Competence of clinical teachers: A survey on perception of masters of nursing specialist postgraduates, their clinical teachers, and head nurses

Xiao-fen Wang a, **, Ling Zhao b, Hong-juan Hu a, Gao-wen Ou a, Li Liao a, *

a School of Nursing, University of South China, Hengyang, Hunan 421001, China
b XiangYa School of Medicine, Central South University, Changsha, Hunan 410013, China

Abstract

Objectives: To explore the current admittance situation of clinical teachers for masters of nursing specialist (MNS) postgraduates and to test the competence of clinical teachers in self-evaluation and other evaluations.

Methods: In this cross-sectional study, using a random number table, we chose 80 MNS postgraduates under clinical practice, their clinical teachers, and head nurses each from six hospitals in Hunan and Guangdong. The participants were tested on the basis of the Clinical Teachers’ Competence Inventory of MNS Postgraduates. The competences of clinical teachers were evaluated by the three groups of participants.

Results: The aggregated scores of teacher competence as evaluated by the MNS postgraduates (181.33 ± 24.95) were lower than those assigned by both clinical teachers (190.75 ± 24.30) and their head nurses (198.53 ± 18.90), with significant differences in all dimensions except for clinical managing ability. The five highest rated items from all participants focused on the teachers’ clinical nursing ability, and the five lowest rated items were mainly about their clinical research ability.

Conclusion: The evaluation from MNS postgraduates is obviously lower than the self-evaluation of clinical teachers, and all participants are aware of the deficiency in research ability of the teachers. Thus, the admittance and examination of clinical teachers should be controlled strictly. Training should be carried out immediately to strengthen their comprehensive abilities, especially their research ability.

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1. Introduction

Nursing postgraduate education has changed greatly in recent years, and relevant curricula have increased in flexibility and dynamics [1]. In general, the changes exactly cater to the social needs for advanced clinical nurses. Considering the healthcare developments that have raised the requirements for nursing, many countries are actively developing nursing postgraduate curricula and cultivating advanced nursing practices that are directly engaged in clinical work [2]. However, the strategies in China remain unchanged. Increasing students have become masters of nursing specialist (MNS) candidates when it was offered in China in 2010 [3]. Meanwhile, more clinical nurses have been chosen to be clinical teachers of MNS postgraduates.

Clinical teaching as a bridge between theory and practice is the most important part of MNS postgraduate cultivation. Clinical teachers are vital in this process [4] because their comprehensive abilities decide the quality of clinical practice of MNS postgraduates. The United States of America has established a strict and relatively perfect admission and evaluation system for clinical teachers of nursing postgraduates. The system states that clinical teachers should be at least masters or doctors from their own professional fields and should perform as clinical practice nurse practitioners or specialists with rich clinical experience and strong educational guidance [2]. The abilities of clinical teachers are evaluated from several aspects by using many mature scales, such as Clinical...
Teacher Competence Inventory (CTCI) [6], Nursing Clinical Teacher Effectiveness Inventory (NCTEI) [7], and NCTEI-based Ideal Teacher Competence Inventory [8].

China starts MNS late and it is still in the exploratory stage [9] because the tutors of MNS postgraduates are nursing professors or senior clinical nursing managers who are too busy to practice postgraduate guidelines. In addition, clinical teachers are only sourced from clinical nurses [10]. However, the abilities of clinical teachers differ largely because of nonexistent mature teacher admissions and examination criteria; moreover, those with insufficient experience do not know how to instruct MNS postgraduates, thereby preventing MNS postgraduates from achieving their learning goals [11,12]. In the past few months, our research group has built a qualification and examination system for clinical teachers of MNS postgraduates, followed by a competence evaluation inventory, by using Delphi's method [13]. The purposes of this study are to explore the current situation of clinical teacher qualification and to analyze the clinical teacher competences, as evaluated by teachers, MNS postgraduates, and head nurses. This way, we can understand the current situation, teaching abilities, and disadvantages of clinical teachers. Therefore, we could provide a gist for choosing, training, and testing clinical teachers of MNS postgraduates in the future.

