ORIGINAL RESEARCH

UTILIZATION OF A SOCIAL MEDIA PLATFORM TO DEVELOP CONTINUING EDUCATION PROGRAMMING FOR PROMOTING NURSING PRACTICE IN CAMBODIA

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Abstract

Background: Cambodia's nursing profession and nursing education system continue to progress 40 years after destruction by the Khmer Rouge. The author, who has a relationship with a hospital in southern Cambodia, was asked to teach physical assessment techniques to improve patient care.

Objective: This study aimed to evaluate the impact of culturally congruent physical assessment media on the knowledge-base of Cambodian nurses.

Methods: This article describes two years of an on-going project designed by the author who annually recruits US based BSN nursing students to use the ADDIE model to create and record segments on physical assessment which are posted on a private YouTube channel for the limited English-speaking Cambodian nursing staff. Optional post-tests are administered by the Cambodian hospital’s nursing director.

Results: Test results reflect knowledge gained on cardiac, pulmonary, and gastrointestinal physical assessment skills with means ranging from 73.55% to 95.71%. Physical assessment skills until recently were not taught in Cambodia's nursing programs. Cambodia's nursing profession is advancing and a corresponding skill set including conducting physical assessments is necessary. As a majority of the project participants did not have prior exposure to the material, a pre-test was not provided and participation in post-testing was optional. The objective was to provide useful professional educational materials at a comfortable language level for the Cambodian nurses using examples which were culturally relevant.

Conclusion: The BSN students successfully developed culturally relevant educational products the Cambodian nurses found useful.

KEYWORDS
nursing education; Cambodian nursing; cross cultural nursing; international nursing partnerships

BACKGROUND

In Cambodia between 1975 and 1979 nursing education was one of many victims of the Khmer Rouge. During the time of Pol Pot's regime, 1.7 million Cambodians with estimates as high as 2.5 million, or 20% of the country's population at the time, died due to forced labor, disease and starvation, and mass execution (Rummel, 1997). Documents disclose only 45 physicians survived that time period with 20 physicians leaving the country once borders were opened (Mcgrew, 1990); however, it is only through oral history that the number of nurses surviving that time period is generally accepted at 20 (Koy, June, 2012). The loss of Cambodia's nurses, faculty members and its entire health care system is a legacy from which Cambodia's nursing profession continues to rebuild (Lasater et al., 2012).

The author has traveled to Cambodia on six different occasions since 2007 as a volunteer nursing faculty member. The focus of these trips has consistently been to implement a body of work...
that supports the professional development of Cambodia's nursing workforce and pre-licensure nursing students. Trips have ranged in length from 2 weeks to 10 months when a US Fulbright Core Scholar Award to Cambodia allowed the author to create, expand and deepen in-country relationships. Over the years Sonja Kill Memorial Hospital (SKMH) and the Kampot Regional Training Center for Nurses and Midwives located in Kampot, Cambodia have become the primary locations for collaborative international nursing projects between the author and her Cambodian nursing colleagues.

However beneficial the in-country efforts, the author and her Cambodian colleagues have desired a sustainable project that would utilize the availability and low-cost advantages of technology and distance learning. Specifically, the nurses and midwives at Sonja Kill Memorial Hospital wanted to learn how to conduct physical assessments, a skill most did not study while in nursing school and the hospital administration was supportive of an initiative to address this need. This article presents the development, implementation and evaluation of the Nurse2Nurse Education Connection, an unfunded, on-going project utilizing BSN students nurse as co-investigators (Co-I) and the author as their faculty mentor and primary investigator.

