Assessing the Knowledge of Undergraduate Nursing Students on Intellectual Disability

Séverine Lalive D'Epinay Raemy, Adeline Paignon, Saray Vega, Marie Emery, and Alexia Bourgeois

Abstract

The literature underscores the importance of integrating intellectual disability content into undergraduate curricula to ensure that future health care professionals can provide appropriate care. Yet education on intellectual disability is often lacking or sporadic in undergraduate health professional training, and nursing schools have not been successful in educating students with the relevant and appropriate knowledge, skills, and attitudes. The purpose of this descriptive observational cross-sectional study was to evaluate if a 4-year nursing curriculum that includes components focused on the care of individuals with intellectual disability enabled students to acquire core knowledge by the end of the program.

KEY WORDS Curriculum – Health Disparities – Intellectual Disability – Nursing Students

Intellectual disability education should be recognized as a core competency integrated at the program level of educational institutions (Vi et al., 2023). The change in curriculum would assist in the development of a health professional workforce that is able to respond to the needs of individuals with intellectual disability. Indeed, the literature repeatedly emphasizes that education on intellectual disability is often lacking or sporadic in undergraduate health professional training (Khanlou et al., 2023; Trollor et al., 2016; Vi et al., 2023). Trollor et al. (2016) conducted a national audit to assess the quantity and nature of intellectual disability content offered within Australian nursing degree curricula. Their findings revealed that more than half of nursing schools (52%) did not offer any intellectual disability-related content.

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Insufficient educational preparation or limited skills in caring for individuals with disabilities may contribute to negative health care outcomes and disparities for this specific population (Edwards & Hekel, 2021; Khanlou et al., 2023). For instance, Edwards and Hekel (2021), in an integrative literature review, acknowledged that inadequate professional training may contribute to negative health care outcomes and quality of services, as well as disparities for people with intellectual disabilities. The World Health Organization (2022) reported that individuals with disabilities were more than twice as likely as others to report that health care providers' skills were inadequate to meet their needs. Conversely, integrating disability education into core curricula and health professional training has been shown to improve competence, confidence, attitudes, and communication skills when interacting with individuals with disabilities (Khanlou et al., 2023). Taken together, these findings highlight the critical need for disability-related education at the undergraduate level to ensure that health care professionals are adequately prepared to care for individuals with disability and, in turn, help reduce the health disparities they face.

Given the critical role of nursing education in addressing these disparities, it is essential to assess students' knowledge of intellectual disability throughout the nursing curriculum. We conducted a descriptive observational cross-sectional study to assess the knowledge of distinct groups of undergraduate nursing students about intellectual disability throughout the 4 years of the curriculum.

METHOD

At the University of Applied Sciences and Arts in Western Switzerland, Geneva, undergraduate nursing students followed around 44 hours of theoretical courses and workshops on intellectual disability over a period of 4 years. To assess their knowledge about intellectual disability, we created a 10-item self-administered paper-and-pencil questionnaire consisting of

open-ended questions. Open-ended questions were used to conduct a quantitative evaluation while allowing for a deeper understanding of students' knowledge. The questions were created according to three dimensions: intellectual disabilities and health disparities (questions 1, 3, and 4); specific health needs and barriers to accessing health care (questions 2, 5, 6, and 7); and rights of individuals with intellectual disability (questions 8, 9, and 10). Three questions (1, 2, and 7) were based on a previous study (Luthi et al., 2013); we created the other seven.

A total of 512 nursing students were invited to participate in the study. Data were collected in September 2018 with four groups of students: prenursing (preparatory program, n = 213, response rate 58%), first-year bachelor (BSc) (n = 100, response rate 55%), second-year BSc (n = 65, response rate 43%), and third-year BSc (n = 52, response rate 46%). The survey was completed during regular classes. Participation was voluntary and had no impact on student grades.

All data were collected anonymously, with informed consent obtained through agreement to a consent statement presented before survey completion. According to the Human Research Ordinance and the Federal Act on Data Protection (Swiss Confederation, 2011), because no health-related data or personal data were collected, no ethical approval was required for this study. Three response categories were created for each question: optimal, incomplete answer, and do not know answer/no answer. The classification of each response was carried out independently by two researchers. A comparison of the classifications was conducted for all questions, and a final nomenclature was established after discussion in cases where discrepancies were observed. A descriptive statistical analysis using JASP (https://jasp-stats.org) was performed on the total number of responses obtained for each categorical response (optimal, incomplete, do not know/no answer) in the four groups of nursing students.

