Measuring Thinking Worldwide

This document is a best practices essay from the international, multidisciplinary collection of teaching and training techniques, “Critical thinking and Clinical Reasoning in the Health Sciences.” Each essay in this set provides an example of training reasoning skills and thinking mindset described by international experts in training clinical reasoning.

Using Theoretical Foundations for a Community Health Nursing or a Population Health Course

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This lesson applies well supported theoretical models to inform the analysis of a community health study and to design a modest intervention that could be carried out by a student intern during a clinical rotation. It is written for senior nursing students, but its applicability for students in other branches of the health sciences is obvious. This lesson is a fine example of the value theoretical models to inform practice. We like the idea of bringing the models to the students, as this type of exercise too often frustrates baccalaureate level students unnecessarily when they are asked to find relevant theoretical models for themselves. Students and clinicians alike will be more likely to seek out relevant models after experiencing this exercise, bridging another theory-practice gap.

The class session and the students

I teach this lesson to students in two programs: public health and community health nursing. The course is a senior seminar that includes a group project where students carry out a focused assessment of a specific community, and design a primary prevention intervention that addresses one deficit in the health of that community. This class occurs early in the semester, and provides a foundation to support the community assessment and the selection of the intervention.

Working in groups of two or three, students conduct the community assessment by gathering and analyzing community health data, by interviewing and learning from key informants in the community, and through their own personal observation of the community. I work with each group of students individually to be sure that they are conducting a
sound analysis of the community’s health problems and are conducting the community assessment in a professional manner. As a part of the project, students consult with a local Public Health District Supervisor in the selection of the specific socio-geo-political and/or aggregate community and the specific health issue or topic.

The community assessment process is taught in different sessions of this course. Figure 1 summarizes this assignment, and structures the paper reporting the work that is required for completion of the course. Each student in the group examines a different aspect of the health problem and contributes an individual community action plan. I ask students to identify both short and long term outcomes in their action plan, and I hold them accountable for carrying out the short term outcomes. This initial community work must be conceived, implemented and completed within about two months and often involves building partnerships in the community that can later be used to address the long term outcomes as well.

An evaluation component is also a necessary piece of the action plan. They must think about how they would measure the impact of their community interactions and the achievement of the outcomes that they intend to influence or control.

The goal of this class session

The goal for this class is for students to understand how to organize and frame their thinking about promoting health in populations from a theory-based perspective. Integrating multiple modes of critical thinking is essential for success in the assigned project. Students need to understand the rationale for selecting a guiding frame, to identify potential relevant guiding theories, to know how to obtain appropriate community evidence for the selected perspective, to decide on options, to understand the influence of context, and to evaluate how the information is linked. In addition, it is important that the students understand the domain specific-knowledge of population care and specifically, working with communities.

Guidelines for conducting a community assessment

1. Initiate your assessment by completing a windshield survey (tour of the census area), remembering to look for clues (data) related to the specific health issue in your assigned community.
2. Collect statistical data, epidemiological trends data, and interviews of community leaders and key informants (PHN, clinic staff, neighborhood board members, policy makers, shop owners, police, fireman, educators and so on, as is relevant to your topic).
3. Determine why the health issue is relevant to your assigned community. Include health status indicators and comparisons of local community to regional, county, state, national and/or world trends. Utilize classic and current data.
4. Seek evidence from the published literature to explain positive and negative influences of the specific health issue under investigation on the health of populations.
5. Apply a theoretical model that is appropriate to the specific health issue under investigation to analyze your community and explain your assessment.
6. In light of your completed assessment, consider specific long term and short term goals for improvement of the specific health issue in your community.
7. Provide an action plan that addresses all of the community weaknesses for the health issue and includes an evaluation module.

Figure 1: Guideline for Community Health Assessment
The class session addresses the analysis of impact of various factors on the health of populations, and the synthesis of theory and evidence-based research to guide an intervention to enhance the health of populations. By the end of this class session students should have gained enough skill in applying theoretical models to select a model to guide their own community assessment project.