LITERATURE REVIEW

Current State of Cambodian Nursing Education

The Kingdom of Cambodia has five nationally supported nursing/ midwifery education programs with all five offering Associate Degree in Nursing programs which requires three years to complete and one of the five programs also offers a Bachelor of Nursing Science degree (Henker et al., 2015). The content of the programs follows a national curriculum authorized by the Cambodian Ministry of Health (Cambodian Council of Nurses, 2017). Additionally, there are a small number of private nursing schools in Cambodia. Although there is a vision for a sustainable health sector, there are recognized challenges uncovered in an extensive survey of Cambodia's public nursing education system conducted by the Ministry of Health (MOH) in collaboration with the Japanese International Cooperative Association (JICA) in 2012.

First, though there is a national curriculum approved by the MoH and the Ministry of Education, Youth and Sport, the 2012 survey documented a consistent lack of lesson plans as well as a lack of lectures based upon evidence (Japanese International Cooperative Association, 2012). There remain no professionally published nursing textbooks in Khmer, the language of the Kingdom of Cambodia, and many of the nursing faculties do not read English well enough to use the textbooks acquired from international sources. However, there is promise of change as there are now 52 Cambodian nurses who have earned Bachelor of Nursing Science degrees from accredited international universities and three who have earned a Master of Nursing Science and a Cambodian nurse earned a PhD in 2018, the first in the country (Henker et al., 2015; Koy, October, 2018).

Professional Development Needs of Cambodian Nurses

Cambodia continues to have some of the lowest health indicators among the Association of Southeast Asian Nations (ASEAN). One contributing factor is the shortage of competent health personnel in the Cambodian health service delivery system (Department of Planning & Health Information of the Kingdom of Cambodia, 2016). Nursing shortages are common in low income countries due to inadequate numbers of nursing schools, the varying quality of nursing education, and the general limited secondary school opportunities (George & Meadows-Oliver, 2013).

A major section of the JICA survey included an assessment of hospital nursing services used by the public nursing programs where students participate in clinical learning experiences. Observations of 40 different nurses at nine different hospitals revealed a significant focus on task-oriented skills with no evidence of knowledge or application of physical assessment skills aside from vital signs (Japanese International Cooperative Association, 2012). The report went on to identify problems associated with in-service training; however, this issue could be resolved by strengthening the nursing department through education and capacity development activities (Japanese International Cooperative Association, 2012).

Benefits of Capacity Development Projects

The United Nations (UN) called upon higher-education institutions to contribute to sustainable development activities and engage in capacity development efforts which required "transnational involvement" (Koehn et al., 2011). Marrone reflected on how observing nursing in an international arena impacts one's perception and appreciation for the diversity that exists within one's own nursing community (Marrone, 2002). International exchanges provide such an avenue (Leh et al., 2004). Steefel quotes Alaf Meleis, president of the International Council on Women’s Health, “When nurses understand and interpret diversity experiences, they are better able to care for patients of many cultures and are better prepared for global health care” (Steefel, 2002). As not all students can participate in travel abroad programs, local cross-cultural face to face opportunities and using technology and networking for international engagement have been explored with promising results (Arbour et al., 2015; Lenz & Warner, 2011).

AIM

The purposes of the project were 1. to identify the effectiveness of the physical assessment educational material developed by BSN nursing students attending a university in the southeastern United States for use by limited English speaking indigenous Cambodian nurses and 2. to determine the Cambodian nurses’ satisfaction with the educational materials developed.
THEORETICAL FRAMEWORK

ADDIE: Instructional Design Model

The ADDIE model was the instructional design model used to design the instructional materials for this project. The author chose the ADDIE model for its similarities to the nursing process which the BSN students were quite familiar with making it a user-friendly product for novice designers creating the project management plan. This project is a multi-year project with a new BSN student team recruited each year to produce videos. The ADDIE model has worked well with each BSN student research team, three to date, finding it useful to organize the team’s body of work.

Florida State University first created the ADDIE model for the US Army in 1975 (Branson et al., 1975). The model consists of five phases: Analysis/Assess, Design, Development, Implement, and Evaluate. The Analysis phase requires one to gather information about the population of learners. It is essential that the instructional content is learner-focused and culturally congruent. 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 actually created. Delivery of materials is furnished during the Implementation phase and learner understanding and program satisfaction are determined during the Evaluation phase (Hsu et al., 2014).

