Selection of a Conceptual Model/Framework for Guiding Research Interventions

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Abstract
Conceptual frameworks or models are used to guide research studies, nursing practice and educational programs, but few researchers have described the criteria used for selecting a conceptual framework for guiding the design of an educational intervention. This paper presents the criteria for appraising conceptual models, results of a critical review of these models and application of a model in designing a research intervention.

The investigator has critically appraised six models of cultural competence for their suitability to guide the development of an intervention to assist nurses in refining their cultural competence skills. Criteria used to appraise the models are: comprehensiveness of content, logical congruence, conceptual clarity, level of abstraction, clinical utility, and perspective on culture (cultural literacy versus experiential-phenomenological perspective). Several of the models met three or more criteria, but Campinha-Bacote's (1999) model of cultural competence is selected to guide the development of the intervention because it provides direction for education, practice and research as well as meets all the aforementioned criteria.

INTRODUCTION
Most research studies have an explicit or implicit theory, which describes, explains, predicts or controls the phenomenon under study. Theories are linked to conceptual models and frameworks; whereas a conceptual model is more abstract than a theory and a theory may be derived from a model, the framework is derived deductively from the theory (Burns & Groves, 2001). Theories are important to intervention evaluation research because: 1) they guide the development of the intervention and the design and conduct of the study; and 2) attempt to explain how the intervention works and which factors facilitate or inhibit the effectiveness of the intervention. There is a need to evaluate different theories or frameworks available within a topical area of interest before selecting one. In order to make an informed decision in selecting a conceptual model, the author has conducted a comprehensive review of the literature. This paper presents six criteria for appraising conceptual models/frameworks, results of a critical review of these models and the importance of using a model to design an educational intervention to assist nurses in refining their cultural competence skills.

DESCRIPTION OF A CASE STUDY
Prior to discussing the criteria for evaluating the conceptual models, the writer will describe a case study of the research intervention. The intervention will be offered to 140 registered nurses from two Public Health Departments in Southern Ontario. It has five components, which are delivered in five two-hour sessions, provided weekly for five consecutive weeks. These are: a) An introduction to transcultural concepts and an overview of Campinha-Bacote's model of cultural competence; b) Cultural awareness; c) Cultural knowledge; d) Cultural skill; and e) Cultural encounter. A one-hour booster session is given to participants at one month following these sessions.

Campinha-Bacote's model of cultural competence (1998) was used to guide the design of the intervention. The model makes explicit the goals of each component in the intervention as well as the choice of content incorporated into the components of the program. For example, the first component of the intervention includes and overview of Campinha-Bacote's model and an introduction to transcultural concepts. The second component (cultural awareness) is comprised of a cultural self-assessment exercise and a simulated game (Ba Fa Ba Fa), which will
enhance participants' cultural awareness and characteristics of cultural desire. In the third component (cultural knowledge), participants will discuss content on biological variation including genetic conditions, variations in drug metabolism, and nutrition as well as apply the processes for developing cultural competence to case studies. In the forth component (cultural skill), participants will conduct simulated cultural assessments on peers as well as discuss the concept of caring, which is an aspect of cultural desire. In component five (cultural encounter), respondents will explore cross-cultural differences in non-verbal communication as well as role play the Ambassador game. This game exposes respondents to cross-cultural differences in non-verbal communication. It also assists them in transferring learning from the simulated game to the clinical area or situation. Through this intervention, nurses will increase their cultural awareness and cultural knowledge as well as improve their motivational level, cultural assessment, and communication skills, and ultimately develop cultural competence.

Additionally, the model influences the teaching-learning methods (experiential exercises, case studies, and group discussions) used in the intervention. The model also provides an understanding of the processes (cultural awareness, cultural knowledge, cultural skill, cultural encounter and cultural desire) nurses must experience in order to become culturally competent. This conceptual model will be used to interpret the results of the study and to determine its empirical and clinical utility.

Lastly, Campinha-Bacote's model (1998, 2002) embraces the experiential-phenomenological perspective, which guided and shaped the contents on culture that were included in the intervention. For example, no specific culture was studied in detail but a variety of examples were cited from many cultures to demonstrate the beliefs and practices of some individuals or groups from these cultures. Additionally, the experiential-phenomenological perspective assisted the reviewer in delineating principles/processes clinicians can use to provide culturally competent care to clients.

