Chinese nurses’ perceived impact of international educational experiences and cultural beliefs following a 1-year study abroad program: an exploratory study

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Received: 22 May 2019; Accepted: 21 July 2019; Published: 20 March 2020

Abstract: Objectives: To examine the perceived impact of international educational experiences and cultural beliefs before and after completing a 1-year Masters of Science in Nursing program.
Methods: An exploratory study was conducted among Chinese nurses studying abroad in a private medium-sized university in the United States. The 27-item electronic pre-survey was administered within 1 week of starting the program and the post-survey was administered 1 year later at the completion of the program.
Results: Majority of participants (n = 25) were female, 23–36 years of age. Findings revealed that the perceived impact of international educational experiences assessed at the start of the program was similar to the perceived impact measured at the end of the 1-year program, suggesting that the students learned and experienced what they anticipated. There was a significant impact on cultural beliefs from the start of the program compared with the end of the program suggesting that a 1-year study abroad program does influence cultural beliefs.
Conclusions: Understanding what is important to provide in a study abroad program and providing the educational experiences identified by students as impactful are avenues to help host universities best develop their programs. Findings suggested that the 1-year program can influence foreign students’ cultural beliefs, yet the professional and personal impact of this change warrants further study.

Keywords: international Chinese nurses • cultural beliefs • learning needs • educational impact

1. Introduction
Studying abroad is an opportunity for individuals to experience different cultures and styles of teaching from various parts of the world. Chinese nursing professionals are one example of individuals who seek opportunities to study abroad. More specifically, data reveal that bachelor-prepared Chinese nurses are taking advantage of opportunities to study in the United States (US) and Australia to obtain a Master of Science in Nursing (MSN) degree.1 Reports from the IIE1 identified that the majority of international students come from China (32%), India (16%), Saudi Arabia (6%), and South Korea (6%), respectively. The US alone enrolled close to
1 million international students in the year 2014–2015, more than any other country. Universities are challenged with serving as host sites for the international nurses and developing programs that are impactful and promote personal and professional growth.

Several studies over the past 10 years have explored nurses studying abroad including identification of what is wanted by the students, and the impact the study abroad had on student cultural beliefs and knowledge. In 2015, Wang et al. published a literature review that explored Chinese nursing students’ learning needs. The review highlighted several key areas that were identified by students, such as English language proficiency, understanding of cultural barriers, experiencing social programs, and different learning styles.

Leinonen identified three key findings of nurses studying abroad. The author identified traveling internationally: (1) allows nurses to share information and ideas of what professional nursing is, (2) provides opportunities for growth, personally as well as professionally, and (3) enhances a nurse’s ability to offer culturally respective care when needed (p. 19). Rew shared a conceptual model that outlined “diversity of roads” (referring to the learning environment of which the students were exposed), “learning landscape” (the process of transitioning from one environment to another), and “pathways” (process to further enhancing one’s professional nursing practice) in an effort to further understand the cultural learning styles and needs of international nurses.

When preparing nurses for international experiences, the literature demonstrates that cultural beliefs, defined by the authors of this study as an awareness or understanding of their own culture as well as others, are important to address and can be impacted by study abroad. A systematic review by Brown et al. noted that students are motivated to travel abroad to experience other cultures and to explore other healthcare settings. Similarly, Kulbok et al. conducted a systematic review on international nursing exchange and identified that cultural knowledge and appreciation was one of the most commonly defined goals of the exchanges. These authors noted “developing cultural competencies was a common theme” (p. 15). Some studies even focused on cultural competency to evaluate the learning and educational development of the nurses. Krishnan et al. identified a statistically significant impact on one’s level of cultural competence from studying abroad (pre-mean 4.08 to post-mean 4.55; \( P < 0.05 \)).

US educators need to understand what international students want in order to assure that desired learning outcomes and student satisfaction are being met. Universities are tasked with developing the most effective and appropriate programs for foreign nurses while still meeting the requirements for accredited degree attainment. How-to articles have been shared with best practices and lessons learned for developing international programs aimed at academic success and promotion of professional and personal development of international students.