2. Methods

2.1. Participants

This is a pilot survey involving 170 clinical teachers of MNS postgraduate as a general sample. They work in six hospitals affiliated with three colleges in Hunan and Guangdong. We obtained the sample using a random number table. The total number of MNS postgraduate clinical teachers is limited; therefore, we set the extraction ratio to 50%, considering the difficulty of full extraction. The specific steps are as follows:

First, we acquired the names of all teachers from the hospital nursing department and numbered the names, arranged in alphabetical order, from 01 to 170. Second, a random number table that was automatically generated by a computer was used to read. We followed a reading rule: start from the third row in the fourth column, from left to right and from top to bottom. Every number we read was recorded, except for those repeated or not in the specified range. We obtained 85 numbers. To compare the self-evaluation and other evaluations of clinical teachers, we required that the data of MNS postgraduates, their clinical teachers, and teachers' head nurses were in a one-to-one correspondence. Therefore, the sample of head nurses was directly chosen from the list of definite teachers without repeated sampling. A total of 190 MNS postgraduates experienced or are currently experiencing guidance from those 170 teachers. Following the one-to-one correspondence principle, the list of MNS postgraduates was directly chosen according to the teachers' list. If a teacher guides more than one MNS postgraduate, we would select one of them through the random number table method. Questionnaires were distributed to 85 sets of clinical teacher, MNS postgraduate and the teacher's head nurse, and 80 sets of questionnaires were returned.

The teachers, MNS postgraduates, and head nurses were all volunteers. The teachers had been teaching MNS postgraduates for more than 6 months, and 79 (98.75%) were females aged 28–47 years. The MNS postgraduates, aged 22–32 years, had at least 6 months of clinical practice. The head nurses, aged 29–48 years, were all females with 1–23 years of management experience. Among the head nurses, 56 (70.00%) were supervisor nurses, and 33 (41.25%) were chief superintendent nurses.

2.2. Instruments and measurements

1) Demographics of these three groups included age and gender. On the basis of the admission criteria for clinical teachers of MNS postgraduates (Table 1) [14], the teachers were asked to answer a questionnaire about their admission situations, including clinical working experience, clinical teaching experience, clinical research competence, computer technology, and English level.

2) The Clinical Teachers' Competence Inventory of MNS Postgraduates (CTCIMNSG) [14] was developed based on the training objectives of MNS postgraduates and the core competence of nurse specialists [3,15]. The inventory (Appendix file) consists of 51 items from five categories: clinical nursing ability, clinical teaching ability, clinical managing ability, clinical research ability, and interpersonal skills. Moreover, a satisfaction survey was added. We used a five-point Likert scale (each item with a score ranging from 1 to 5). A high score indicates a strong ability of the clinical teacher. The Cranach's α of CTCIMNSG was 0.96, with each domain ranging from 0.89 to 0.92. The content validity index was 0.93 across the full scale and ranged from 0.86 to 1.00 in each subscale and from 0.72 to 1.00 in each item. The factor analysis identified five common factors, each explaining more than 50% of total variance.

2.3. Procedures

Data were collected from six hospitals in Hunan and Guangdong. The hospitals were mainly affiliated with universities, including the University of South China, Central South University, and Southern Medical University. The CTCIMNSG checklists, demographic forms, and informed consent forms were sent to MNS postgraduates, their clinical teachers, and head nurses separately. The participants were asked to evaluate the clinical teachers’ abilities by using scores from 1 to 5. Two investigators were responsible for distributing the questionnaires on the spot, and the electronic version was used in some places. The questionnaires were numbered after completion, and any questionnaire with less than

| Table 1 |
|---|
| Admission criteria for clinical teachers of MNS postgraduates. |

