Educating Nursing Students with Disabilities: Replacing Essential Functions with Technical Standards for Program Entry Criteria

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Abstract
Across the globe, students with disabilities have been increasing in prevalence in higher education settings. In the twenty-first century the struggle to include individuals with disabilities into nursing schools and workplaces continues in different parts of the world. Historically, entry criteria in nursing schools have been based on essential functions, which were primarily designed to be used in the workforce, rather than technical standards for education. In other health professions, such as medicine, this is not necessarily the case. For example, the American Association of Medical Colleges has worked over the past two decades to develop appreciation among medical schools for the need to admit and accommodate students with disabilities. We argue that nursing has not followed suit. This paper presents an integrative literature review, consisting of material from the United States, Ireland, United Kingdom, and Australia, investigating compelling stories, legal mandates, websites, and extant literature looking at essential functions or technical standards as entry criteria for nursing schools. The results show that, when essential functions for employment are used in nursing education, they may be a barrier to entry into that program. The paper concludes with recommendations for well-defined technical standards for nursing schools to be used primarily as entry criteria.

Keywords: Nursing students with disabilities, technical standards, essential functions, entry criteria

In the twenty-first century, the challenges of including individuals with disabilities in nursing schools and workplaces continue throughout the Western world. Laws preventing discrimination against these individuals have been enacted; however, the interpretations of those mandates are often unclear and questions remain (Matt, Fleming, & Maheady, 2015). The main issue involves what constitutes essential functions in the workplace and whether these standards are appropriate for use as entry criteria in educational programs. As is the case with most practice professions, particularly those in the health care professions, postsecondary education of nursing students has traditionally been viewed as the preparation of practitioners. To that end, nursing programs strive to provide students with realistic clinical experiences in which students are expected to function in health care settings, providing hands-on care to patients to assist students in developing skills in the classroom and lab settings that they can apply later to a work environment. Faculty often look to the work environment, using essential functions of the job, for guidance to determine appropriate accommodations for students with disabilities in these preparatory programs. The primary focus of this paper is to investigate the compelling stories, laws, websites, and extant literature reporting a different approach for entry criteria and accommodations for nursing students, one that relies on technical standards rather than essential functions of future employment in the educational context. The authors conclude with specific recommendations for development of entry criteria and determination of accommodations based on technical standards.

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Review of the Literature

Using a method described by Whittemore and Knafl (2005), the authors conducted a broad, systematic integrative review of this topic. This review encompassed an in-depth investigation of personal stories, legal mandates, websites, and a systematic review of the extant literature from the U.S., Ireland, U.K., and Australia, using the following search terms: nurse AND disability OR nurse AND essential functions OR nurse AND technical standards, in CINHAL for 2007-2015 and on the Internet. Articles, laws, relevant cases, and websites were selected based on the relevance to this concept. Three themes related to this investigation emerged: legal mandates for disability accommodation in higher education, students with disabilities in health professions training programs, and the use of employment-related essential functions in educational contexts.

Legal Mandates for Disability Accommodation in Higher Education

Statutory Authority

While the Americans with Disabilities Act ([ADA]; 1990) is widely recognized as the law that made reasonable accommodations for individuals with disabilities a common household word in the U.S., Section 504 of the Rehabilitation Act of 1973 was the first legal mandate to protect students with disabilities from discrimination. Ireland, the U.K., and Australia have similar laws that protect students with disabilities in higher education (Irish Statute Book, 2005; United Kingdom Parliament, 2010; Australian Human Rights Commission, 2015).

While enacting Section 504, the American Congress found that “disability is a natural part of the human experience and in no way diminishes the right of individuals to - (F) enjoy full inclusion and integration in the economic, political, social, cultural, and educational mainstream of American society” (29 U.S.C. § 701(a)(3)(F)). Section 504 stipulates that, among other mandates, qualified students with disabilities shall not be excluded from participation in any program or activity receiving federal financial assistance solely on the basis of the disability. The definition of a disability is the same as that in the ADA: a physical or mental impairment that substantially limits one or more major life activities, a record of having such an impairment, or being regarded as having such an impairment (42 U.S.C. Chapter 126 § 12102(2)). Postsecondary schools receiving federal financial assistance must also provide auxiliary aids to students who are disabled. If an aid is necessary, the institution must make it available, unless provision of the aid would cause undue burden. A student with a disability may not be required to pay part or all of the costs of that aid or service (U.S. Department of Education, 1998).

