

# Physiotherapy students' attitudes towards and knowledge of older people

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The purpose of this study was to determine whether students' attitudes towards and knowledge of older people changed throughout the physiotherapy undergraduate program. Students' demographic information and attitudes towards and knowledge of older people were gathered via repeated question-responses over three points of time during the 4-year program. Validated instruments—the Geriatric Attitudinal Scale (GAS) and the Facts on Ageing Quiz 1 (FAQ1)—were used to measure participants' attitudes and knowledge of older people. The FAQ1 yielded two variables: knowledge as percentage of FAQ1 correct responses, and ignorance as percentage of FAQ1 Don't Know responses. The instruments were administered in Year 2 prior to the students' first clinical (Time 1), immediately after their first clinical (Time 2), and Year 4 just prior to completion of the program (Time 3). Changes over time were analysed using paired t-tests with significance set at  $p < 0.05$ . Participants initially demonstrated positive attitudes towards older people with a mean of 73.8% GAS positive responses with no significant change over time ( $p = 0.56$ ). Initial knowledge about older people was poor with a mean of 43.6% FAQ1 correct responses which increased significantly over time to 51.7% ( $p = 0.0001$ ). This improvement in knowledge was accompanied by a decrease in ignorance over the study period ( $p = 0.0001$ ). While attitudes toward older people were positive and knowledge improved over time, the level of knowledge attained was below expectation for beginning practitioners. This finding has implications for the education and training of physiotherapy students. [Hobbs C, Dean CM, Higgs J and Adamson B (2006): **Physiotherapy students' attitudes towards and knowledge of older people. Australian Journal of Physiotherapy 52: 115–119**]

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## Introduction

Globally the ageing population presents a significant challenge for healthcare provision. The older Australian population is increasing not only in number but also in proportion to the total population (ABS 2003). Projections suggest that in 2051 older people will account for 24–27% of the total Australian population and within that prediction, 5% of the Australian population will be aged 85 years and over (ABS 2003).

In Australia, the workforce shortage in the field of human services, particularly for older people, has been longstanding (Access Economics 2001). The increase in life years of older people will impact on health and aged care costs. There will be a greater number of older Australians, including Indigenous Australians, who will require health services such as physiotherapy. As Australian longevity increases, a longer timeframe for health care provision to individuals is foreseen. In addition, natural ageing will extend the intensity required for health care provision (personnel hours) because older people are generally slower than younger people in performing the same life tasks (Pickles et al 1995). Due to the more complex health status of older people it takes health professionals a longer time to diagnose and service their health care needs (Creasey 1999). As a consequence, it is envisaged that there will be an increased demand on the physiotherapy workforce for volume, intensity and duration of services for older people in multiple workplace settings. This increased demand will have ramifications that affect many stakeholders such as clients, carers, academics, national/international committees, workplace providers and students.

The change in population profile means that an increasing number of physiotherapists will be needed to support the health care needs of this expanding sector of the population. Further, it is known that the level of disability increases with age (Andrews 2001). Hence, the predicted changes in the population profile suggest that the number of older Australians, particularly the very old aged 85 years and over, seeking physiotherapy services will increase. Additionally, this population will require longer consultations and greater expertise in physiotherapists, due to co-morbidity and socioeconomic issues such as finances, carer support, transport and housing. Hence physiotherapy shortages for older people will increase unless practitioners recognise the opportunities that exist.

The number of physiotherapy degree programs within Australia has increased considerably in the past decade (Crosbie et al 2002). In part, this was an attempt to address workplace demand for physiotherapists and students' interest in this profession. While it is encouraging to see the profession grow and interest in other areas of the profession increase, beginning practitioners are seemingly reluctant to work with older people (Finn 1986, Morris & Minichiello 1992). The purpose of this study was to examine the changes that occurred in physiotherapy students' attitudes of and knowledge towards older people, if any, during their undergraduate program. It was anticipated that, in addition to other variables such as maturation and broad life experiences, academic units of study and clinical placements, both of which included exposure to older people, would improve students' attitudes towards and knowledge of older people.

Previous studies of physiotherapy students' attitudes towards older people revealed conflicting findings about attitudes

correlated to behaviour. Mock geriatric clinical placements and actual clinical placements have demonstrated that physiotherapy students' attitudes towards older people could be improved (Brown et al 1992, Taylor and Tovin 2000). Service-learning has also been shown to improve students' attitudes towards older people (Beling 2003). Other research, not confined to physiotherapy students, contends that exposure to healthy and well older people (Rowland and Shoemaker 1995, van Zuilen et al 2001), coursework (Davis-Berman and Robinson 1989, Gorelik et al 2000), and clinical experience (Francesco et al 1997, Richardson et al 1997, Rowland and Shoemaker 1995, Royle et al 1998, van Zuilen et al 2001) positively influence students' attitudes to working with older people.

