

THE PROCESS OF ENHANCING A GERIATRIC MODULE IN UNDERGRADUATE PHYSIOTHERAPY EDUCATION IN SOUTH AFRICA – PERCEIVED ATTITUDES TOWARDS AGEING AMONG COMMUNITY-DWELLING ELDERLY PERSONS IN CAPE TOWN

THE framework of Bloom's taxonomy was utilised in reviewing the educational outcomes of the geriatric module in undergraduate physiotherapy education at the University of Cape Town. The review indicated the need to pay more attention on the affective domain. To inform the content of the module, an exploratory, analytical cross-sectional study was conducted to assess the perceived attitudes of community-dwelling elderly persons in Cape Town towards their own ageing. The Attitudes to Ageing Questionnaire (AAQ) was administered to residents in six old age homes. Functional independence in activities of daily living was also assessed using the Barthel Index (BI). One hundred residents (59 women and 41 men) participated in the study, aged 61 to 95 years. The attitudes among the participants varied on individual basis, though most of them tended towards negative attitudes in the psychosocial (22.93 ± 6.63), and physical domains (17.79 ± 4.30), and positive attitudes in the psychological domain (15.44 ± 3.51). Participants with high functional levels and lower number of comorbidities were more likely to have positive attitudes towards their ageing. Outcome of study was utilised to enhance the geriatric module.

Amosun SL, (PhD)¹

¹Division of Physiotherapy, Department of Health and Rehabilitation Sciences, Faculty of Health Sciences, University of Cape Town,

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INTRODUCTION

The 4-year physiotherapy undergraduate program at the University of Cape Town (UCT) is located in a Faculty of Health Sciences that is committed to the values of health equity and social justice embedded in the Primary Health Care (PHC) philosophy (Amosun et al 2012). As in many other

countries, undergraduate physiotherapy education in South Africa has been modified due to changes in the healthcare (based on PHC philosophy) and higher education (achieving equity through widening access) systems aimed at eliminating the legacy of apartheid and steer the systems towards goals of economic development, social reconstruction, and equity (Amosun et al 2012; Ramklass 2009). The changes led to the modification of the conceptual framework for curriculum design in physiotherapy education, which now consists of three elements that are intertwined – (a) the content aspect or the knowledge base of physiotherapy; (b) the learning aspect or the student's learning process; and (c) the socio-cultural aspect which concerns the way in which physiotherapy is experienced and practiced (Borberg et al 2003).

Traditionally, the geriatric module in

the undergraduate physiotherapy program - Care of Older Persons - was aimed at preparing the students to demonstrate the knowledge, attitude and skill required to provide appropriate and effective interventions to address the health problems in older persons. The current structure of the undergraduate physiotherapy education program permits the theory of the module to be covered in the 2nd year, while students begin to apply the physiotherapy skills in the care of the elderly in a variety of community settings (including old age homes) under the supervision of clinical educators from the 3rd year of the program. On reflection, it was noted that the educational outcomes of the 2nd year module was based on a "cure model" with emphasis on diagnoses and subsequent cure of age-related biological changes and other health problems in elderly people (Hall et al 2009), with little

Corresponding author

Prof SL Amosun,
Division of Physiotherapy,
Department of Health and
Rehabilitation Sciences,
Faculty of Health Sciences,
University of Cape Town,
Anzio Road, Observatory
7925,
South Africa.
E-mail: seyi.amosun@uct.ac.za

Variables	Frequency
Age (61-92 years)	
60-70	25
71-80	40
81-90	30
91+	5
Highest level of education	
No formal education	4
Primary	22
High school	52
Tertiary	22
Marital status	
Unmarried	20
Married	9
Divorced	18
Widowed	53
Do you have children?	
Yes	81
No	19
Frequency of visits	
Always	10
Often	34
Sometimes	19
Seldom	17
Never	20
Frequency of participation in social activities outside home	
Always	3
Often	18
Sometimes	8
Seldom	15
Never	56
Frequency of participation in social activities in home	
Always	7
Often	29
Sometimes	14
Seldom	15
Never	35
Number of co-morbidities	
None	10
1-2	41
3-4	39
5-6	11
7-8	3
Bartel Index	
Minimum	20
Maximum	100
Mean(SD)	88.6(19.8)

Table 1: Baseline profile of participants (N=100)

focus on psychosocial issues. This manifested often in the assessment of students in clinical settings.

