

The Impact of a clinical placement in rehabilitation on the attitudes of undergraduate nursing students towards people with disabilities

reviewed article

AUTHOR

Laynie Hall-Pullin RN, BA, MComN
Lecturer & Bachelor of Nursing Campus Course Advisor
University of Western Sydney

Lynn Chenoweth RN, DComHlth, BA, MA(Hons), MAdEd, PhD
Professor of Aged & Extended Care Nursing
University of Technology, Sydney &
Director, Health & Ageing Research Unit
South Eastern Sydney Area Health Service

Julie Pryor RN, CM, BA, MN
Associate Director, Rehabilitation Nursing Research and Development Unit
University of Western Sydney and Royal Rehabilitation Centre, Sydney

ABSTRACT

This paper reports on a collaborative pilot study, conducted with a sample of twenty-six undergraduate nursing students attending clinical placements in an Australian rehabilitation setting. It reports on a component of the study that aimed to measure the impact of the rehabilitation clinical placement on the development of positive attitudes towards people with acquired disabilities. The Scale of Attitudes toward Disabled Persons (SADP) was administered to students on entry to, and exit from, the five-day clinical placement. Comparison of the results revealed no statistical difference. However, given that the majority of students (76%) already held positive attitudes to people with disabilities on entry to the clinical placement, the findings need to be cautiously interpreted.

Keywords: attitudes, attitude scales, undergraduate students, rehabilitation nursing, disability, clinical practice

INTRODUCTION

Attitudes that underlie the behaviour of health professionals can have a significant impact on their effectiveness as service providers and on the satisfaction experienced by people with disabilities (Gething, 1997). More specifically, attitudes can create or maintain negative behaviours that "limit successful rehabilitation, integration and independence of disabled people in the community" (Antonak & Livneh, 1988, p. 5). Historical evidence outlined by Cocks and Stehlik (1996) indicates that health care staff not specialising in rehabilitation can lack awareness of, and sensitivity

to, the comprehensive needs of people with acquired disabilities. Although difficult to measure, the literature suggests that on-going research on attitudes towards people with disabilities is warranted. This paper reports on a pilot study designed to evaluate the effectiveness of a specialty clinical area for nursing students by measuring their attitudes to persons with disability before and after the rehabilitation clinical placement. Following a review of the literature, the research design will be outlined and the findings presented. The paper concludes with a discussion of the findings and directions for further research

REVIEW OF THE LITERATURE

People with acquired disabilities often require lengthy rehabilitation following their traumatic injury or sudden exacerbation of chronic illness. The attitudes of rehabilitation professionals and nurses impact significantly on the psychosocial process of adjustment for a person with an acquired disability accessing rehabilitation services (Antonak & Livneh, 1988, p.13-14). Studies have recommended the development of strategies that aim to improve professional attitudes towards individuals with disabilities (Mantziou, Brocalaki, Andrea, Ktenas, Chatira & Kotzabassaki, 2002). Research using cohorts of medical students has found that the more positive the attitude towards people with disabilities, the more likely it is that the participant will be comfortable managing complex rehabilitation situations (Tervo, Azuma, Palmer & Redinus, 2002). It is recognised that all attitudes consist of a cognitive, affective and behavioural component, and are learned through interactions between people and the environment (Antonak & Livneh, 1988, pp. 7-10).

The Impact of a clinical placement in rehabilitation (cont'd)

In particular, attitude development has been linked to the nature of the professional education experience and the preparation received for clinical practice (Bergman & Hanson, 2000).

