Challenging Stereotyping and Bias: A Voice Simulation Study

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ABSTRACT

Stigma is a barrier to mental health care access for patients with schizophrenia and can interfere with developing therapeutic relationships. This study demonstrates success of a voice simulation experience during orientation in changing the biases of nursing students and the effect on the development of the nurse-patient relationship. Ninety-four individuals participated; 52 received a voice simulation experience during orientation, and 42 received orientation with no voice simulation experience. The Medical Condition Regard Scale was administered before and after orientation. Posttest paired t test results show significant differences in attitudes toward patients with voice hearing experiences between the two groups. The themes of personal growth from the focus groups postorientation include Affective Experience, Physical Experience, and Empathy. Findings demonstrate that the orientation process should include methods to challenge stereotyping and bias to decrease stigma, improve service access, and enhance the ability to develop therapeutic relationships.

Nursing students, like the general public, may be influenced by the stereotyping of individuals with mental illness, which may affect the development of therapeutic relationships with patients at the start of the first clinical rotation in psychiatric nursing. Therefore, the development of a teaching strategy to address nursing students’ attitudes that influence nurse-patient relationships is crucial. Voice simulation can help nursing students gain insight into the world of those with mental illness.

LITERATURE REVIEW

Various studies (Emrich, Thompson, & Moore, 2003; Happell, Pinikahana, & Roper, 2003; LaSor, 1979; Lindgren & Oermann, 1993; Moyle, 2003; Stuart & Arboleda-Florez, 2001) have discussed the development of therapeutic relationships with clients as one major goal of nursing. A therapeutic relationship is crucial in caring for individuals experiencing mental illness. The relationship is a learning experience for both patients and nursing students and provides a safe environment for corrective emotional experiences to occur.

 Provision of care can be difficult for nursing students in the initial psychiatric clinical encounter. They come with their own biases of patients with mental illness. Students frequently have an insufficient knowledge base for understanding mental illness and feel unprepared and unsure how to respond or even begin a conversation with patients who may be acting peculiar, such as those experiencing auditory hallucinations. Nursing students frequently experience feelings of anxiety and fear, which interfere with their ability to respond with the care and empathy necessary to promote optimum health. Suikkala and Leino-Kilpi (2001) suggest that learning and caring are two essential aspects of the nursing student-patient relationship. Formation of a therapeutic relationship with individuals with mental illness requires students to develop a frame of reference, which includes self-awareness and knowledge of their feelings and reactions in psychiatric clinical settings. The therapeutic use of self facilitates the effective communication necessary.
for a successful nursing intervention in directing and promoting adaptive behavioral change. As noted by Stuart and Laraia (2005), “communication is the relationship itself; without it, a therapeutic nurse/patient relationship is not possible” (p. 24).

In a recent study of undergraduate medical and nursing students in Spain (Llerena, Caerces, & Penas-Lledo, 2002), 344 students claimed to have general knowledge of schizophrenia and a high awareness of mental illness and its associated risk and onset, yet their attitudes regarding recovery, dangerousness, and violence and whether to accept them in a social situation were negative. Negative attitudes toward mental illness, and specifically schizophrenia, are correlated with a decrease in community integration and recovery for those with serious and persistent mental illness (Llerena et al., 2002).

Educational programs have proven successful in reducing the stigmatization associated with individuals who have mental illness (Mino, Yasuda, Tsuda, & Shimodera, 2001). However, the programs do not report improvement in the attitudes of students working with patients who have mental illness, in particular those with severe illness such as schizophrenia in which delusions, paranoia, and hallucinations abound. Studies have shown that different kinds of psychiatric diagnoses have an effect on the extent of stigmatization of clients. For instance, less stigma is associated with symptoms of depression than with schizophrenia (Christison, Haviland, & Riggs, 2002; Mann & Himelein, 2004).

Emphasis on effective educational preparation of nursing students is necessary to influence therapeutic relationships with patients with mental illness. Lindgren and Oermann (1993) suggested that teaching knowledge and skills is critical in caring for disabled individuals, as well as in fostering a positive attitude. Thompson, Emrich, and Moore (2003) stated, “The development of professional attitudes toward people with disabilities is a desired outcome of baccalaureate education” (p. 28). A nursing student may be the only positive and caring individual with whom mental health clients have contact. Therefore, an accepting and knowledgeable attitude is important in providing effective care and achieving constructive outcomes.