Some of these principles include: 1) Acknowledge all individuals have a culture and that there is more variations within a culture than among cultures (Campinha-Bacote, 2002); 2) Conduct a cultural assessment on all clients to elicit shared beliefs, values, and practices that affect health and healthcare (Leininger, 1995; Campinha-Bacote, 1999). The cultural assessment focuses on major beliefs and practices that relate to a particular setting or health care problem. 3) Develop a plan of care or strategies that are mutually agreeable to the client(s), taking into consideration both the client's and the healthcare professional's perspectives; 4) recognise clients as teachers of their culture and be open to learning about their healthcare beliefs and practices (Tsang & George, 1998); 5) be prepared to accommodate health beliefs and practices of the client that are not harmful to the client's well-being even though these beliefs and practices are different from the healthcare provider's professional and personal culture and practice (Leininger, 1995; Patcher, 1994); 6) negotiate health beliefs and practices with the client that the healthcare provider perceives as harmful to the client's well-being (Leininger, 1995; Jackson, 1993); and 7) recognise that clients from diverse cultures have internalised elements from other cultures (including the dominant culture) in order to adapt to their new environment (Tsang & George, 1998; Dyche & Zayas, 1995). Thus, the experiential-phenomenological perspective on culture is more preferable than the cultural literacy approach for the purposes of the planned intervention.

CRITERIA FOR EVALUATING THE CONCEPTUAL MODELS/FRAMEWORKS IN GENERAL AND CULTURAL COMPETENCE SPECIFIC

The criteria used to critically appraise these models were identified in the literature and include: Comprehensiveness of content, logical congruence, conceptual clarity, level of abstraction, clinical utility, and perspective of culture (cultural literacy versus experiential-phenomenological perspective). Fawcett's (1995) criteria (comprehensiveness of content, logical congruence, conceptual clarity, and level of abstraction) were selected for appraising these conceptual models because the criteria assisted the reviewer in theoretical substruction of the models. Thus, the reviewer was able to determine the logical adequacy of the models and their ability to guide the methodology of the study and the study intervention. Another reason for choosing these criteria was to increase one's understanding of the relationship of conceptual models to other components of the structural hierarchy of contemporary nursing knowledge such as meta paradigms, philosophies, theories, and empirical research. To further identify the model for guiding the research study and designing the intervention, two additional criteria were added to Fawcett's criteria (1995): Cultural perspective and clinical utility.

Each criterion will be described briefly followed by its
application to the models. Comprehensiveness of content refers to the depth and breadth of contents (Fawcett, 1995). For example, depth is present when the conceptual model provides adequate descriptions of its constructs, and links the relational propositions of its constructs to one another. Alternatively, breadth of the content requires that the model be sufficiently broad in scope to provide guidance in various clinical situations and serve as a basis for research, education, and administration.

Logical congruence refers to the logic of the internal structure of the model, which is evaluated through critical reasoning (Fawcett, 1995). Critical reasoning involves judgements regarding the world's views and categories of nursing knowledge reflected by the model. It highlights strengths and explores problems inherent in that line of reasoning. In other words, logical congruence involves merging different viewpoints or redefining all concepts from different schools of thought in a consistent manner before incorporating them into the model.

Conceptual clarity refers to identification and explicit description of the concepts as well as identification of relational statements, which show association or causality among concepts. Additionally, the developer of the model should state the assumptions and basis on which the model or framework is built, such as observation and insight, experience, middle range or grand theory (Fawcett, 1995).

Level of abstraction refers to the extent or intensity by which concepts are represented in a conceptual model. Level of abstraction ranges from concrete to very abstract. Abstract concepts are those that are not limited by time or space and are not directly measurable. Similarly, concrete concepts are those that are directly measurable (Olszewski Walker & Coalson Avant, 1995). When concepts are classified in this way, an analyst is able to determine the concretization or abstractness of the whole theory. For example, the concrete level may include specific factual ideas or guidelines, whereas the abstract level includes theoretical concepts from middle range or grand theory.

Clinical utility refers to the applicability and relevance of the model to the real world of practice (Sidani, 2000). That is, the model is important to clinicians because it helps them understand the situation at hand and guides their practice. The analyst must consider two main issues: The clinical problem and setting where the model is relevant, and the model's ability to influence nursing practice. If the model meets these two conditions or has the potential to meet these conditions, it is considered useful.

The last criterion to be described is perspective on cultural competence models. Two distinct perspectives are cited in the literature: Cultural literacy and experiential-phenomenological perspectives (Dyche & Zayas, 1995). According to Dyche and Zayas (1995), the cultural literacy approach proposes that clinicians have superior knowledge as compared to their clients. In most models which subscribe to the cultural literacy approach, clinicians attempt to gain expert understanding of their clients' situation by increasing their knowledge of the clients' culture and demonstrate this knowledge in a manner to impress the clients. Cultural literacy assumes that the practitioner is knowledgeable about the clients' problems and issues and has the solutions and expertise to solve them (Tsang & George, 1998).

