A Q methodology study of perceptions of poverty among midwestern nursing students

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S U M M A R Y

Objectives: Providing patient-centered care involves understanding how social factors, including poverty, affect health outcomes. The purpose of this study was to explore nursing students' beliefs surrounding the poor.
Design: A Q methodology design was used to discover patterns of perceptions towards those living in poverty.
Setting: The study took place on two campuses of a large public, university in the Midwestern United States.
Participants: The purposeful sample of 23 Q participants was drawn from students enrolled in the second, third, and final year of study in a baccalaureate nursing program.
Methods: Participants rank-ordered their level of agreement with a set of 30 statements regarding poverty. Data were analyzed by a three-step process that included correlating participant profiles, performing factor analysis, and generating factor scores. A factor array and narrative were used to explain the findings.
Results: Three viewpoints were identified: Judges who tended to feel that poverty was linked to individual behavior; Allies who mostly saw societal reasons for poverty and felt a strong need to assist the poor, and Observers who did not blame individual for their circumstances, but were not as compelled to champion their cause.
Conclusions: Given these different perspectives, educators may need to use variety of teaching approaches to help students achieve patient-centered care competencies with their poorest patients.

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Introduction

Nurse educators strive to teach quality and safety competencies in patient and people-centered care during pre-licensure education (Cronenwett et al., 2007; World Health Organization, 2007). These quality and safety competencies involve recognizing personal attitudes about working with persons from different social backgrounds, seeking to learn from them, and being willing to support patients with differing values (Cronenwett et al., 2007). Poverty may be viewed as one of these social backgrounds. To provide effective care, students must be sensitive to the causes and ramifications of poverty (Sword et al., 2004). The problem is that direct exposure to poverty among nursing students in affluent countries may be limited leading to unfavorable attitudes towards the poor that could affect care quality (DeLashmutt, and Rankin, 2005; Reutter et al., 2004). This manuscript describes a project to explore beliefs surrounding the poor in a group of nursing students in the United States. The findings suggest that a variety of teaching and learning strategies may be needed in nursing curricula to address diverse poverty-related student attitudes.

Background

Atherton et al. (1993) suggested that individuals adopt an overall positive or negative attitude towards the poor, but others believe that attitudes surrounding poverty and its causes are multi-factorial (Feagin, 1972, 1975; Reutter et al., 2004; Sword et al., 2004; Reif, and Melich, 1993; Yun, and Weaver, 2010). Feagin was one of the first to suggest that people tended to believe in an individualistic, structural, or fatalistic explanation for why there were poor in wealthy nations. The individualistic view suggests that people are personally responsible for their economic fate. The structural view holds society and lack of resources responsible for causing poverty and most closely aligns with the perspective of the World Health Organization (Commission on Social Determinants of Health, 2008). The fatalistic view does not blame society or the individual, but rather attributes poverty to bad luck.

Alternatively, a four-structure model of the causes of poverty including unluckiness, laziness, injustice, and a blending of causes called "modern world" has been used to describe attitudes in European countries (Reif, and Melich, 1993). In more recent years, Yun and Weaver (2010) found attitudes towards poverty among college students clustered around three factors. Like Feagin (1972, 1975), Yun and Weaver identified a structural perspective. The researchers also identified an attitude of personal deficiency which mirrors Feagin's individualist

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perspective. The personal deficiency attitude reflects the belief that those living in poverty have a character flaw making them different from others and contributes to their circumstances. Yun and Weaver's third attitude was labeled "stigma" and was described as negative feelings about the welfare system and those who take part in it. A large cross-sectional study of Canadian baccalaureate nursing (BSN) students found that participants had neutral to slightly positive attitudes towards poverty (Reutter et al., 2004; Sword et al., 2004). Four different explanations for how students viewed the relationships between health and poverty emerged: structural, behavioral, myth, and drift. The most prevalent student attitude was the structural explanation. Still some argue that the traditional methods used to measure attitudes towards poverty don't fully address the complexity and interactions of perceptions (Lepianka et al., 2009).

Understanding how attitudes develop is important to nurse educators. Sword et al. (2004) found that the most significant factor for developing positive attitudes toward the poor in nursing students was personal exposure and diversity of experiences. Clinical education with impoverished clients has been shown to improve students' social awareness (DeLashmutt, and Rankin, 2005), but increasing exposure to poverty through coursework was found to be associated with an increased belief that individual behavior choices lead to poor health (Sword et al., 2004).

Large group simulations have been used to increase student awareness of the situations often faced by people living in poverty such as inability to pay for rent or food, utilities shut off, and being illegally evicted (MACA Missouri Association for Community Action, 2010; Patterson, and Hulton, 2011; Vandsburger et al., 2010). In these simulations, students participate in roles where they are the impoverished person trying to navigate their environment to meet basic needs. We had mixed results when we used this experiential teaching method with our entry level BSN students. Pre and post-testing on the Attitudes Towards Poverty Scale Short Version (Yun, and Weaver, 2010) showed that the students were more likely to agree that structural barriers were a major factor in poverty and less likely to agree with statements that reflected stigma against the welfare system after the simulation. However, the students were more likely to feel that poverty was related to a personal character deficiency following the activity.