Nursing students entering the psychiatric clinical rotation are expected to develop therapeutic relationships with patients receiving treatment for various mental health issues. Students’ attitudes toward patients with mental illness who experience auditory hallucinations act as a barrier in establishing therapeutic relationships. To help nursing students develop more empathy for patients with mental illness, nurses must bring a positive attitude and approach to the relationship (Moyle, 2003).

Students have simulation experiences throughout their academic program. A voice simulation exercise (VSE) has been developed that allows students the opportunity to hear distressing voices not unlike those experienced by individuals with mental illness. The simulation exercise has not been measured related to changes in students’ attitudes and the development of the therapeutic nurse-patient relationship.

Christison, Haviland, and Riggs (2002) developed the Medical Condition Regard Scale (MCRS) to capture students’ attitudes regarding patients with varying medical conditions or diagnoses and how their attitudes may change during their education. The scale captured students’ attitudes related to medical conditions and, in particular, conditions considered chronic or conditions in which students thought they would have little effect on patients’ health status.

**RESEARCH QUESTIONS**

Schools of nursing face the dilemma of exposing nursing students to experiences that can markedly challenge their perceptions before they begin to interact with patients in the psychiatric setting. The authors anticipated that the VSE will help students understand the day-to-day challenges faced by those with psychiatric disabilities, learn about the subjective experiences of hearing voices, and become more empathic toward individuals who hear voices.

The purpose of this study was to determine nursing students’ perceptions and attitudes toward patients who experience auditory hallucinations. It also aimed to determine whether an orientation process that includes a VSE changes students’ attitudes and increases their ability to interact with patients with auditory hallucinations. This study included three research questions:

- What is the effect of a VSE on nursing students’ attitudes when they begin the psychiatric nursing rotation?
- Does the VSE increase nursing students’ empathy and desire to develop a therapeutic relationship?
- What are the differences between student participants who experienced the orientation with the VSE and those who did not?

**METHOD**

**Design**

A descriptive comparative design was used to determine the success of a VSE during orientation in changing
nursing students’ attitudes regarding patients who experience auditory hallucinations versus orientation without the VSE; the independent variable of nursing students’ attitudes regarding patients who experience auditory hallucinations was considered. The participants consisted of students entering their fourth-year psychiatric nursing rotation in two private nursing schools located in an urban setting in the western United States.

Sample
The sample consisted of 94 nursing students: 52 (55%) in the VSE orientation group and 42 (45%) in the comparison orientation group. The ages of the participants (Table 1) ranged from 18 to 55 years, with a total of 87 (92.6%) women (50 experimental, 37 control) and 6 (6.4%) men (1 experimental, 5 control). One participant in the experimental group did not indicate gender.

Instruments
Two instruments were used in the study. The MCRS (Christison et al., 2002) was piloted using eight medical conditions. One of the conditions piloted by Christison et al. (2002) was that of patients with long-standing auditory hallucinations and paranoid delusions. The second instrument used for the current study was a demographic questionnaire created by the authors.

The 11-item MCRS was used to identify participants’ attitudes and health care-related behaviors before and after participants’ orientation to the clinical site prior to beginning their psychiatric nursing rotation. Christison et al. (2002) reported that the MCRS scores were reliable, with a coefficient alpha of 0.87 and a test-retest reliability of 0.84. The scale captured participants’ attitudes related to medical conditions, in particular, conditions in which students thought they would have little effect on patients’ health status (Christison et al., 2002).

The 11-item demographic questionnaire was developed specifically for this study to provide a profile of the participants. Questions about gender, age, and experience working with patients with mental illness in different settings were included. Other items sought information regarding personal experience (e.g., having a family member with mental illness) or exposure to media about mental illness.

Procedure
Approval was obtained from institutional review boards. A convenience sample of fourth-year nursing students was obtained through volunteerism during the first day of the Psychiatric/Mental Health Nursing class. Those who consented to participate in the study signed a consent form and were given the demographic questionnaire and the MCRS to complete prior to their clinical orientation experience.

The participants were divided into experimental and control groups according to the participant’s clinical site and rotation. Both groups engaged in an orientation that consisted of a visit to the clinical site and completed the forms necessary for the agency. In addition to the standard orientation, the experimental group was introduced to a VSE.

