



ELSEVIER

Contents lists available at ScienceDirect

Nurse Education in Practice

journal homepage: www.elsevier.com/locate/nepr

Original research

Evaluation of nursing students' perceptions of their cultural care competency: A mixed method study in Taiwan

Hwey-Fang Liang^{a,b,c,*}, Kuang-Ming Wu^d, Chang-Chiao Hung^a, Ying-Hsiang Wang^e, Yong-Chuan Chen^f

^a Department of Nursing, Chang Gung University of Science and Technology, Chiayi Campus, Taiwan

^b Chronic Diseases and Health Promotion Research Center, Chiayi, Taiwan

^c Chang Gung Memorial Hospital, Chiayi, Taiwan

^d Department of Early Childhood Education, National Chiayi University, Chiayi, Taiwan

^e Department of Pediatrics, Chang Gung Memorial Hospital, Chiayi, Taiwan

^f Neonatal Intensive Care Unit, Department of Nursing, Taichung Veterans General Hospital, Taichung, Taiwan



ARTICLE INFO

Keywords:

Cultural care
Mixed method
Nursing education
Nursing students

ABSTRACT

Growing cultural diversity among immigrants has challenged health care practice in Taiwan. This study used mixed methods to evaluate how the implementation of a course on cultural competence embedded in a nursing course affected nursing students' perceptions of their cultural care competency. An evaluation survey with a quantitative questionnaire comprising pre- and post-test measures of self-perceived cultural care competency was implemented for 48 participants at the commencement and completion of the course. A focus group interview (n = 10) was conducted and a thematic approach applied to analyze qualitative data. The results found a significant improvement in self-perceived cultural care competency ($t = 7.15, p < 0.001$). Two themes emerged from the qualitative analysis: (1) the thought-provoking nature of the course and (2) appreciation for the multiple learning strategies of the course. The findings suggest that embedding cultural competence education in nursing courses is essential to improving nursing students' perceptions of their cultural care competency.

1. Introduction

Globalization and growing cultural diversity among client populations challenge nurses' practice and nursing education worldwide. In Taiwan, transnational marriages are the major source of immigration, and this phenomenon has become a tremendous challenge for nurses (Chang et al., 2013). According to the household registration data (Ministry of the Interior, 2018), the total Taiwanese population was 23,571,497 at the end of April 2018. Of the total population, 533,159 (2.3%) were immigrants, including foreigners and foreign spouses, of which 354,982 (66.6%) were from Mainland China, Macao, and Hong Kong. Immigrants from other countries, predominantly in Southeast Asia, numbered 178,177 (33.4%).

New immigrant women, who are usually very young and married to men with a low socio-economic status, often experience difficulties in dealing with issues pertaining to life adaptation, communication, and family continuity owing to the significant differences from their original cultures (Hsieh and Wang, 2008; Yang and Wang, 2003). Moreover, new female immigrants are often expected to bear children soon

after their marriage in keeping with Taiwanese traditional ideas of continuing the family line (Chou et al., 2006). Thus, pediatric health-care professionals commonly encounter the childcare issues of immigrant women in Taiwan (Chen et al., 2008).

Culture can be an elusive and nebulous concept, but it generally encompasses all aspects of the ways people live, including beliefs, values, actions, interactions with other, customs, institutions, and group affiliations, whether racial, ethnic, religious, or social (Bourque Bearskin, 2011; Epner and Baile, 2012). Immigrants' native languages and cultures affect their health beliefs and care practices. Thus, cultural competence is essential for health care professionals committed to providing the best possible care to all of their patients regardless of background (Nguyen, 2008). The need providing culturally competent care to people of diverse cultures has become apparent in educational and health service programs established to meet the needs of immigrants (Leininger and McFarland, 2002).

* Corresponding author. Chang Gung University of Science and Technology, Chiayi Campus, 2, Sec., W., Jiapu Rd, Puzi City, Chiayi County, 61363, Taiwan.
E-mail address: hfliang@gw.cgust.edu.tw (H.-F. Liang).