RESULTS

Chi-squared test revealed a significant association between categorical responses and the four groups of students, $\chi^2(6, n = 3{,}848) = 63.20$, $p < .001$, when all questions were considered together. The same pattern was observed when the three dimensions covered by the questionnaire were examined: dimension 1, intellectual disabilities and health disparities, χ^2 (6, n = 1285) = 13.18, p = .040; dimension 2, specific health needs and barriers to accessing health care, χ^2 (6, n = 1,703) = 26.78, $p < .001$; and dimension 3, rights of people with intellectual disability, χ^2 (6, n = 860) = 29.72, $p < .001$. Because chi-square tests indicate significant associations, we further examined standardized residuals (SR) to pinpoint which cells contributed the most to the overall chi-square statistic. If SR are beyond the range of ±2, the condition can be considered a major contributor to the overall chi-square value. For optimal answers, SR < 2 was observed in prenursing students (preparatory program) for dimensions 1, 2, and 3 (SR for dimension 1, –2.25; dimension 2, –3.11, dimension 3, –3.90), while SR > 2 was observed at the end of the curriculum in the BSc third-year group for each dimension (SR for dimension 1, 2.99; dimension 2, 3.65; dimension 3, 2.81). The opposite pattern was observed for do not know/no answer for dimensions 1 and 2 (preparatory program, 3.17 and 3.87; BSc third –3.39, –3.26, respectively) and for incomplete answers for dimension 1 in the BSc third-year group (SR = –2.64). Altogether, these results indicated that BSc third-year students demonstrated greater knowledge about intellectual disability across all three dimensions covered by the questionnaire compared with students from previous years.

DISCUSSION

Our results showed that a 4-year nursing curriculum with approximately 44 hours dedicated to courses on intellectual disabilities enabled nursing students to acquire knowledge by the end of the program on core topics such as intellectual disabilities and health disparities, specific health needs, barriers to accessing health care, as well as rights of individuals with intellectual disabilities. These results underscore the importance of incorporating disability education into the nursing curriculum. Evaluating its effectiveness may ensure that health care professionals can provide adequate care for individuals with intellectual disabilities and help reduce health inequalities. Indeed, the literature repeatedly shows that health care professional education contributes greatly to the quality of care that individuals with intellectual disabilities receive (Edwards & Hekel, 2021; Khanlou et al., 2023).

Because the questionnaire was grounded in evidence of the literature about health-related inequalities encountered by individuals with intellectual disability (World Health Organization, 2022), the results of our study also provide insights into key disability-related content that should be included in the nursing curriculum. The national audit in Australia by Trollor et al. (2016), which studied the quantity and nature of disability content within nursing curricula, highlighted important inconsistencies and gaps across schools. Interestingly, Peiris-John et al. (2021) conducted a qualitative study to explore how teachers at a New Zealand university perceived the need for training to enhance disability education for health professionals. This study showed that greater attention may be required at a strategic level to enhance the profile of disability education in health curricula. Altogether, these results highlighted that disability education should be better supported by institutional policy and considered a core competency with relevant teaching and learning across the training years. Also, Trollor et al. (2016) demonstrated that clinical assessment skills, as well as ethics and legal issues, were among the most frequently taught topics, whereas human rights issues were underrepresented. Taken together and consistent with previous literature (see e.g., Beacock et al., 2015), these findings suggest that intellectual disability education within nursing curricula should cover key areas comprehensively, including communication, ethics and legal aspects, professional attitudes, and health-related issues affecting individuals with intellectual disabilities.

In our study, the evaluation of knowledge was carried out through a 10-question survey. To enable the adaptation of educational content, additional questions that address a broader range of aspects related to intellectual disability may be needed. Moreover, there was no psychometric validation of the questionnaire used in this study. Our results call for the development of psychometric tools to evaluate knowledge, skills, and attitudes of nursing students to create an appropriate learning environment.

CONCLUSION AND FUTURE RESEARCH

Our results show that undergraduate BSc nursing students completing the curriculum demonstrated greater knowledge about intellectual

disability than prenursing students and students in the second year. These results, in line with previous literature, underscore the importance of including a continuous, multimodal, and structured curriculum on intellectual disability at the undergraduate level to enable health care professionals to adequately care for people with intellectual disabilities. This can help reduce the health disparities experienced by this population. Future research should aim to develop comprehensive assessment tools that address a wider range of dimensions related to intellectual disability, thereby enabling the adaptation of educational content. Moreover, subsequent studies may seek to investigate the extent to which this knowledge is transferred into clinical practice.

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