

Supporting Cambodian Midwifery Education Through an International Collaborative Teaching Project

Karen S. Reed¹, Sathya Tes²

¹*Clinical Assistant Professor, University of Florida College of Nursing, Gainesville, FL32610, United States,* ²*Faculty Member, Kampot Regional Training Center for Health, Kampong Bay Village, Kampot City, Kampot, Cambodia*

Abstract

A course on nursing process for midwifery students was collaboratively designed and taught by a US Fulbright Scholar and a Cambodian nursing professor at a rural Cambodian nursing and midwifery program at the behest of the program director. The project was designed to coincide with a national initiative by the Cambodian Ministry of Health to launch the use of nursing process by nurses and midwives.

Using the ADDIE Model, the syllabus and lesson plans were created taking Cambodia's culture and resources into consideration. Lessons were delivered in English and Khmer. Upon conclusion of the course, a case study-based written exam with multiple choice and short answer questions in Khmer was administered. The sample was composed of 106 first year Khmer speaking midwifery students with 78.4% of the students scoring higher than 70% and 20.8% of them earning 90% or higher.

Nursing process is now integrated throughout the curriculum and midwifery students are modeling its use in clinical settings. Thus, providing initial evidence on the benefit of international partnerships in the classroom setting to effectively strengthen midwifery education and practice in Cambodia.

Keywords: *Cambodian midwives, international partnerships, midwifery education, nursing process*

Introduction

International nurses and midwives have supported their Cambodian counterparts through formal and informal collaborative partnerships to rebuild the health care system and to improve Cambodian health outcomes through education and professional development ^(1, 2, 3, 4). The first author is a nursing faculty member who received a US Fulbright Core Scholar Award to Cambodia. During the 10 month in-

country teaching experience, she taught nursing and midwifery students at the Kampot Regional Training Center for Health (KpRTC) in rural Cambodia and implemented a number of courses at the request of the KpRTC Program Director who served as her in-country supervisor during the award period.

The purpose of this article is to share the results of an international collaboration to teach nursing process to first year midwifery students at a regional training center, which are the public nursing and midwifery educational institutions in Cambodia. The goals of the project were to: 1. Collaborate with an in-country faculty member in creating a Nursing Process course including syllabus and lesson plans, 2: Support the knowledge base of Cambodian midwifery faculty

Corresponding author:

Karen S. Reed

addressed to PO Box 100187, University of Florida College of Nursing, Gainesville, FL32610, United States. Email: ksreed@ufl.edu

members and clinical preceptors on the integration of the nursing process into theoretical and clinical learning activities, and 3. Evaluate the effectiveness of an English speaking faculty member and bi-lingual Cambodian faculty member co-teaching a cohort of Khmer speaking Cambodian midwifery students.

Review of Literature

US Fulbright Program

The US Fulbright Program is a widely recognized and prestigious international exchange program which grants support for graduate study and research in 140 countries. It also provides distinguished US university faculty the opportunity to teach internationally either as a US Fulbright Core Scholar or as a US Fulbright Specialist, which is a short-term, project-based program. The US Fulbright Program was created by Senator J. William Fulbright in 1945. The program was a post- World War II project designed to promote peace and understanding through educational exchange. The US Fulbright Program is administered by the Bureau of Educational and Cultural Affairs of the US Department of State⁽⁵⁾.

History of Midwifery Education in Cambodia

The first school for nurses and midwives was established in 1950 as the 'Ecole d' Infirmieres et de Sages Femmes', in Phnom Penh as a two-year education program. The program later advanced to a three-year midwifery program but the school was closed 1975-1979 due to the ravages of the Khmer Rouge. The program was reopened in 1980 and later, it became the Technical School for Medical Care^(6,1).

It was during the 80's that four regional training centers were established to increase the number of health care workers. The post-basic midwifery program was introduced in 2002 with students studying midwifery for one year followed by three years of nursing education. In 2008, a revised national curriculum created a three-year direct entry associate degree midwifery program in addition to the 3+1

program to increase the number of educated midwives^(6, 1).

Introduction of Nursing Process in Cambodia

It is a priority of the Cambodian government to develop human resource capacity to address health reform within the country. The Cambodian Ministry of Health (MoH) has mainly focused on strengthening the country's training system in order for the system to function effectively and ensure quality training nationwide for health care workers. The MoH prepared guidelines on training standards using nursing process and nursing diagnoses as foundational elements in the development of other nursing documents to meet the need for nursing quality and effectiveness. The Manual of Nursing Process: A Step by Step Guide for All Health Care Facilities was piloted in 2011 and published in May 2012⁽³⁾. Once published, teams of professional nurse educators composed of Cambodian and international nurses conducted workshops for hospital nursing departments and Regional Training Centers (RTCs) during 2013-2014.

It was during one such training in Kampot, Cambodia that the visiting US Fulbright Scholar was invited to participate in the workshop. The KpRTC Program Director then requested the development and implementation of a Nursing Process course for nursing and midwifery students attending the school as part of the Fulbright body of work for the remainder of her tenure. Additionally, there was travel throughout provinces of southern Cambodia to conduct workshops on nursing process at rural provincial health centers so the clinical sites used by the program would possess the same information as the students. All workshops were taught in English with interpretation services provided by the co-author, a Cambodian nursing faculty member who received his BSN in Thailand.