2. Background

Culturally appropriate or culturally competent care is a critical component of patient-centered care for health care providers (Kamrul et al., 2014) in the current context of global diversity. Scholars' understanding of cultural competency changes as the world changes. Thus, cultural competency has come to have a variety of definitions. "Cultural competence" is a term attributed to Leininger, who encouraged its implementation by nurses working in multicultural settings (Bourque Bearskin, 2011). Campinha-Bacote (2002) presents cultural competence as a progression and integration of cultural awareness, cultural knowledge, cultural skill, cultural encounters, and cultural desire. Through this progression, health care professionals work toward providing care that is culturally sensitive and appropriate for each of their patients regardless of background (Campinha-Bacote, 2002). Although culture entails the whole of life, Bourque Bearskin (2011) points out that cultural competency does not entail acquiring comprehensive knowledge of the multiplicity of cultures, nor disregarding one's own identity; rather, it denotes a respect for diversity and an acceptance of manifold perspectives. Developed in the 1990s by Ramsden, the concept of "cultural safety" in the 1990s and implemented it as a means of protecting rather than threatening patients' cultural identities (Papps and Ramsden, 1996) and avoiding cultural stereotyping. Ramsden (2002) identifies care as unsafe when cultural factors prevent patients from accessing the care they need or cause patients to feel inferior or disregarded, whether intentionally or unintentionally on the part of the provider. Cultural safety provides a means for health care providers to reflect and act with intention, especially in terms of the power dynamics at play in the clinical setting; it allows for a genuine care partnership between providers and patients of disparate cultural backgrounds.

Oelke et al. (2013) describe culturally congruent care as including cultural awareness, sensitivity, competence, safety, and advocacy. Cultural awareness and cultural sensitivity are the initial components necessary to cultural competency and cultural safety (Dell et al., 2016). Cultural awareness opens into cultural competency through a serious examination of personal cultural biases and prejudices as well as one's own cultural identity (Gurm and Cheema, 2013; Nguyen, 2008). Cultural awareness implies the need to understand oneself in order to develop the capacity to provide culturally competent care for others (Dudas, 2012). Cultural sensitivity is then achieved when one is able to recognize the legitimacy of others' experiences regardless of their cultural dissimilarity. Sensitivity includes an understanding of how personal attitudes and experiences can impact the lives of others. Finally, the concept of cultural safety allows one to avoid the stereotyping of cultural groups (Papps and Ramsden, 1996). Cultural awareness and cultural sensitivity primary focus on understanding one's own personal attitudes and prejudices and their possible impacts, whereas cultural safety offers a means of providing patients an autonomy in contributing to decisions affecting their care and well-being (Nguyen, 2008).

Cultural competence is foundational for providing patients with the care that is most responsive to their circumstances. It requires that providers develop and remain mindful of culturally appropriate knowledge, attitudes, and skills. Studies (Chang et al., 2013; Lin et al., 2015) have revealed that the cultural competence level of Taiwanese nurses is low to fair when encountering multicultural patients. Taiwanese nurses believe that they do not have sufficient cultural competence to care for culturally diverse clients. Scholars have reported that adequate education could promote healthcare providers' and nursing students' cultural care competency (Kohlbray, 2016; Owiti et al., 2014). However, very few schools of nursing in Taiwan have established undergraduate cultural care courses. For nursing students, who often have a heavy curricular emphasis on core courses with a largely single-culture nursing focus, it is important to link the courses with cultural care (Leininger and McFarland, 2002). It is strongly recommended that education related to cultural competence be included in undergraduate

nursing education programs (Halter et al., 2015; Waite and Calamaro, 2010). Examples of effective nursing education programs in other countries that have incorporated a cultural competence component have been documented (Diaz et al., 2015; Mareno and Hart, 2014).

Perry et al. (2015) successfully used an eSimulation module for the delivery of strategically integrated cultural competency training to a large number of nursing staff and allied health professionals. Dabney et al. (2016) applied a repeated measure in the form of pre-test and post-test data to assess the effects of a cultural competence training program on pediatric health care providers' self-reported ability to provide culturally competent care to a diverse pediatric patient population, and found that it significantly enhanced provider knowledge, awareness, and, to some extent, skills. Debiassi and Selleck, 2017 found that their cultural competency training for nurse practitioners resulted in a significant increase in reported cultural assessment documentation and decrease in stereotyping. Other scholars (Diaz et al., 2015) suggest the necessity of an increased and explicit focus on concepts of culture in nursing education programs to prepare nurses for culturally congruent practice with the potential to reduce health disparities. Therefore, Cultural competency education needs to be appropriately tailored and integrated into the nursing curriculum in Taiwan in order to help equip student nurses to provide of patient-centered care.