Deegan developed the VSE, which is a 45-minute audiotaped presentation that simulates the experience of hearing distressing voices (Patricia Deegan, personal communication, May 5, 2004). The voice audiotape simulates an auditory hallucination, including whispers, noise, and intrusive words or messages. Although to our knowledge there has been no published research related to this program, it is being used with mental health groups, police groups, and other professionals to help them provide improved treatment for patients who hear voices.

Each nursing student was given a tape player, the audiotape, and headphones. The students were instructed on the use of the equipment and were asked to place the volume of the recorder at a comfortable level to hear the tape

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Experimental Group (n = 52)</th>
<th>Control Group (n = 42)</th>
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<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>18 to 24</td>
<td>35 (67.3%)</td>
<td>35 (67.3%)</td>
</tr>
<tr>
<td>25 to 29</td>
<td>10 (19.2%)</td>
<td>1 (1.9%)</td>
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<tr>
<td>30 to 34</td>
<td>4 (7.7%)</td>
<td>4 (7.7%)</td>
</tr>
<tr>
<td>35 to 39</td>
<td>1 (1.9%)</td>
<td>1 (1.9%)</td>
</tr>
<tr>
<td>40 to 44</td>
<td>1 (1.9%)</td>
<td>1 (1.9%)</td>
</tr>
<tr>
<td>45 to 49</td>
<td>1 (1.9%)</td>
<td>1 (1.9%)</td>
</tr>
<tr>
<td>50 to 55</td>
<td>1 (2.4%)</td>
<td>1 (2.4%)</td>
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</table>

* The participant’s gender was unknown.
and also be able to hear noise in the surrounding environment. As students were listening to the tape, they were given a number of exercises to complete. The exercises consisted of answering simple math problems, arranging toothpicks into specific shapes, and reading an article and answering related questions.

After the orientation, the participants met in focus groups to discuss the orientation process. Each group answered the same questions:

- Describe how you were feeling during the orientation.
- What physical effects did you notice during orientation?
- How will the orientation affect your nursing care with patients who experience auditory hallucinations?

The focus groups were audiotaped. Participants completed a second MCRS within a 7-day period after the orientation and focus group meeting.

A total of 116 students were asked to participate in the study; 98 (84%) agreed to participate, but 4 (4%) did not return the second MCRS form. There were several areas of missing data for two demographic and MCRS forms. The following results were based on 94 responses unless otherwise indicated.

**RESULTS**

**Quantitative Analysis**

The demographic variables were analyzed for the entire sample, and the two groups were compared for equivalence (Table 1). The pretest and posttest MCRS scores were compared using the t test, Levene test for equality of variances, and the independent t test. Statistical analyses were accomplished using SPSS software, version 12. Statistical significance was set at $p \leq 0.05$.

<table>
<thead>
<tr>
<th>Life Experience</th>
<th>Experimental Group ($n = 52$)</th>
<th>Control Group ($n = 42$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Cared for patient with mental illness</td>
<td>28 (53.8%)</td>
<td>24 (46.2%)</td>
</tr>
<tr>
<td>Immediate family with mental illness</td>
<td>10 (19.2%)</td>
<td>42 (80.8%)</td>
</tr>
<tr>
<td>Spouse with mental illness</td>
<td>1 (1.9%)</td>
<td>51 (98.1%)</td>
</tr>
<tr>
<td>Personally experienced mental illness</td>
<td>4 (7.7%)</td>
<td>48 (92.3%)</td>
</tr>
<tr>
<td>Friend with mental illness</td>
<td>15 (28.8%)</td>
<td>37 (71.2%)</td>
</tr>
<tr>
<td>External family member with mental illness</td>
<td>8 (15.4%)</td>
<td>44 (84.6%)</td>
</tr>
<tr>
<td>Exposed to media regarding mental illness</td>
<td>13 (25%)</td>
<td>39 (75%)</td>
</tr>
<tr>
<td>Volunteered with mental illness treatment program</td>
<td>15 (28.8%)</td>
<td>37 (71.2%)</td>
</tr>
</tbody>
</table>

There were no differences between the experimental and control groups regarding age and life experiences with individuals with mental illness (Tables 1 and 2). As expected, there were no significant differences between the pretest MCRS scores of the two groups ($p = 0.170$). The posttest scores of the MCRS variables changed significantly for both the experimental and control groups. There was a significant difference in the posttest MCRS scores of the two groups ($p = 0.001$). The change in the scores for the variables “Satisfying to work with these patients,” “Insurance plan should cover patients like this,” “There is little I can do to help patients like this,” “I feel especially compassionate toward patients like this,” “I wouldn’t mind getting up nights to care for patients like this,” and “I enjoy giving extra time to patients like this” were larger for the experimental group (Table 3). The scores for the experimental group for the variables “There is little I can do to help patients like this” and “Treatment for these patients is a waste of money,” were significantly different from those of the control group ($p = 0.000$ and $p = 0.05$, respectively).