Bandura's Social Cognitive Theory

The author knew the project teams were composed of novice BSN nursing students in multiple areas including the creation and delivery of educational materials and working with nurses who are Limited English Proficiency (LEP), and who possessed little to no understanding of the Cambodian culture and the Cambodian health care system. The author believed that in addition to an instructional design model to guide the project, it would be beneficial to utilize a social learning theory in constructing the nursing students’ orientation to the project and developing support within the project experience. Constructs from Bandura’s Social Cognitive Theory were used in providing the materials and informational and emotional support necessary to the student team members. In turn, this allowed for production of the necessary deliverables for there to be effective project outputs.

Self-efficacy, a vital concept of Bandura’s Social Cognitive Theory, is the optimistic belief in one's ability to successfully accomplish a task and produce a favorable outcome (Bandura, 1995). Participating students needed to know they could succeed. The Cambodian staff at SKMH expected a quality product, and it would not be inappropriate to state that patient care was dependent upon the quality and accuracy of deliverables provided to the SKMH staff.

As Bandura's model calls for self-efficacy development through mastery experiences, vicarious experiences and social persuasion (Lee et al., 2012), this theory was useful in guiding the relationship between the faculty mentor and the members of the student team. The goal was for student team members to feel successful and build self-confidence through each phase of the project. Factors influencing outcomes of student performance included difficulty of the task, effort expended, and amount of assistance required or received. Therefore, it required the faculty mentor to provide information, role play, problem solve, word-smith, and share stories of in-country successes and failures to support the development of the student team members.

Sample

SKMH is the primary stakeholder of this project. The sample participants in this project were the English speaking, Cambodian national nursing and midwifery SKMH staff members. The organization is a charity hospital that opened in April 2012 with the vision of improving the health conditions of Cambodians in the region. The hospital strives to assist poor families, expectant mothers, and children. It operates mainly with Cambodian staff but is supported by expatriate healthcare specialists. The hospital is managed under HOPE Worldwide, an international non-profit organization whose mission is to promote sustainable community-based health services.

Year one of the project, a total of 31 Cambodian nurses and midwives, employees at SKMH, reporting themselves as new graduates with up to four years of work experience participated in the project. During year two, a total of 22 Cambodian nurses and midwives working at SKMH and ranging in work experience from four months to four years participated in the project. No other demographic information was solicited. The sample was recruited through a convenience sampling method.

METHODS

This project is in year three of production. This article describes the process and results associated with years one and two. There is no outside funding; the instructional designer and biostatistician professionally support this project although it is outside of their assigned plan of work. This project was designed with the Director of Nursing at Sonja Kill Memorial Hospital in Kampot, Cambodia and received the administrative approval of its Chief Executive Officer prior to implementation. The project is approved through the IRB process at the author’s university which requires documentation of support from SKMH.

The students who comprise the project teams as Co-I can earn academic credit through the college's Honors Program for their participation or they may participate in the project as their EMBRACE (Engaging Multiple communities of BSN students in Research and Academic Curricular Experiences) scholarly project. However, only three of the seven students who participated during this project’s first two years participated in those programs. The remaining four students participated in the
project as volunteers, earning no academic credit or outside recognition.

This project is organized as a 10-month activity, as described in Table 1, providing BSN students with the opportunity to engage in cross-cultural research and to provide a meaningful service to an international nursing community. The project year begins in February with the faculty member recruiting up to four students from the second semester junior class for the project. Students are interviewed for their prior cross-cultural experiences, communication abilities, group dynamics, and commitment to the project. A student’s grade point average is not taken into consideration. This project provides an opportunity for students who are able to effectively articulate in writing and verbally a desire to engage in an international service learning project. As noted, the ADDIE model is used as the framework for designing the project. It is an instructional design model that novice educators quickly understand.