While nurses studying abroad have been the subject of prior studies, there is a paucity of research specific to a cohort of Bachelor of Science in Nursing (BSN)-prepared Chinese nurses studying in a 1-year study abroad program. The purpose of this study was to compare the perceived impact of the international educational experiences and cultural beliefs prior to and after the completion of a 1-year study abroad program. Findings from this study can be used to tailor program development and teaching practices at host universities and potentially foster professional and personal growth of students by influencing cultural beliefs. With Chinese students becoming the largest cohort of international students in the US, fewer studies concentrated on the needs of students studying as a cohort or subgroup.

2. Methods
To measure the perceived impact of educational experiences and cultural beliefs of Chinese nurses before and after a 1-year study abroad MSN program, an exploratory study was conducted. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. A private university located in Pennsylvania collaborated with a university in Shanghai, China to offer nurses, with a BSN degree equivalent, an opportunity to obtain an MSN degree in the US. The BSN-prepared Chinese nurses were licensed in China and employed by various hospitals with diverse specialties. After a thorough admission process, including evaluation of English language skills, a select group of nurses was admitted as a cohort to a 1-year program. The students were required to travel to the US and to live on campus while completing their coursework. The program required a total of 36 credits and 250 practice experience hours. The program was completed over three 14-week semesters.

The convenience sample for this study included two consecutive cohorts, each cohort enrolled in the 1-year study abroad program. The study occurred over 2 years. Study methods were the same for both cohorts. The specific research questions addressed were: what was the perceived impact of the international educational experiences of Chinese nurses who studied abroad and how did the study abroad experience impact Chinese nurse’s cultural beliefs? The study was approved by the university Institutional Review Board.
All Chinese nurses from cohorts one and two \((n = 29)\) were invited to participate. Recruitment occurred by university e-mail invitation at the start of the program from the Dean of the School of Health Sciences. If interested, students indicated their consent to participate by selecting the hyperlink that was embedded in the e-mail. The hyperlink took students directly to an electronic questionnaire where they completed the pre-survey questions. At the end of the 1-year period, the students were sent a second e-mail invitation by the Dean to complete the post-survey through a hyperlink.

Data collection was completed through Qualtrics™, electronic survey software. No personal or identifiable information was collected. Since this was an anonymous survey, there were no codes assigned, so pre- and post-survey responses could not be matched.

Since there was no single survey written in clear English language that addressed the impact of an international education experience that addressed the student learning needs identified in the literature, the investigators crafted an 8-item questionnaire based on the literature findings.\(^{7,18-20}\) Development of the survey items were based on the following research findings of studies. Wang et al.\(^7\) reported English language, cultural barriers, new social experiences, and different learning styles as a challenge to Chinese nursing students and recommended that the learning experiences of Chinese students be more fully explored and understood. Edmonds\(^18\) had recommendations for nursing education, providing an effective learning opportunity that included self-efficacy, development of a global nursing perspective, and an understanding of the components of cultural competency. In Kokko’s systematic review,\(^19\) the author recommended that nursing management knows and supports the learning experiences of international nursing students. Thus the researchers crafted questions to better support students’ learning needs when in the US to gather data to add to the existing research (Table 1).

For the questions involving cultural beliefs, the investigators took 19 items from a published survey, the Cultural Awareness Scale (CAS).\(^20\) Rew et al.\(^20\) developed the 36-item CAS to measure multicultural awareness among nursing students and faculty. The CAS evaluates five areas related to cultural awareness: educational experience, cognitive awareness, research issues, behaviors/interactions, and patient care clinical issues. The CAS was free to use and did not require training to administer. Permission was granted from the authors of the scale to modify the scale to address the international nursing student cohort being studied. Thus items on the scale that related to research issues, minority representation in the classroom, and some educational experiences were not included due to the specificity of the research question and cohort sample. Although reliability and validity estimates were established for the CAS,\(^20\) content validity and reliability were not estimated on the modified scale.

After the researchers had developed and identified two surveys to gather the data needed to answer the two research questions, the items were compiled into a single, adapted survey with two subcategories: learning needs and cultural beliefs. The investigators felt that a single link to a combined survey would be less confusing for the new students studying abroad. The entire survey, except for question 8, which was an open-ended question, used a 7-point Likert scale ranging from 1—strongly disagree to 7—strongly agree and took approximately 15 minutes to complete.

