

Teaching Critical Thinking to Nurses in a Ugandan Hospital

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Abstract

A partnership that was established to provide cross-cultural learning for senior-level community health nursing students from the United States also provided a learning opportunity for nurses at a pediatric neurosurgical hospital in Uganda. The faculty who accompanied the students on the study abroad to the CURE Children's Hospital of Uganda provided an educational session on critical thinking in response to request from the hospital administrators. Learning outcomes were evidenced through informal one-on-one interactions following the sessions. Even a small contribution such as this teaching intervention in cross-cultural exchange may affirm the belief that "each drop counts" as the nurses may obtain skills that enhance their ability to contribute to saving the lives of their patients.

Keywords

critical thinking, nursing in Africa, staff development, cross-cultural nursing, culture

Introduction

What began as a small project to secure a cross-cultural nursing experience for undergraduate nursing students evolved into an opportunity to teach critical thinking to nurses in Uganda. CURE International, a nonprofit organization started in 1998, is based in the United States and operates hospitals in 11 countries. The mission of CURE International is to treat the millions of children in developing countries who have curable spinal deformities and other crippling conditions, such as cleft palate, clubfoot, hydrocephalus, and spinal bifida. CURE International focuses on both physical and spiritual healing (CURE International, 2008).

The liaison between CURE International and the Department of Nursing at York College of Pennsylvania, to allow nursing students to have cross-cultural study abroad experience, was established in 2006. The CURE Children's Hospital of Uganda (CCHU) was chosen by the CURE International staff for this study abroad experience. In June 2006, a faculty member traveled to CCHU to establish rapport with the hospital staff and explore options for student experience, spending a considerable amount of time in conversation with the director and assistant director of nursing. In the course of these conversations, a plan was developed for future student visits, and for the faculty, on return for those visits, to offer staff development education for the hospital nurses.

Uganda

Uganda is a landlocked country in sub-Saharan East Africa that borders the equator. The area is beautiful and lush, but living

conditions for the people are harsh. Uganda has a population of 25 million, with 85% earning less than \$1/day (UNICEF, 2006). The vast majority of the population lives in rural areas in extreme poverty. Life in Ugandan villages focuses on sustenance, that is, gathering and preparing food and retrieving water. Only half of Ugandans have access to health care (World Health Organization, 2001).

Illiteracy is also high among Ugandans because education is not free. Only when families have additional financial resources after meeting their basic needs for food and water, will they prioritize educating their children. Although both government and private schools are available throughout the country, families must pay for tuition, school supplies, and school uniforms. Often, it is the child considered by the family to have the most academic potential who is sent to school. When that child finishes school and gets a job, he or she, in turn, is responsible for providing for the rest of the family. For example, one of the neurologists at CCHU explained that after he had completed his medical training, he assumed responsibility for health care expenses for an uncle with HIV, housing expenses for a brother with a drug problem, and education expenses for all his younger siblings. He described the situation merely as being "my turn."

Which child in a family will attend school and which children will stay home to assist with basic survival needs is gender based; boys typically get preference for education. The literacy

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rate in the country is 60% for men and less than 50% for women. Thirty-six percent of girls aged between 5 and 13 years are working (UNICEF, 2006).

Although there are 51 recognized languages in Uganda, English is the official national language of the country. Therefore, any Ugandan who has attended school has learned English as a second language, although that person's primary language remains his or her tribal language.

Education and Nursing Role in Uganda Government Hospitals

There are a variety of levels of educational preparation for entry into nursing practice in Uganda. Enrolled nurses complete 2 years of classroom/clinical education to become enrolled nurses, enrolled midwives, or enrolled psychiatric nurses. Registered nurses complete 3 years of classroom/clinical education and are registered as comprehensive nurses, midwives, or psychiatric nurses. Three universities in the country offer a 4-year bachelor's degree. Bachelor's degree nurses constitute less than 1% of the nursing workforce (Mastisiko & Kiwanuka, 2003).

The majority of nurses at CCHU, at the time of this study abroad, were enrolled nurses. These enrolled nurses complete their clinical training at government hospitals. Consequently, these nurses become socialized into the role of the nurse within the circumstances of limited resources that exist in government hospitals. Courses taught in the enrolled nursing program are general and include medicine, surgery, and basic pharmacology (Cissy Kisenyi, personal communication, September 9, 2009).

Standards for care in government hospitals in Uganda differ substantially from that in Western hospitals. Family members stay with patients and provide all basic care, including personal care, providing comfort measures, laundry, preparing meals, and even feeding patients when needed. If a patient needs repositioning, the family member would provide assistance to the nurse.