ADDIE Model

The co-developers of the Nursing Process course utilized the ADDIE Model, an Instructional

Systems Design (ISD) Model, to develop the course. Created for the Department of Defense by Florida State University, this ISD provides a template for curricular or program design but does require local cultural considerations⁽⁷⁾. The five phases include Analysis, Design, Development, Implementation and Evaluation. The Analysis Phase requires collecting information about the population of learners. Instructional content must be learner-focused and culturally sensitive. The Design Phase is used to plan learning modules and identify appropriate strategies for the learning audience. The Development Phase is when the instructional media and supporting materials are created. The lessons are delivered during the Implementation Phase and learner understanding and program satisfaction are determined during the Evaluation Phase⁽⁸⁾.

Methods

Methodology

A 15- class hour course in Nursing Process was co-designed by the authors. Students were assigned to take the Nursing Process course by the program director. However, students were not assigned a course grade as the course was not included in the mandated midwifery curriculum created by the Cambodian MoH. The program director believed it was important that the students have exposure to the material, and it was part of his vision for the school to become a national leader of Cambodian nursing and midwifery education.

As earlier noted, the ADDIE Model was used to design the course. Use of this ISD Model was helpful as it provided the Cambodian faculty member the opportunity to learn an evidenced based framework for curricular design which could be applied to future courses in which he was involved in developing. Once the syllabus was developed, it was presented to the program director for approval prior to course implementation.

The US faculty member taught the class in English while the Cambodian faculty partner verbally interpreted material into Khmer, Cambodia's national language. Students were provided access to the Nursing Process Manual designed by the MoH with multiple copies placed on reserve in the school library. The document was available in both English and Khmer by the Cambodian MoH.

The lesson plans were co-designed, and this provided the US faculty member an opportunity to introduce her Cambodian co-teacher to Blooms Taxonomy. The classroom activities were designed to foster students remembering, understanding, and application of the nursing process. Learning activities included the use of flash cards, team games, case studies, and small group presentations. The activities were scaffolded in a manner that supported the development of student confidence and fostered practice in critical thinking techniques. The teaching methods used were unlike those typically used in Cambodian midwifery education; therefore, it required faculty encouragement to promote student engagement.

Bloom's Taxonomy was used to design the final examination blueprint with student knowledge assessed using remembering, understanding and application questions. The written final examination was based upon a case study and the questions evaluated the students' knowledge of the various steps in the nursing process using short answer and multiple-choice questions that reflected the three levels of Blooms taxonomy previously stated. Two exams, each with a different case study, were developed using the same format. Two exams were necessary to promote test security due to the proximity of the students to one another in the testing environment. The exams were developed in English, translated into Khmer, verified for accuracy by a second bi-lingual Cambodian faculty member, and students provided their answers in Khmer. The Cambodian co-teacher graded the exams with the US faculty member

providing the key. Together, they went over the scoring of answers for each test with the Cambodian co-teacher interpreting the students' answers. The graded exams were statistically analyzed once the US faculty member returned to her home institution.

Sample

The sample was composed of 106 Cambodian first year midwifery students attending the school. All of the students were female. No other demographic data was collected.

Ethical Considerations

An IRB-02 application for this behavioral/non-medical research project was submitted to the US faculty member's university. As part of the application, a consent form was designed in Khmer. The form was developed in English, translated into Khmer by a bi-lingual Cambodian nurse educator (not the co-teacher) and in turn was translated back into English by a second bi-lingual Cambodian nurse in a different city to ensure the accuracy of the form. The KpRTC Program Director approved the use of the data collected for educational purposes and dissemination in a professional nursing journal. The university IRB approved the project. Students were informed verbally in Khmer and within the consent form that they may participate in the course and take the exam without signing the consent form.

Results

A total of 106 students participated in the course and took one of two versions of the exam, which was presented to them in Khmer. A total of 78.4% of the students scored above 70% on the exams with 20.8% of them scoring 90% or higher. The score ranges were 30%-100% Exam Version 1 (N=51) and 25%-100% Exam Version 2 (N=55) with a mean of 74.6% and 74.45% respectively for the two versions of the exams. All students were successful in listing the steps of the nursing process and identifying some if not all the objective and subjective data contained

within the case study. The questions which proved the most problematic were the creation of a relevant goal and measurable outcomes. However, in 24 years of teaching nursing process, it has been observed those areas are consistently the most problematic for novice users of the process.

Discussion

There were multiple constructs to consider in the design and implementation of this project. The first construct was the *delivery of the material in the classroom*. Cambodian nursing education is delivered in a manner quite different than in many Western-style university settings. In Cambodian public nursing programs, students sit shoulder to shoulder. There are no textbooks in Khmer so faculty members translate material from English or French publications to develop their lecture content. Lecture is the primary teaching methodology and material is task focused.