| Admission Criteria |
|---|
| 1. Registered nurse |
| 2. Bachelor's degree, senior vice title or higher, Graduate's degree, intermediate title or higher |
| 3. Clinical working experience (Bachelor's degree > 10 years, graduate’s degree > 5 years) |
| 4. Clinical teaching experience (Bachelor's degree > 5 years, graduate’s degree > 3 years) |
| 5. Grade A at the National Professional and Technical Foreign Language Test |
| 6. Adept at using basic computer programs (e.g., word, office, PPT) and network resource |
| 7. Having hosted or taken part in at least 1 scientific project of province or department level or above in recent 5 years |
| 8. Having published at least 2 first-author papers on province-level core journals or above in recent 3 years |
| 9. Specialist Nurse Qualification Certificate |
95% completion was excluded. For each group, 85 questionnaires were sent out and 80 valid questionnaires were taken back.

2.4. Ethical considerations

The study was approved by the Ethics Committees of all six hospitals. Informed consent was obtained from all participants, and data from each participant were anonymous.

2.5. Data analysis

The scores of items in each category were summed as the score of the category, such as clinical nursing ability, clinical teaching ability, clinical managing ability, clinical research ability, and interpersonal skills. The total score of a teacher was summed from the scores of all five categories. The data were analyzed using SPSS 18.0. Demographic data were analyzed using descriptive statistics, whereas ANOVA was used on the five scales and satisfaction to test the differences among the three groups. \( P < 0.05 \) was considered to indicate statistical significance.

3. Results

3.1 The current admission situations of clinical teachers of MNS postgraduates are shown in Table 2

3.2 The evaluation differences between teachers and others are shown in Table 3

The score of scales (including total scale and five subscales) and satisfaction assigned by MNS postgraduates were all lower than

| Variable                              | MNS postgraduates (n – 80) | Clinical teachers (n – 80) | Head nurses (n – 80) | F     | P     |
|----------------------------------------|-----------------------------|---------------------------|---------------------|-------|-------|
| Highest level of education completed (%) |                             |                           |                     |       |       |
| Junior college                         | 9 (11.3)                    | 65 (81.3)                 | 6 (7.5)             |       |       |
| Undergraduate                          |                             |                           |                     |       |       |
| Master’s degree or above               |                             |                           |                     |       |       |
| Professional title (%)                 |                             |                           |                     |       |       |
| Primary nurse                          | 30 (37.5)                   | 38 (47.5)                 | 12 (15.0)           |       |       |
| Supervisor nurse                       | 38 (47.5)                   | 38 (47.5)                 | 12 (15.0)           |       |       |
| Co-chief superintendent nurse or above |                             |                           |                     |       |       |
| Clinical working experience (%)        |                             |                           |                     |       |       |
| \( \leq 5 \) years                     | 8 (10.0)                    | 25 (31.3)                 | 47 (58.8)           |       |       |
| 5-10 years                             |                             |                           |                     |       |       |
| \( \geq 10 \) years                    |                             |                           |                     |       |       |
| Clinical teaching experiences (%)      |                             |                           |                     |       |       |
| \( \leq 5 \) years                     | 16 (20.0)                   | 34 (42.5)                 | 30 (37.5)           |       |       |
| 5-10 years                             |                             |                           |                     |       |       |
| \( \geq 10 \) years                    |                             |                           |                     |       |       |
| English level (Multiselect) (%)        |                             |                           |                     |       |       |
| Title English grade A                  | 45 (56.3)                   | 19 (23.8)                 | 9 (11.3)            |       |       |
| CET4                                   |                             |                           |                     |       |       |
| CET6                                   |                             |                           |                     |       |       |
| Computer level (Multiselect) (%)       |                             |                           |                     |       |       |
| Skilled of making PPT and using internet resources | 77 (96.3) | 43 (53.8) | 21 (26.3) |       |       |
| At least 3 professional computer module tests | 39 (48.8) | 34 (42.5) | 22 (27.5) |       |       |
| Provincial and national computer test grade 2 | 39 (48.8) | 34 (42.5) | 22 (27.5) |       |       |
| Research project in recent 5 years (Multiselect) (%) | 39 (48.8) | 34 (42.5) | 22 (27.5) |       |       |
| No project                             | 39 (48.8)                   | 34 (42.5)                 | 22 (27.5)           |       |       |
| Having hosted or taken part in municipal project | 34 (42.5) | 34 (42.5) | 22 (27.5) |       |       |
| Having hosted or taken part in provincial project or above | 22 (27.5) | 22 (27.5) | 22 (27.5) |       |       |
| Publish papers as first author in recent 3 years (Multiselect) (%) | 36 (45.0) | 36 (45.0) | 36 (45.0) |       |       |
| No                                     | 36 (45.0)                   | 36 (45.0)                 | 36 (45.0)           |       |       |
| Having published papers in provincial core journal | 38 (47.5) | 38 (47.5) | 38 (47.5) |       |       |
| Having published papers in national core journal or above | 25 (31.2) | 25 (31.2) | 25 (31.2) |       |       |
| Have a specialist nurse qualification certificate (%) | 43 (53.8) | 43 (53.8) | 43 (53.8) |       |       |
| Yes                                    | 43 (53.8)                   | 43 (53.8)                 | 43 (53.8)           |       |       |
| No                                     | 37 (46.3)                   | 37 (46.3)                 | 37 (46.3)           |       |       |
| Approach to be clinical teacher of MNS postgraduates (%) | 3 (3.8) | 3 (3.8) | 3 (3.8) |       |       |
| Self-recommendation                    | 3 (3.8)                     | 3 (3.8)                   | 3 (3.8)             |       |       |
| Peer recommendation                    | 6 (7.5)                     | 6 (7.5)                   | 6 (7.5)             |       |       |
| Passing tests                          | 0                           | 0                         | 0                   |       |       |
| Manager appointment                    | 71 (88.8)                   | 71 (88.8)                 | 71 (88.8)           |       |       |