Assess/ Analyze Phase

By mid-March, the new team meets, and the plan of action is outlined with the faculty mentor. The instructional designer creates a new project site annually using Canvas®, the university’s learning management system, as the platform and files from the previous year’s project team are moved forward and archived for reference as needed. The site is divided into sections including: review of literature, contact information, SKMH newsletters, Institutional Review Board 02-Behavioral/Non-Medical (IRB02) information, outputs, posters, exams and video links, project production schedule, tips for handouts, and videos from former project years. The review of literature section contains multiple sub-files including cultural dimensions of learning, global educational partnerships/capacity development, and Cambodian health/nursing that the student teams must read and update with current material. Students attend a full day orientation on the modern history of Cambodia, its nursing education system, history of the project, the IRB02 process including training requirements and the Belmont Report, designing professional development materials for LEP nurses working in a low-resource setting, and a segment discussing their personal stage of cultural development. Students reach out to the nurses at SKMH via a private Facebook account that was created as a comfortable place for the Cambodian nurses to ask questions and for the students and the nurses to engage in conversation. Additionally, the SKMH nursing director, a German national who is trilingual and a longtime resident of Cambodia, introduces new Cambodian SKMH staff members to the project and discusses with the Cambodian staff members the topics they wish to see developed into videos.

By the first week in May when the students leave on summer break, they have completed the IRB02 training modules to become Co-I on the study, the IRB02 has been completed, submitted and approved. The students, utilizing the information from SKMH, choose which topics they will develop for videos, scripts and exams. Videos that have been produced to date include basic anatomy and physical assessment of the gastrointestinal, respiratory, neurological and cardiac systems.

Design Phase

Over the summer, the students stay in contact with one another and the faculty mentor developing the video scripts and exams. The faculty mentor helps them with editing and provides final approval of all scripts, Power Point content and post-tests. Additionally, the students will update the review of literature and are responsible for reading all materials on the Canvas site. This is a critical step in creating and delivering the material in a culturally congruent manner.

Development Phase

At the beginning of fall semester, students work directly with the instructional designer in scheduling and recording the videos. The students must also make a final decision about which state side conference, if any, they wish to participate in so that abstract deadlines can be identified, and poster production timelines prepared.

The SKMH Director of Nursing provided the BSN student team with suggested criteria for the evaluation tool as well as the author, based upon her prior experiences directly providing continuing education to the nurses and midwives at the hospital. The BSN student team created a simple evaluation tool for the Cambodian nurses to complete once each video is viewed. The BSN student team set an arbitrary minimum level of success at 72% with a desired rate of 80%. These figures are not based on any statistical evidence as the review of literature did not yield any materials providing insight into a logical figure when working virtually with LEP international nurses in a low-income country. This study is contributing to the body of literature on this topic.

Implementation Phase

The nurses at SKMH watch the videos on a private YouTube Channel and then take the exams when they wish to do so. The nursing director administers the consent process for the nurses and midwives who participate in the project and is responsible for the security of the exams. He scans the signed consent forms, the completed exams, and evaluations forms and emails them to the faculty mentor who retains them in a secure location. No pre-test is administered as such a step might provoke unnecessary anxiety in project participants. Any knowledge gained is considered a positive movement and a foundation for growth. Nurses and midwives are permitted access to the videos without a requirement to take the exam. The intention is to give all of the Cambodian nurses and midwives at the hospital the opportunity to utilize the instructional videos if they desire.

During this phase, students also prepare and submit abstracts for the conferences in which they wish to participate and begin designing their poster.
Evaluation Phase
The College of Nursing biostatistician develops basic statistics. The students and the faculty mentor examine the statistics and determine opportunities for improvement. Once the conferences are completed, the students and faculty mentor discuss feedback received on the poster presentations at the chosen conferences.

