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## ORIGINAL RESEARCH

# Nursing students' views on rural nursing practice in China: A questionnaire survey

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## ABSTRACT

**Objective:** The purpose of this study was to investigate final year nursing students' views on rural nursing practice in China. There are fewer nurses in rural areas compared to urban areas in China. Little is known about how current nursing students view rural nursing practice, and what influences their intentions to work rurally in their career.

**Methods:** A questionnaire survey was designed. Data were collected in one area in Eastern China between December 2011 and March 2012. A self-completion questionnaire was hand distributed to final year nursing students in six nursing schools and collected by the researcher with a response rate of 89% (n = 445).

**Results:** Nursing students in China had some unique perceptions on rural nursing practice. Respondents viewed nursing posts in rural areas as having lower incomes, lower professional status and fewer opportunities for learning skills. They also associated rural nursing with a light workload, less stress and few night shifts. In contrast to the wider literature, Chinese nursing students did not consider that rural nursing posts could foster autonomy in practice or offer the opportunities to broaden their skills.

**Conclusions:** The perceived lower financial rewards, fewer opportunities for skills development and the low professional status of rural nurses make recruitment of a skilled nursing workforce to rural areas a major challenge in China. Policies, such as reforming the rural nursing delivery system, providing financial incentives and supporting for professional development, should be considered.

**Key Words:** Nursing students, Career choice, Health workforce, Rural areas

## 1. INTRODUCTION

### 1.1 Background

A large proportion of China's population lives in rural areas. As of 2010, more than half of its population was living rurally. However, the nursing working force in rural areas and urban areas is distributed unevenly, with higher overall numbers and more highly qualified nurses in urban areas, and correspondingly fewer and less educated nurses in rural areas.<sup>[1]</sup> Although health outcomes in China have been improved gradually with its economic development since the

1980s, the gaps between urban and rural areas are widening.<sup>[2,3]</sup> These inequalities in health care are becoming more difficult to ignore under the growing requirement for social equality and justice in basic public services. Remedying the geographical imbalance in the health workforce is an effective way to improve health outcomes in rural areas and thus of the whole population.

Nurses are the key health care providers in rural areas. Developing efficient rural nursing recruitment policies is important to ensure a constant and stable workforce. Currently, grad-

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uate recruitment is still the main source of entrants into the rural nursing workforce in China; however, little is known about how these students are thinking about rural nursing posts. Investigating their attitudes towards rural nursing practice has significant value in contributing to rural nursing recruitment policy making and future nursing education reform.

## 1.2 Review of the literature

Nursing positions in rural areas have distinctive characteristics; rural nurses often face a variety of environmental, professional and financial challenges.<sup>[4-6]</sup> In the context of the global nursing workforce shortage, the nursing workforce shortage in rural areas is often exacerbated by geographical imbalance.<sup>[7-9]</sup>

Research has revealed some influencing factors on rural nurse recruitment, such as financial rewards, working environment, the opportunities for professional development and community environment. In the literature, the impacts of salary and other financial incentives upon recruitment of rural nurses have been frequently reported.<sup>[10-12]</sup> Salary for nurses in rural areas was usually reported to be lower than for their urban counterparts. In the USA, Skillman *et al.*<sup>[11]</sup> reported that the more rural a registered nurse's residence, the lower salary he/she received according to a national survey in 2000 of registered nurses.

Some studies reported that diversity of skills used attracted some health professionals to rural practice and encouraged undergraduate students to consider rural and remote practice.<sup>[13,14]</sup> However, it was also reported that the mixed skill characteristic of rural health services discourages graduates from seeking rural employment, although this might be a reason for them to select rural health settings as a clinical placement place, in order to obtain wide variety of clinical experience.<sup>[15]</sup>

More personal autonomy in the job was thought to be one of the unique characteristics of rural practice.<sup>[16,17]</sup> However, lack of anonymity was considered a major challenge for nursing practice and had a negative impact on rural recruitment.<sup>[16,18]</sup> Studies about recruitment of rural health workers also reported some rural community environment factors involved in students' decisions to work rurally.<sup>[14,19]</sup>

Most of the findings mentioned above were reported by researchers from Australia, Canada and the USA, and some from the UK, Thailand and South Africa. These observations may not be the same with regards to China. To address the rural workforce issues, exploration is necessary in line with the substantial cultural and political differences between China and other countries, and especially, in the context of

the large rural population in China.