The US faculty member had prior experience teaching in Cambodian nursing and midwifery programs and pacing the delivery of material so it could be accurately interpreted. The co-author was fairly new to the faculty role and this collaboration provided him with support in learning how to teach using a variety of interactive strategies.

Learning activities not typical of the Cambodian classroom were introduced to these students. This course was taught eight months into the Fulbright award period; therefore, the US faculty member was no longer an oddity with the students. A positive reputation and trust had been developed across the months during earlier delivered coursework. Learning activities included students working in small groups reading short vignettes, then creating pieces of a nursing care plan followed by presenting their group's work to the class as a whole. Another learning activity was role playing to practice interviewing patients to collect data. The students quickly moved past initial shyness and embraced this activity enthusiastically.

Another construct which required consideration was *culturally congruent care*. The author incorporated the local culture, work and living conditions and family structure into the vignettes and case studies used by the students to construct the nursing care plans. It was critical that the students were provided with culturally relevant situations through which they could learn nursing process. Additionally, the nursing interventions required consideration of Cambodia's perinatal and postpartum practices and beliefs for the material to be useful and student understanding achieved. The US faculty member had worked on multiple short-term teaching projects across a six-year period prior to receiving the US Fulbright Scholar Award. These collective experiences provided her with a basic understanding of the culture related beliefs as well as the resources, structure and services associated with Cambodia's health care system.

A final construct was *faculty and clinical site professional development*. As noted earlier, it was important that the Cambodian midwifery faculty members and the clinical sites used by the KpRTC received the professional development necessary for there to be sustainability of the Nursing Process course and implementation in the clinical settings during midwifery student clinical rotations. Multiple workshops on nursing process and teaching strategies were presented by the co-authors throughout southern Cambodia.

Conclusion

The midwifery profession in Cambodia continues to evolve and develop the evidenced based practice standards of maternal care which are evident among the higher income countries of southeast Asia. It is a tribute to the country's efforts that in August 2019 Cambodia held its First National Symposium on Midwifery. The theme was "Maternal and Child Healthcare and Management During the Prenatal and Perinatal Period". It will require continued effort, both at local and national levels, for the standards of care

to continue to evolve. The Nursing Process course is one example of how collaboration between educators in an international setting can advance knowledge and practice at the local level. The nursing process is now integrated throughout the curriculum at the KpRTC and as their graduates enter the workforce, those midwives are mentors and role models utilizing the nursing process to promote positive outcomes for the women and newborns in Cambodian communities.

Ethical Clearance: The University of Florida, Gainesville, Florida, USA, IRB-02 Approved UFIRB #2014-U-590. The Honorable Dr. Samnang Chhun, Director of the Regional Training Center for Health, Kampot, Cambodia, approved the study for local implementation.

Funding Source: US Fulbright Scholar Program awarded the 10 month teaching grant for the US faculty member.

Conflict of Interest: The co-authors, whose names are listed, have no conflicts of interest to declare.

The co-authors have seen and agree with the contents of the manuscript and there is no financial interest to report. We certify that the submission is original work and is not under review at any other publication

References

1. Fujita N, Abe K, Rotem A, Tung R, Keat P, Robins A, Zwi A. Addressing the human resources crisis: a case study of Cambodia's efforts to reduce maternal mortality (1980-2012). *BMJ Open*. 2013; 3(5):doi:10.1136/bmjopen-2013-002685
2. Koto-Shimada K, Yanagisawa S., Boonyanurak, P., & Fujita, N. Building the capacity of nursing professionals in Cambodia: Insights from a bridging programme for faculty development. *International Journal of Nursing Practice*. 2016; 22(Supplement 1): 22-30

3. LasaterK, Upvall M, Nielsen A, Prak M, & Ptacheinski R. Global partnerships for professional development: A Cambodian exemplar. *Journal of Professional Nursing*. 2012; 28(1): 62-68
4. Henker R, Prak M, & KoyV. Development and implementation of cornerstone documents to support nursing practice in Cambodia. *The Online Journal of Issues in Nursing*. 2015; 20(2): DOI 10.3912/OJIN.Vol20No02Man05
5. Bureau of Educational and Cultural Affairs[Internet]. USA;About Fulbright; n.d. [cited 2020 May 20]. Available from: <https://eca.state.gov/fulbright/about-fulbright>
6. Cambodian Midwives Council[Internet]. Cambodia;c2020.History of midwifery regulation in Cambodia; 2013 [cited 2020 May 20]. Available from :http://www.cmidwivesc.org/?lg=en&pg=article&req=aboutcmc_instruction
7. BransonR, RaynerG, CoxJ, FurmanJ, King F,& HannumW. Interservice procedures for instructional systems development.(5 vols) (TRADOC Pam 350-30NAVEDTRA 106A). Ft. Monroe, VA: US Arm Training and Doctrine Command, August, 1975. (NTIS No. ADA 019 486 through ADA 019 490)
8. HsuT, Lee-HsiehJ, Turton MA, & Cheng S. Using the ADDIE model to develop on-line continuing education courses on caring for nurses in Taiwan. *Journal of Continuing Education in Nursing*. 2014;45(3): 124-131