The framework of Bloom's taxonomy for understanding and conceptualizing the realms of educational outcomes identified three domains (ten Cate et al, 2004) – cognitive (deals with the recognition of knowledge required), affective (deals with values, attitudes, and behaviors), and psychomotor (deals with the physiotherapeutic skills required). Educational outcomes

related to sustainable development in higher education often include affective attributes such as values, attitudes and behaviours (Buissink-Smith et al 2011). The structure of the geriatric module would suggest that greater attention was paid to the cognitive and psychomotor domains, with little attention on the affective domain. This raises the question regarding what should be included in the learning outcomes of the module from the affective domain. A further search for peer-reviewed literature on the preparation of undergraduate physiotherapy students in South Africa to care for elderly people led to one study that concluded there was little alignment between the geriatric content in the curricula and the strategies for intervention that were outlined in the local and international policies for older persons (Ramklass et al 2010).

Curriculum enhancement is a deliberate act of enquiry that sets out with the intention of allowing people concerned with an educational learning event to make rigorous, informed judgments and decisions about the educational event, so that appropriate development may be facilitated (Coles & Grant 1985). The process should therefore reflect rigour, transparency, accountability, collegiality, and objectivity. For the purpose of enhancing the geriatric module in the undergraduate physiotherapy program at UCT, the six-step approach to curriculum enhancement was

selected as a formal process instrument (Kern et al 2009). The six steps are made up of problem identification and general needs assessment, needs assessment of targeted learners, goals and objectives, educational strategies, implementation, and evaluation and feedback. The process in the first step is described in this manuscript.

An understanding of the contextual factors that impact the process of curriculum enhancement is essential to

ensure the relevance of the curriculum. Globally, the number of people aged 60 years and older (the elderly) has increased at an unprecedented rate, and by 2050 the group may outnumber children aged 0-14 years (Aboderin 2011). Similar estimations for Africa suggest that by 2025, the proportion of the elderly in the population will be 5.5% or 52.7 million people, and will further increase to 8.3% in 2050 (Apt 2011). Statistics South Africa (2102) indicated that the elderly make up approximately 8% of the population (about 51.8 million people), the proportion increasing from 7.3% in 2001 and predicted to be 9.5% in 2015 (Westaway, 2010).

Responding to population ageing globally, the World Health Organisation (WHO) recommended measures that would reduce the risk of disease and promote the maintenance of function, confidence and engagement that can support healthy ageing (Aboderin 2010). In line with global attempts, the South African Older Person's Act of 2006 was established to protect the interests of the elderly (Ramklass et al 2010). Similar to the Madrid International Plan of Action on Ageing in 2002, and the African Union Policy Framework and Plan of Action on Ageing in 2003, the act was based on the three priority areas of WHO policy framework on active ageing, namely older people and development, advancing health and well-being into old age, and ensuring an enabling supportive environment. The act makes provision for the protection of the rights of the elderly, providing guidelines for healthcare professionals in the provision of services. With the implementation of the act, it is hypothesized that elderly persons in South Africa should report positive experiences in ageing.

Ageing is a complex process involving biological (anatomical, physiological), psychological, and social changes (Lupien & Wan 2004). The roots of the dysfunctional impact of the apartheid era are still evident, manifesting in the area of access to healthcare services (Coovadia et al 2009; Mayosi et al 2009) and the challenges of ageing and inequity. The current generation of elderly South Africans experience in various ways chronic and multiple health problems including falls, fractures, incontinence, non-communicable diseases (Coovadia et al 2009; Mayosi et al 2009) and limited mobility (Amosun et al

2007). They also experience the impact of HIV/AIDS, elderly abuse, poverty, as well as inadequate and undignified living conditions (Bohman et al 2011; Ramklass et al 2010; Strydom 2005). For various reasons, the support from extended family has been waning, and there has been an increase in the admissions of elderly people into long-term residential facilities.

Other factors influencing the process of ageing include the images of ageing created by self and the society which are mutually reinforcing. In describing their personal experiences, elderly South Africans have acknowledged the importance of good health, exercise and a balanced diet, as well as the role health plays in a positive self-image (Strydom 2005). They also acknowledged the significant roles of community and family, but expressed mixed perceptions on overall life satisfaction (Bohman et al 2011). In addition, they expressed their subjective emotions of insecurity in their non-pedestrian friendly communities, and wondered what the benefit of getting old was (Amosun et al 2007). These experiences possibly reflect some of the attitudes (perceived or real) of the elderly towards their own ageing, which may impact their wellness. It is therefore helpful to increase the understanding of the attitudes of elderly South Africans towards their own ageing within the culturally diverse contexts in the country. Therefore, to enhance the geriatric module in the undergraduate physiotherapy program at UCT, the general aim of this exploratory study was to assess the perceived attitudes of community-dwelling elderly South Africans in Cape Town towards their own ageing. In addition, the survey would assess the functional levels of the participants. The conclusions of the study would inform what should be included in the learning outcomes of the module from the affective domain.