In a government hospital, administering medication is a nursing role. Most government hospitals have a basic formulary. When a patient needs a medication that is not in the basic formulary of that hospital, the family may purchase those medications and then the nurse would administer them. The nurse is also responsible for carrying out treatments, and as with medications, this may be limited by what is available at the hospital. Enrolled nurses are not expected to incorporate nursing assessment or critical thinking related to assessment finding into nurse care and actions (Thompson & Cechanowicz, 2007).

When nurses do collect assessment data, they do so merely as a task. Nurses are not expected to interpret the data they collect. If nurses were to attribute meaning to assessment data, it likely would not affect the outcome of the patient's illness as resources for diagnosis and treatment are limited.

Cultural norms also influence the nursing role. For example, level of education, as well as gender, defines who is considered able to form opinions of value. Level of education

and gender also determine who shares opinions and information with whom. In general, the more educated person does not value or elicit information from a less educated person. Nurses receive less education than physicians. Thus, educational distinction limits sharing of information. Cultural gender roles also influence nursing practice norms. Females, who constitute the majority of the enrolled nursing workforce (Ministry of Health, 2007), are not free to share information with physicians, who are predominantly male.

CURE Children's Hospital of Uganda

CCHU is a 36-bed pediatric neurosurgical specialty hospital located in Mbale, Uganda. As is the case with all CURE International hospitals, an expatriate executive director manages CCHU, and all other hospital staff are nationals. As one of only three pediatric neurosurgical centers in Africa, CCHU treats patients from a wide geographic area. The conditions treated include hydrocephalus, neural tube defects, spina bifida, epilepsy, and brain tumors. The most common conditions treated are hydrocephalus and spina bifida.

The majority of patients who enter CCHU are in advanced stages of disease. On admission, many patients with spina bifida are septic from cerebral spinal fluid infection. Many children with hydrocephalus have grossly enlarged heads, are malnourished, and have significant disability. The late stage patient presentation for care is not atypical in the developing world, where preventive care, access to referral, and easy travel are substantially limited. CCHU operates on a Western medical model, with the exception being that spiritual care is consistently integrated into the health care. A spiritual department is a core care provider in a country where the dominant belief is that illness and disability is a result of sin (Miriam Ongom, personal communication, June 20, 2007). Mothers of the children with spina bifida and hydrocephalus are often ostracized by their village community, based on the belief that the child's illness is a result of the sins of the mother. The spiritual department focuses on emphasizing the Western belief that illness and disability is of physical origin. Mothers are cared for through prayer and counseling, whereas the children receive medical and spiritual care as well (see Figure 1).

Transition to Nursing Role at CURE Children's Hospital of Uganda

An enrolled nurse's transition from working within the nursing practice standards of a government hospital in Uganda, where all enrolled nurses get their first clinical experience, to working at CCHU is difficult. CCHU treats pediatric patients with a higher level of acuity than is seen in the government hospitals. At CCHU, it is not unusual for a child to be admitted directly to the intensive care unit (ICU) with a focus on cure. In contrast, critically ill patients in government hospitals usually die because of lack of resources. At CCHU,



Figure 1. A mother holds two children who are being treated for hydrocephalus at CCHU

there are adequate resources for medical diagnosis and treatment as well as laboratory and diagnostic equipment. The nurse-to-patient ratio is 1:6 in a 30-bed ward and 1:2 or 1:3 in an 8-bed ICU. In government hospitals, medications and supplies are scarce, laboratory and diagnostic equipment are limited, and the nurse-to-patient ratio is 1:50, sometimes even 1:100 (Kapiriri & Martin, 2007; Thompson & Cechanowicz, 2007, Woodhead, 2001).

Because resources exist that allow for better patient outcomes at CCHU, greater autonomy in nursing practice is encouraged at CCHU. Physicians at CCHU value and use input from nursing assessment (Cissy Kisenyi, personal communication, June 25, 2007). The standards of practice for care in CURE International hospitals are based on a Western medical model. They are more demanding than the national standards of practice in the government hospitals in Uganda.

Nursing practice standards at CCHU are therefore different at CCHU than at the government hospitals, where most enrolled nurses have worked prior to coming to CCHU. There are greater demands on the nurses within the nursing role, and at CCHU, they are asked to do this work but at lower wages than are offered at the government hospitals (Cissy Kisenyi, personal communication, June 23, 2007).

Nursing assessment and communication of changes in patient status to the physician can mean life or death for critically ill patients at CCHU. However, the reality is that enrolled nurses, who comprise the majority of the nursing workforce at CCHU at the time of this study abroad, were not academically prepared nor socialized clinically to take such action. They had not been prepared to interpret or communicate assessment findings and did not have experience using critical thinking as part of assessment and application of the nursing process prior to their employment at CCHU (Cissy Kisenyi, personal communication, June 25, 2007).