Section 504 also provides for technical standards, defining a “qualified handicapped person” as one who meets the “academic and technical standards requisite to admission or participation in the recipient’s education program or activity” (Title 34 Education Part 104, Subpart A §104.3(l)(3)). In this context, technical standards are the requirements for admission into and participation in the educational program. On its face, this is different from essential functions, which are included in ADA in the context of employment. According to the ADA, an individual with a disability must be qualified to perform the essential functions of the job with or without reasonable accommodation to be protected by the law (EEOC, 2008).

The purpose of the ADA was clearly to eliminate discrimination against individuals with disabilities (42 U.S. Code Chapter 126 § 12101(b)(1)). Title I addresses employment and Title II addresses public services, neither of which applies to students in higher education; however, Title III addresses public accommodations and services operated by private entities, which does include institutions of higher education and their students. Included in the definition of public accommodation are “a nursery, elementary, secondary, undergraduate, or postgraduate private school, or other place of education” (42 U.S. Code Chapter 126 §12181 (7)(J)).

Other countries have also enacted laws to protect individuals with disabilities in higher education. In Ireland, the law is the Disability Act of 2005; the U.K. enacted the Equality Act of 2010; and Australia passed the Disability Discrimination Act of 1992 (Irish Statute Book, 2005; United Kingdom Parliament, 2010; Australian Human Rights Commission, 2015).

In 2005, Ireland enacted the Disability Act of 2005, with a provision mandating public bodies to support access for persons with disabilities over 18 years of age to services and facilities such as educational institutions. The Act is dedicated to mainstreaming people with disabilities in society through education and employment. Specifically, this Act postulates that persons with disabilities are entitled to an independent assessment of their health and educational needs and will be offered a report of a statement of services to be provided (Irish Statute Book, 2005). There is funding available specifically for students with disabilities to fund educational supports. For example, if a student requires a piece of assistive software, the college will apply to the Fund for Students with Disabilities on the
student’s behalf, then buy the software and deliver it to the student (Association for Higher Education Access & Disability [AHEAD], n.d.).

The Equality Act of 2010, passed by Parliament in the U.K., harmonized and/or extended discrimination laws, including those pertaining to students with disabilities. This law made it unlawful to discriminate against students with disabilities in universities by treating them less favorably or offering fewer services. In addition, universities must make “reasonable adjustments” for students with disabilities so they are not significantly disadvantaged when compared to able bodied students (United Kingdom Parliament, 2010). The law also introduced anticipatory duties, for example, requiring the designing or redesigning of curricula and study programs to be as inclusive as possible from the start. Students with disabilities in higher education are eligible for Disabled Students Allowance (DSAs) to cover extra disability-related costs or expenses (Disability Rights U.K., 2013).

The Disability Discrimination Act (DDA) of 1992 in Australia provides protection from discrimination for all people in Australia, including relatives who are treated less fairly solely due to their relationship to individuals with disabilities. Specifically for educators, the DDA states: “If a person with a disability meets the essential entry requirements, then educators must make changes or ‘reasonable adjustments’ if that person needs them to perform essential course-work.” (“Course changes,” n.d., para 10). The DDA specifies that the essential entry requirements are specific to course work (Australian Human Rights Commission, 2015; Commonwealth of Australia, 2005).

Case Law

There have been court cases addressing educational institutions’ appropriate investigation of accommodations for students with disabilities. In one case, the court overturned a lower court’s support of dismissal of a medical student because the court determined that the dean did not investigate the student’s proposed accommodation, instead denying the request for accommodation through the registrar (Weber, 2000).

A particularly impactful case, Southeastern Community College v. Davis (1979), involved a hard of hearing applicant to a nursing program. The U.S. Supreme Court held that an applicant with a hearing impairment is not “otherwise qualified” because she could not meet physical qualifications of the program. The applicant in the case was unable to understand speech without lip-reading. Since that time, advances in technology have improved the ability of individuals with hearing loss to communicate. Hearing aids and cochlear implants today make it possible for people to accommodate for their hearing loss. The Davis case also established the permissibility of technical standards in higher education.

