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RESCUING NURSING EDUCATION FROM CONTENTS OVER SATURATION: THE CASE FOR A CONCEPT-BASED UNDERGRADUATE NURSING CURRICULUM IN A KENYAN CONTEXT

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Abstract:
Nursing education has been plagued with a saturation of contents that is generated as requirement by the Nursing council of Kenya for many years. The multiple contributing factors underscore the complexity of the health-related problems in Kenya and validate the need for educational reforms within the discipline. This review article seeks to address various factors contributing to content saturation in undergraduate nursing and propose a conceptual approach for curriculum review, development and finally advocating for innovative teaching-learning modalities in undergraduate nursing education as discussed in current articles. Content saturation has been an evolutionary process which Shifts from the industrial age to the information age at the beginning of the 21st century. It is characterized by an explosion of new information and brings new changes and challenges to the nursing education. Changes in Health care have also played a key role. Historically, nursing practice and education have been based on a provider-driven health care system and treatment-based health care model. The addition of content related to community populations, health promotion, and outcomes to its curricula (Freeman, Voignier, & Scott, 2002; Hamner & Wilder, 2001; Reece, Mawn, & Scollin, 2003) has been a key factor in content saturation. Conventional teacher-centered pedagogy is common to nursing education. This model incorporates outcome-based or competency-based education; the focus is on content supported by predefined learning objectives within the realm of a program's conceptual framework, objectives, and philosophy. the gap between academia and nursing practice has been cited as a concern of employers regarding the preparation of nursing graduates as theoretical based; the common theme found in these studies is the view held by nurse administrators, nurse

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managers, and staff nurses that nursing graduates are inadequately prepared (Eubanks et al., 2002; Burch et al., 2009; Lowry et al., 2000; Smith & Crawford, 2004). In summary Nurses must be knowledgeable, demonstrate reasoning capabilities, and be skilled at accessing and using information to keep pace with a fluid and uncertain health care environment. In addition, nurses must partner with other health care providers in problem solving and governance at the individual, population, organizational, and policy levels. A concept-based curriculum coupled with a conceptual learning approach can prepare nursing graduates who are skilled at conceptual thinking and learning; such skills are necessary to respond to a rapidly changing profession and health care environment.

Keywords: curriculum, learning, nursing education, teaching, content saturation

1. Background

The health professions education crisis as described by the Institute of Medicine (IOM) (2003) is a multifaceted and complex issue that affects all health profession disciplines across many developing countries. Multiple issues related to educational preparation and entry into practice have been identified, instigating a call for major educational reforms, although the IOM (2003) acknowledges there are hitches associated with such reforms. Changes in education systems traditionally occur slowly, further adding to the gap between the perceived market need and what is being delivered. The need for undergraduate curriculum reform is prominent in the nursing literature. Young (2004), proposed that a paradigm shift in nursing education is needed. Most nursing leaders agree that significant curriculum reform is needed in order to improve the current nursing practice in Africa and in particular Kenya. Although, there are many opinions about the specific changes that should be made. Common themes in the literature that are associated with curriculum reforms and related to the need for curricula that are responsive to changes in the health care delivery system, and based on collaborative pedagogical innovation (Ben-Zur et al., 2005; Ironside, 2004).

These assumptions reinforce the attitude held by many nursing faculties that "*if content is not covered, students will not learn it, and their sense of personal responsibility to cover all of the content then is not attained*". Ironside (2004) suggested that the limits of conventional pedagogy have been reached in nursing education and explored the relationships among content, knowledge, and thinking. There continues to be a lack of consensus regarding what constitutes essential content among nurse educators.

This issue is compounded by the fact that faculty positions are often filled by nurses with clinical or research expertise, as opposed to educational preparation, resulting in many faculties lacking teaching expertise (Gelmon, 2001; Krisma et al., 2005). In many cases, inexperienced nurse educators initially lack the expertise to recognize the amount of content reasonable to present in a given class period rather they over teach to the extended that the leaner has no room for father personal study. They may also

struggle to identify important and relevant content with respect to the lesson; therefore, what is taught often directly reflects their own area of expertise or what is found in nursing textbooks. Although experienced nurse educators may not agree on what constitutes essential content, they tend to be more selective about the kind and amount of content included in a class (Pensacola et al., 2000).