METHODS

This was an exploratory, analytical cross-sectional study. Due to difficulties encountered in identifying appreciable number of elderly persons living in communities either independently or with families, six old age homes in Cape Town Metropole were purposively selected for the study based on convenience of location, and to allow for inclusion of participants from different population groups. After obtaining ethical approval from the Research

Ethics Committee of the Faculty of Health Sciences, University of Cape Town, and permission from the management of the selected old age homes, the study was advertised on noticeboards. The records of residents who indicated interest in participation were reviewed for their suitability. Selected participants were then given information letters and a verbal explanation of the procedure for the study, and then requested to sign consent forms. Inclusion criteria were based on a participant being a permanent resident in one of the selected old age homes, and being at least 60 years old at the time of data collection. A participant would also have sufficient comprehension of the English language to answer the questions without translation being necessary. Residents with a diagnosis of cancer, aphasia, agnosia, hearing impairment, senility, dementia, Alzheimer's disease, psychosis or any other significant cognitive impairment were not included in the study. Those requiring frail care were also excluded.

MEASUREMENT INSTRUMENTS:

The Attitudes to Ageing Questionnaire (AAQ) offers a self-reported measure with which older people express their attitudes to ageing (Laidlaw et al 2007). It is a 24-item instrument (rated on a 5-point Likert-type scale) based on the multidimensional concept of wellness in elderly people. It is divided into three domains, each with 8 statements, expressing cross-cultural attitudes to ageing. The first domain focuses on psychosocial losses relevant to older adults in which old age is seen primarily as a negative experience involving psychological and social loss (AAQ1 – psychosocial loss). The second domain has a more mixed physical functioning focus with items related primarily to health, exercise and the experience of ageing itself (AAQ2 – physical change). The third domain is made up of items that reflect both positive gains in relation to self and to others about ageing (AAQ3 – psychological growth). Originally lower scores for the psychosocial domain would indicate a negative attitude to ageing, whereas lower scores for the physical change and psychological domains indicate a positive attitude to ageing.

The instrument was piloted among five older persons resident in one old home that was not selected for this study. The 24-item instrument was reduced to 22 items because two items were taken out of the

original version – from AAQ2: My identity is not defined by my age; from AAQ3: It is very important to pass on the benefits of my experiences to younger people – due to difficulties in comprehension.

In the main study, apart from obtaining data about the demographic and baseline profile of the participants, two instruments were interviewer-administered. Based on their personal experiences, each participant was requested to express the level of agreement with each statement utilising a likert scale response format - strongly agree (1), agree (2), neutral (3), disagree (4), and strongly disagree (5). The scoring for the psychosocial loss domain was reversed to be in line with the physical change and psychological growth domains, where a higher score reflects a more negative attitude to ageing.

Secondly, the Barthel Index (BI) was utilised to assess the self-rated levels of functional independence of each participant in ten activities of daily (Sainsbury et al 2005). The activities of daily living (ADL) assessed included feeding, bathing, dressing, grooming, control of bowel movements, bladder control, toilet use, transfers, mobility, and use of stairs. The maximum possible score is 100, indicating independence in all ADL.

The data generated was analysed descriptively. The mean and standard deviation in each of the three domains of the AAQ were determined. The association between the scores of the AAQ domains and the baseline profile of the participants was also determined. The level of significance was set a $p < 0.05$.

RESULTS

A total of 100 residents (10 blacks, 51 whites, 39 coloureds) met the inclusion criteria and allowed to take part in the study. The sample consisted of 59 women (aged 60-95 years) and 41 men (aged 61-92 years), and have all lived in the selected old age homes for more than six months. Table 1 shows some of the baseline profile of the participants. The mean BI score (88.6 ± 19.8) suggests that most of the participants reported a high level of functional capability. Descriptive statistics (including mean and standard deviation) for the individual items in the three subscales of the AAQ are presented in Table 2 for male and female participants. There were no statistically significant differences ($p > 0.05$) in gender for AAQ1, AAQ2, AAQ3, and AAQ.