**Qualitative Analysis**

The audiotaped focus groups were transcribed and then read, word for word, initially by both researchers independently, then jointly. Answers to the focus group questions were analyzed by schema analysis as depicted by Ryan and Bernard (2003), which included careful reading of verbatim text while seeking to discover and link themes into theoretical models. Key words and phrases used by the participants were used as substantive codes to find common themes. These themes were developed inductively by carefully comparing and contrasting the responses.

As the simulation experience persisted and they continued to lose mental focus, students became more vulnerable to increased insecurity.
Identifying similar and frequently mentioned responses formed the content of major themes. The themes are discussed and exemplified with direct quotes from the participants. On analysis of both groups’ responses to the questions, the themes identified by groups were found to differ.

**Experimental Group**

**Question 1: Describe How You Were Feeling During the Orientation Group.** Study participants in the experimental group described feelings of stress and anxiety when answering question 1, as summarized by the theme Kind of Lost. They expressed feeling worried, unable to concentrate, difficulty with mental focus, and feeling distracted, alone, and lost. The perceptions were intensified to the point that students explained they wanted to ignore the setting around them. One participant related, “I would just isolate because it’s easier to just focus [on the voices] than listening to other people.” Another stated, “You pretty much give up.” Another student said, “I had no threshold for stress at all, I just felt kind of lost.”

The second theme, Who Cares, suggested that the participants felt a sense of devaluation and anger. The participants remarked they felt frustrated, on the edge, degraded, uncomfortable, and devalued. The participants described initially feeling consistently on edge. Then, as the simulation experience persisted and they continued to lose mental focus, students became more vulnerable to increased insecurity. One of the participants related, “You get frustrated and frustrated, pretty soon you’re just mad and you shut down.” Another related, “You start to second guess yourself immediately and it [makes] you feel stupid.” Students also said, “I’m like, ‘what is wrong with me!’” and “I felt devalued, I’m not worth listening to, and like who cares.”

**Question 2: What Physical Effects Did You Notice During the Orientation Group?** Most of the participants described how difficult the VSE was on them physically. Most of the participants described physically becoming weak and exhausted from the experience.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Experimental Group (n = 52)</th>
<th>Control Group (n = 42)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest (n = Mean)</td>
<td>Posttest (n = Mean)</td>
</tr>
<tr>
<td>Satisfying to work with these patients</td>
<td>52 (3.9)</td>
<td>50 (4.7)</td>
</tr>
<tr>
<td>Insurance</td>
<td>52 (5)</td>
<td>50 (5.5)</td>
</tr>
<tr>
<td>Little I can do</td>
<td>52 (2.8)</td>
<td>50 (2.3)</td>
</tr>
<tr>
<td>Compassion</td>
<td>52 (4.4)</td>
<td>49 (5.3)</td>
</tr>
<tr>
<td>Irritate</td>
<td>52 (2.4)</td>
<td>50 (2)</td>
</tr>
<tr>
<td>Up nights</td>
<td>52 (3.6)</td>
<td>50 (4.4)</td>
</tr>
<tr>
<td>Treatment is a waste of money</td>
<td>50 (1.7)</td>
<td>50 (1.3)</td>
</tr>
<tr>
<td>Difficult for me</td>
<td>52 (3.1)</td>
<td>50 (2.9)</td>
</tr>
<tr>
<td>Something to help</td>
<td>52 (4.3)</td>
<td>50 (4.5)</td>
</tr>
<tr>
<td>Extra time</td>
<td>52 (4)</td>
<td>50 (4.6)</td>
</tr>
<tr>
<td>Not to work</td>
<td>52 (3)</td>
<td>50 (2.5)</td>
</tr>
</tbody>
</table>

* p < 0.05.  
** p < 0.001.