Child and adolescent care is a compulsory course in most two-year undergraduate nursing programs in Taiwan. Additionally, students who complete a five-year junior college nursing program prior the two-year undergraduate program have already learned pediatric nursing and had clinical experience in a pediatric ward. An embedded cultural competency in child and adolescent care (ECC-CAC) course could be an effective way to improve student nurses' cultural care preparation because this course emphasizes family-centered care, which is important for immigrant families. Furthermore, incorporating cultural care in the curriculum of existing courses is a pioneering approach that shows how cultural competence can be integrated into existing content and can be used in client or family care. Thus, the present study aimed to evaluate the impact of an ECC-CAC course on student nurses' perceptions of their cultural care competency. The ECC-CAC course was expected to help promote nursing students' understanding of the aspects of cultural care related to child and adolescent health. Ultimately, the goal was to improve nursing students' cultural competence regarding child and adolescent care practices and to help develop future nurses in a global world.

3. Methods

3.1. Development and implementation of the embedded cultural competency in child and adolescent care (ECC-CAC) course

A preliminary literature review was conducted via a panel discussion with pediatric experts to determine the cultural perceptions that are vital to child and adolescent care with immigrant mother caregivers.

Thus, it was determined that the ECC-CAC should help develop nursing students who are knowledgeable, sensitive, and competent to provide effective care for children and adolescents with different or similar cultures. Subsequently, an outline was developed for the ECC-CAC course based on the content of the child and adolescent health care curriculum and the concepts of cultural competency. For example, the Sunrise Model (Leininger and McFarland, 2002) was employed as a guide for enhancing students' knowledge of the worldviews of different cultural groups, conducting culturally sensitive logical health care assessments of clients' health needs, and reflecting on different factors predicted to influence culturally sensitive care. Furthermore, Campinha-Bacote's (1994) process of cultural competence, including cultural awareness, cultural knowledge, cultural skill, cultural encounters, and cultural desire, was integrated into the course to foster practices that are sensitive to and congruent with recipients' respective

Table 1
Major areas of the embedded cultural care in child and adolescent care course.

Units	Content of health care	Cultural care perception	Annotation
Family-centered child/adolescent health	Family and culture assessment achieved through the nursing process, developmental theories, and cultural care theories enable nursing students to develop their unique clinical and educational approach to care for children/adolescents and their families	Cultural care concepts, cultural diversity care theories, and the Sunrise Model	Assessment data revealed cultural variations with similarities and differences within and between cultures
Child/adolescent health assessment and promotion	Health assessment of the child/adolescent and the family, physical and developmental assessment of the child and adolescent	Develop interpersonal skills in responding in a culturally competent manner to the unique needs of children, adolescents, and their families	Remaining alert to subtle and gross differences among clients from the mainstream and immigrants' cultures, helps nursing students to understand why cultures are different and to understand clients' explanations or reasons over time
Nursing care of child/adolescent in life-threatening situations	Life-threatening health problems (e.g. cancer, hospitalization) and culturally competent intervention for children, adolescents, and their families	Cultural care during the nursing process	Identify and understand different values and patterns of expression of clients to provide adequate cultural care
Nursing care of child/adolescent with altered health function	Utilizing the nursing process, developmental theories, and cultural competency to manage and care for child/adolescent with selected health problems (e.g. cardiovascular, respiratory, neurologic, endocrine, gastrointestinal, musculoskeletal, integumentary, hematologic, reproductive, and renal functions)	Cultural care during the nursing process (starting with assessment, nursing diagnosis, plan, implementation, and evaluation)	

Table 2
Guide questions for the focus group interview.

1. How was this course?
2. In what way did you benefit from this course?
3. How did you feel during the ECC-CAC practice and what were your thoughts then?
4. Do you consider the ECC-CAC course beneficial for child care of immigrant families?
5. How can the ECC-CAC course improve culture care perception?

Note. ECC-CAC: embedded cultural care in child and adolescent care.

cultures. For example, the essential process of accurately performing a physical assessment is required cultural competency in order to collect relevant data regarding the client's health history and presenting problem to elicit information about the individual's (or family's) cultural beliefs, practices, and values. Such culturally-informed accuracy should help the provider to intervene within the cultural context of the individual (Campinha-Bacote, 2002; Sealey et al., 2006).