The international literature commonly reports that nurses receive little formal preparation in the provision of care that facilitates ongoing recovery and adaptation of people with acquired disabilities (Neal, 2001; Nolan and Nolan, 1999; Brown and Johnson, 1997). Commentaries by Australian writers Pryor (1999), and Borbasi and Evans (2000) pose possible reasons for these findings. Pryor (1999) highlights the paucity of literature discussing the relationship between rehabilitation and nursing, while Borbasi and Evans (2000) contend that rehabilitation nursing has not traditionally been a speciality to which undergraduate students have been exposed. Consequently, the role of the rehabilitation nurse has been undervalued. A contributing factor may be the focus on acute care that permeates the biomedical ideologies governing our health systems, ignoring the needs of patients living with chronic or disabling conditions (Wass, 2000; Short, Sharman & Speedy, 1998; Brown & Johnson, 1997). It is not surprising therefore that studies on attitude measurement report inconsistent findings using a variety of methodologies.

A number of studies have been conducted with undergraduate students using attitude scales. The original Attitude to Disabled Persons scale (ATDP) was developed by Yucker, Block and Young (1966, cited in Antonak, 1982, p. 22). This scale was later used as the basis of a modified instrument developed by Antonak (1981, 1982) who formulated the Scale of Attitudes Toward Disabled Persons scale (SADP), to replace the ATDP (Antonak, 1982). Despite this, the original ATDP instrument (with two subsequent revisions) continues to be widely used. Antonak indicated however, that the more contemporary SADP tool is useful for "measuring the effectiveness of rehabilitation counselor training programs and attitude change programs" (1982, p. 28). This is the rationale for choosing this particular instrument for this study.

The ATDP has been used in the majority of studies conducted within the last decade (Thompson, Emrich & Moore, 2003; Mantziou et al, 2002; Penny, 2002; Hunt & Hunt, 2000; Goddard & Jordan, 1998; Paris, 1993; Gething, 1992). Hunt and Hunt (2000) used the ATDP scale (Form A) to measure attitudes of carers over a two-day sports camp for people with disabilities, and compared these scores to a control group. Fifty-four University students from various health care majors were studied. Findings suggested that the clinical experience alone was not

great enough to produce a change in attitudes (Hunt & Hunt, 2000). A recent study which used both the ATDP and the SADP to examine if gender and age variables of medical students impacted on attitude towards disability, found that attitude scores on the SADP were less positive than on the ATDP scale (Tervo, Azuma, Palmer & Redinius, 2002). The SADP was validated in 1982 and has also been used in recent studies using a pre and post-test design (Packer, Iwasiw, Theben, Sheveleva and Metrofanova, 2000; Martin & Ligon, 2000). Martin and Ligon (2000) used the scale to survey 19 social work students to evaluate the effects of different theoretical instruction methods. Packer et al used the scale to compare attitudes among cohorts of occupational therapy and medical students, and identified the importance of positively influencing students' attitudes towards people with disabilities prior to beginning their careers in health (2000, p.39).

While research findings on attitude change following theoretical or clinical instruction are inconsistent, education programs have been found to be generally effective in preparing students and staff for working with people with disabilities (Wagner & Stewart, 2001; Goddard & Jordan 1998; Greene 1997; Timms, McHugh, Carroll & James 1997; Oermann & Lindgren, 1995; Edwards & Kittler, 1991; Ouellette & Ahn, 1991). For example, Greene (1997) found that purposeful education resulted in an increase in occupational therapy students' appreciation of client needs for dignity, equality and justice. Likewise, Oermann and Lindgren's (1995) study with undergraduate nursing students using the ATDP scale, found that students improved their level of sensitivity to the needs of clients with disability following an education program. Edwards and Kittler (1991), and Ouellette and Ahn (1991), reported similar positive outcomes after studying the effects of rehabilitation clinical placements in Brain Injury Units. However, Yamamoto, Randall, Takeda and Leelamamit's (1996) study found that medical students were less sensitive to the needs of people who had what they termed "mental" disabilities at the end of a four-year education program, compared to the beginning of the program. Penny's (2002) recent study with occupational therapy students also concluded that participants' attitudes to people with mental illnesses changed in a negative way following

reviewed article

The Impact of a clinical placement in rehabilitation (cont'd)

fieldwork placement.