The mean of the AAQ scores was

	Male (n=41)	Female (n=59)	p-level		
	mean	SD	mean	SD	
AAQ1 - Psychosocial loss					
Old age is a time of loneliness	3.37	1.41	2.83	1.33	0.055
Old age is a depressing time of life	3.07	1.29	2.78	1.25	0.258
I find it more difficult to talk about my feelings as I get older	2.51	1.12	2.51	1.10	0.997
I see old age mainly as a time of loss	3.07	1.33	3.07	1.19	0.980
I am losing my physical independence as I get older	3.24	1.14	3.17	1.22	0.796
As I get older I find it more difficult to make new friends	2.73	1.16	2.51	1.21	0.316
I don't feel involved in society now that I am older	2.83	1.22	2.83	1.19	0.970
I feel excluded from things because of my age	2.78	1.26	2.76	1.25	0.964
TOTAL AAQ1	23.61	7.15	22.46	6.27	0.396
AAQ2 - Physical change					
It is important to take exercise at any age	1.93	0.93	1.75	0.78	0.357
Growing older has been easier than I thought	2.68	1.13	2.8	1.09	0.547
I don't feel old	2.39	1.32	2.64	1.32	0.322
I have more energy now than I expected for my age	3.2	1.12	3.08	1.21	0.649
Problems with my physical health do not hold me back from doing what I want	2.68	1.25	2.85	1.22	0.534
My health is better than I expected for my age	2.37	1.11	2.54	1.07	0.280
I keep fit and active as possible by exercising	2.41	1.05	2.22	0.98	0.347
TOTAL AAQ2	17.66	4.80	17.88	3.96	0.454
AAQ3 - Psychological growth					
As people get older they are better able to cope with life	2.73	1.1	2.86	1.11	0.489
It is a privilege to grow old	2.32	1.19	2.44	1.29	0.715
Wisdom comes with age	2.17	0.95	2.07	1.02	0.458
There are many pleasant things about growing older	2.49	1.12	2.31	0.99	0.480
I am more accepting of myself as I have grown older	2.12	0.75	1.97	0.72	0.310
I believe my life has made a difference	1.98	0.94	2.02	0.86	0.620
I want to give a good example to younger people	1.71	0.78	1.73	0.78	0.883
TOTAL AAQ3	15.51	3.56	15.39	3.50	0.975
TOTAL AAQ SCORE	56.78	11.66	55.73	9.72	0.614

Table 2: AAQ scores and gender (n=100)

56.32±10.51 (range = 32-91) for all the participants. Similar scores for black, white and coloured participants were 62.0±5.86 (range=50-71), 55.17±10.26 (range=32-89), and 56.52±10.66 (range=38-91) respectively. The differences were not statistically significant differences ($p>0.05$). Similarly there were no statistically significant differences in the mean AAQ scores in the following variables – levels of education, marital status, and the frequencies of family visits, as well as participation in social activities inside or outside of the residential homes. The mean scores of AAQ1, AAQ2, and AAQ3 were 22.93±6.63 (range=8-39), 17.95 ±4.30 (range=10-35), and 15.44±3.51 (range=9-26) respectively. There was a tendency towards negative attitudes in both AAQ1 and AAQ2, but towards positive attitude in AAQ3.

There were statistically significant ($p<0.05$) associations between each domain of the AAQ and the BI score (Table 3). This indicates that participants with a higher level of function were more likely to report positive attitudes towards psychosocial loss, physical change, and psychological growth. The number of co-morbidities in the participants was positively associated with each domain of AAQ (Table 3), indicating that the greater the number of co-morbidities the greater the tendency towards a negative attitude towards ageing. The association was statistically significant with AAQ2 ($p=0.029$) and total AAQ ($p=0.031$). Examples of the co-morbidities identified among the participants included hypercholesterolemia, diabetes, cardiovascular accidents, chronic pain, asthma, blindness, and depression.

DISCUSSION

The first step - problem identification and general needs assessment - in the six-step approach to curriculum enhancement (Kern et al 2009) was addressed in this manuscript. In order to inform the affective domain in Bloom's taxonomy (ten Cate et al, 2004), an exploratory survey provided information on the attitudes of elderly people in six old age home in

Cape Town towards their own ageing. The outcome of the survey was intended to inform what should be included in the learning outcomes of the geriatric module from the affective domain. However, due to the small sample size and selection of participants that may be characteristically different from those living in communities, caution must be exercised when making inferences from data.

Among the participants, the attitudes to aging varied on individual basis. The psychosocial domain values the close relationships with members of the family and the community, as well as involvement in activities (Laidlaw et al 2007). Most of the participants in the study tended towards negative attitudes. The physical domain focuses on attitudes towards one's physical health, participation in exercise, and the changes taking place as part of the ageing process. Similarly, most of the participants tended towards negative attitudes. The third domain - psychological growth – focuses on psychological gains in relation to self and to others while ageing. Most of the participants tended towards positive attitudes. These attitudes of the elderly towards themselves could affect their wellbeing (Laidlaw et al 2007), and it is important that the physiotherapy students should note this while assessing their clients.