Table 1 ADDIE Project Development Plan

<table>
<thead>
<tr>
<th>Phase</th>
<th>Time Frame</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Assess/ Analyze</td>
<td>April</td>
<td>• Identify what video topics the SKMH would like to have.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Solicit data from Facebook page &amp; through SKMH director of nursing via email</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Students determine student video dyads and which topics the dyads will develop.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Student teams develop &amp; agree upon summer body of work.</td>
</tr>
<tr>
<td>D - Design</td>
<td>May-June-July</td>
<td>• Student dyads will develop video scripts and exams.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• PI works with student dyads in draft development and will approve final drafts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• PI responds to any IRB02 board comments (IRB is renewed annually due to change in Co-l and new topics)</td>
</tr>
<tr>
<td>D - Develop</td>
<td>August-mid-September</td>
<td>• Student dyads will work with videographer in scheduling and recording videos.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• SKMH nurses oriented to project and those who wish to participate sign consents</td>
</tr>
<tr>
<td>I - Implement</td>
<td>mid-September-mid-November</td>
<td>• SKMH nurses and midwives watch videos</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Study participants take supervised exams.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Exams and consent forms scanned and emailed to PI.</td>
</tr>
<tr>
<td>E - Evaluate</td>
<td>November</td>
<td>• PI collaborates with College of Nursing statistician in collecting basic stats on collected exams.</td>
</tr>
<tr>
<td></td>
<td>December</td>
<td>• BSN student team and PI conducts statistical analysis and assesses program evaluations.</td>
</tr>
<tr>
<td></td>
<td>February</td>
<td>• Create recommendations for next team</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• BSN student team participates in recruitment of the next year’s team by making a presentation and answering questions.</td>
</tr>
</tbody>
</table>

Exam and Evaluation Results
Test Results Year One: Fall 2015- Spring 2016
A total of 31 project participants took the pulmonary anatomy and physical assessment exam and 21 study participants completed the cardiac anatomy and physical assessment exam. No records were kept as to whether a staff member took one or both exams, nor how many times a nurse or midwife viewed the videos or participated in the associated in-service programming prior to taking the exam. The project end point was providing conveniently accessible, readily understood, professional educational material on physical assessments for the Cambodian nurses and midwives. Tables 2 and 3 describe the test results. The mean for the 31 study participants who completed the pulmonary exam on the anatomy and physical assessment was 73.55 ± 17.23, with a low score of 40 and a high of 100. The 21 study participants who took the cardiac exam on the basic anatomy and physical assessment that first year earned a mean of 76.25±15.06; scores ranged from 50.00 to 100.00.

Table 2 Pulmonary Anatomy & Physiology Test Data 2015-2016

<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwife</td>
<td>3</td>
<td>83.33</td>
<td>15.28</td>
<td>70.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Not Stated</td>
<td>4</td>
<td>72.50</td>
<td>17.08</td>
<td>50.00</td>
<td>90.00</td>
</tr>
<tr>
<td>Nurse</td>
<td>24</td>
<td>72.50</td>
<td>17.75</td>
<td>40.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>73.55</td>
<td>17.23</td>
<td>40.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 3 Cardiac Anatomy & Physical Assessment Test Data 2015-2016

<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwife</td>
<td>4</td>
<td>72.50</td>
<td>15.00</td>
<td>50.00</td>
<td>80.00</td>
</tr>
<tr>
<td>Not Stated</td>
<td>1</td>
<td>90.00</td>
<td></td>
<td>90.00</td>
<td>90.00</td>
</tr>
<tr>
<td>Nurse</td>
<td>16</td>
<td>75.63</td>
<td>13.15</td>
<td>60.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>75.71</td>
<td>13.26</td>
<td>50.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Test Results Year Two: Fall 2016- Spring 2017

Based upon feedback from participants on the sound quality of the videos and responses received to some of the test questions, which were mostly fill-in-the-blank, the BSN student team revised both the pulmonary and cardiac anatomy and physical assessment videos and revised some of the questions on the corresponding exams. For that reason, there can be no correlations made between test results of the cardiac exams between the first two years of the project. The second-year team also made videos on basic anatomy and physical assessment of the gastrointestinal (GI) and neurological systems at the request of the SKMH staff. However, no staff members attempted to take the neurological anatomy and physical assessment exam and no additional pulmonary exams were received. Therefore, there is no data to report for those tests. Tables 4 and 5 outline the results of the GI exam and the revised cardiac exam.