**Learning objectives:**

By listening to the class presentation, and reviewing and evaluating various theoretical models presented in class, students will be able to:

1. Explain how the use of theoretical models provides varying perspectives on a community health assessment (analysis and explanation).
2. Analyze and compare the utility of various theoretical models for use in population care (interpretation and analysis).
3. Identify and integrate appropriate community health related data to support an accurate community health analysis (analysis and inference).
4. Apply a logic model to relevant community data and analyze the information gained from the model in terms of the evaluation of a primary prevention intervention (analysis and evaluation).

**The actual materials used for the class session:**

Eight to ten theoretical or conceptual models currently in use in the health sciences are pre-selected for students to evaluate. The models must be available for use in the class session, so I prepare small packets that include these models before class. I select a variety of different models that take varying perspectives and range across a variety of outcomes when they are applied to a community assessment. When selecting the models for this exercise it is essential to anticipate the kinds of projects your students will be preparing so that at least one model can be successfully applied to their community health issue during this class session. For example, I know that there will be students who will design a final intervention project related to health promotion, so I include a health promotion model in the packets. I also know that students may seek to improve the functional health care delivery system in their chosen community, so consequently, one or more systems models should be in the packet. The graphic representation of the model, a brief description of the model, and a discussion of how it is used to describe, explain or predict community health issues, can be found in texts or prepared from published theory papers. Ideally the students will have some exposure to many of the models in the packet prior to being asked to apply them in this exercise, but the packet is a shortcut to retrieving applicable models and allows class time to be used for the application of the models and intervention planning.

Examples of appropriate models that I use for my nursing and public health students include: the Green and Kreuter Precede-Proceed Model for Health Promotion Planning and Evaluation (1991); Pender’s Health Promotion Model (1996); King’s General Systems Framework (1971, George, 2002); Neuman’s Health Systems Model (1994); Becker’s Health Beliefs Model (1974; Janz & Becker, 1984); Anderson and McFarlane’s Community-as-Partner Model(1996); W. K. Kellogg Foundation logic model (2004); Green’s Ecological Model (1992); Stokols Ecological Model (1992); and Watson’s Carative Model (1985). Most of these models are well known, but I have included a reference for each at the end of this chapter. As you might already be thinking, some of these models are more useful than others. Discerning which of the models provide value is a large part of the class exercise.

**How I teach this lesson:**

This class session has two sections, the first is a lecture where I discuss the importance of using theoretical models to analyze community health problems and plan community health interventions, and a second section where students begin to examine theoretical models that can help them to carry out a community assessment and design a community...
intervention plan. This class is intended to assure that they will do a systematic analysis and use research based models to intervene for improvement in public health.

I begin the lecture by introducing the metaphor of a kaleidoscope to visually illustrate the point that the answers you get when assessing a community depend on the view taken of the community. For example, I explain that if one looks for health beliefs using a health belief model, they will gain an understanding of the collective health beliefs, attitudes and values that influence the populations’ life choices and subsequent health. But the Health Belief Model will not be particularly helpful for understanding the influence of context on community health. For examining how people are situated I the community, they would be better served by using an ecologically focused model. And so on.

I next review the application of a theoretical model, highlighting the inherent benefit of this systematic method of assessing or explaining health. I also discuss the added potential benefit of using an appropriate theory to guide practice. In this part of the class I want to be sure that students grasp the fact that established theoretical models have consistent logical links that have typically been supported through research. For population health a useful practice model 1) applies to multiple levels of clients, 2) addresses health promotion, illness preventions or resolution of existing problems, and 3) provides directions for nursing activities to achieve goals of care.

Finally I take a few moments to discuss the utility of logic models. It is in this part of the session that I stress the important dimension of using critical thinking in problem identification and problem solving when assessing the health needs of a community. As a foundation, I describe logical models as useful for: 1) bringing details to broad goals, 2) illustrating if-then relationships or a chain of events, 3) identifying assumptions and gaps, and 4) summarizing complex events such that signals for evaluation points may become clearer.

In the second section of the class, students work together in their smaller clinical groups. I give them a guideline for this part of the discussion to assure that they have a good opportunity to meet the learning goals. Figure 2 briefly describes the guideline. The time available for this portion of the class can vary but I like to provide them at least 45 minutes to work down the suggested questions.