Again, the small sample size and the unequal numbers of participants from the three different population groups, limits any inferences in the differences in the mean AAQ scores of black, white, and coloured participants. While the survey suggests that there is no statistically significant difference between the three population groups, the students should be aware of the reported challenges in ageing and inequity in South Africa (Coovadia et al 2009; Mayosi et al 2009), and apply this knowledge while assessing their clients.

In this survey, two factors were significantly associated to the attitudes of the participants, namely the functional levels and the number of co-morbidities present. In responding to population ageing globally, the WHO recommended measures

that would reduce the risk of disease and promote the maintenance of function to support healthy ageing (Aboderin 2010). Physiotherapy students should be made aware of these two factors which can be applied in the care of their clients.

Utilising the six-step approach to curriculum enhancement (Kern et al 2009), the outcomes of this survey would inform the next step in enhancing the geriatric module – Needs assessment of targeted learners. The physiotherapy students should be cognisant of the attitudes of the elderly to their ageing in the three domains measured by the AAQ. It would be helpful for the students to identify the attitudes of their clients in the psychosocial and physical domains, and the possible reasons for the negative attitudes. The students could also build on the positive attitude in the psychological growth domain to improve the attitudes in the other two domains. In addition, the students should be made aware of the possibility of differences in the attitudes based on the population background of their clients. Lastly, the students should be made aware of factors that enhance the attitude of elderly people to ageing.

The outcome of this survey led to some modification of the learning outcomes of the geriatric module in the affective domain in order to ensure that physiotherapy students are made aware of possible factors that could impact the wellbeing of elderly people.

CONCLUSION

The outcomes of the survey of the attitudes of residents in old age homes in Cape Town towards ageing have contributed to the enhancement of the geriatric module in the undergraduate physiotherapy education program at UCT.

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	AAQ1		AAQ2		AAQ3		AAQ	
	r	p level	r	p level	r	p level	r	p level
Barthel Index	-0.204878	0.040878*	-0.208802	0.037087*	-0.196875	0.049616*	-0.145446	0.148778
Number of co-morbidities	0.194096	0.052990	0.217566	0.029673*	0.040002	0.692735	0.215475	0.031317*

* Statistically significant at $p<0.05$

Table 3: Association between Attitude to Ageing scores and baseline profile of participants (n=100)

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CPD Questions (Vol 70 no 1 – March 2014)

1. Complete questionnaire and insert the correct answers in the spaces provided.
2. Ensure that you have included your full details as requested.
3. Only original questionnaires will be considered therefore please cut out and submit to SASP Head Office at: SASP CPD Questionnaire, P.O Box 752378, Gardenview, 2047 by 31 January 2014.
4. In order to capture your CPD points at the HPCSA your submission must be accompanied by a proof of payment to the value of R20.00 (NO CASH/POSTAL ORDERS/CHEQUES). Payments can be made by EFT to South African Society of Physiotherapy, Standard Bank, Bedford Gardens, Branch Code: 051001, Account No: 300417152. Please use membership number/CPD Journal as reference.

Full Name: _____	SASP Membership No.: _____
Email: _____	HPCSA PT No.: _____

CPD QUESTIONS

1. The prevalence rate for pain in South Africans living with HIV/AIDS is?
2. Self-efficacy theory uses social learning including problem solving and goal setting to
3. Environmental Barriers experienced by stroke clients include
4. Barriers experienced by patients post stroke occur at

Please indicate if the following are true or false

5. Good clinical reasoning is dependent on the clinician having the ability to recognise relevant information about the patient. **True or False**
6. Concept maps are constructed using hierarchical concepts and linking phrases to describe a particular topic. **True or False**
7. Guidelines for the management of stroke have been developed for South Africa. **True or False**
8. Less than 20% of stroke sufferers over the age of 65 years die. **True or False**
9. Patients who present with stroke require a multidisciplinary approach to rehabilitation. **True or False**
10. Flexibility in thinking refers to a network of knowledge which is held together by abstract relationships and not a mere lexicon of medical information. **True or False**

1. _____

2. _____

3. _____

4. _____

5. _____ 6. _____ 7. _____

8. _____ 9. _____ 10. _____

For any queries regarding submission of questionnaires, email Thuli at membership@saphysio.co.za