A total of 22 study participants took the revised cardiac exam with a mean of 88.13±12.57. Scores ranged from 50.00 to 100.00. Study participants from the previous year were welcomed to watch the new video and take the revised exam. Therefore, some improvements may be due to repeated exposure of the material. The results of the gastrointestinal exam ranged from 90 to 100 among the seven study participants who took the exam with an average score of 95.71±5.35.

Table 4 Cardiac Anatomy and Physical Assessment Test Data 2016-2017

<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwife</td>
<td>7</td>
<td>70.00</td>
<td>10.73</td>
<td>50.00</td>
<td>90.00</td>
</tr>
<tr>
<td>Nurse</td>
<td>15</td>
<td>92.66</td>
<td>11.65</td>
<td>67.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>88.13</td>
<td>12.57</td>
<td>50.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 5 GI Anatomy & Physical Assessment Test Data 2016-2017

<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwife</td>
<td>2</td>
<td>95.00</td>
<td>7.1</td>
<td>90.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Nurse</td>
<td>5</td>
<td>96.00</td>
<td>5.5</td>
<td>90.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>95.71</td>
<td>5.35</td>
<td>90.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Feedback from Cambodian Project Participants

Nurses and midwives who viewed the videos were encouraged to provide feedback. Year one, study participants were simply asked to provide written comments. Year two of the study, a more formal tool was used, which still included the opportunity for participants to freely comment. Table 6 reflects the feedback results from one of the videos. Overall, the US students were touched by the many positive comments. However, they were a bit surprised at comments noting they spoke too quickly as they perceived themselves to be speaking very slowly.

Table 6 Cardiac Anatomy & Physical Assessment Video Satisfaction Survey Results 2016-2017

<table>
<thead>
<tr>
<th>Questions</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The video production is very good</td>
<td>23.8%</td>
<td>71.4%</td>
<td>4.8%</td>
<td>-</td>
</tr>
<tr>
<td>The video information is helpful</td>
<td>9.5%</td>
<td>81.0%</td>
<td>9.5%</td>
<td>-</td>
</tr>
<tr>
<td>The video teacher communicated in English that I can understand</td>
<td>9.5%</td>
<td>81.0%</td>
<td>9.5%</td>
<td>-</td>
</tr>
<tr>
<td>I like the organization of the video</td>
<td>38.1%</td>
<td>57.1%</td>
<td>0.0%</td>
<td>4.8%</td>
</tr>
<tr>
<td>What did you like best about the video?</td>
<td></td>
<td></td>
<td></td>
<td>Pictures of anatomy, clear pictures, explain organ functions, excellent teachers</td>
</tr>
<tr>
<td>What did you not like about the video?</td>
<td></td>
<td></td>
<td></td>
<td>Fast show, speak so fast, the video very fast</td>
</tr>
</tbody>
</table>

DISCUSSION

While a higher mean is desired, the overall exam results are promising. As the Cambodian nurses and midwives develop greater comfort and trust with the project, it is hoped that more staff members will participate. Because limited information is presented on anatomy and physiology in Cambodian nursing curricula, the students created short, less than 15-minute videos, explaining anatomy and physiology of a system as companion videos to the physical assessment videos. Culturally relevant graphics and pictures were incorporated into the power point slides. Great care was taken to demonstrate use of equipment available in-country and to use units of measurement and acceptable ranges of findings which one would expect in a Cambodian hospital. This was a critical role that both the faculty mentor and the SKMH Nursing Director played in vetting the materials prior to video production.
Based upon the evaluations of the year one videos, the decision was made to revise and re-record both the cardiac and pulmonary videos and redesign some of the test questions for the cardiac exam. Then, the year two student project team created physical assessment videos of the GI and neurological systems to contribute to the available list on the secure YouTube channel. To date, no staff members have taken the exam associated with assessment of the neurological system. The faculty mentor will meet with the SKMH nursing director and his nursing educator team to discuss what measures can be taken to improve both the video and corresponding handouts as well as support the confidence of the staff members in attempting the exam.