As research on the effect of specialty disability education programs for Australian nursing students is scant, this pilot study aims to contribute to the knowledge educators require in preparing students for this field of health care. The project was designed to explore the effect of a rehabilitation clinical placement on undergraduate nursing students' attitudes towards people with disability. This paper reports on only one of the three aims of the larger research project, namely, to measure the impact of a clinical placement in rehabilitation on the development of positive attitudes in undergraduate nursing students towards people with acquired disabilities.

RESEARCH METHODS

Approval was sought and granted from two human research ethics committees, one academic and one clinical, before the project was commenced.

Study Design

This was a three-part pilot study, employing multiple methods in a pre/post-test design, operating concurrently. The part reported here pertains to the survey of undergraduate nursing students' attitudes towards people with disabilities on entry to, and exit from, a clinical placement, using the Scale of Attitudes Toward Disabled Persons scale (SADP)

(Antonak, 1982).

Intervention

Undergraduate nursing students were assigned to a five-day clinical placement in a designated in-patient rehabilitation facility in Australia. All students were participating in the same Bachelor of Nursing program, but were rostered to one of four clinical units for the duration of their placement. A registered nurse experienced in rehabilitation was assigned to facilitate each group of eight students on the placement. In each clinical unit other registered nurses also provided support.

Research instruments

The SADP, developed by Antonak in 1981 and revised in 1982, is a valid and reliable instrument. Antonak (1982) noted that the SADP measures attitudes towards disabled persons as a group and consists of 24 items on a 6-point rating scale, ranging from -3 to signify "I disagree very much" to +3, signifying "I agree very much". No neutral response

option is provided. Higher scores indicate a more favourable attitude towards people with disabilities. The SADP yields rich data emphasising the multi-dimensional character of attitudes towards people with physical, emotional, intellectual, mental and social disabilities in three domains: civil and legal rights, equity and equality, and anti-normalisation and discrimination in habilitation programs.

Data Analysis

Participant demographics provided descriptive statistics and, because the participant numbers were small, demographic characteristics were not correlated with scores on the attitude scale. Since the SADP has both negative and positive agree and disagree responses, the negative responses were reversed before being analysed as suggested by Antonak (1982). For example, -3 (I disagree very much) was converted to zero instead of -3; -2 (I disagree pretty much) became +1; -1 (I disagree a little) became +2; +1 (I agree a little) became +3; +2 (I agree pretty much) became +4 and +3 (I agree very much) became +5. The sum of the responses to the items was then calculated and a constant of 72 added to the total. This last step eliminated negative scores and allowed the pre and post-test scores for each student to be compared initially before analysing group means for the three domains. T-tests were run for all data although only group means are reported here, as sample size was insufficient to discriminate on t-test analysis.

Sample

The convenience sample included twenty-six voluntary second (33%) and third (67%) year undergraduate nursing students from a Sydney based university. The majority (77%) of the sample were female. Some were enrolled nurses before commencing the Bachelor of Nursing program. Fifty percent of students indicated that they had had previous experience in some type of disability setting including family settings, and one third of the sample was aged 35 years or above. Ages spanned from 20 to 45 years.

Results

Variance among individual items on the SADP was minimal, therefore group means are reported and categorised in three domains: civil and legal rights, equity and equality, and anti-normalisation and discrimination in habilitation programs.

Domain 1: Civil and legal rights

A range of responses was recorded for items in this domain (see table). Overall, the scores revealed there was little variation between pre and post clinical scores.

reviewed article

The Impact of a clinical placement in rehabilitation (cont'd)