The ECC-CAC course outline and contents were evaluated by local experts on cultural care and child and adolescent health, who made suggestions to further enhance the course. Following revisions but before the course content was finalized, it covered the following four main units: family-centered child/adolescent health, child/adolescent health assessment and promotion, nursing care of child/adolescent in life-threatening situations, and nursing care of child/adolescent with altered health function (Table 1). Within these lectures, concepts of cultural care were discussed. The following teaching strategies were included: (1) didactic teaching concerning concepts of child and adolescent health and culturally competent care; (2) the Sunrise Model, which conceptually enables distinguishing cultural care situations from a holistic perspective of multiple factors that can potentially influence child and adolescent care and the well-being of immigrant mothers and their families (Leininger and McFarland, 2002); (3) interactive learning among student groups, such as role play, presenting scenarios about nurses managing cultural conflicts to encourage peer discussions and stimulate critical thinking in students; and (4) providing reflective feedback. The course was implemented across 18 weeks, and two lecturers ensured consistency in the implementation through three to six discussions before and during the course.

3.2. Study design and participants

The study applied an explicative progressive method integrated with quantitative and qualitative approaches (Creswell, 2012). Data were collected through a pre- and post-test evaluation from a single group to test the effectiveness of a developed ECC-CAC course. An additional focus group interview on the completion of the course was conducted.

Fifty nursing students were registered for the course and participated in the study. They were in the second semester of the first year of a two-year baccalaureate nursing program in a university in Taiwan. A focus group discussion was later used with 10 students who participated in the pre- and post-evaluations. Guide questions (Table 2) helped facilitators to explore participants' experiences of the process of cultural competency learning and how this ECC-CAC course affected them.

3.3. Ethical considerations

This study was approved by the Institutional Review Board of the Chang Gung Memorial Hospital in Chiayi, Taiwan (102-2360B). The participants were given information about the study indicated their consent to participate by signing a written consent form.

Participants were able to withdraw from the study at any time. Of the three researchers, two were educators at the university where the study was performed. The researcher who gathered the data was not involved in any examination or assessment of the students at the time of participant recruitment and data collection. All data were collected anonymously and were coded to maintain confidentiality.

3.4. Data collection

The research was performed from February to June 2015. Participants were required to finish a self-perceived cultural care competence (SP-CCC) questionnaire before and after the course. They also provided qualitative written feedback regarding the course after its completion. Participation in the evaluation was anonymous and voluntary. The data were collected by investigators other than the contributors or instructors who graded students' ECC-CAC course results. The questionnaire developed by Liang (2013) was used to measure students' self-perception of cultural care competence (CCC). It consists of 22 items across three constructs including "cultural knowledge,"

“cultural attitude,” and “cultural skill.” Each item was measured on a five-point Likert scale, ranked from 5 (“totally agree”) to 1 (“totally disagree”). The sum was computed as a total indicator of SP-CCC. This scale has been validated on a Taiwanese nursing student population, with good reliability and validity. In this study, the Cronbach's alpha (α) value of the questionnaire was 0.94, while those for subsets of the questionnaire ranged from 0.86 to 0.92. The content validity was confirmed by pediatric nursing and cultural competency education experts. The scores of SP-CCC ranged from 22 to 110. A higher score indicated greater potential on SP-CCC. A focus group was conducted two weeks after the completion of the course to explore students' perspectives and understanding regarding the course. Participation in this focus group were voluntary. Ten students participated in the 50-min focus group interview, and all processes were audio-recorded. Guide questions (Table 2) were reviewed and confirmed among the members of the research team prior to the focus group interview.

3.5. Data analysis

The quantitative data were analyzed by applying IBM Statistical Package for the Social Sciences (SPSS), version 22. The qualitative data from students' written feedback and transcripts from the focus group interview were analyzed using thematic analysis (Thomas and Harden, 2008), including coding, generalizing codes into describing themes, and organizing describing themes into analytical themes with sub-themes.

4. Results

4.1. Quantitative results

Fifty nursing students enrolled in the ECC-CAC course. Forty-eight (96%) completed the pre- and post-tests. They were female and ranged in age from 20 to 24 years. A comparison of the participants' SP-CCC in the ECC-CAC course at the pre- and post-tests revealed a significant improvement (Table 3). The mean total score on the post-evaluation was 101.00 ± 3.48 , which was significantly higher than the pre-evaluation score (88.28 ± 12.54) ($t = 7.15$, $p < 0.001$). On the post-test, students' scores increased significantly on knowledge, attitude, and skills (22.79 ± 1.20 , 48.94 ± 1.05 , and 29.36 ± 2.04 , respectively) as compared to the pre-test (20.69 ± 3.40 , 42.53 ± 6.08 , and 25.15 ± 4.29 , respectively) ($t = 4.48$, $p < 0.001$; $t = 7.41$, $p < 0.001$; $t = 6.62$, $p < 0.001$, respectively). This indicates that the participants had more positive perceptions of their CCC after the ECC-CAC course.