Although resources for materials and supplies at CCHU exceed what is available at the government hospitals, budget priority is given to providing care, in a situation where the demand far exceeds the available resources. Funding for staffing as well as for staff development is limited. Nurses are offered pediatric advanced life support training as well as training in perioperative nursing care, topics not incorporated into enrolled nursing education curriculum. No other professional development is regularly offered to the CCHU nurses.

The topic of critical thinking was identified by the CCHU nursing administrators for the visiting faculty's staff development program. Their intuition was that if the CCHU nurses could be educated about critical thinking, as it relates to nursing process, they could move beyond completing nursing assessment as a task. They anticipated that if nurses could learn to interpret assessment data and communicate pertinent findings to the physicians in time, CCHU patient care and outcomes and nurses' job satisfaction could be improved.

Designing a Critical Thinking Education Module

The American Association of Colleges of Nursing Essentials for Baccalaureate Nursing Education identifies critical thinking or clinical decision making as a core competency for nursing practice (American Association of Colleges of Nursing, 2008). Critical thinking incorporates principles of questioning, inference, intuition, inductive and deductive reasoning, analysis, synthesis, interpretation, application, and creativity. Western teaching strategies to facilitate critical thinking in nursing include concept mapping, reflective journaling, problem-based learning, gaming, simulation, and case studies. Students actively participate in activities designed around those strategies (Ignatavicius, 2004).

Access to information resources, even textbooks, in developing countries is limited. In Uganda, less than 2% of the population has access to the Internet (UNICEF, 2006). Lecture is the primary teaching methodology because of tradition and the unavailability of resources for other teaching methods. Students take notes when paper and pencils are available.

Lecture is not typically the sole strategy used to teach critical thinking. Although the concepts can be presented in lecture format, engagement of the learner is recognized as a pedagogy for stimulating critical thinking (Rubenfeld & Scheffer, 2006) instead of a strategy that would engage the nurses more actively. Thus, a first challenge for the faculty was identification of an academically sound method for teaching critical thinking that would be accepted by the CCHU nurses who were socialized to learning only through lecture format. Professionals who had taught formally in Uganda and other countries in Africa have documented this phenomenon (Conrad, 1997; Khalil, 2006; Lekalakala-Mokgele, 2006).

The definition of and concepts related to critical thinking were introduced using lecture format with a PowerPoint™ presentation. Critical thinking was defined as a bridge between information and action. This was depicted with a picture of a footbridge in a popular site near the hospital (see Figure 2). Critical thinking was described as a norm for nursing practice in the United States. This was relevant to the CCHU nurses because at the time of the staff development presentation the CCHU nurses had been working with the United States nursing students throughout the previous week and had expressed interest in learning about nursing in the United States. Continuing in lecture format, critical thinking was further described as interpretation of nursing assessment findings.

The nurses who attended the staff development program were comfortable throughout this introductory lecture material. They listened attentively without asking questions, which has been identified by others as a cultural norm (Conrad, 1997; Khalil, 2006; Lekalakala-Mokgele, 2006). Two case studies were presented to depict the concept of critical thinking. The case study information was included in the PowerPoint™ presentation, and as in the introductory lecture, the nurses listened attentively without asking questions while the first case study was presented.

The first case study was about a 2-year-old child who had a shunt placed at age 3 months for post-meningitis hydrocephalus and was readmitted to the hospital for the first time since the shunt placement. The child was admitted directly to the ICU late in the evening with the following:

- Seizures
- Temperature—38.9°C
- Heart rate—190
- Respiration rate—65
- Oxygen saturation—90%
- Flexion of child in response to pain

The case study slide showed appropriate nursing interventions complying with ICU standing orders based on assessment data.

- Administer rectal diazepam
- Administer rectal paracetamol (antipyretic)
- Give the child a tepid sponge bath; then leave the child exposed

Assessment data at half-hour intervals reflecting that the child was not responding to the interventions was presented that included increasing respiratory rate and decreasing oxygen saturation. Assessment of breath sounds was not included because that assessment is not standard nursing practice in the CCHU hospital. The half-hour assessment data in the case study reflected deterioration of the child's condition throughout the day.