<p>Strong positive mean pre and post-test (3-4.5)</p>	<p>Agreeing that:</p> <ul style="list-style-type: none"> disabled children should be provided with free public education, a disabled individual is capable of making moral decisions, disabled people should not be prevented from having children, disabled adults should not be involuntarily committed to an institution following arrest, disabled people should be given opportunities for gainful employment, equal work opportunities should be available to disabled individuals, there should be laws to prevent employers from discriminating against disabled people, and that disabled people should receive at least the minimum wage for their job.
<p>Mid range mean pre and post-test (2-2.5)</p>	<p>Arguing against the propositions that:</p> <ul style="list-style-type: none"> rehabilitation programs are too expensive to operate, and That disabled people are like children in many ways.
<p>Low mean pre and post-test (1)</p>	<p>Arguing strongly against the propositions that:</p> <ul style="list-style-type: none"> Disabled people should be prohibited from obtaining a driver's license.
<p>Small decrease in pre and post-test means</p>	<p>Arguing against the proposition that:</p> <ul style="list-style-type: none"> Repetitive work is appropriate for disabled people.

students did not agree with the propositions that disabled people:

- show a deviant personality profile;
- are more accident prone;
- need only the proper environment and opportunity to develop and express criminal tendencies;
- engage in bizarre and deviant sexual activity; and
- that disabled children have an adverse effect on regular classrooms.

Students strongly agreed pre-test (4) with the proposition that most disabled people are willing to work, however, they were less supportive of this proposition post-test (2.4).

Domain 3: Anti-normalisation and discrimination in habilitation programs

Once again, the scores revealed there was little variation between pre and post-test scores. There were strong positive responses pre and post-test (3.0 to 4.5) for the propositions:

- that disabled people should be able to live where they choose;
- that adequate housing for disabled people is neither too expensive nor too difficult to build;
- that disabled people are able to adjust to a life outside an institutional setting;
- that zoning ordinances should not discriminate against disabled people; and
- that disabled people should not live with others of similar disability.

In summary, the SADP group means reveal only small differences in the positive attitudes that the majority (76%) of students held towards people with disabilities on entry to, and exit from, the clinical placement. There was no statistical significance between pre and post-test group means for the three domains, civil and legal rights, equity and equality, and anti-normalisation and discrimination in habilitation programs. Reversing negatively scored questions from 0 (I disagree very much) to 5 (I agree very much) revealed very small changes in high positive scores for 76% of the students. This signifies that on entry to the clinical placement, the majority of students had the view that people with disabilities ought to be afforded the same rights and respect that all other citizens expect as a matter of course. This is an important finding, given that the group means were negatively influenced by the consistent pattern of some 2-4 individual students

reviewed article

Domain 2: Equity and equality

Overall, the scores revealed there was little variation between pre and post-test scores. There were low mean scores pre and post test (1 to 2) showing that

The Impact of a clinical placement in rehabilitation (cont'd)

who had opposite responses to other students for most propositions.

DISCUSSION

Although the study sample is small, the findings reflect those of Bergman and Hanson (2000) who used the ATDP scale. The five-day clinical placement, like Bergman and Hanson's (2000) two-day fieldwork placement at a sports camp for people with disabilities, was not a strong enough factor to produce a difference in attitudes. The researchers note however, that 88% of their participants had previous contact with people with disabilities, and that the experience itself may have had some impact on those students with least favourable attitudes initially, whilst not further improving attitudes in students who already displayed positive attitudes.

reviewed article

Similarly, particular student characteristics may have influenced the findings in this pilot study. Fifty percent of the student participants had previous experience with caring for people with a disability and 33% were mature aged students aged between 35 and 45 years. This provides support for Packer et al's suggestion that "those who experience more contact with persons with disabilities appear to have more positive attitudes" (2000, p. 42). In Packer et al's (2000) study using the SADP, the attitudes of three groups of occupational therapy and nursing students were measured. They determined that students enrolled in courses taught largely by people with disabilities reported the most positive attitudes. Similar conclusions were drawn in Hunt and Hunt's (2000) study comparing the attitudes of undergraduate rehabilitation and business majors. Analysis showed that rehabilitation majors (who demonstrated the more positive attitudes) were more likely to be older, female and have experienced greater personal contact with people with disabilities (Hunt & Hunt, 2000). These findings also support the proposition that more contact leads to a more positive attitude towards people with disabilities.