4.2. Qualitative results

The following two themes were identified from the analysis of the data comprising students' written feedback and focus group interview transcripts: 1) thought-provoking nature of the course and 2) appreciation for the multiple learning strategies of the course.

Theme 1: Thought-provoking nature of the course

Students reported that they obtained cultural knowledge; shared

cultural experiences during lectures, discussions with peers, and role-playing; and discussed their thoughts with peers and lecturers during the course. They found the lectures and brainstorming with peers thought-provoking. After significant reflection, the following two outcomes emerged.

Subtheme 1: Eager to Help Others from Different Cultures: A Positive Attitude of Providing Care for Children/Adolescents from Immigrant Families. Students learned to provide culturally embedded child and adolescent care. They learned to respect people from diverse cultures and sympathize with and honor their situations and hardships. They cherished living in and learning about their own culture, and intensely wished to help others from different cultures. One participant said:

In my recent clinical practice, I took care of a child whose mother came from Indonesia. She was about the same age as me. I thought, at this age, I had my family's support to pursue studies. However, she had to take care of a new family and children in a different country. I was more sympathetic towards her and desired to take good care of her child and her. [Nursing student B]

Subtheme 2: Extend the Reach of Cultural Sensitivity: Experience of the Learning Process. Students learned about the values of different cultures and to respect and appreciate culturally competent care. They came to believe that they had to take the initiative in caring for immigrants and their children in clinical settings. A participant said:

I admit I had stereotyped immigrant mothers before, and it was reflected in my communication with them. I didn't realize this before. During the course, especially from the role play, I realized that I may harm immigrant mothers because of my neglect. Through the course, I realized that I should be patient and careful with cultural differences while communicating with immigrants. Otherwise, we could hurt their feelings. [Nursing student D]

Another said:

I didn't want to take care of children from immigrant families because it took me a lot of time to understand them before. After the course, I will be sensitive and will double check if immigrant mothers understand me; if not, I will demonstrate child care practices for them. [Nursing student F]

Theme 2: Appreciation for the Multiple Learning Strategies of the Course

Students described that they often listened to lectures in their courses but did not have time to consider and assimilate the content. However, the group discussions involved in this course stimulated their thinking and encouraged them to express themselves. In addition, they enjoyed learning about the lecturers' experiences and their peers' thoughts during discussions. The following two subcategories emerged from the interviews:

Subtheme 1: Learning About Different Cultures Is a Joyful Experience. Students mentioned that usually they have to take many compulsory courses, most of which were difficult, harsh, and boring. However, they learned culturally competent care through interesting strategies to open their minds to cultural diversities. They took joy in learning to understand the value and beauty of other cultures. One participant said:

Table 3

Differences in pre-test and post-test self-perceived cultural care competence scores (N = 48).

Dependent variables	Pre-test	Post-test	Difference (post-pre test scores)			
	Mean \pm SD	Mean \pm SD	Mean \pm SD	95% C.I.	t	p
Cultural knowledge	20.69 \pm 3.40	22.79 \pm 1.20	2.10 \pm 3.26	(1.16, 3.05)	4.48	0.000
Cultural attitude	42.53 \pm 6.08	48.94 \pm 1.05	6.04 \pm 5.93	(4.66, 8.15)	7.41	0.000
Cultural skill	25.15 \pm 4.29	29.36 \pm 2.04	4.21 \pm 4.36	(2.93, 5.49)	6.62	0.000
Total	88.28 \pm 12.54	101.00 \pm 3.48	12.72 \pm 12.07	(9.13, 16.30)	7.15	0.000

Through interesting strategies such as role-playing and group discussion, we had chances to understand the content and share ideas and experiences with others regarding child and adolescent care. Role-playing helped me realize that inadequate cultural care is a burden for immigrant mothers. It opened my mind to consider their thinking and needs. I learned the different values of mothers' care based on diverse cultures. I never enjoyed such wonderful learning experiences before. [Nursing student G]

Subtheme 2: Increased Self-Confidence and Skill. Students reported that they increased their confidence and cultural competency skills from interactive learning strategies. One participant noted:

From group discussions during preparation for the role play, I realized that I was not the worst performer regarding caring for immigrant mothers and their children. However, I learned innovative strategies, which increased my confidence to work with immigrant mothers. [Nursing student H]

Another one said:

When I had difficulties in talking with immigrant mothers, I learned from my classmates that I could draw pictures of the care schedule of their children, such as how to administer medicines, how to take the child's temperature, and so on. [Nursing student B]

5. Discussion

This study aimed to evaluate the extent to which an ECC-CAC course could increase perceptions of cultural care competency among Taiwanese nursing students. Cultural care competencies, including knowledge, attitude, and skills, were embedded into the core child and adolescent healthcare course using multiple learning strategies. Both quantitative and qualitative analyses confirmed that the course improved students' perception of CCC. The findings confirm those of other studies (Elminowski, 2015; Kohlbry, 2016; Owiti et al., 2014) that have shown a significant improvement in SP-CCC after education. It showed that CCC could be improved by enhancing related knowledge, awareness, and skills (Dabney et al., 2016).

Qualitative analysis revealed that the ECC-CAC course not only improved students' SP-CCC of child and adolescent health but also stimulated them to rethink their attitudes and skills while providing child/adolescent care based on the cultural differences of immigrant mothers. Participation in the course led to two main reflections. First, the course was thought-provoking, resulting in (1) eagerness to help others from different cultures, and (2) extending the reach of cultural sensitivity. The ECC-CAC course stimulated students' thoughts as they realized that the immigrant mothers' ages were similar to their own, which promoted sympathy, induced empathy, and made them eager to devote time and energy to help children and their immigrant mothers. Empathy-induced altruism arises from the emotional entanglements it offers the self in relation to the other's health and well-being (De Waal, 2008). Thus, the development of good rapport with clients may be influenced by students' perceptions, emotions, and experiences derived from the ECC-CAC course (Wu and Volker, 2012). Students also revealed that they had previously held prejudices and stereotypes against immigrant mothers and other caregivers because they had trouble communicating with them, causing them to spend more time on clinical tasks. Consequently, students perceived immigrants to be difficult clients (Bennett, 1986; Shen, 2015). This was of great concern for nursing educators when they tried to integrate CCC strategies to develop supportive instructional strategies (Lobb, 2012). Integrating cultural safety (Papps and Ramsden, 1996) into nursing education can also help to dispel prejudices and stereotypes. Cultural safety allows for provider-patient relationships based in equality because it provides a means for providers to consider the power inherent in their station and background and how they bring that to bear on interactions with their

patients.

Second, participants appreciated the multiple learning strategies of the course and, thus, shared their experiences of joy and noted their increased self-confidence for working with clients from different cultural backgrounds. Those multiple strategies included *didactic teaching; interactive learning activities, such as role-playing with scenarios to encourage students' discussion and stimulate thinking; and writing reflexive feedback*. In this study, role-playing was used as a problem-based learning method to actively involve students and to present the cultural challenges related to child and adolescent care. It employed scenarios from past clinical practice as an interactive approach to enhance students' engagement and stimulate critical thought as they practiced culturally competent care (Forsgren et al., 2014). Further, in the focus group discussion, students expressed that their previous denial and defensiveness regarding caring for diverse clients had changed owing to the integration of cultural care knowledge and skills with their clinical practice. This helped them brainstorm to create innovative strategies to solve problems regarding working with immigrant caregivers. These approaches, ranging from questioning common stereotypes to teaching communication skills to equipping nursing students with cultural knowledge, allowed them to develop better outcomes (Long, 2012). Particularly, the results indicated that the students appreciated the integration of cultural competency in the child and adolescent health care course. This result showed that knowledge of ECC-CAC is helpful for nursing students to understand the relevance of concepts of cultural competency (Lobb, 2012). Students reported that the strategies of the embedded course and peer discussion were helpful for them to realize the connections between multicultural and pediatric care education. In addition, lectures and clinical practices afforded them better preparation for their future practice. For future courses, students suggested increasing professional nursing courses on culturally based child and adolescent disease-related care, which would help them implement culturally appropriate care more holistically in their practices.

6. Conclusion

Cultural care education embedded in child and adolescent nursing education is effective for improving students' perception of their cultural care competency as an alternative to the current approaches to cultural education. Apart from didactic teaching, multidimensional teaching strategies incorporated with locally and culturally relevant issues were applied in the ECC-CAC course in this study. These strategies encouraged students to think reflexively and to develop empathy and the desire to provide culturally competent care, thus encouraging them to develop innovative approaches for communicating with immigrant caregivers of child/adolescent patients. With these practices, students were encouraged through the required professional nursing course to incorporate culturally appropriate care when interacting with their child and adolescent patients and their immigrant caregivers. The participants believed that the structure of the embedded course, including lectures on cultural care theory, was integral to increasing their cultural care knowledge as well as to improving their perceptions regarding the integration of culturally competent and pediatric nursing care. Learning strategies applied in the embedded course helped students learn effectively. This approach to cultural education exceeds standard professional nursing course content and offers students opportunities to engage in reflexive thinking and to improve their cultural competency and confidence when dealing with immigrants.