In addition, a 28-item survey, the International Education Survey (IES),\(^21\) was added to the end of the 1-year study to gather the participants’ thoughts on how the study abroad experience impacted their professional nurse role, personal development, intellectual development, and international perspectives. The IES was free to use and did not require training to administer. Reliability and validity estimates were established for the IES survey.\(^21\) The results of that data will not be reported or discussed in this article.

Survey data collected through Qualtrics™ were transferred to a Microsoft Excel spreadsheet and later into the IBM SPSS Statistics for Windows, version 24.0 software program\(^22\) for data analysis. Several item responses needed to be reverse-coded due to the phrasing of the questions. Descriptive statistics were calculated on each pre- and post-item total scores. Since the pre- and post-response rates were not equal, independent \(t\)-tests were estimated to compare pre- and post-individual subcategory scores and individual item scores. In addition, calculations using both equal variance and unequal variance were run to determine the level of significance.

3. Results

Of the international students in cohorts one and two, a total of 25 out of 29 (86%) participated in the pre-survey and a total of 17 out of 29 (59%) participated in the post-survey. The majority of the participants were female (93%) and ranged from 23 to 36 years of age.

Since the 27-item survey was the compilation of two categories, a comparison of responses from the pre- and post-survey means for each of the categories will be reported.

The category of learning needs (questions 1–7) pre- and post-individual items and aggregate mean scores were not significantly different \((P = 0.180)\) (Table 2). Question 8 was open-ended, so was not included in the
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Using a scale from 1 to 7 indicates how much you agree or disagree with each statement below:

| Items                                                                 | Pre-mean (SD) (N = 25) | Post-mean (SD) (N = 17) | P value* (one-tailed) |
|----------------------------------------------------------------------|------------------------|-------------------------|----------------------|
| Learning total score                                                | 48.160 (1.405)         | 47.760 (1.348)          | 0.180                |
| Cultural total score                                                | 104.170 (7.464)        | 108.730 (10.640)        | 0.069                |
| Question 14                                                         | 5.480 (0.963)          | 4.710 (1.490)           | 0.036                |
| Question 17                                                         | 6.120 (0.971)          | 6.590 (0.507)           | 0.024                |
| Question 19                                                         | 4.800 (1.323)          | 5.760 (1.251)           | 0.012                |
| Question 20                                                         | 3.710 (1.488)          | 4.810 (1.601)           | 0.014                |
| Question 21                                                         | 4.160 (1.519)          | 5.750 (1.125)           | <0.001               |

Note: Learning total score = questions 1–7; Cultural total score = questions 9–27; *P < 0.05.

Table 1. Information gathering survey.

Using a scale from 1 to 7 indicates how much you agree or disagree with each statement below:

| Question                                                                 | Pre-mean (SD) (N = 25) | Post-mean (SD) (N = 17) | P value* (one-tailed) |
|--------------------------------------------------------------------------|------------------------|-------------------------|----------------------|
| 8. Please list any additional learning needs you want to share.         |                        |                         |                      |

Note: Question 8 is open-ended. Questions 9–27 were taken from the Cultural Awareness Scale with permission to print from the authors.

Table 2. Findings from mean comparison of pre- and post-surveys.

The category of cultural beliefs yielded some significant findings with five individual items, despite the overall subcategory aggregate mean not being statistically significant (P = 0.069). In the other 14 items from this subcategory, students rated statements of cultural beliefs.
beliefs, values, and experiences similarly from pre-study abroad to post-study abroad experiences. However, individual findings on questions 14, 17, 19, 20, and 21 were significant following the students’ experience in the 1-year cohort program (Table 2). In question 14, students had endorsed feeling comfortable working with patients of different ethnic backgrounds prior to their study abroad program; however, at the end of the program their responses suggested less comfort. In question 17, students had more awareness of their cultural values influencing their classroom behavior following the study abroad experience compared with prior experiences. Students also found that the MSN clinical experiences significantly assisted them in becoming more comfortable interacting with people from different cultures compared with interacting with people from their own country (question 19). In comparison with their past academic experience, the participants found that the cultural sensitivity role modeled by their instructors within the MSN nursing program assisted them in translating those behaviors into their clinical practice (question 20). This response was re-enforced with the overall response to question 21 indicating that the classroom experiences helped them become more comfortable interacting with people from different cultures.

