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Exploring Nursing Students' Attitudes and Knowledge in Caring for People with Disabilities

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***Abstract* -** *Literature reveals that content in nursing curricula specific to disability health care is limited; poor communication, lack of competence, negative attitudes, and quality of care by nursing staff are concerns raised by people with disabilities (PWDs).*

A. Purpose: *Explore the knowledge, attitudes, and comfort level of pre-licensed nursing students in caring for PWDs.*

B. Method: *Nursing students (N = 124) received a pre-post course survey collecting quantitative and qualitative data. Educational interventions included a focused lecture and an authentic encounter with a simulated patient consultant with a disability.*

C. Results: *Two survey domains improved: working with PWD's in a clinical setting (p = .000) and positive impressions of self-concepts of PWD (p = .019). All survey items shifted positively; 41% of survey items statistically improved (alpha $\leq$ .05). Post course themes shifted from self-concern to patient advocacy.*

D. Conclusion: *Educational interventions can better be prepared nurses in caring for PWDs.*

Keywords: *disability care, educational intervention, nursing student*

I. INTRODUCTION

The World Health Organization (WHO) reports that there are more than 1 billion people with a disability, approximately 15% of the world's population.[1] The WHO also reports that not only is disability a global health issue but a human rights issue as well.[1] While disability knows no bounds and affects all cultures, age groups, and socioeconomic levels, disability disproportionately affects vulnerable populations, including women, children, low-income, and minority groups. In turn, disability can disproportionally create vulnerability. Two systematic reviews and meta-analyses of observational studies published in Lancet reported that children with disabilities are nearly four times more likely to experience any type of violence, adults with disabilities are at 1.5 higher risks for violence, and those with mental disorders are four times more at risk compared to peers without a disability.[2, 3] The CDC reports that adults with a disability, compared to adults without a disability, are more likely to experience depression (42% vs. 11.6%), obesity (39.1% vs. 27.6 %), smoking (26.2% vs. 12.7%) and diabetes (16.7% vs. 7.4%);[4] and less likely to receive preventive services and routine screenings.[5, 6]

There are approximately 20.7 million nurses worldwide. It is inevitable that nurses, across all practice settings, will have the opportunity and responsibility to provide direct care to people with disabilities (PWDs). Nurses will observe firsthand the barriers which PWDs face within the systems of health care, education, employment, and housing. Nurses must also realize their own theory-to-practice gap, and the potential consequences when caring for PWDs.[7] Content in nursing curricula specific to disability health care is limited. Smeltzer and colleagues discovered an absence of disability-related content in pre-licensure nursing textbooks.[8] Translating this into practice, PWDs have indicated four areas regarding their care by nursing staff: poor communication, lack of competence, negative attitudes, and quality of care received.[9]

This study focuses on exploring the knowledge, attitudes, and comfort level of pre-licensed nursing students in caring for PWDs. We hypothesized if education on the health care of PWDs and incorporation of authentic experiences with simulated patients with disabilities were implemented into nursing school curricula, then nursing students would have an increase in knowledge and an improved attitude in delivering equitable care to all patients.

II. METHOD

A. Setting and Participants

After obtaining institutional review board approval, pre-licensed nursing students that were registered for a university level health assessment course were invited to enroll in the study. It was emphasized that participation was not mandatory and did not affect their course grade. A total of 124 students completed the pre-post course survey (69.7%); age range 18-28 (mode 19 years); 91% female.

B. Intervention

Following the pre-course survey, a lecture entitled Disability: Awareness to Competency was delivered to all registered students in the course. Topics covered included:

- major definitions and models of disability,
- health status of people with disabilities,
- case studies underscoring lack of access to health care,
- social determinants of health impacting PWDs,
- discussion and application of the International Classification of Functioning Disability and Health (ICF), and
- nursing competencies for caring for PWDs.[10]

Thirty-one percent of students (n = 38) also participated in a new learning experience in the simulation laboratory, an authentic encounter with a simulated patient with a disability, also known as an SP Consultant. The consultants were adults with various disabilities (e.g., spinal cord injury, spina bifida, developmental disabilities) who were interested in sharing their life experiences. This was part of a new initiative within the school of nursing to educate nursing students in the care of PWDs. A total of five SP consultants were interviewed by a clinical group, each consisting of approximately 8 students. Students followed the health history write-up provided in their text for consistent questioning and data gathering.