Limitations

While acknowledged as a pilot, this study had several limitations. The voluntary nature of the study required drawing on a convenience sample. Random sampling may have yielded different results. The clinical facility in rehabilitation was a new facility offered to students therefore students were randomly allocated to this rehabilitation facility by university staff. The constraints of fitting in with an organised clinical program were acknowledged as limitations

early in the pilot. Unlike Martin and Ligon's (2000) methodology using the SADP, the pilot did not use a control group, which would have been a useful comparison to validate responses. The duration of the clinical placement (5 days) compared to the researchers' preferred duration (10 day experience), was not possible within the restrictions of an established practical curriculum. Another consideration that limits interpretation of the findings is the students' variable previous experiences and contact with people with disabilities.

CONCLUSION

The pilot study aimed to evaluate the effectiveness of a specialty clinical placement for nursing students through measuring their attitudes to people with disabilities before and after the rehabilitation clinical placement. While the pre/post mean attitude scores did not reveal statistically significant differences, students entered into the clinical placement with unusually high positive mean scores, suggesting the important influence of prior life experience and/or education upon these findings. The results, although constrained by the limitations identified, do support the contention that further research using a variety of designs is needed, to clearly elucidate the impact of clinical education on nursing students' attitudes towards people with disabilities. Given the significant proportion of the Australian population who have a variety of disabilities, and their increasing representation in the health care system, it is imperative that research in this area is not dismissed as just too difficult.

Acknowledgments

The valuable contribution of the following individuals in completing this research project is acknowledged - Mr. Ralph Forbes, Ms. Aine Higgins, Ms. Yun-Hee Jeon and the 26 anonymous undergraduate nursing students whose willing participation was greatly appreciated.

References

- Antonak, R.F. 1981, *Development and psychometric analysis of the Scale of Attitudes Toward Disabled Persons (Technical report No 1)*, Durham, N.H: University of New Hampshire Education Department.
- Antonak, R.F. 1982, *Development and psychometric analysis of the Scale of Attitudes Toward Disabled Persons, The Journal of Applied Rehabilitation Counseling*, 13 (2), 22-29.
- Antonak, R. & Livneh, H. 1988, *The Measurement of Attitudes towards people with disabilities: Methods, Psychometrics and Scales*, Springfield, Illinois: Charles Thomas

The Impact of a clinical placement in rehabilitation (cont'd)

Bergman, M.M. & Hanson, C.S. 2000, The relationship between participation in a sports camp and students' attitudes towards persons with disabilities, *Occupational Therapy in Health Care*, Vol 12 (4), 51-63.

Borbasi, S & Evans, S. 2000, Introducing Undergraduate Nursing Students to Rehabilitation as a Branch of Specialty Practice through an Innovative Approach to Clinical teaching, *Journal of the Australasian Rehabilitation Nurses Association*, 3 (4), 17-20.

Brown, V. M. & Johnson, M. S. 1997, Rehabilitation needs and experiential learning, *Journal of Nursing Education*, 36 (3), 140-143.

Cocks, E & Stehlik, D. 1996, History of Services, In J. Annison, J. Jenkinson, W. Sparrow & E. Bethune, eds, *Disability: A Guide for Health Professionals*, South Melbourne: Thomas Nelson, 8-33.

Edwards, P. & Kittler, A. W. 1991, Integrating rehabilitation content into nursing curricula, *Rehabilitation Nursing*, 16 (2), 70-73.

Gething, L. 1992, Nurse practitioners' and students' attitudes towards people with disabilities, *Australian Journal of Advanced Nursing*, 9 (3), 25-30.

Gething, L. 1997, *Person to person. A guide for professionals working with people with disabilities*, Sydney: MacLennan & Petty.

Goddard, L. & Jordan, J. 1998, Changing attitudes about persons with disabilities: effects of a simulation. *Journal of Neuroscience Nursing*, 30 (3), 307-313.