Characteristics of the cultural literacy approach include: 1) the practitioner is an expert, 2) the practitioner assumes superior knowledge, 3) culture is a homogenous system, 4) clinicians use culture specific techniques to assist clients and 5) the client is a member of a cultural group (Dyche & Zayas, 1995). Adherence to these characteristics results in several limitations such as, the practical impossibility of knowing every culture of clients the practitioner encounters, the risk of generalizations and stereotyping individuals, failure to recognise and acknowledge individual differences within groups or cultures, and failure to recognise that individuals internalise different cultures (Tsang & George, 1998). For example, an individual who has lived in more than one culture will select different elements of those cultures, internalise and adapt those elements to meet their needs. Additionally, the cultural literacy approach labels people rather than focus on their individuality.

Alternatively, the experiential-phenomenological approach advocates that the clinician does not assume superior knowledge but conserves a sense of humility and openness. Thus, the healthcare professional perceives the client as teacher of his/her culture, and learns from the client. In the experiential-phenomenological approach, healthcare professionals are encouraged to suspend their own assumptions and listen to the clients' story. Both the client and the professional bring knowledge to the cultural encounter. For example, the client brings knowledge of his/her culture, perception of the illness or situation while the clinician brings knowledge of the health care system, epidemiology of diseases and resources. The client and practitioner share their knowledge with each other and together they develop mutually agreeable goals and a plan to
meet the client's needs.

Characteristics of the experiential-phenomenological perspective include: 1) practitioner as learner, 2) the plurality and multiplicity of the internalised culture, 3) uniqueness of individuals in the culture, 4) naivety and curiosity of the practitioner, 5) process-oriented techniques used by the practitioners and 6) expectation of critical self-examination of practitioner. Adherence to these characteristics result in several benefits such as: Acknowledging and respecting individual differences within groups or cultures; acknowledgement that clients may internalise different elements from diverse cultures to meet their respective needs; culture is dynamic and always changing; there is more variation within a culture than between cultures; and practitioners recognise the uniqueness of their own cultures as well as their clients' cultures.

**REVIEW OF SIX CONCEPTUAL MODELS/FRAMEWORKS BASED ON THE CRITERIA**

Six models of cultural competence were critically appraised in order to determine which model was the most appropriate to guide the development of an educational intervention for a research study. The criteria used to critique the models/frameworks were: Comprehensiveness of content, logical congruence, conceptual clarity, level of abstraction, clinical utility and perspective of culture. Models reviewed included: Campinha-Bacote (1998, 2002), Purnell (1998, 2002), LaFromboise and Foster (1992), Cross, Bazron, Dennis, and Isacc (1989), Wills (1999), and Green (1995, 1982). The reviewer has chosen these six models because they provide a historical perspective on cultural competence (models are developed between 1989-1999); have a variety of developers (nurses, social workers, and psychologists); have clinical utility and can be applied to research. Nurses have developed three of the models (Campinha-Bacote, Purnell, and Wills), Social Workers have developed two of the models (Green, Cross et al.), and psychologists (LaFromboise & Foster) have developed one of the models.

All of these models define cultural competence as a process and are applicable to practice. According to Campinha-Bacote (1998), cultural competence is defined as “a process in which the healthcare provider continuously strives to achieve the ability to effectively work within the cultural context of a client/individual, or family or community” (1999, p. 203). Similarly, Purnell (2002) defines cultural competence as adapting care in a manner that is consistent with the client's culture and is therefore a conscious process and nonlinear. Cross et al. define cultural competence as “a set of congruent behaviours, attitudes, and policies that come together in a system, agency, or among professionals and enable that system, agency, or those professionals to work effectively in cross-cultural situations” (1989, p ii).

LaFromboise and Foster (1992) describe a cross-culturally competent psychologist as being able to display skill, self-confidence, and willingness to be flexible in responding to the needs of clients from diverse cultures. Alternatively, Green (1995, 1982) describes cultural competence as an evolving process on a continuum, where individuals and organisations move toward cultural competence, but the process is never completed. Lastly, Wills (1999), does not define cultural competence but perceives it as a seven-step progression toward the achievement of cultural competence.

**CRITICAL APPRAISAL OF THE MODELS**

Purnell's model (1998, 2002) is comprehensive in content, very abstract, has logical congruence, conceptual clarity, demonstrates clinical utility and espouses the experiential-phenomenological perspective (see Table 1). It provides a comprehensive, systematic and concise framework to assist health care professionals in providing individualised, culturally competent and appropriate care to clients. It can be used in practice to assess individuals, a family, community or society. The model's philosophical claim is explicit and the model reflects more than one contrasting world view. Additionally, it is easy to apply and is relevant to any culture or setting. It has been used in staff development and academic settings in many countries. Lastly, the model was used to guide ethnographic, ethnomet hodological and constitutive ethnographical research studies (Purnell, 2002).