C. Design

The study was a cross-sectional, pre-post course survey design. With permission from the author, the *Medical Student Attitudes Toward Persons with Disabilities*[11] instrument was employed to collect quantitative and qualitative data. Verbiage on the instrument was adapted to be inclusive of nursing students; no other content was changed on the instrument. This 30-item survey utilizes dichotomous and Likert-scaled response formats and takes approximately 15 minutes to complete. The instrument is divided into four sections: 1. Demographics (2 items: age and gender), 2. Factual experience (2 items; e.g., 'Do you have a friend or relative with a disability who you see at least occasionally?'), 3. Beliefs about people with disabilities (18 items; e.g., 'Most people with disabilities expect special treatment'), and 4. Clinical scenarios (4 items in response to 2 scenarios [8 total]; e.g., 'In scenario A, I would be comfortable performing a physical assessment on the patient'). Symons and collegues[11]administered this instrument to a sample of 342 students in medical schools in New York, U.S. Good internal consistency was found, resulting in a Cronbach's alpha coefficient of 0.857. Exploratory factor analysis yielded meaningful item groupings into five domains:

- Comfort interacting with people with disabilities (Items 4, 6, 7, 9, 12, 14, 18, and 19).
- Working with people with disabilities in a clinical setting (Items 22, 23, 24, 26, 27, and 28).
- Negative impressions of self-concepts of people with disabilities (Items 3, 8, and 11).
- Positive impressions of self-concepts of people with disabilities (Items 5, 13, and 17).
- Conditional comfort with people with disabilities (Items 10 and 15).
- Items 16 and 20 did not fall into any grouping.

D. Data Collection

Pre-post course survey data was generated and collected using Qualtrics software (Qualtrics, Provo, UT, USA. https://www.qualtrics.com). Data collection occurred over one 15-week fall semester.

E. Data Analysis

To analyze quantitative data, two-tailed paired sample t-tests were performed; alpha < .05. Three of the authors performed a thematic analysis on qualitative responses.

III. RESULTS

A. Quantitative Data

Pre-post survey items were analyzed individually and grouped within the five domains. All twenty-two individual items shifted in a positive direction, indicating improved knowledge and attitudes towards PWDs. Overall, 41% of survey items significantly improved.

Two domains, working with people with disabilities in a clinical setting and positive impressions of self-concepts of people with disabilities, significantly improved. The following list of domain provides more detailed information (* indicates significant items):

1. Comfort interacting with people with disabilities (Items 4, 6*, 7, 9, 12, 14, 18, and 19). While most items in this domain did not significantly improve, students indicated increased comfort interacting with a person with an intellectual disability (Item 6; p = .009).
2. Working with people with disabilities in a clinical setting (p = .000) (Items 22*, 23*, 24*, 26*, 27*, and 28*).

   All six individual items related to the following two scenarios: A) A middle-aged man experiencing abdominal pain; he is also accompanied by a woman and B) A middle-aged man experiencing abdominal pain also using a wheelchair, has garbled but intelligible speech, and appears to have spasticity in all four limbs. He is also accompanied by a woman about the same age. Students reported an increased comfort level in both scenarios. More specifically in determining the role of the man versus the woman (Items 22 and 26; p = .002 and .025 respectively), performing a physical assessment (Items 23 and 27; p = .000 and p = .038), and establishing a nursing plan of care (Items 24 and 28; p = .000 and p = .000).

3. Negative Impressions of self-concepts of people with disabilities (Items, 3, 8, and 11).

Although these three items did not meet statistical significance, student responses shifted towards a more positive understanding that PWDs typically do not feel sorry for themselves, do not resent people without disabilities, and do not expect special treatment.

4. Positive Impressions of self-concepts of people with disabilities (p = .019) (Items 5, 13*, and 17*).

Students reported significant attitudinal changes, more strongly agreed that most people with disabilities are not ashamed of their disability (Item 13; p = .029), and understood that people with disabilities should be cared for in any primary care office as opposed to a specialty clinic (Item 17; p = .05).

Conditional comfort with people with disabilities (Items 10 and 15).

Student responses indicated a positive shift in their own self-comfort around people with intellectual disabilities.

B. Qualitative Data

Students were asked if there were any elements in either scenario involving the middle-aged man with abdominal pain that would make them uncomfortable in the clinical encounter. Thematic analysis revealed the following pre-post course themes.