Values are expressed as means of three replicates with standard deviations (Mean \( \pm \) SD).
Values are expressed as means of three replicates with standard deviations (Mean ± SD).

### Table 4
Five highest-rated items of clinical teachers’ abilities from three groups.

| Rank | Items                                                                 | Affiliated subscale       | Score  |
|------|-----------------------------------------------------------------------|---------------------------|--------|
|      | **MNS postgraduates**                                                |                           |        |
|      | Mastering nursing operation in the specialist field and the critically ill patients rescue techniques | Clinical nursing ability  | 4.39 ± 0.65 |
|      | Mastering the theoretical knowledge of the specialist field          | Clinical nursing ability  | 4.35 ± 0.66 |
|      | High sense of responsibility, self-discipline                        | Clinical nursing ability  | 4.21 ± 0.69 |
|      | Being willing to help managers develop their own regular teaching and nursing work plan | Clinical managing ability | 4.13 ± 0.79  |
|      | Being able to organize nursing rounds independently                   | Clinical teaching ability | 4.06 ± 0.75  |
|      | **Clinical teachers**                                                |                           |        |
|      | Mastering the theoretical knowledge of the specialist field          | Clinical nursing ability  | 4.41 ± 0.63  |
|      | High sense of responsibility, self-discipline                        | Clinical nursing ability  | 4.39 ± 0.67  |
|      | Mastering nursing operation in the specialist field and the critically ill patients rescue techniques | Clinical nursing ability | 4.34 ± 0.67  |
|      | Enjoying nursing, and full of enthusiasm for nursing work            | Clinical nursing ability  | 4.27 ± 0.68  |
|      | Having a strong sense of teamwork and ability                         | Interpersonal ability      | 4.25 ± 0.68  |
|      | **Head nurses**                                                      |                           |        |
|      | Mastering the theoretical knowledge of the specialist field          | Clinical nursing ability  | 4.59 ± 0.50  |
|      | High sense of responsibility, self-discipline                        | Clinical nursing ability  | 4.59 ± 0.52  |
|      | Mastering nursing operation in the specialist field and the critically ill patients rescue techniques | Clinical nursing ability | 4.55 ± 0.55  |
|      | Having a strong sense of teamwork and ability                         | Interpersonal ability      | 4.46 ± 0.64  |
|      | Enjoying nursing teaching work                                       | Clinical teaching ability | 4.45 ± 0.57  |

Those evaluated by teachers or head nurses. All dimensions, except clinical managing ability, were significantly different among the three groups (P < 0.05).