4. Discussion

No significant differences were noted between the Chinese nurses’ pre- and post-program perceived impact of international educational experiences, suggesting that their expected learning needs were fulfilled by the 1-year study abroad MSN program. The researchers believe that students’ anticipatory educational experiences were well matched with their acknowledgment of educational experiences after the study abroad program. This finding supported the program’s mission of providing meaningful graduate-level nursing education to a culturally different population of students. While it was not known initially if the planned activities would meet the needs of the students, the findings reported from this study suggest that the activities and experiences were effective in meeting the students’ learning needs.

To address the learning needs of the Chinese nursing students, numerous activities were provided to the students. For example, tutors were provided for individual student assistance as needed or as identified by each student. The Chinese students attended a 14-week “English as a second language (ESL)” workshop, and one-on-one conversational hours, specifically designed for them through the Office of International Affairs (OIA) at the university. The students were assigned a nursing academic advisor of Asian descent who was able to communicate in both Chinese and English languages and who understood Chinese culture and health systems. In addition, each student was matched with a practice experience preceptor who guided him or her through 250 practice experience hours.

The 1-year MSN program appeared to have an impact on the cultural beliefs of the Chinese nurses through classroom activities, clinical experiences, and outside class experiences. Students endorsed a higher level of comfort interacting with people from different cultures at the end of the program compared with their comfort level prior to the program. The students acknowledged that nursing instructors modeled behaviors sensitive to multicultural issues and used examples and case studies incorporating information from various cultures and ethnic groups which could have helped to develop a level of comfort. This finding is consistent with Mitchell et al.’s findings indicating when faculty and clinical educators are culturally competent and willing to advocate for and create an equitable environment appropriate for international nursing students’ learning, these students can adjust and succeed in their study abroad program.

The Chinese nurses participated in several activities outside of the MSN program. They joined various campus activities, and made connections with individuals from the US, Japan, Thailand, India, South Korea, Saudi Arabia, and other countries. They traveled extensively throughout North America and the Caribbean. Participating in activities outside of the classroom could have potentially impacted their cultural beliefs. This finding is consistent with the results of other studies which demonstrated an increased appreciation and sensitivity toward different cultural issues after international experiences.4,24

Pre-survey results demonstrated that the Chinese nurses had adequate cultural desire (the motivation of being culturally aware) that is fundamental to evoke cultural competence.25 However, the Chinese nurses felt less comfortable working with patients of different ethnic backgrounds after their US training than earlier. The nurses may have been exposed to a more culturally diverse patient population in their American health system experience as compared with their Chinese health system, thus recognizing their comfort level was not as high as previously thought. The limited amount of direct patient care experiences and potential language barriers in the clinical practice environment7,25 may be the reason these Chinese nurses reported being less comfortable caring for patients from other cultures following the study abroad experience.

This study had several limitations. For example, a small convenience sample was used from a single university in the US, and the students were from a specific geographic region in China. The cohort size for
years 1 and 2 was only 21 and 8, respectively. The low respondent rate, particularly at the end of the program, was another limitation. Finally, a 36-credit study abroad MSN program in 1 year may have limited these Chinese nurses’ opportunities to further understand cultural differences. To date, there has been little research conducted in the US regarding the experience of international graduate nursing students studying abroad in a cohort. Although these limitations prevent generalization of the findings to other similar programs and nursing schools, the study adds to the knowledge gap regarding the perceived impact of educational experiences and cultural beliefs of Chinese nurses who study abroad.

5. Conclusions
The results of this study suggested that the cohort-based, 1-year study abroad MSN program met the Chinese nurses’ learning needs and influenced their cultural beliefs. The findings in this study provide a needed contribution to international graduate nursing education study abroad programs. In order to improve our understanding of the benefits and effects of international graduate-level nursing education, future studies with larger samples should be considered.

Appropriately tailoring program activities and experiences can be helpful in providing effective education for foreign nurses. Finally, while it is not known what the impact is of influencing cultural beliefs of foreign students, participants in this study acknowledged more awareness of their own cultural values, which could potentially be useful in future professional practice in recognizing inherent and subtle biases influencing patient care given to individuals, not of their culture.

Ethical approval
Ethical issues are not involved in this article.

Conflicts of interest
All contributing authors declare no conflicts of interest.

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