Physiotherapy students' ignorance of and generalisations about older people have also been shown to influence negatively their decision to work with older people (Coren et al 1987, Dunkle and Hyde 1995, Noose and Wilson 1994). Students' perceptions of their families' expectations about them working with older people were also influential predictors for working in aged care (Dunkle and Hyde 1995). Factors such as the students' age (Dunkle and Hyde 1995), previous interactions (both social and working) with older people (Dunkle and Hyde 1995, Wong 1991), attendance at gerontology courses (Dunkle and Hyde 1995, Taylor and Tovin 2000), and enthusiastic educators (Dunkle and Hyde 1995) did not significantly change students' behaviour.

The aim of this study was to investigate Australian physiotherapy students' attitudes towards and knowledge of older people. Students' attitudes and knowledge were measured at three points in time during their undergraduate program to examine changes over time and to describe their attitudes and knowledge as beginning practitioners.

## Method

A repeated question-response design was implemented. Undergraduate physiotherapy students at The University of Sydney were assessed at the beginning of Year 2 prior to their first clinical placement (Time 1), six months later immediately following their first clinical placement (Time 2), and at the end of Year 4 just prior to completion of the undergraduate program (Time 3), 2.5 years after Time 1. Throughout, the researchers were blind to the identity of the participants.

The beginning of Year 2 of the program was considered the most suitable time to commence data collection since the first undergraduate year contained applied sciences content but little physiotherapy academic input and no clinical education input. Student exposure to learning opportunities that could influence their knowledge and attitudes towards older people was part of the Year 2 experience. Ethics approval was attained from The University of Sydney and all ethical commitments made (particularly informed consent and confidentiality) were adhered to throughout the study.

Academic physiotherapy content related to older people was integrated throughout the course with predominance of this content in Year 4. There was no stand alone unit of study dedicated to older people. Clinical education consisted of six placements: one 4-week placement in Year 2, one 5-week placement in Year 3, and four 5-week placements in Year 4. The Year 2 placement was a general placement, which usually included some gerontology content. This placement was designed primarily for students to gain experience in

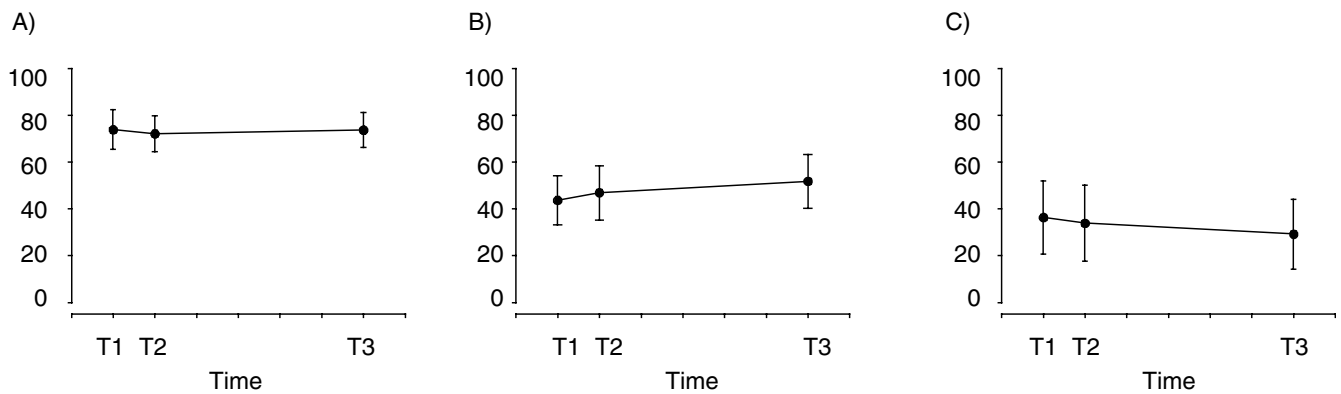
communication, team work, manual handling, working in a health care environment, and safety. The remaining clinical placements included one elective, one neurology, one cardiopulmonary, and two musculoskeletal placements. These placements were focussed on knowledge, clinical reasoning, technical skills, and competence. A specific gerontology placement was allocated if requested as an elective preference. In this cohort, less than 2% requested a gerontology elective.

**Participants** Year 2 School of Physiotherapy students, who had completed all mandatory prerequisites to commence their clinical education, were eligible to participate in this study. There were 208 eligible students, both local and international, and of that number 198 volunteered to participate, provided written consent and demographic information, and completed Time 1. One hundred and forty-five students (73% of those who consented to participate) completed Time 2 and 165 students (80% of those who consented to participate) completed Time 3.