The case study was completed with assessment data and nursing interventions gathered over the time intervals. The child's condition continued to deteriorate, the physician made

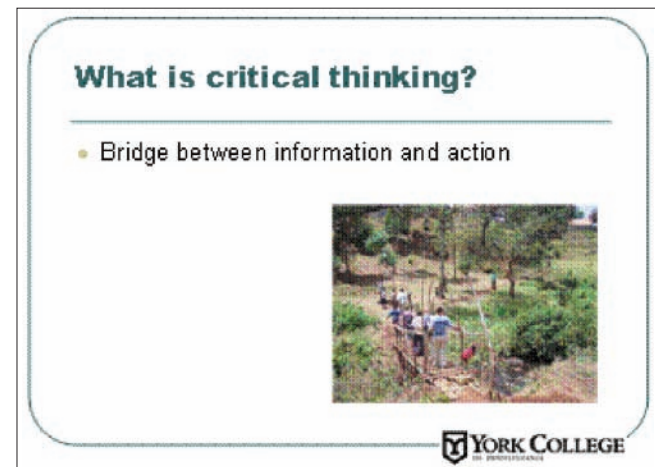


Figure 2. Slide from critical teaching presentation

rounds the next morning, the child was by then in respiratory distress, and subsequently died later that morning. In this first case study example, the nurse collected patient assessment data and recorded the information as completion of the task. The outcome of this case study, the child's deteriorating condition leading to death, was a familiar scenario for the CHHU nurses.

The nurses listened attentively throughout the first case study. Many shook their heads in agreement with the patient outcome displayed on the slide. It was a familiar outcome.

A second case study scenario was introduced. The case study began with the same patient scenario as in the first case study. However, in the second case study, after the assessment findings were displayed, the next PowerPoint™ slide displayed "What is the nurses' next step using critical thinking?"

The resulting blank stares from the nurses attending these sessions was expected at this point, as interacting with a presenter in any discussion format for teaching is not a norm. In anticipation of this, the director of nursing attended the session and role modeled interaction with the presenter by initiating the first response interaction. This case study was then continued in this format, using discussion rather than lecture as the teaching methodology. The nurse's next step using critical thinking was to consider that changes in the child's vital signs reflected that interventions had not been effective and that the physician needed to be notified. The director of nursing provided this answer, as none of the nurses were willing to participate in the discussion format of the presentation.

As the case study scenario progressed, reporting assessment data to the physician in a timely manner allowed for changes in the treatment plan, which, in turn, resulted in early diagnosis and treatment of sepsis. In this case study scenario, the outcome was that the child survived.

The nurses were not comfortable with discussion as a teaching methodology. Their interaction was limited, and throughout

the remainder of the discussion the director of nursing was the primary respondent.

However, the nurses' lack of interaction did not appear to affect their learning about critical thinking. When the faculty visited the units to supervise the students in the days following the educational session, nurses approached saying, "I used critical thinking!"

One nurse in the ICU reported that her patient's condom catheter was leaking because the condom was too big. She had taken a rubber glove, cut out a thumb, and used that in place of the condom.

One of the students described witnessing a Uganda nurse's critical thinking:

I took the 11:00 a.m. vital signs for Grace, the CCHU nurse. I reported to her that one patient had a temperature of 38.2°C. Grace responded by saying, "Okay." Then after a few minutes Christine looked up from what she was doing at the nurses' station and said, "I am going to get some paracetamol" (the antipyretic.) It was as if a light went off in her head. She saw her role as going beyond taking the vital signs and simply recording them in the chart. And she took action. (Personal communication, Jolanda Myers, February 27, 2008)

The students reported that other CCHU nurses were seeking examples of critical thinking. They were asking students how to interpret particular assessment findings and whether or not they should call a physician.

The actions of the CCHU nurses made it evident that even though their participation was minimal they had been listening, processing, and understanding during the educational sessions. They were showing attempts to incorporate critical thinking and were using the students' knowledge of critical thinking to enhance their own nursing practice. More important, what began as a unilateral learning experience, that the nursing students would obtain cross-cultural learning opportunity, became a reciprocal learning opportunity. The CCHU nurses were able to learn skills that enhanced their practice and possibly improved patient outcomes.

Global Implications

Numerous strategies have been proposed to support the advancement of nursing in developing countries. Partnerships between universities have been instituted (Kemp & Tindiweegi, 2001; Khalil, 2006; Sochan, 2008) and educators from the United States moving to a developing country to teach in a school of nursing (Conrad, 1997; Fitzpatrick, 2008) have been described in the literature. Teaching nurses in a small specialty hospital could be considered too minor an endeavor to be worthwhile. Also, some academicians may discount projects not initiated within exacting frameworks and rigorous research criteria. This experience of taking a small number of students to learn about nursing in a developing

country and then subsequently providing educational sessions for nurses in a small hospital on critical thinking may appear insignificant. However, the reciprocal learning and long-term impact of the experience, both for the students and the CCHU nurses, may provide long-term benefits that are difficult to measure.

Each one of us can make a contribution. Too frequently we think we have to do spectacular things. Yet if we remember that the sea is actually made up of drops of water and each drop counts, each one of us can do our little bit where we are. Those little bits can come together and almost overwhelm the world. Each one of us can be an oasis of peace.

—Desmond Tutu

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Bio

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