Greene, D. 1997, The use of service learning in client environments to enhance ethical reasoning in students, *American Journal of Occupational Therapy*, 51 (10), 844-852.

Hunt, B & Hunt, C.S. 2000, Attitudes toward people with disabilities: a comparison of undergraduate rehabilitation and business majors, *Rehabilitation Education*, 14 (3), 269-283.

Mantziou, V., Brocalaki, I., Andrea, S., Ktenas, E., Chatira, K & Kotzabassaki, S 2002, Children's nursing: Attitudes of registered nurses and student nurses to disabled children. *British Journal of Nursing*, 11 (17), 1141-1146.

Martin, R. & Lignon, J. 2000, Using the Americans with Disability Act to Influence Student Attitudes Towards People with Disabilities: Comparing Classroom and Experiential teaching Approaches. *Rehabilitation Education*, 14 (2) 181-186.

Neal, L.J. 2001, Using Rehabilitation theory to teach medical surgical nursing to undergraduate students, *Rehabilitation Nursing*, 26 (2), 72-77.

Nolan, M. & Nolan, J. 1999, Rehabilitation, chronic illness and disability: The missing elements in nurse education, *Journal of Advanced Nursing*, 29 (4) 958-966.

Oermann, M.H., & Lindgren, C.L. 1995, An Educational program's effects on student's attitudes towards people with disabilities: a one year follow-up, *Rehabilitation Nursing*, 20 (1), 6-10.

Oullette, F. & Ahn, D. 1991, Brain Injury rehabilitation settings: A gold mine for student and staff learning, *Rehabilitation Nursing*, 16 (5), 271-274.

Packer, T.L., Iwasiw, C., Theben, J., Sheveleva, P & Metrofanova, N. 2000, Attitudes to disability of Russian occupational therapy and nursing students, *International Journal of Rehabilitation Research*, 23 (1), 39-47.

Paris, M.J. 1993, Attitudes of medical students and health-care professionals towards people with disabilities. *Archives of Physical Medicine and Rehabilitation*, 74 (8), 818-825.

Penny, N.H. 2002, Longitudinal study of student attitudes toward people with mental illness *Occupational Therapy in Mental Health*, 17 (2), 49-80.

Pryor, J. 1999, Nursing and Rehabilitation In J. Pryor, Ed. *Rehabilitation - A vital nursing function*, Deakin, ACT: Royal College of Nursing Australia, 1-13.

Short, S., Sharman, E. & Speedy, S. 1998, *Sociology for Nurses: An Australian Introduction*. 2nd Edition. South Melbourne: McMillan.

Tervo, R.C., Azuma, S., Palmer, G. & Redinius, P. 2002, Medical students' attitudes toward persons with disability: a comparative study. *Archives of Physical Medicine and Rehabilitation*, 83 (11), 1537-1542.

Timms, M., McHugh, S., O'Carroll, A & James, T. 1997, Assessing impact of disability awareness training using the Attitudes Towards Disabled Persons Scale (ATDP - Form O). *International Journal of Rehabilitation Research*, 20 (3), 319-323.

Thompson, T.L.C., Emrich, K. & Moore, G. 2003, The Effect of Curriculum on the attitudes of Nursing Students Toward Disability. *Rehabilitation Nursing*, 28 (1), 27-30.

Wagner, A.K. & Stewart, P.J.B. 2001, An internship for college students in physical medicine and rehabilitation: effects on awareness, career choice, and disability perceptions, *American Journal of Physical Medicine and Rehabilitation*, 80 (6), 459-465.

Wass, A. 2000, *Promoting Health: the primary health care approach*. 2nd edition, Marrickville: Harcourt.

Yamamoto, K., Randall, M., Takeda, M. & Leelamanit, W. 1996, Attitudes of medical students towards persons with mental disorders: comparative study between Japan and Thailand, *Psychiatry Clinical Neuroscience*, 50 (4), 171-80.

reviewed article