This study applied a mixed methods design. Investigators collected quantitative and qualitative data including reflexive writing and focus group interviews. However, there were some limitations in this study. The first was the lack of a control group in the research design because it was difficult to find another instructor and participant students with a similar background to that of the experimental group. However, if a control group had been included, the investigators could have drawn

stronger conclusions about the validity of the ECC-CAC course and the results of the study would have been more generalizable. Secondly, the sample size was small, thus limiting the generalizability of the conclusions drawn. Future studies should improve on these limitations.

Role of the funding source

This study was supported by a grant from Ministry of Science and Technology, Taiwan (NSC101-2511-S-255-004), and Chang Gung Memorial Hospital at Chiayi (BMRP824).

The funding body had no involvement in the design of the study and collection, analysis and interpretation of data and in writing of this manuscript.

Ethical approval

This study was approved by the Institutional Review Board of the Chang Gung Memorial Hospital (102–2360B). The participants were given information about the study indicated their consent to participate by signing a written consent form.

Declaration of competing interest

The authors declare that they have no conflict of interest.

Acknowledgements

We would like to thank the participants sharing their experiences.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.nepr.2019.102639>.

References

- Bennett, M.J., 1986. A developmental approach to training for intercultural sensitivity. *Int. J. Intercult. Relat.* 10, 179–196.
- Bourque Bearskin, R.L., 2011. A critical lens on culture in nursing practice. *Nurs. Ethics* 18, 548–559.
- Campinha-Bacote, J., 1994. Cultural competence in psychiatric mental health nursing. A conceptual model. *Nurs. Clin. N. Am.* 29, 1–8.
- Campinha-Bacote, J., 2002. The process of cultural competence in the delivery of healthcare services: a model of care. *J. Transcult. Nurs.* 13, 181–184.
- Chang, H.Y., Yang, Y.M., Kuo, Y.L., 2013. Cultural sensitivity and related factors among community health nurses. *J. Nurs. Res.* 21, 67–73.
- Chen, M.J., Tang, C.H., Jeng, H.M., Chiu, A.W.H., 2008. The maternal and child healthcare needs of new immigrants in Taipei. *J. Nurs. Res.* 16, 307–320.
- Chou, P.H., Wang, H.H., Chiang, Y.P., Lin, Y.R., Kang, C.W., Lee, W.C., 2006. The pregnancy and labor experience of Southeast Asian women in transnational marriages. *J. Evidence-based Nurs.* 2, 311–321.
- Creswell, J.W., 2012. *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. Edwards Brothers, Inc, Boston.
- Dabney, K., McClarlin, L., Romano, E., Fitzgerald, D., Bayne, L., Oceanic, P., Nettles, A.L., Holmes, L., 2016. Cultural competence in pediatrics: health care provider knowledge, awareness, and skills. *Int. J. Environ. Res. Public Health* 13, 14.
- De Waal, F.B., 2008. Putting the altruism back into altruism: the evolution of empathy. *Annu. Rev. Psychol.* 59, 279–300.
- Debiase, L.B., Selleck, C.S., 2017. Cultural competence training for primary care nurse practitioners: an intervention to increase culturally competent care. *J. Cult. Divers.* 24, 39–45.
- Dell, E.M., Firestone, M., Smylie, J., Vaillancourt, S., 2016. Cultural safety and providing care to Aboriginal patients in the emergency department. *Can. J. Emerg. Med.* 18, 301–305.
- Diaz, C., Clarke, P.N., Gatua, M.W., 2015. Cultural competence in rural nursing education: are we there yet? *Nurs. Educ. Perspect.* 36, 22–26.
- Dudas, K.I., 2012. Cultural competence: an evolutionary concept analysis. *Nurs. Educ. Perspect.* 33, 317–321.
- Elminowski, S.N., 2015. Developing and implementing a cultural awareness workshop for nurse practitioners. *J. Cult. Divers.* 22, 105–113.