Contents repetition contents saturation also occurs as a result of contents repetition within and between courses. For example, the common cognitive course that majority of medical students undertake are; anatomy, physiology, and as prerequisite or co-requisite courses. Many faculty teachings in health assessment courses believe a review of anatomy, physiology, pathophysiology, biochemistry and of the heart and vascular system is necessary before student's nurse can understand how to perform a cardiac and peripheral vascular assessment and interpret the findings. In another course involving heart disease among adults, nursing faculty members review anatomy, physiology, pathophysiology, and assessment before discussing nursing care. Although it could be argued that some repetition is needed for students to attain deep understanding, the review of content coupled with new content results in a saturation of information for faculty and students to get through in a given class session or assignment. The centrally view is whereby faculty member fail to priorities area of need in learning rather do teach globally.

A growing body of literature suggests that the management of curricular content is one of the key challenges of health professions education. The IOM (2003) specifically cites "*overly crowded curricula*" (p. 38) as one of many challenges of health education reform. Tanner (2007) described the expectations set forth in the American Association of Critical-Care Nurses (AACN) Essentials as a "*blueprint for the 21-year curriculum"* (p. 383) but also noted that she believed none of the core knowledge and competencies identified could be eliminated. The student experience, captured by Diekelmann (2002), is frustrating and overwhelming, fueled by excessive reading assignments, content processing, and memorization. The problem with content saturation is not unique to health professions education. The rapidly changing Kenya society and rapid expansion of knowledge have also created challenges in primary, secondary, and postsecondary education systems.

According to Erickson (2002), such changes have made it difficult to determine essential knowledge and skills. Similarly, one of the perceived challenges for nurse educators is to determine what aspects of traditional nursing practice to retain? What contents to let go? Finally, what new knowledge to incorporate in the nursing practice? These issues relate to content development and its management. Unfortunately, such decisions are not easy, Nurse educators could spend months debating content and still not achieve consensus. No solid reason has been given to explain this phenomenon. (Diekelmann, 2002) All too often, faculty members protect content associated with their own clinical expertise; thus, such attempts usually result in nothing more than a rearrangement of content that is replicated, in some instance same faculty members have many courses to teach in a given trimester or semester thus they end up over spilling

junk of notes that they have prepared to the leaners who in same circumstance do not need some of the content.

2. Methodology

Desk review was conducted in Masinde Muliro university library, Nursing Council of Kenya database and Internet.

Desk review used the following descriptors 'curriculum', 'curricula', 'Nursing Education', and 'Teaching-Learning', in combination with Technical Nursing terms 'saturation' 'health care delivery', 'concept-based curriculum', 'Academic Gap'The search was done in PsycINFO®, MEDLINE™, Embase, Crossref, British Journal of Medicine (BMJ) Genamics Journal Seek, Global impact factor.com, Google Scholar, Academic keys, Open Academic Journals Index, Sherpa/RoMEO (University of Nottingham), Chemical Abstracts (CAS) and Open-j-Gate.

3. Results

The findings cover The Evolution of Content Saturation, Changes in health Care Delivery, Teacher-centered pedagogy, academic-practice gap and training guidelines.

3.1 The Evolution of Content Saturation

Content saturation has been an evolutionary process. In nursing it's not expansional. Literature provides ample evidence of this. Although, no single event or cause can be blamed for the current situation, contributing factors include the shift from the industrial age to the information age where information is cloud saturated, changes in health care delivery, teacher-centered pedagogy, content repetition, and the academic-practice gap.

Shift from the industrial age to the information age at the beginning of the 21st century, Kenya finds itself in the midst of an information age, one of the factors contributing to content saturation in nursing education in the society. This age is characterized by an explosion of new information, widespread access to data through Web-based information systems, and technological advances, and brings new changes and challenges to nursing education. Nursing faculty must teach nursing practice based on national guidelines; thus, new information is added to the curriculum for the purpose of blending.

3.2 Changes in health Care Delivery

Changes in Health care delivery has been a key factor contributing to content saturation and the inability to adjust the amount of content within nursing curricula as new models of health care that have emerged. Historically, nursing practice and education have been based on a provider-driven health care system and treatment-based health care model. In this model, the focus of health care is on interventions that occur late in the disease process; therefore, nursing education traditionally focused on treatments and tasks

required to care for individuals late in the disease process. As health care evolved to a health-based model, the nursing profession responded by adding content related to community populations, health promotion, and outcomes to its curricula (Freeman, Voignier, & Scott, 2002; Hamner & Wilder, 2001; Reece, Mawn, & Scollin, 2003). However, nursing programs have also continued to teach disease-focused nursing care, resulting in a substantial increase of content in most nursing curricula.