Students with Disabilities in Health Related Academic Programs

Medical schools have admitted and graduated students with a variety of disabilities. In fact, a medical student was admitted to a program when he was legally blind, receiving accommodation on the medical college application test of a scribe and a reader and later making rounds as a fourth year student with his guide dog at a Veterans Administration (VA) hospital (Villarosa, 2003). The Association of American Medical Colleges (AAMC; 2005) published a report describing various disabilities in medical education, guidelines for accommodation, and court decisions regarding the need to accommodate in the context of health professions training programs. The AAMC cited the Davis case, as well as others that specifically pertain to medical school students. The courts generally found that schools were not required to accommodate if necessary modifications would fundamentally alter the academic requirements “essential to the program of instruction” and “impose an undue burden on faculty.”

The AAMC has published multiple documents since the implementation of the ADA addressing the accommodation of students with disabilities in medical schools and technical standards for medical students (Eickmeyer, Do, Kirschner, & Curry, 2012). These publications continue to refer to the definition of technical standards from a 1979 Special Advisory Panel report, which included the following categories of necessary skills and abilities: “(1) observation, (2) communication, (3) motor, (4) conceptual, integrative, and quantitative, and (5) behavioral and social” (p. 568). Although the advisory panel did not find that use of intermediaries was an appropriate accommodation for students with disabilities, the Association of Academic Physiatrists (1993) published a white paper addressing the issue, emphasizing accommodation and alternative means, and stating “the candidate who cannot perform these activities independently should be able, at least, to understand and direct the methodology involved in such activities” (p. 47). According to Eickmeyer et al. (2012), there is no consensus within the medical profession about the technical skills required of medical students and they suggest revisiting these standards to be less of a barrier to admission of students with disabilities to medical schools.
In Ireland, the Association for Higher Education Access and Disability (AHEAD) “is an independent non-profit organisation working to promote full access to and participation in further and higher education for students with disabilities and to enhance their employment prospects on graduation” (http://www.ahead.ie/aboutus). In addition, they coordinate the LINK Network, which is a coalition of seven partners located in Europe (i.e., SIHO in Belgium; AHEAD in Ireland; handicap studie in Netherlands; DSIS in Slovakia; Stockholm University in Sweden; Universell in Norway; and the National Association of Disability Practitioners [NADP] in U.K.) dedicated to sharing ideas and improving current practice and standards in their respective countries. AHEAD published guidelines for working with midwifery and nursing students with disabilities in clinical practice, a document that describes a needs assessment process for determining appropriate accommodation for identified disabilities in clinical environments, giving examples of accommodations for specific disabilities (i.e., visual, cognitive, physical, and mental health). A case was presented in which a midwife who suffered from depression as a student was given an accommodation of reduced hours and flexible hours as a means to complete her placements and achieve her postgraduate requirements (McKernan & Quirke, 2012). Although no longer in existence, Skill: National Bureau for Students with Disabilities, published one of its more useful publications, encouraging students with disabilities to consider a wide range of career options, which included case studies of individuals with a range of impairments who had studied nursing successfully and were employed. This publication (Into Nursing and Midwifery, n.d.) also included useful practical advice about the applications process.

In the U.S., examples of nursing students with various disabilities being admitted, receiving accommodations and going on to practice as nurses are reported in the literature. In one such case, a nurse born with spina bifida, who uses a wheelchair, reports her interaction with the assistant dean:

We knew that we were going to have to pick apart each clinical and assess whether or not I absolutely had to perform every skill. If it was not an essential function for nursing, then we discussed delegating the task. If I knew there was a lift or transfer that I could not perform, I asked a classmate to do it for me, promising to lend my help when he or she needed it. (Maheady, 2006, p.76)

In another example, a nurse was accommodated for hearing loss with an amplified stethoscope and front row seating while in nursing school. She later had a cochlear implant and now works as a nurse in an intensive care unit (Maheady, 2014).