**Measurement of attitudes toward and knowledge of older people** Two instruments used in this study measured participants' attitudes toward and knowledge of older people. The Geriatric Attitudinal Scale (GAS) (Reuben et al 1998) was selected as the most suitable measure of attitudes because the scale contained a clinical component and was easy to administer and score. The GAS is a 14-item instrument consisting of five positively worded items and nine negatively worded items (Reuben et al 1998). Participants were required to indicate their responses to items on a 5-point scale ranging from Strongly disagree (1) to Strongly agree (5). A score of three denotes a neutral response. Scores of negatively worded GAS statements were reversed before they were added to scores for the positively worded statements to produce a total score. Sample items include 'Older people are pleasant to be with', 'If I have the choice, I would rather do clinical work with younger persons than older persons', 'Older people in general do not contribute much to society' (Reuben et al 1998).

At Time 1 participants had not experienced clinical practice; therefore, only 11 of the 14-item GAS instrument were used because the remaining three questions related to clinical practice. In the subsequent administrations of the GAS, (Time 2 and Time 3) all 14 items were used. Therefore, percentage GAS positive responses were used to allow comparison over time. Given the 1–5 scoring system, a total of 60% indicates neutral attitudes; scores above this percentage indicate a positive attitude and below this percentage a negative attitude.

The Facts on Ageing Quiz 1 (FAQ1) (Palmore 1998) was considered to be the most appropriate measure of students' knowledge. It covers physical, mental and social facts and the common misconceptions about aging. The FAQ1 is a 25-item knowledge scale designed to force a Yes, No, or Don't Know response from participants to a statement related to their knowledge of older people. Sample statements include 'The majority of older people (age 65+) are senile (have defective memory or are disorientated or demented)', 'Most older persons have no interest in, nor capacity for sexual relations', 'The majority of older persons feel miserable most of the time'. The quiz had been previously validated in Australia (Luszcz 1982). From the FAQ1 data, two variables were analysed: knowledge (% FAQ1 correct responses) and ignorance/lack of knowledge (% FAQ1 Don't Know responses) (Palmore 1998). The Don't Know response



**Figure 1.** Mean responses and standard deviations for Time 1 (T1), Time 2 (T2) and Time 3 (T3) for A) Attitude (% GAS positive responses), B) Knowledge (% FAQ1 correct responses) and C) Ignorance (% FAQ1 Don't Know responses) for all participants.

choice enabled researchers to investigate whether ignorance was a significant contributor towards participants' lack of knowledge. Percentage FAQ1 responses were used to allow comparison over time.

Thus there were three dependent variables in this study: attitudes towards older people (% GAS positive responses), knowledge of older people (% FAQ1 correct responses), and ignorance of older people (% FAQ1 Don't Know responses). For each variable, paired t-tests were used to compare results between Time 1 and Time 2, Time 2 and Time 3, and Time 1 and Time 3. Significance was set at  $p < 0.05$  and effect size and 95% confidence intervals were determined.

## Results

**Profile of cohort** 81.6% of participants were Australian-born with a mean age of 21.8 years. Approximately 15% spoke a language other than English at home. Seventy percent of participants were female. The majority of participants (90%) resided in a metropolitan area and 67% had attended private or selective schools prior to undertaking tertiary education.

**Attitude towards older people** Attitude measured by the GAS over three points of time is shown in Figure 1a. The data indicated that the participants' attitudes to older persons were positive, with a mean of 73.8% GAS positive responses, prior to their first clinical education placement. There was a small but significant worsening of attitude by 2.3% GAS positive responses (95% CI 3.6% to 1.0%,  $p = 0.001$ ) from Time 1 to Time 2, and a small but significant improvement in attitude by 2.0% GAS positive responses (95% CI 0.8% to 3.2%,  $p = 0.001$ ) from Time 2 to Time 3. This meant that there was no significant difference between Time 1 and Time 3 with a mean change of -0.4% GAS positive responses (95% CI -0.9% to 1.7%,  $p = 0.56$ ).

**Knowledge of older people** Knowledge measured by the FAQ1 over three points of time is shown in Figure 1b. Initial data (Time 1) indicated that participants' knowledge at this time was inadequate with a mean of 43.6% FAQ1 correct responses at Time 1 which improved to 51.7% by Time 3. There was a significant increase in knowledge of 3.3% FAQ1 correct responses (95% CI 1.6% to 5.0%,  $p = 0.001$ ) from Time 1 to Time 2, and a significant increase in knowledge of 5.2% FAQ1 correct responses (95% CI 3.3% to 7.2%,  $p < 0.001$ ) from Time 2 to Time 3, producing a

significant overall increase in knowledge of 8.5% FAQ1 correct responses (95% CI 6.5% to 10.4%,  $p < 0.001$ ) from Time 1 to Time 3.