Purpose

Given the mixed results following the poverty simulation, we decided that we needed a better understanding of our students' attitudes to help determine what learning activities were most indicated. The purpose of our Q methodology study was to explore our BSN students' beliefs surrounding the poor. The research question that guided this study was, "what patterns of perceptions surrounding poverty exist among BSN students enrolled at a large Midwestern university?"

Methods

First created by Stephenson (1935) and made popular by Brown (1980), Q methodology is a type of mixed-method research that uses an alternative approach to factor analysis to study subjectivity. In this method participants, or *Q participants*, become the variables. Q studies involve analyzing a rank-ordering of participant's level agreement with a set of subjective statements surrounding a given topic known as the *Q sort*. Using relatively small sample sizes, statistical principles are then applied to find groups with shared viewpoints, referred to as the factors (Van Exel, and de Graaf, 2005; Webler et al., 2009). By combining qualitative and quantitative research approaches, Q methodology provides an excellent way to study perceptions in the health science fields (Cross, 2005).

Q methodology studies begin by identifying the statements groups might say about a topic, referred to as the *concourse* (Van Exel, and de Graaf, 2005). For our study, statements reflecting attitudes towards the poor were initially extracted from written student feedback after the poverty simulation. To ensure that a wide range of attitudes were represented in the study, additional statements were gathered from a student focus group and student blogs. The student focus group was conducted shortly after the poverty simulation by a senior nursing student for the sole purpose of gathering more attitude statements. The student led the group in a private room and taped students' responses for further analysis. The synthesis of the three data sources resulted in 99 attitudes statements about poverty. After reviewing the statements for repetition and range of views, 30 were retained. The 30 statements were numbered and printed on individual cards to create the *Q deck* for sorting.

University Institutional Board Review approval was obtained to study outcomes from the poverty simulation and conduct this follow-up study. In a typical Q methodology, one to three dozen well-chosen participants are considered a sufficient sample size (Webler et al., 2009). For our study, Q participants were recruited through a classroom visit from one residential and one commuter campus of a large nursing program at a public, research-intensive, university in the Midwestern United States. Students enter our program after a year of prerequisites; therefore, to capture viewpoints that might vary based on educational progression, a purposeful sample of participants was recruited from the second, third, and last year of the program. Students were assured that their participation was voluntary and confidential. Volunteers were given a packet with a study information sheet, instructions, a demographic profile, the Q deck, a sorting sheet, and a stamped self-return envelope. To encourage participation, a card was included for students to return if they wished to be entered in a drawing for a national licensure review book.

The instructions for completing the Q sort followed the method described by Van Exel and de Graaf (2005). Participants were asked initially to sort statements into nominal piles labeled *agree*, *neutral*, and *disagree*. Next, they selected the three statements that they most agreed with and placed the card numbers in the three last boxes on the right of the score sheet under $+3$. They continued by placing the next four they most agreed with in the next column $(+2)$. The procedure was followed until all cards from the agree pile were gone. The procedure was repeated starting on the left side of the sorting sheet with the disagree pile. The neutral pile filled all remaining open spaces. Participants were also asked to explain why they choose the statements they most and least agreed with.

The sorting sheet resulted in the reporting of data a -3, -2, -1, 0, $+1$, $+2$, $+3$ distribution. Analysis was done using PQMethod version 2.33 (December, 2012) software (http://schmolck.userweb.mwn.de/qmethod/). Procedures included correlating subject profiles, followed by factor analysis and varimax rotation, and finally calculating factor scores. A factor array and narrative was used to describe the significant shared viewpoints.

Results

Sorting sheets were returned by 23 students with a mean age of 22.17 years (range 19–27 years). All participants were Caucasian. Nineteen participants were female and four were males. Most reported a marital status of being single ($N = 21$). Participants in this study included 6 students in their second year of study, 10 in their third year, and 7 in the last year.

Initial factor analysis revealed four factors with eigenvalues greater than one. Following varimax rotation, three factors were retained that explained 63% of the variance. Twenty of the students loaded on one of the three final factors (see Table 1). Table 2 displays statements used for Q sort and their factor arrays. Eleven statements represented consensus among the participants. All factors highly agreed with the statement, "it is stressful to live in poverty ($+3$)." Building on this belief, it was widely thought that poverty was a daily struggle, resulting in a paycheck to paycheck life style, and made decisions tough. Participants generally felt that some people really didn't have a choice but to get help. It was also agreed that though some may abuse the system,