#### 3.3 The five highest- and five lowest-rated items from three groups are shown in Tables 4 and 5, respectively

### 4. Discussion

#### 4.1. Present admission situation of clinical teachers of MNS postgraduates

Many present clinical teachers of MNS postgraduates did not meet the general admission criteria (Tables 1 and 2). In the educational background, for example, only 6 (7.5%) teachers have master’s degrees. As for professional titles, 30 (37.5%) teachers have primary titles, and only 12 (15.0%) teachers have the vice-senior titles or above. As for scientific research, 39 (48.8%) teachers have never partaken in any project, and 36 (45.0%) teachers have never published papers. These results indicate that, currently, clinical teachers are largely unqualified in many aspects, such as educational background, teaching experience toward postgraduates, and research ability. Moreover, most clinical teachers are computer and English literate, and 43 (53.8%) have a specialist nurse certificate. However, we should not ignore the subjective randomness of managers because 71 (88.7%) teachers were nominated directly by their head nurses without tests. As direct instructors of MNS postgraduates, clinical teachers must have rich experience in clinical nursing, education, management, and research, and should at least have bachelor’s degrees and co-chief superintendent nurse titles [16,17]. Therefore, clinical managers should raise the clinical teacher admission standards and strictly enforce them as preconditions to ensure the quality of clinical practice for MNS postgraduates.

#### 4.2. Differences among the three groups in evaluation of clinical teacher abilities

The scores of all items evaluated by MNS postgraduates were lower than those assessed by either clinical teachers or their head nurses (Table 3). These findings are similar to our earlier study [18]. The first reason might be the lack of experience of clinical teachers in teaching MNS postgraduates, as well as the lack of regular training, because they had no intensive understanding of the training objectives and cultivation patterns of MNS postgraduates [19]. Second, the teaching methods were so timeworn and simple that the teachers instructed MNS postgraduates as if they were...

### Table 5
Five lowest-rated items of clinical teachers’ abilities from three groups.

| Rank | Items                                                                 | Affiliated subscale       | Score  |
|------|-----------------------------------------------------------------------|---------------------------|--------|
|      | **MNS postgraduates**                                                |                           |        |
|      | Being able to use basic statistical software such as SPSS statistical software | Clinical research ability | 4.39 ± 0.65 |
|      | Being able to apply scientific research into clinical practice and promoting the improvement of care service quality | Clinical research ability | 4.35 ± 0.66 |
|      | Generally understanding English literatures and proficiency in writing English abstracts of research papers | Clinical research ability | 4.21 ± 0.69 |
|      | Being able to carry out project declaration and research independently | Clinical research ability | 4.13 ± 0.79 |
|      | Being able to guide MNS postgraduates in clinical research            | Clinical research ability | 4.06 ± 0.75 |
|      | **Clinical teachers**                                                |                           |        |
|      | Being able to analyze and judge the data based on the statistical results | Clinical research ability | 4.41 ± 0.63 |
|      | Being able to use basic statistical software such as SPSS             | Clinical research ability | 4.39 ± 0.67 |
|      | Being able to guide MNS postgraduates in clinical research            | Clinical research ability | 4.34 ± 0.67 |
|      | Generally understanding English literatures and proficiency in writing English abstracts of research papers | Clinical research ability | 4.27 ± 0.68 |
|      | Being able to carry out project declaration and research independently | Clinical research ability | 4.25 ± 0.68 |
|      | **Head nurses**                                                      |                           |        |
|      | Being able to analyze and judge the data based on the statistical results | Clinical research ability | 4.59 ± 0.50 |
|      | Being able to guide MNS postgraduates in clinical research            | Clinical research ability | 4.59 ± 0.52 |
|      | Being able to use basic statistical software such as SPSS             | Clinical research ability | 4.55 ± 0.55 |
|      | Being able to carry out project declaration and research independently | Clinical research ability | 4.46 ± 0.64 |
|      | Generally understanding English literatures and proficiency in writing English abstracts of research papers | Clinical research ability | 4.45 ± 0.57 |