Scholarly literature addressing the issue of technical standards in nursing programs is scarce. In fact, in the U.S., only one such paper was found in an extensive online search. In 1995, Watson surveyed baccalaureate nursing programs to explore responses and reactions to applicants to the programs and students with disabilities. In the article, Watson discussed the lack of technical standards in nursing schools and included core performance standards required for nursing, developed by the Board of Directors of the Southern Council on College Education for Nursing. The standards were broken down into the following issues: critical thinking, interpersonal, communication, mobility, motor skills, hearing, visual, and tactile (p. 150). Although these standards targeted nursing programs in Southern states, they specifically focused on nursing skills and did not address necessary skills for nursing students. Watson stated that “[c]urrent accurate performance expectations and technical standards have been needed for some time” (p. 152). It is clear that these are still needed.

**Essential Functions of Employment vs. Academic Technical Standards**

There is no published document from any American nursing school accrediting body providing guidelines for technical standards and accommodation of students with disabilities in nursing training programs comparable to the publication from the AAMC. In 1996, however, the National Council of State Boards of Nursing (NCSBN) supported a study conducted with the express purpose of validating previous studies to assist state boards of nursing in evaluation of candidates for licensure in light of the Americans with Disabilities Act (Yocom, 1996). The researcher specified tasks and skills that were identified by practicing nurses, and the study was subsequently the basis for entry criteria developed by a number of nursing programs across the United States (e.g., American International College, 2012; Hackensack UMC Mountainside School of Nursing, 2011; Missouri State University, 2012). Yocom explained at the Rush University College of Nursing Symposium on Nursing Students with Disabilities that the Validation Study was not the list that students must possess, but it is a representative list of skills and abilities that students may need to possess (Pischke-Winn, Andreoli, & Halstead, 2003).
As noted above, Ireland’s AHEAD provides support for educational institutions such as conducting a needs assessment of people with disabilities, where reasonable accommodations can be identified. AHEAD specifies that reasonable accommodations can enable students to perform “essential tasks” that are pertinent to their current courses and can transition to assist them in the workplace. They carefully focus on current course work (AHEAD, 2015).

Stanley, Ridley, Manthorpe, Harris, and Hurst (2007) studied disabled students and practitioners in social work, nursing and teaching. They reported that employers and staff in higher education have often struggled to reconcile professional demands and fitness for practice concerns with disability legislation. Interestingly, by addressing the barriers in the educational context, employers may be made aware of strategies to improve the work environment for graduate nurses with disabilities, thus increasing inclusivity in the nursing profession (Crawshaw, 2002).

In a comprehensive guide to support nursing and midwifery students with disabilities in clinical settings, Howlin and Halligan (2011) provide a detailed discussion of legal protections for students with disabilities in Ireland. This publication provides extensive information about the preparation of students for practice, including the distinction between the competencies required by regulatory bodies and the mechanisms by which individuals may achieve them in the educational setting. The guide provides examples of suggested accommodations for a variety of specific disabilities in the context of nursing and midwifery education and the Employment Equality Acts in Ireland.

Similarly, in the U.S., the Job Accommodation Network (2013) published a guide for disability accommodations in the context of nursing, which provides practical solutions to accommodating specific disabilities in compliance with the ADA. The same accommodations are available to students with disabilities in clinical settings.

**Discussion**

In the U.S., the Rehabilitation Act of 1973 introduced the concept of essential functions of a job, requiring individuals with disabilities to be able to perform these essential functions with or without accommodation in order to be eligible for employment. Employers determine the essential functions for a particular job, and the functions are related to each individual employment setting and each individual job. In the context of higher education, however, essential functions are not a consideration. Technical standards, or eligibility criteria, define the parameters of what must be done to ensure safe and effective practice in a given field (Jarrow, 2014). They might be thought of as the essential functions of a health professions training program, as defined by the school (VanMatre, Nampiaparampil, Curry, & Kirschner, 2003). They differ from the essential functions of a job and should not be based on essential functions defined by employers in health care workplaces.