## 2. METHODS

### 2.1 Research aim

The aim of this study was to investigate Chinese final year nursing students' perspectives on rural nursing practices.

### 2.2 Research design

A self-completion questionnaire survey with an exploratory interview study was designed to address the research aim. Ethical approval was sought and obtained from the university where the first author was completing doctoral studies as well as with the host university in China. Firstly exploratory interviews were conducted with eleven final year nursing students. The objective was to qualitatively explore students' perspectives towards rural nursing practice to provide context for the questionnaire design. Literature based on research evidence from countries other than China was used as a basis for the questionnaire development. The exploratory interviews provided important contextualization for the development of the tool for the main quantitative questionnaire survey. Secondly, the survey data were collected between December 2011 and March 2012 after a pilot study in October and November, 2011. The self-completion questionnaires were hand distributed to final year nursing students in six nursing schools in Eastern China.

### 2.3 Sample/participants

Participants in the quantitative survey involved a stratified and then clustered sample of final year nursing students in six nursing education institutions in Eastern China. The response rate was 89% with N = 445.

### 2.4 The instrument

Based on the exploratory interview findings and the literature review, a questionnaire was developed and piloted involving pre-test, test-retest and pilot study stages between July and November 2011 prior to the main survey. The questionnaire was developed in Chinese and was hand distributed in Chinese to the nursing students. The questionnaire was translated into English for the academic supervisors. The Cronbach's alpha for those related items in the tools was 0.722.<sup>[20]</sup>

Students' perspectives about rural nursing practice were measured in the form of Likert scale type questions. Students were asked to record their agreement with twenty-six statements, which were drawn largely from the exploratory interview findings and the evidence from the wider literature reports. Participants were asked to choose one option among five alternatives: strongly disagree, disagree, neutral, agree and strongly agree.

## 2.5 Data collection

The quantitative questionnaires were hand distributed by the first author in the classrooms, or meeting rooms of those nursing schools or placement institutions of the respondents. A verbal explanation of the purpose and the procedures of the study were given before the students began to fill in the questionnaires. The participants were informed that participating in the study was voluntary and the questionnaires were anonymous. Completed questionnaires were collected immediately after the participants finished them.

## 2.6 Data analysis

SPSS 19.0 was used to aid the survey data analysis. 434 valid questionnaires remained in the data set for analysis after 11 questionnaires were eliminated due to incompleteness or inconsistencies.

To answer the research questions about students' perspectives on rural nursing practice, the central tendency of responses such as the median of participants' responses to 26 statements were calculated. The distributions of responses were demonstrated by the percentages in each agreement category.

## 3. RESULTS

The data set consisted of 434 cases. The demographics of the participants are presented in Table 1. The average age of participants was 20.5 years old. The majority of participants were female and three-quarters of them had a rural background. Most students (86%) had rural living experience and the average length of time living in rural areas was 13.6 years. Bachelor, diploma and associate levels students are represented in the sample (about a third of each group).

**Table 1.** The demographics of the participants

Items	Attributes	Number of Case	% of Total Sample
Gender (n = 433)	Male	3	0.7
	Female	430	99.3
Rural Identification (n = 434)	Urban	103	23.7
	Rural	331	76.3
Education level (n = 434)	Diploma	136	31.3
	Associated	159	36.3
	Bachelor	136	31.3
Rural Placement (n = 425)	Master	3	0.7
	Having rural placement	105	24.7
	Without rural placement	320	75.3

*Note.* As there were some missing data, the number of participants in each variable did not equal to 434, the n-size for each variable is displayed in the parenthesis.

Students' perspectives towards rural nursing practice are reflected in their strength of agreement with twenty six statements. The distributions of responses were demonstrated by the percentages in each agreement category. To visualize these data concisely, the percentages of responses in the categories of agree and strongly agree were added together, and the percentages of responses in the categories of disagree and strongly disagree were added together. The results are presented in Figure 1.