**Ignorance of older people** Ignorance measured by the FAQ1 over the three points of time is shown in Figure 1c. Time 1 data demonstrated that the level of ignorance was quite high with a mean of 36.2% FAQ1 Don't Know responses which decreased to 29.1% by Time 3. There was a significant decrease in ignorance of 3.1% FAQ1 Don't Know responses (95% CI 0.9% to 5.3%,  $p = 0.01$ ) from Time 1 to Time 2, and a further significant decrease in ignorance of 5.0% FAQ1 Don't Know responses (95% CI 2.5% to 7.5%,  $p < 0.001$ ) from Time 2 to Time 3 producing a significant overall decrease in ignorance of 8.0% FAQ1 Don't Know responses (95% CI 5.6% to 10.3%,  $p < 0.001$ ) from Time 1 to Time 3.

## Discussion

This research has a number of implications for the physiotherapy profession in relation to the ageing population and the resultant growing requirements for health services in aged care. The findings are encouraging in that an overall improvement in attitudes and knowledge and a reduction in ignorance occurred. However, the level of improvement is disappointing. While the GAS scores demonstrated a somewhat positive attitude towards older people throughout the undergraduate program, a more favourable attitude is desirable.

Clinical educators are influential role models in physiotherapy education (Baldry-Currens and Bithell 2000, Ohman et al 2002, Peat 1985, Shepard et al 1999, Simpson et al 1999). However, health professionals (who are often clinical educators) have been shown to have ageist beliefs (Finn 1986, Morris and Minichiello 1992). It is important to recognise that when students are on placement, they may encounter behaviour that can negatively influence their attitudes and knowledge of older people.

More favourable attitudes may also be fostered by undergraduate course academics acting as role models. The need to emphasise the increasing demand for health care for older people and to promote the evidence that physiotherapy for older people has a valuable and effective role in health promotion and health care for older people should not be

underestimated. Positive promotion of aged care as an attractive and valuable career path may concurrently dispel the myths and ageist beliefs that exist.

The participants' knowledge of older people, below 50% on the initial response, was not unexpected for this largely young cohort. The results of knowledge and ignorance illustrated that although the participants' knowledge of older people had improved significantly, primarily attributed to a reduction in their level of ignorance, their knowledge of older people only reached 52% and the ignorance score was still 29%. These results indicate that participants were still not well-informed about ageing when they graduated.

These findings should be a major concern for the profession. It is conceivable that when beginning practitioners' opinions are sought regarding the health status of older people, complaints will be dismissed by practitioners as a sign of 'growing old' (Palmore 1998). It is also of concern that beginning practitioners' expectations of older people, particularly the healthy aged, may be too low and they may provide inadequate advice to or set low treatment goals for older people. This suggests that the attainment of a higher level of knowledge about older people should be a key emphasis in curriculum development.

The contribution of physiotherapy clinical educators to facilitating students' knowledge of older people has been recognized (Peat 1985, Simpson et al 1999) and includes the enhancement of professional competencies, educational skills, and understanding of health care (Bennett 2003, Higgs et al 1991, Morris 2002, Neville and French 1991). Further research could explore clinical educators' attitudes towards and knowledge of older people because a potential cycle of negative bias from clinical educators needs to be halted if the profession is to be credible and keep pace with current health care needs.

The results of this study have prompted the implementation of strategies at the School of Physiotherapy in The University of Sydney that are aimed at improving undergraduate physiotherapy students' attitudes towards and knowledge of older people as well as ensuring that beginning level practitioners' competencies match changing healthcare demographics. Examples include a dedicated unit of study to examine physiotherapy for older people (including dispelling myths) and the inclusion of an aged care component in a community health clinical placement. Ongoing research will evaluate the effectiveness of these strategies.

This longitudinal study was confined to one cohort of undergraduate physiotherapy students. Broad interpretation of the results from this study is limited because first, the findings are restricted to one undergraduate cohort at one university. Second, the findings do not include participants from the graduate entry program and are therefore not generalisable to this group. Third, student attitudes are developed through broad life experiences on and off campus, academic and non-academic, formal and informal. It is not possible to isolate aspects of the curriculum. However, it is important to recognise that professional education is influenced by multiple variables and maturation.

In conclusion, this study demonstrated that these physiotherapy students began with somewhat positive attitudes toward older people and their knowledge of older people improved throughout the program. However the low level of knowledge and attitudes attained suggests that

educational and workplace sectors need to address the real issues confronting workforce preparation in relation to the care of older people. This is particularly important because students' ideology will become the foundation for their professional behaviour and the norms of their profession.

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