- Epner, D.E., Baile, W.F., 2012. Patient-centered care: the key to cultural competence. *Ann. Oncol.* 23, 33–42.
- Forsgren, S., Christensen, T., Hedemalm, A., 2014. Evaluation of the case method in nursing education. *Nurse Educ. Pract.* 14, 164–169.
- Gurm, B.K., Cheema, J., 2013. Cultural safety assessment of an urban Canadian hospital. *J. Cult. Divers.* 20, 177.
- Halter, M., Grund, F., Fridline, M., See, S., Young, L., Reece, C., 2015. Transcultural self-efficacy perceptions of baccalaureate nursing students. *J. Transcult. Nurs. : Off. J. Transcult. Nurs. Soc.* 26, 327–335.
- Hsieh, S.C.Y., Wang, M.C.Y., 2008. Immigrant wives and their cultural influence in Taiwan. *J. Taiwan Normal Univ.: Humanit. Soc. Sci.* 53, 101–118.
- Kamrul, R., Malin, G., Ramsden, V.R., 2014. Beauty of patient-centred care within a cultural context. *Can. Fam. Physician* 60, 313–315.
- Kohlbray, P.W., 2016. The impact of international service-learning on nursing students' cultural competency. *J. Nurs. Scholarsh.* 48, 303–311.
- Leininger, M., McFarland, M.R., 2002. *Transcultural Nursing : Concepts, Theories, Research and Practice*, third ed. McGraw-Hill Companies, Inc.
- Liang, H.F., 2013. In: NSC101-2511-S-255-004, National Science Council Symposium on Medical Education. National Science Council, Taiwan.
- Lin, C.-N., Mastel-Smith, B., Alfred, D., Lin, Y.H., 2015. Cultural competence and related factors among Taiwanese nurses. *J. Nurs. Res.* 23, 252–261.
- Lobb, P.M., 2012. Making multicultural education personal. *Multicult. Perspect.* 14, 229–233.
- Long, T.B., 2012. Overview of teaching strategies for cultural competence in nursing students. *J. Cult. Divers.* 19, 102.
- Mareno, N., Hart, P.L., 2014. Cultural competency among nurses with undergraduate and graduate degrees: implications for nursing education. *Nurs. Educ. Perspect.* 35, 83–88.
- Ministry of the Interior, 2018. *National immigration agency: statistics*. Available at <https://www.immigration.gov.tw/mp.asp?mp=2>, Accessed date: 10 April 2018.
- Nguyen, H., 2008. Patient centred care: cultural safety in Indigenous health. *Aust. Fam. Physician* 37, 990.
- Oelke, N.D., Thurston, W.E., Arthur, N., 2013. Intersections between interprofessional practice, cultural competency and primary healthcare. *J. Interprofessional Care* 27, 367–372.
- Owiti, J.A., Ajaz, A., Ascoli, M., Jongh, B., Palinski, A., Bhui, K.S., 2014. Cultural consultation as a model for training multidisciplinary mental healthcare professionals in cultural competence skills: preliminary results. *J. Psychiatr. Ment. Health Nurs.* 21, 814–826.
- Papps, E., Ramsden, I., 1996. Cultural safety in nursing: the New Zealand experience. *Int. J. Qual. Health Care* 8, 491–497.
- Perry, A., Woodland, L., Brunero, S., 2015. eSimulation: a novel approach to enhancing cultural competence within a health care organisation. *Nurse Educ. Pract.* 15, 218–224.
- Ramsden, I., 2002. *Cultural Safety and Nursing Education in Aotearoa and Te Waipounamu*. Victoria University of Wellington New Zealand.
- Sealey, L.J., Burnett, M., Johnson, G., 2006. Cultural competence of baccalaureate nursing faculty: are we up to the task? *J. Cult. Divers.* 13.
- Shen, Z., 2015. Cultural competence models and cultural competence assessment instruments in nursing: a literature review. *J. Transcult. Nurs.* 26, 308–321.
- Thomas, J., Harden, A., 2008. Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Med. Res. Methodol.* 8, 45.
- Waite, R., Calamaro, C.J., 2010. Cultural competence: a systemic challenge to nursing education, knowledge exchange, and the knowledge development process. *Perspect. Psychiatr. Care* 46, 74–80.
- Wu, H.L., Volker, D.L., 2012. Humanistic Nursing Theory: application to hospice and palliative care. *J. Adv. Nurs.* 68, 471–479.
- Yang, Y.M., Wang, H.H., 2003. Life and health concerns of Indonesian women in transnational marriages in Taiwan. *J. Nurs. Res. : J. Nurs. Res.* 11, 167–176.