Campinha-Bacote's model is comprehensive in content, has a high level of abstraction, conceptual clarity, and logical congruence as well as demonstrates clinical utility (Table 1). The model advocates the experiential-phenomenological perspective of culture. Nurse educators can use the model to teach nurses how to deliver culturally competent nursing care by incorporating all its constructs in and education program. The model's philosophical claim is explicit and it reflects more than one contrasting world view. For example, it reflects more than one field of knowledge (skill acquisition, transcultural nursing, medical anthropology, and multicultural counselling), which are combined in a consistent manner (Campinha-Bacote, 2002). Furthermore, the sources of knowledge are congruent with nursing world view. Lastly, this model has provided direction for empirical
research using pre-test post-test designs and the development of interventions.

**Figure 1**

Table 1: Critique of Models

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<th>Model</th>
<th>Critical Utility</th>
<th>Perspectives on Culture</th>
<th>Comprehensive Scope of Content</th>
<th>Conceptual Clarity</th>
<th>Logical Congruence</th>
<th>Level of Abstraction</th>
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The next model to be discussed is LaFromboise and Foster's model (1992). This model is comprehensive in content, has a moderate level of abstraction, has conceptual clarity and logical congruence with demonstrated clinical utility (Table 1). Limitations of this model are: 1) it has not been tested empirically, and 2) has adopted certain aspects of cultural literacy approach (Tsang & George, 1998).

Cross et al.'s model (1989) is comprehensive in content, has logical congruence, and conceptual clarity as well as demonstrates clinical utility (Table 1). It embraces both the experiential-phenomenological and cultural literacy perspectives (Tsang & George, 1998). Although the model has moderate level of abstraction, it provides guidelines on how to gain cultural competence. Other limitations of this model are: 1) it espouses a dominant position that presupposes that practitioners and therapists have expert cultural knowledge of their clients. This expectation is unrealistic, a practitioner does not have knowledge of every culture that individual will encounter in practice. 2) This model has not been tested empirically but guided practice, education and administration.

The fifth model to be discussed is Will's model (1999). This model has conceptual clarity, clinical utility, and logical congruence (Table 1). It supports the experiential-
phenomenological perspective of culture by recognising the practitioner as learner and variation within a culture and groups. Limitations of the model are: 1) it is very concrete, 2) it does not provide direction for research, education, and administration, 3) it has not been tested empirically, and 4) the developer of the model does not define cultural competence.

Lastly, Green's model (1995, 1982) has comprehensiveness of content, conceptual clarity, logical congruence and is easy to apply in clinical practice (Table 1). Limitations of the model include: 1) it espouses certain aspects of the cultural literacy approach by developing culture-specific practice guidelines for healthcare professionals to utilise in practice. Culture is not homogenous and there are more variations within a culture than among different cultures (Campinha-Bacote, 2002). 2) It has not been tested empirically, and 3) it has a low level of abstraction.

The writer has critically appraised six models of cultural competence for their suitability to guide the development of the intervention in a research study. Criteria used to appraise the models/frameworks are: Comprehensiveness of content, logical congruence, conceptual clarity, level of abstraction, clinical utility and perspective on culture (cultural literacy versus experiential-phenomenological perspective). Several models met three or more of these criteria. However, only two models: Campinha-Bacote and Purnell models met all the criteria. Moreover, Campinha-Bacote's model is deemed more appropriate to guide the development of the intervention because it provides direction for education and research, and have been used in quantitative and qualitative research studies.

RATIONALE FOR SELECTING CAMPINHA-BACOTE'S CONCEPTUAL MODEL

As previously mentioned, Campinha-Bacote's model embraces the experiential-phenomenological perspective. It supports the client as teacher of his/her culture and the clinician as learner. It also acknowledges the plurality and multiplicity of the internalised culture as well as the practitioner's utilisation of a process-oriented technique (not a cook-book approach) to meet clients' cultural needs. Furthermore, it recognises that culture is dynamic and always changing and there is more variation within a culture than among different cultures. Additionally, this model has been tested in empirical studies, using pre-test post-test designs and can explain or guide nursing interventions in any setting. Therefore the model is a good fit for the proposed study.

Based on a review of cultural competence models, the Campinha-Bacote's model is chosen to guide the development of an intervention for research. The model is abstract and comprehensive enough to provide direction in developing the educational intervention and conducting empirical research. It provides the structure and theoretical base for the educational intervention. For example, the five constructs (cultural awareness, cultural knowledge, cultural skill, cultural encounter, and cultural desire) are included as components of the educational intervention for nurses. Furthermore, the model has implications for practice. If study results are significant, the intervention can be delivered to nurses in any setting, in order to increase their level of cultural competence.

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