Pre-course Themes:

The first theme was a lack of knowledge and experience caring for people with a disability. Many students often reported that they did not have any experience or interaction with people with disabilities:

- *I normally do not interact with people with disabilities.*
- *The patient may be uncooperative.*
- *We have not had enough practice on patients with disabilities.*

The second most common theme was a lack of general nursing knowledge and experience. This was understandable since the health assessment course was one of their first clinically-based courses in the program.

- *I am not sure I could make a nursing plan for both scenarios.*
- *I lack experience.*
- *I would want someone with more experience to make sure I was doing everything correctly.*
- *I would not feel comfortable with the information … to make a care plan for someone who isn't normal.*

A third theme centered around fear of causing harm to or being harmed by the patient in the wheelchair.

- *I would be afraid I would hurt the man in the wheelchair.*
- *I would proceed with more care and caution during the physical exam of the patient in the wheelchair so as not to injure the patient or myself.*

Fourth, communication was a concern for various reasons in both scenarios.

- *I do not think I could effectively communicate with a person with a disability.*
- *I would be afraid that I would misinterpret what he was saying.*
- *I would be worried the woman in Scenario B would try to speak for the man.*

Fifth, specific discomforts were noted regarding the patient's physical disabilities, including garbled speech, spasticity, jerking, patient behaviors, a woman in the room, as well as male-female interactions.

- *I imagine if his spasticity is severe, I would feel nervous about him accidentally harming himself or me while assessing.*
- *I would be a bit more timid in my examination of the man in the wheelchair because I would be afraid to hurt him even though he could be in less pain than Scenario A.*
- *I would be a little uncomfortable due to me being a woman.*
- *… muscle spasms … creates a boundary between the patient and me …*
- *I would want to know why he has contractions and why his speech is the way it is.*

Post-Course Themes:

While pre-course themes remained for many students, other themes began to emerge that reflected movement from self-performance towards thinking of the patient and taking more of a professional role.

The first additional theme that became apparent was fear of not meeting patient needs

- *I would want better training to better handle Scenario B*
- *I want to be able to give him (the man in Scenario B) the best possible care*
- *I worry I would not be able to determine an effective care plan for the man in the wheelchair.*
- *In scenario B, worry about meeting the patient's needs.*

The second added theme indicated a desire and awareness of ensuring advocacy.

- *I am worried that the woman in scenario B would try to speak for the man instead of allowing him to speak for himself.*
- *If I could see signs of abuse/discomfort in either situation, I would be a bit alarmed.*
- *I would make sure the patient is accurately advocated for so that the proper treatment can be given.*

IV. DISCUSSION

This pilot study was the first formalized educational intervention at this institution to provide pre-licensed BSN students a focused lecture on disability care and an authentic encounter with a simulated patient with a disability. While not a planned intervention, we also expected that some students would have an opportunity to care for a patient with a disability on their various clinical units in a concurrent fundamentals course; 44% reported such an encounter (n = 54).

Prior to receiving the educational intervention, 66% of students registered in the course reported having structured experiences working with people with disabilities outside of nursing school; 53% reported having a friend or relative with a disability. While most students entered their sophomore year having interactions with PWDs in various settings, 55% of students in the pre-survey recognized elements in the case scenarios that would make them uncomfortable, particularly with Scenario B.

While 41% of survey items indicated statistical significance, all post-survey items migrated towards a positive change in attitudes and knowledge in caring for persons with disabilities. This finding appears to be unique but valuable. Smeltzer and colleagues (2018) surveyed undergraduate nurses students using two attitude surveys before they interacted with a standardized patient with a disability and prior to graduation with no difference in scores over time.[12] Time frames may have influenced that difference in findings.

V. CONCLUSIONS

Since the initial pilot study, we have expanded the authentic encounters with our SP consultants across all health assessment and population health courses in the undergraduate and second-degree tracks. Additionally, we have added encounters in the Family Nurse Practitioner program. Students, faculty, and SP consultants with disabilities are all providing high satisfaction feedback on surveys. We will continue to monitor and report on the efficacy of this valuable educational component.

In conclusion, further research on these specific types of educational interventions is needed. Educating nursing students on how to provide equitable, competent, evidence-based care will help to decrease disparities experienced by PWDs.

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