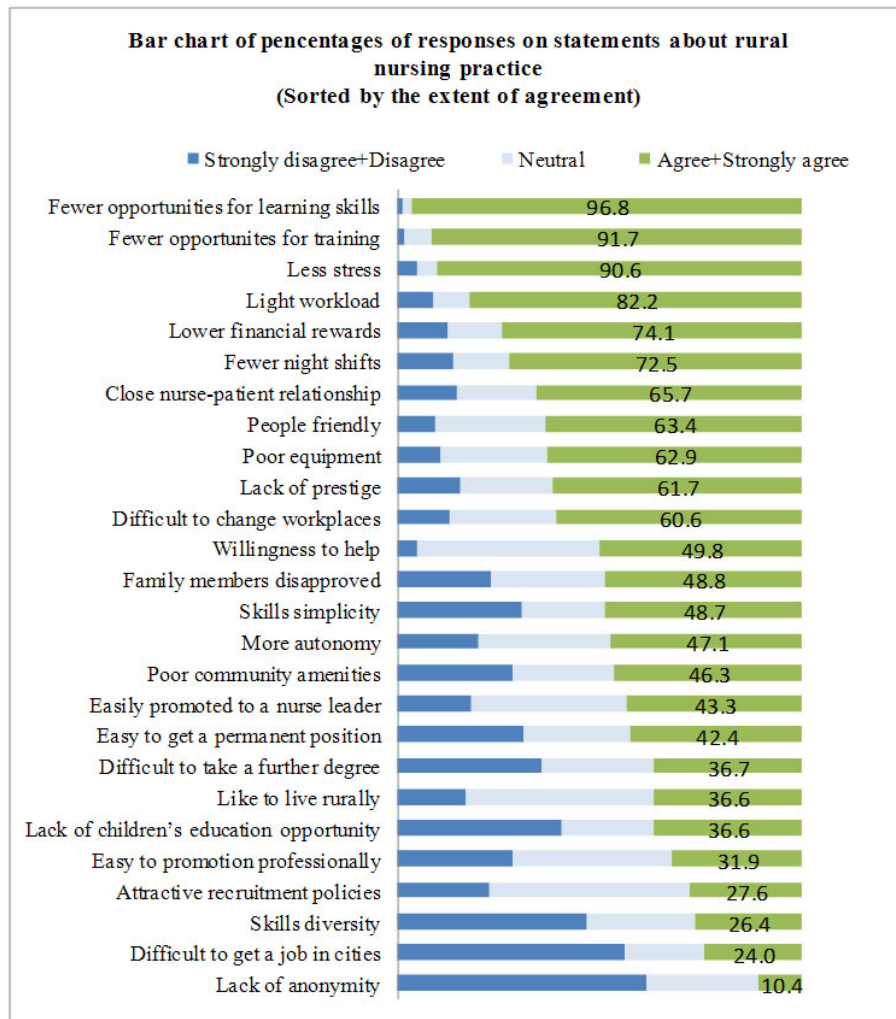
### 3.1 Most agreed statements

In Figure 1, we can see that fewer opportunities for learning skills and professional training, less stress and light workload in rural settings were statements students agreed with most (greater than 80%). In addition, agreement between 60%-75% was indicated by the students for lower financial rewards, fewer night shifts, close nursing-patient relationship, people being friendly and poor equipment in rural health settings, lack of prestige of a rural job and difficult to change

workplaces.

### 3.2 Statements students disagreed with

Figure 1 also displays those statements that students mostly disagreed with. The statements about lack of anonymity and more personal autonomy in rural health facilities were denied by most participants. In terms of anonymity, 61.8% of participants disagreed with the statement that working in rural health facilities led to a lack of anonymity, which is the most disagreed-with of the twenty-six statements. Along with the large proportion of disagreement, 27.9% stood in a neutral position. This result indicates that most nursing students did not think lack of anonymity was a reason for them not to take a rural job. In responding to the statement that working in a rural health facility allows more personal autonomy than in a city hospital, 32.7% of participants took a neutral position and 20.2% of participants disagreed with the statement. This indicated the majority of students did not think rural nursing posts allowed more personal autonomy.



**Figure 1.** The percentages of agreement on statements about rural nursing practice

#### 4. DISCUSSION

##### 4.1 Students' perspective on rural nursing practice

The majority of the opinions were similar to that identified in the wider literature, such as perceptions of lower financial rewards, a closer nursing-patient relationship, people being friendly and the poor equipment in rural health setting.<sup>[21,22]</sup> There were also some unique views in this study. The nursing students, for example, perceived fewer night shifts, a light workload and a lack of prestige associated with rural working. These views were raised in the exploratory interview with the small sample and the survey supports that these are widely held views amongst nursing students.