**Exploring the applicability of theoretical models to the project**

Briefly discuss each of the following questions in your small groups:

1. What models help to explain the health issue we’ve chosen?
2. Are we examining the health issue from a health prevention, health promotion, system analysis, or ecological frame?
3. Recalling the idea of ‘kaleidoscope,’ how do the different models provide differing perspectives on improving health in the community?
4. What model characteristics are most important?
5. What data must be gathered from the community?
6. Are we attempting to create future partnerships to stimulate an intervention?
7. What models relate to influences we think we need to change?

Your answers to these questions will determine your best choice of a theoretical model for your project.

**Figure 2: Identify an Appropriate Theoretical Model**

Initially the students dialogue about what constitutes a useful model. Most of these discussions culminate in the correct conclusion that the model must be focused on a desired outcome and the concepts must be relevant to the problem that will be addressed. They often will also identify ‘clarity,’ ‘explanatory or predictive power,’ or some other aspects of theory application in these discussions. Each member of the group has the model packet and can use these examples to think abstractly about why they seem to be useful (or not). In the course of the discussion, the
group begins to zero in on a few of the models as more applicable for potential use. I walk around from group to group to reinforce good thinking and also to help assure that each group moves on to address all the questions on the list in the time available.

The question “which data would need to be gathered from a community” takes on varying appearances, depending on the variety of the variables included in the models the students have identified as relevant. The intent is for students to begin to think about the multi-dimensional aspects of populations that influence health. I’m hoping that they will generalize this insight when they initiate their clinical assignment, refining and relying on patterns of thinking that have been stimulated and practiced in this classroom exercise. By examining potentially relevant models and thinking about potentially relevant data in a small group discussion, students are more likely able to identify needed data when they work individually or in groups out in the community.

The student work product

Later in the course, all of the student groups complete their community assessment. Each group member details a different aspect of the community health problem, identifying a weakness, analyzing the relevant data, applying an appropriate model and developing an action plan for that specific weakness. Each student writes an individual paper reporting this work.

Additional faculty-student discussions are required to continue the multi-dimensional critical thinking necessary to complete this project. However, students are able to logically link the data that they gather during the community assessment, to identify a deficit, and finally to structure an appropriate measurable outcome. Collected data, detailed community strengths and weaknesses, and recommended actions are shared with the public health officials responsible for the community. While the students do not carry out the proposed actions themselves, actions are often taken based on the student assessment.

Project evaluation

Understanding and interpretation of the assignment is evaluated in a graded paper. In terms of this class session, I evaluate the application of the theoretical models for organizational adequacy, and for appropriately placed community data within a selected frame, of sufficient collection of data for intervention decision making, and finally, for developing and implementing a logical intervention that is supported by the community data and the theoretical model chosen to guide the project.

My guideline for this paper covers the following expectations:

1) Show evidence of a comprehensive socio-geo-political assessment
2) Identify and discuss relevant health related strengths and weaknesses within the community
3) Briefly explain why strengths and weaknesses exist in the community
4) Develop a measurable action plan to address a specific weakness
5) Reference appropriate theoretical model(s)

Requiring consistency between community data, descriptive and predictive models and a measurable action plan exercises these senior students’ critical thinking skills (analysis, inference and evaluation) in an authentic community health problem frame.

Student feedback and some final thoughts

I caution students that graphic representations of their chosen theories only depict estimations of reality, but are not reality. Similarly the data gathered will never completely reflect all aspects of the community. Options excluded by these selection processes may have influenced the results of the exercise and may not provide all that nurses really
want to know. The models will also not provide them an assurance that the planned interventions will make a true
difference, only a well analyzed intervention plan grounded in evidence based inference.

Students find the approach a new way to organize their thinking about outcomes of care. Because many of the ideas
are highly theoretical, it often takes weeks of the students’ delving into their clinical community assessment project
and planning the intervention before the ‘Ah-ha!’ moment comes. It is only near the end of the project that students
begin to understand the idea of the ‘kaleidoscopic view.’ They begin to see that their work product results from
analyzing the problems of their community using the specific models that they have chosen, considering several
possible paths, selecting a route, and then committing to working toward a final outcome.

References
Pender, N.J. Health Promotion in Nursing Practice, 3rd Ed. Stamford, CT: Appleton & Lange, 1996.
W. K. Kellogg Foundation (2004). Logic Model Development Guide. Battle Creek, MI:

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