Values are expressed as means of three replicates with standard deviations (Mean ± SD).
undergraduates or even junior college students. Thus, the needs of MNS postgraduates could not be met adequately [20]. Third, the MNS postgraduates could not have a proper self-position because they expected too much from their clinical teachers. Instead of getting diverse trivial matters from their teachers' instruction, the MNS postgraduates could not have a proper self-position because they expected too much from their clinical teachers. Instead of getting diverse trivial matters from their teachers' instruction, the MNS postgraduates wanted to directly engage in clinical management or advanced nursing work, which made them discontent.

Moreover, the scores assigned by the head nurses were the highest among the three groups probably because most clinical teachers were directly nominated by their head nurses, who were deemed to possess the highest degrees or richest experiences in their departments. Therefore, the head nurses were fully confident in their choices and gave the highest scores. However, their subjective assumptions without objective bases usually lead to ignorance of teachers’ comprehensive abilities, which were unfavorable for the competition and improvement of other clinical teachers.

Thus, the head nurses need to perform a comprehensive clinical ability test or a competition system for clinical teachers. Moreover, both administrators and clinical teachers should provide MNS postgraduates with psychological guidance so they can enjoy clinical practice and improve their learning performances with the right frame of mind.

4.3. Cons and pros of clinical teachers of MNS postgraduates

The five highest-rated items from all participants are related to the clinical nursing abilities of teachers (Table 4). In general, present clinical teachers have theoretical bases, strong specialist abilities, and high professional ethics that help MNS postgraduates realize their learning goals [18]. However, the five lowest-rated items were mainly associated with the clinical research ability of teachers (Table 5). Clearly, the greatest weakness of clinical

| Factors                  | Items                                                                 |
|--------------------------|----------------------------------------------------------------------|
| Clinical nursing ability | Enjoying nursing, and full of enthusiasm for nursing work            |
|                          | High sense of responsibility, self-discipline                        |
|                          | Mastering the theoretical knowledge of the specialist field          |
|                          | Mastering the new expertise and cutting-edge technology of the specialist field |
|                          | Being able to use nursing procedures to take holistic care of patients |
|                          | Being able to targeted provide patients with comprehensive health education |
|                          | Being able to actively participate in professional academic activities |
|                          | Being able to concentrate on subject construction and professional development and put forward reasonable proposals |
|                          | Being able to clear their career positioning and develop specific career planning |
| Clinical teaching ability| Enjoying nursing teaching work                                       |
|                         | Having good language skills                                          |
|                         | Being able to clarify the training objectives of MNS postgraduates and the specific responsibilities of teachers |
|                         | Being able to develop the corresponding teaching plan of the department by combining with the MNS graduate clinical practice program |
|                         | Being able to train postgraduates in accordance with their aptitude, and use various teaching methods flexibly |
|                         | Being able to organize nursing rounds independently                   |
|                         | Being able to organize specialized skills training independently      |
|                         | Being able to guide MNS postgraduates in evidence-based nursing practice |
|                         | Being able to train MNS postgraduates in ponder over practical ability and critical thinking |
|                         | Being able to objectively and timely evaluate MNS postgraduates clinical practice and give rationalization recommendations |
|                         | Being willing to actively follow the teaching feedback from MNS postgraduates and adjust teaching strategies accordingly |
| Clinical managing ability| Being willing to help managers develop their own regular teaching and nursing work plan |
|                         | Being able to work out teaching and work objectives at all stages of development according to the actual situation |
|                         | Being proficient and effective at organization of clinical teaching activities |
|                         | Being able to reasonably allocate human and material resources required |
|                         | Being able to motivate and coordinate the study and work enthusiasm of MNS postgraduates and department staff and helping them achieve teaching and work objectives |
|                         | Being able to give advice for existing teaching and work plans and analyze their cons and pros comprehensively and select the best advice |
|                         | Being able to properly handle emergencies in teaching and nursing work |
|                         | Being able to deal with problems in teaching and nursing work and to assist decision-making by appropriately and effectively using management tools. |
| Clinical research ability| Being good at discovering problems in nursing practice and taking measures to find evidence |
|                         | Being able to summarize the values of scientific research in the process of nursing and teaching |
|                         | Mastering the basic Chinese and English document retrieval methods |
|                         | Generally understanding English literatures and proficiency in writing English abstracts of research papers |
|                         | Being able to use basic statistical software such as SPSS |
|                         | Being able to analyze and judge the data based on the statistical results |
|                         | Being able to carry out project declaration and research independently |
|                         | Being able to publish a research paper as the first author at provincial core journal or above |
|                         | Being able to apply scientific research into clinical practice and promoting the improvement of care service quality |
|                         | Being able to guide MNS postgraduates in clinical research |
| Interpersonal ability    | Being positive and optimistic                                         |
|                         | Being able at controlling emotions and relieving pressure             |
|                         | Being willing to help MNS postgraduates in controlling their emotions and guide them correct their self-positioning |
|                         | Respecting and trusting MNS postgraduates                             |
|                         | Paying attention to the learning and psychological needs of MNS postgraduates and providing necessary help |
|                         | Being willing to treat MNS postgraduates equally without prejudice or merit ranking |
|                         | Having strong empathy, being able to initatively care about the pains of medical services |
|                         | Being able to skillfully use communication tools and skills           |
|                         | Being able to communicate effectively with MNS postgraduates, patients and colleagues and maintain harmonious relations |
|                         | Being able to effectively handle contradictions between doctors and patients, and reduce disputes and conflicts |
|                         | Being willing to respect the views and opinions of others             |
|                         | Having a strong sense of teamwork and ability                         |