In contrast to the published literature to date, the respondents also do not believe that there is much autonomy in rural nursing posts, or opportunities for learning more skills. These differing perceptions form a unique pattern of views in Chinese students' minds concerning rural nursing posts. We do not know how much these perspectives reflect the realities

there, but these views certainly have a substantial impact on final year nursing students' intentions to work rurally.

In this study, students ranked lack of prestige as one of the major barriers to considering a rural post suggesting that they perceived rural posts as being less respected and that this has impacted on student's intentions to work rurally. Little has been reported about this perception in the literature, although there were some hints at this in the qualitative descriptions of some papers. For example, Crooks<sup>[23]</sup> pointed out that rural and remote nurses need to value their contribution and realize they are not less important, as rural nursing tends to suffer from a lack of recognition by nursing colleagues in other areas of practice in Canada. The impact may have been strengthened in the Chinese context as students are usually very concerned about the expectations of their family members and the issue of saving "face" or having "prestige" is an important cultural custom in the Chinese context.<sup>[24]</sup> The professional status of rural nursing is related to many

aspects, the situation of team members is a major aspect. Historically, nurses working in rural areas in China were less qualified than those working in cities. As a result, the professional status of this group becomes lower. The lower professional status in turn prevents the higher educated and more highly qualified nursing students from valuing working rurally. Thus creating a vicious circle.

In the wider literature, skills diversity was recognised to be a major characteristic for rural and remote practice;<sup>[5,6,12,13]</sup> but according to the results of this survey it seems that this is not the case in China, most students viewed the skills used in rural settings to be basic and simple. This may be related to differences between the Chinese rural nursing delivery system and that of other western countries.

#### 4.2 Policy implications

This study has identified that Chinese students have some unique views on rural nursing practice. Thus, in making policies to attract nursing graduates to rural areas, these views should be specifically considered. For example, the study has shown that the skills used in rural nursing are considered to be simple rather diverse and this has created a situation in which most students think rural practice is not an ideal place for new graduates to grow and develop. It implies that while trying to change students' aspirations and raise students' commitment to rural nursing, reformation of the current system is needed to enable rural nursing practice be viewed as an advanced nursing practice.

With regards to the impact of the perceived lower professional status of rural nurses, encouraging highly qualified nurses to work rurally is a crucial step to lift the professional status of rural nurses. The exploratory interviews suggested that bachelor students were less concerned about finding employment, but they might desire a permanent position, as contract nurses might lack job security and may have lower salaries than permanently employed nurses. This is similar to report in Nepal.<sup>[25]</sup> It is possible that a strategy of offering permanent positions to graduate nurses might increase the possibility of more highly qualified bachelor nurses taking a rural job.

As lower financial reward is also a major reason for nurs-

ing students not considering a rural job, a strategy to provide some financial incentives, such as direct incentive programs, service linked scholarships or service-cancellable loan programs, could potentially attract some graduates. Apart from financial incentives, other potential policies, such as increased exposure to rural practices, supportive clinical mentorship and supporting for professional development,<sup>[26]</sup> may also help to improve nursing students' attitudes towards rural nursing practice and ultimately improvement of the rural nursing workforce.

#### 4.3 Limitations of the study

The study had some limitations. Due to the funding and time limitation, the study was limited to one area of China. Furthermore, owing to the lack of an existing sample frame, the sample of the survey was limited to a cluster sampling, of which the generalization ability is usually considered to be lower than a simple random or systematic random sample.

### 5. CONCLUSION

The study revealed that Chinese students had some unique views regarding rural nursing practice. Most nursing students perceived nursing posts in rural areas to lack opportunities for learning skills and professional training or development, to provide lower incomes and lower professional status. Such issues combined with low prestige for rural working deter nursing students from working rurally. Nursing students also associated rural posts with a light workload, less stress and fewer night shifts. Strategies to encourage graduates to work in rural areas could include reforming the rural nursing delivery system, providing financial incentives, and support for professional development, to encourage more highly qualified nursing students to work rurally.

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#### CONFLICTS OF INTEREST DISCLOSURE

The authors declare that there is no conflict of interest.

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