Only a small number of nurses and midwives have taken the gastrointestinal assessment exam (N=7); however, the results are quite good with all earning either 90% or 100% on the ten item multi-choice exam. The faculty mentor will use the meeting previously mentioned to discuss what measures she can take to encourage participation and how the staff member's wish her to support their professional development. It may be that a monthly visit using Skype to maintain contact with staff members and initiate relationships with new staff members between in-country visits will keep project momentum going.

A puzzlement has been the almost non-use of the Facebook page. While members of the student project team and the faculty mentor receive multiple individual Facebook friend requests from the nurses and midwives at SKMH, there is only the very rare question or discussion post on the private dedicated Facebook page. It may be that the SKMH staff members do not find it useful or necessary.

The seven students on the first two project teams have now graduated and all have shared the impact this project has made on their nursing practice. When caring for a patient or communicating with a family member where there is an issue with health literacy or LEP, they have shared how they remember the lessons learned in delivering the video materials. They find alternative words and phrases, avoid compound sentences, avoid beginning sentences with prepositional phrases, and seek verification there is understanding. One former student joined the faculty mentor in Cambodia for a month to the great delight of the SKMH staff. She and the faculty mentor worked with the Cambodian staff to practice what they had learned on the videos. Additionally, the former student collaborated with the Cambodian staff members to create and implement a number of quality improvement activities which continue today.

CONCLUSION

The purpose of this project was to evaluate the impact of culturally congruent physical assessment media on the knowledge-base of Cambodian nurses. Initial test results indicate that knowledge was gained. This experience has provided the BSN nursing student project teams with the opportunity to enhance their teaching skills, to engage in the research process, and to foster their own cultural development while advancing the workforce development of an international nursing community.

IMPLICATIONS FOR RESEARCH AND PRACTICE

Recommendations

One recommendation for the initial Assess/Analysis phase is to arrange for a virtual meeting between the student project team and the Cambodian staff at SKMH. This would allow for greater clarity in the feedback received to date and allow creation of the most learner-centered instructional material possible. While the year one team did do so, the 12- hour time difference proves a challenge. There is also a need to identify how to best standardize the exams in a culturally congruent manner so that the effectiveness of the videos can be better measured.

Implications

Four Cambodian hospitals require their staff members to meet a set of English speaking and writing standards. These hospitals have a number of capacity development projects with nursing and medical education programs and hospitals in Middle (MIC) and High Income Countries (HIC). This project has the potential for replication at those hospitals. Nursing education programs in MIC and HIC can provide students from multiple health disciplines with opportunities to develop the cultural sensitivity, skills and knowledge necessary to work effectively with patient and family populations as well as with members of today's diverse healthcare workforce. This project can be reasonably replicated by any nursing or other health science program wishing to create a cross-cultural, capacity building experience for its students and it would be an excellent chapter service project for a professional nursing organization.

Ethical Considerations

This project was approved by the University of Florida (Gainesville, Florida, USA) IRB 02 (Behavioral/ Non-Medical) board. #2015-U-0442. The title of the study as approved was, "Creating Culturally Congruent Training Materials to Promote Physical Assessment Competencies among Cambodian Nurses".

Declaration of Conflicting Interest

The author(s) report(s) no real or perceived vested interests that relate to this article that could be construed as a conflict of interest.

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References


Koy, V., (June, 2012). [Personal communication].

Koy, V. (October, 2018). [Personal communication].


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