Table 6

Items of the clinical teachers’ competence inventory of MNS postgraduates.
Automated text from OCR: teachers is their lack of research experience. We previously found that most experts think one of the most important traits of clinical teachers is their research ability [14], which is a prerequisite for clinical teachers to improve themselves and stimulate nursing research development. Moreover, the two lowest-rated items in the clinical teachers to improve themselves and stimulate nursing teachers is their lack of research experience. We previously found responsibilities of teachers a whole.

Moreover, the three groups were not significantly different in evaluating the clinical managing abilities of teachers. This result might be due to the small sample sizes of the three groups. Thus, further research involving an extensive scope and increased sample size is needed. As Onishi [21] reported, MNS postgraduates do not necessarily need high management abilities because of their shortage of working experience; therefore, the appraisal for their clinical teachers should not be too strict.

5. Conclusion

The present clinical teacher admissions criteria are insufficient. Clinical teachers have strong professional abilities, but their research ability is weak and does not meet the requirements of MNS postgraduates. Therefore, clinical administrators should improve the admissions criteria and enforce them. Meanwhile, relevant trainings for clinical teachers are needed to enhance their comprehensive abilities, especially research ability. Moreover, clinical teachers should improve their sense of crisis and enhance their strengths to offset their weaknesses. Furthermore, MNS postgraduates ought to correct their own state of mind according to clinical work and seek improvement, instead of constantly complaining about their clinical teachers.

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Xiao-fen Wang conceived the study and designed the research programmed. Li Liao supervised the conduct of the survey and data collection. Gao-wen Ou undertook recruitment of participates and managed the data, including quality control. Hu and Zhao provided statistical advice on study design and analyzed the data; Xiao-fen Wang drafted the manuscript, and all authors contributed substantially to its revision. Li Liao takes responsibility for the paper as a whole.

Conflicts of interest statement

The authors declare no conflict of interest.

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Appendix A. Supplementary data

Supplementary data related to this article can be found at http://dx.doi.org/10.1016/j.ijnss.2017.03.005.

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