This means that entry criteria for nursing programs should not be based on requirements by employers for nurses to enter employment. Technical standards must reflect current practice and not historical precedent. For example, a nursing program cannot include a standard requiring the ability to lift 50 pounds because, in the past, there were no mechanical lifts or lift teams and nursing students were expected to be able to move patients. Moreover, technical standards cannot specify how a skill must be accomplished; they can only require that a person accomplish the skill. For example, a standard might be that the individual must be able to detect blood pressure and heart sounds, but it cannot state that the individual must use specific equipment (i.e., standard hospital stethoscopes and blood pressure cuffs) to accomplish this, allowing for reasonable accommodation and the use of non-traditional equipment.

In the context of technical standards, future employment cannot be a consideration (Jarrow, 2014). Since nursing graduates may find employment in a variety of environments, it is not reasonable to assume they will require every ability and skill imaginable. Jarrow (2006) describes the example of a statement that a nurse must be able to climb stairs; however, climbing stairs is not a nursing task, nor is it required in every employment situation. If it is an essential skill that every nurse must have, it should be built into the program as a skill to be developed.

Technical standards are used as entry criteria; thus, they are not exit criteria and should not reflect skills that students must demonstrate by completion of the program. Those would be considered competencies and must be taught and evaluated in the program. Technical standards are skills and abilities that are needed to be successful in the program (Jarrow, 2014).

Essential functions may be a barrier to entry into a nursing job for an individual with a disability, but technical standards that are well written should not be a barrier to entry into a nursing program. They should be applied equally to all students and should not serve as a way to screen out certain students; instead, they should serve as information to help students know what to expect. They should focus on the skills students will need in order to learn to perform nursing skills, not how the students will perform those skills (Evans, 2014).
Conclusion and Recommendations

As is the case in medical schools, students with disabilities are underrepresented in nursing schools, although numbers are unavailable since disability data is not collected in this context in most programs (Marks & Ailey, 2014). It is clear from the literature that the AAMC has been working to address this phenomenon by providing research and papers that encourage reasonable accommodation in medical schools. Researchers have lamented that technical standards need to be revisited to break down barriers to the admission of students with physical and sensory disabilities to medical schools. Nursing school accrediting associations have not given as much attention to this problem. Consequently, some schools continue to base admission criteria on Yocom’s Validation Study, which was focused on practicing nurses rather than nursing students.

Advances in technology and legal mandates requiring equal access to educational programs make it imperative that nursing schools revisit technical standards and admission criteria to ensure that individuals with disabilities are not arbitrarily excluded from nursing education. The American Association of Colleges of Nursing (AACN) and the National League for Nursing (NLN), as well as European nursing program accrediting bodies, should begin an in-depth process to develop comprehensive, realistic technical standards, appropriate to current professional nursing roles and nursing educational objectives and strategies, to assist nursing schools in their efforts to comply with the Americans with Disabilities Act mandates.

Nursing programs should develop technical standards considering the following guidelines:

- Do not use exit standards as entry standards.
- Focus on the abilities and skills students need in order to learn nursing skills, not how they will do them.
- Standards must be equally applied to all applicants, not only those with disabilities.
- Consider accommodations and alternative ways of accomplishing tasks, but do not include specific accommodations in the standards.
- Include the tag line: able to meet these requirements with or without reasonable accommodation.
- Do not conflate technical standards with essential functions of a specific nursing job.
- Work with the school’s office of disability services.

In a white paper addressing inclusion of students with disabilities in nursing schools, Marks and Ailey (2014) suggested model technical standards for nursing schools. Examples of technical standards included in the white paper are:

- Ability to learn in classroom and educational settings.
- Communication abilities for sensitive and effective interactions with patients (persons, families and/or communities).
- Ability to observe patient conditions and responses to health and illness.
- Ability to assess and monitor health needs.
- Critical thinking, problem-solving and decision making ability needed to care for persons, families and/or communities across the health continuum and within their environments – in one or more environments of care.
- Concern for others, integrity, ethical conduct, accountability, interest and motivation.

At the very least, nursing schools should be engaging in a dialogue about technical standards and accommodation of students with disabilities. Through such dialogue, the need to comply with legal mandates and the benefits of designing nursing education to include individuals with disabilities will be realized, opening the doors to a population of future nurses that will bring unique perspectives to the profession and benefits to the patients they serve.
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