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Question 3: How Will the Orientation Experience Affect Your Nursing Care with Patients who Experience Auditory Hallucinations? Feel Things Out was the first theme identified in students' responses to this question. Participants related that the orientation experience, particularly the VSE, helped them better understand how it felt to experience a mental illness. They expressed a desire to improve their ability to interact with patients. The importance of good communication skills was paramount in caring for patients who experience auditory hallucinations. Participants shared they would suspend judgment, try to be more understanding, and consider the patient's point of view. They described the necessity of excellent listening skills using respect, empathy, and patience; and of believing patients as they talked about the voices they hear. One participant stated, “I now have a greater respect for people with mental health issues. I certainly know if a patient came in stating I'm hearing voices, I will believe him. Certainly it's not something he's making up.” Another said, “It's important to remember to feel out what they are feeling. You have to stop and let them go at their own pace and let them process.”

The second theme that was identified in the participants' responses to question 3. Participants related that the orientation helped them begin to have a different view of individuals with mental illness. They expressed concern and a sense of the difficulty mental illness creates in patients' lives. They also related feeling sad for them. The participants noticed how others, including themselves initially, treated patients with mental illness differently and how patients encounter difficulty in life as a result. One participant said, “I think it would be sad to be a person like that. I just feel sad for them.” Another stated, “I feel bad for them…. I don’t think I could deal with it, so it would be really hard.” Another student related, “It put my problems in perspective.”

The third theme that was expressed was Give Good Nursing Care. The control group participants stated that patients with mental illness need fair treatment and more individualized care. They shared in the focus group the need to be more positive and kind and to express empathy because patients “deserve our care.” One participant said, “Remember, they are still human whether someone is acting in the way we expect them to. They still deserve our care and fair treatment.” Another participant related, “It’s not like they are in a hotel. They don’t want to be here, so we need to treat them and help them to make it a positive experience.”

Participants related that the orientation experience, particularly the VSE, helped them better understand how it felt to experience a mental illness. They expressed a desire to improve their ability to interact with patients. The importance of good communication skills was paramount in caring for patients who experience auditory hallucinations.
DISCUSSION

The experimental group gained insight through participation in the VSE. The participants in the experimental group described an insider’s view, relating how important it was to be able to “understand, be patient, and really listen.” Nursing students demonstrated a change in attitude, believing they can develop a significant therapeutic relationship with those who experience auditory hallucinations (p = 0.000) and that treatment provided to patients is beneficial and cost effective (p = 0.05). The participants were able to explain new insights into the patients’ world. They expressed becoming more empathetic. Wasylko and Stickley (2003) discussed students’ difficulty in determining the manifested feeling (2003) discussed students’ difficulty in determining the manifestation of empathy, which occurs from exposure to patient experience through drama or simulation. Yet participants were able to describe the importance of this learning exercise as a part of the orientation to the clinical site. The VSE captured the patient’s view and gave a brief glimpse of the patient’s reality and promoted empathy and change in perception and practice of nursing care, providing emotional intelligence (Wasylko & Stickley, 2003).

In contrast, the control group did not experience the same level of learning and were left with an outsider’s view (Table 3). They were not able to grasp the patient’s view and therefore experienced limited growth or change in perception and practice, stating “our job is [to] treat them and not to judge them.” Some level of insight may have occurred, but it would be difficult to determine any gains in students’ emotional intelligence (Wasylko & Stickley, 2003).

Role-play, standardized patient scenarios, drama, and theater have been used as modalities for student learning (O’Connor, Albert, & Thomas, 1999; Scherer, Bruce, Graves, & Erdley, 2003; Wasylko & Stickley, 2003; Whitisi, 1985). Developing case studies, scenarios, or simulations to benefit student discussion and learning is necessary to help students empathize and develop therapeutic relationships with their patients in mental health nursing. This is a challenge for students who have not been exposed to patients with auditory hallucinations. Voice simulation is one tool that can be used to reduce stigmatizing perceptions, to enhance empathy and student insight, and to improve the development of the nurse-patient relationship. As stated by one participant who experienced the VSE, “I now have a greater respect for people with mental health issues. I certainly know if a patient comes in hearing voices, I will believe him. Certainly it’s not something he’s making up. I will listen more and listen to the experiences. I have a greater respect for what [patients with mental illness] have to go through.”

REFERENCES


