitative content analysis: a discussion paper, Nurse Educ. Today 56 (2017) 29–34.
- [21] Z.C. Chan, et al., Self-image of male nursing students in Hong Kong: multi-qualitative approaches, Am. J. Men's Health 8 (1) (2014) 26-34.
- [22] N.P. Ndou, S.S. Moloko-Phiri, Four-year diploma male students' experiences in a profession traditionally perceived as a female domain at a selected public college of nursing in Limpopo, South Africa, Curationis 41 (1) (2018) e1–e6.
- [23] R.J. Meadus, J.C. Twomey, Men student nurses: the nursing education experience, Nurs. Forum 46 (4) (2011) 269-279.
- [24] D. Feng, et al., The mediating role of perceived prejudice in the relationship between self-esteem and psychological distress among Chinese male nursing students. J. Prof. Nurs. 35 (6) (2019) 505–511.
- [25] R. García-Sierra, J. Fernández-Castro, Relationships between leadership, structural empowerment, and engagement in nurses, J. Adv. Nurs. 74 (12) (2018)
- [26] C.I. Yang, et al., There is nothing wrong with being a nurse: the experiences of male nursing students in Taiwan, Jpn. J. Nurs. Sci. 14 (4) (2017) 332-340.
- [27] Y. Ma, S.C. Chen, H. Zeng, Male student nurses need more support: understanding the determinants and consequences of career adaptability in nursing college students, Nurse Educ. Today 91 (2020) 104435.