3.3 Teacher-centered pedagogy

This is a factor contributing to content saturation that is conventional teacher-centered pedagogy common to nursing education. Such a model incorporates outcome-based or competency-based education; the focus is on content supported by predefined learning objectives within the realm of a program's conceptual framework, objectives, and philosophy. According to the NLN (2003), underlying assumptions associated with this model include that "*it is possible to learn all nursing content through a particular curriculum and it is the teacher's responsibility to ensure that all content is covered within a given timeline.*" (Krisman-Scott et al., 2005)

3.4 Academic-practice gap

This is the gap between academia and nursing practice. To meet the current demands of the health care market, nursing graduates require a wide variety of skills and must be able to adapt to a number of settings; however, an ongoing perception is that graduates fall short of this expectation. Several studies have cited the concerns of employers regarding the preparation of nursing graduates as theoretical based; the common theme found in these studies is the view held by nurse administrators, nurse managers, and staff nurses that nursing graduates are inadequately prepared (Eubanks et al., 2002; Burch et al., 2009; Lowry et al., 2000; Smith & Crawford, 2004). These findings suggest a perceived gap between what is expected of nursing graduates and their actual skill base. Nurse educators often interpret these findings as knowledge deficit issues and erroneously conclude that providing more information is the solution. In addition, many specialty practice organizations recommend core competencies for their area of practice to be included within undergraduate curricula, although the effects on nursing curriculum development is not clear. Examples of proposed competencies from specialty groups include genetics (Lea, 2002), environmental health (Larsson & Butterfield, 2002), community health nursing (Association of Community Health Nursing Educators, 2000), and critical care Carlson et al., 2008. Many nursing faculties believe that incorporating such competencies will strengthen nursing curricula and perhaps lessen the perceived gap. Unfortunately, many competencies identified by specialty groups are consistent with the skill and knowledge base of experienced nurses; it would be unrealistic to expect new nursing graduates to have mastered such competencies, given the constraints of undergraduate curricula.

3.5 A concept-based curriculum

moving past barriers Nursing programs have traditionally offered content laden and highly structured curricula with an emphasis on behavioral outcomes fostering linear thinking (NLN, 2003). The organization of such models traditionally followed practice areas similar to those used by the medical model. Most nursing faculties in Kenya are comfortable with this model because it is the one under which most faculty were taught and beca use clinical expertise usually falls into such areas. When the focus of content is presented in the context of population groups or settings (e.g., midwifery), faculty feel the need to cover everything they can because of the perception that it may be the only course addressing care associated with that particular population. A common problem in such a model is the unintentional content repetition that occurs (e.g., pain) in each course across multiple population groups or settings. In addition, because of the emphasis on practice areas, faculty teach in relative isolation to other practice areas and often lack an understanding or interest in other aspects of the curriculum. An organizational shift from a medical or practice model to a conceptual approach requires a complex curriculum design and is a "*quantum leap*" for faculty accustomed to working within the structures mentioned above. reforming nursing education in this way requires educators to move out of their comfort zones. Young (2004) pointed out that positive course evaluations and high pass rates on the licensure examination further strengthen resistance to change.

The Conceptual Approach rescuing nursing education from content saturation requires a major paradigm shift: a shift away from the practice orientation that emphasizes content toward conceptual pedagogy that emphasizes concepts across environmental settings, the life span, and the health-illness continuum.

Concepts provide the organizational framework and structure for the curriculum and are the foci within courses. Carrieri-Kohlman et al., (2003) defined a conceptual approach as "*a process that deliberately attempts to examine the nature and substance of nursing from a conceptual perspective*" (p. 1). This requires nurse educators to think differently about curricular design (i.e., a concept-based approach) and teach differently by implementing student-centered, active learning activities that focus on conceptual learning. Identification of Concepts. Nursing programs that adopt a concept-based curriculum must first identify the concepts to be used in the curriculum. Concepts can be identified in many ways. A faculty brainstorming session can be useful in generating initial ideas for concepts and concept groups (Carrieri-Kohlman et al., 2003); the resulting lists should be validated through a review of the nursing literature. Generating concepts from existing nursing frameworks, such as nursing diagnosis, outcomes, and intervention taxonomies, has also been reported (Freeman et al., 2002; Lee-Hsieh et al., 2003). After the concepts have been identified, their definitions must be established. The need for universal understanding and consistent use of concepts among faculty is critical for curriculum success. Concepts may be clarified by using a dictionary, reviewing the nursing literature, or conducting a concept analysis. In a concept analysis approach, critical attributes, model cases, and related cases contribute to clarity.

3.6 Organization of Concepts

As concepts are identified and defined, classifications for the concepts are identified. A logical grouping or organization of concepts provides direction for the courses in which concepts are likely to be taught. For example, one general category might be professional nursing care, to include concepts such as caring, communication, and leadership, whereas another general category might include concepts associated with clients, such as oxygenation, fatigue, and coping. The general concept categories facilitate decisions about courses and the presentation of concepts within and between courses so logical sequencing follows throughout the curriculum. Faculty must be willing to shift from traditional nursing courses (e.g., pediatrics, maternity, mental health, medical-surgical, community health) to concept-based courses in which concepts are presented across the life span and across clinical settings, in both didactic and clinical courses. for example, students could learn about the concept of dyspnea in a didactic course, work with a young child experiencing dyspnea as a result of asthma in an inpatient setting and investigate community resources for individuals with chronic respiratory disease who experience dyspnea in an outpatient setting. As another example, when infection is taught conceptually, students learn mechanisms, measurement, assessment, and management principles of infection and how these principles are applied in various populations, settings, kinds of infectious disease, and stages of illness. Students connect their broad understanding of infection as a concept to the many infectious diseases they encounter in clinical practice. Students learn to interact with individuals related to health care needs as they appear, as opposed to viewing a patient or group of patients in a discrete context.

3.7 Exemplar Content

Although a large body of content exists for all concepts, exemplar content that best represents the concept is used to help students understand the concept. The exemplars selected should represent individuals across the life span and in various settings to allow students to apply concepts in a variety of contexts. Faculty must be very selective in the exemplars used to represent concepts; use of excessive exemplars could result in content saturation and defeats one of the benefits of the concept-based model. Using incidence and prevalence is one suggested basis for selecting exemplars. For example, otitis media, pneumonia, and urinary tract infection might be the most appropriate content exemplars for the concept of infection because of their high incidence and prevalence in various population groups. For example, health care organizations achieving magnet status may be discussed as an exemplar of nursing leadership and its effect on patient care outcomes. Students learn about what attracts and retains nurses in these facilities in the midst of a severe nursing shortage, resulting in nurse-controlled practice and better patient outcomes (Hess, 2004).

Conceptual teaching and learning even the most carefully planned conceptually designed curriculum will fail unless faculty abandon their focus on content and embrace conceptual learning. In other words, a concept-based curriculum should be conceptual

not only in structure but also in process. Conceptual learning is a process by which students learn how to organize information in logical mental structures, thus challenging students to become increasingly skilled at thinking (Timpson & Bendel-Simso, 2009).

Conceptual teaching and learning complement the constructivist paradigm in fostering critical thinking and deep understanding through the connection's students make to past learning, their application of concepts in multiple contexts, and their development of an understanding of interrelated concepts (Erickson, 2002). Although nurse educators can teach a class or course conceptually within a traditional curriculum, the absence of a conceptual foundation makes such an experience an isolated event for learners and limits students' ability to consider interrelated concepts within and between courses. Conceptual teaching requires an active, learner-centered approach. The nursing literature has long called for a shift from teacher-centered teaching to student-centered learning. The connections students need to make in a concept-based curriculum must be supported by teaching approaches that allow students to construct deep meaning and understanding; this is not the typical outcome of a teacher-centered approach. The difference between a content-focused and a concept-focused lesson was aptly described by Erickson (2002) as "*the difference between facts of the Alaska oil spill and an understanding of the importance of environmental sustainability*" (p. 50). Moving faculty from a content-focused, teacher-centered learning environment to conceptual teaching approaches may be the greatest challenge faced by nursing programs wishing to adopt a concept-based curriculum. A comprehensive faculty development plan that includes consultants and faculty mentoring is necessary to successfully implement such a curriculum. Directing faculty to literature addressing conceptual learning and teaching strategies may also be helpful. Because the nursing literature is somewhat limited in this area, broadening a search to other disciplines, particularly education, is suggested.

4. Summary

Health professions educators, including nurse educators, have long been reluctant to initiate changes so desperately needed in education. The call for educational reform has been clear and consistent in the literature for years. It is time for nurse educators to respond by actively considering alternatives to the typical content-saturated curricula. Dramatic reform and innovation in nursing education are needed to prepare nurses for contemporary practice and to meet the current and future needs of the health care delivery system. Nurses must be knowledgeable, demonstrate reasoning capabilities, and be skilled at accessing and using information to keep pace with a fluid and uncertain health care environment. In addition, nurses must partner with other health care providers in problem solving and governance at the individual, population, organizational, and policy levels. Unless significant changes are made in nursing education, nurses will increasingly have difficulty providing and influencing health care. A concept-based curriculum is one way to foster and enhance the capabilities mentioned above through conceptual learning. Because a great deal of content currently taught in

nursing education programs will become quickly outdated, saturating students to the point at which learning is inhibited ill prepares them for nursing care in the future. A concept-based curriculum coupled with a conceptual learning approach can prepare nursing graduates who are skilled at conceptual thinking and learning; such skills are necessary to respond to a rapidly changing profession and health care environment.

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