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Attitudes Toward the Elderly Among Students of Health Care Related Studies at the University of Salamanca, Spain

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Introduction: This study uses a cross-sectional approach in terms of evaluating attitudes toward the elderly among health sciences students. The aim of this study was to measure attitudes among final year pregraduate students of seven health care careers.

Method: A cross-sectional study was conducted with final year students of medicine (M), occupational therapy (OT), physiotherapy (P), nursing (N), psychology (Ps), social work (Sw), and dentistry (D). The data was collected using the validated Spanish version of the questionnaire that uses the Aged Semantic Differential (ASD), a scale developed by Rosencrantz and colleagues. Additional information about sociodemographic characteristics of students was collected.

Results: A total of 472 valid questionnaires were collected; 54% of the students showed positive attitudes toward the elderly. Female students had more positive attitudes than male ones. The Ps and P students showed a high interest in choosing geriatrics as their speciality (36%), while only 16% of the medical students considered it among their career options.

Discussion: Pregraduate health care students' attitudes tend to be less positive concerning older people's capacity for self-determination. Therefore, it would be advisable to enhance continuous interaction among healthy aged people and students of the named specialities during their specific training. The fact that the N students had less positive attitudes toward the elderly, while they were also more likely to take action, and the fact that the Ps and Sw students had more positive attitudes might suggest a need to enhance and combine the approach to the care of the older people in nursing with the psychological and life course approaches.

Key Words: attitudes, aging, pregraduate education, medical training, geriatric education

Introduction

Medical literature shows that in a world with high demands for geriatric care,¹–³ health care professionals and in particular physicians tend to exhibit negative attitudes toward the elderly. The University of Salamanca is committed to training its students in attending to and caring for the older people. As part of this commitment, the university coorganized a seminar in 1998,⁴ aiming to place the need for widening geriatric and gerontology training at different levels of academic education on the public agenda. This interest in training of human resources has currently reached the highest levels of political decision making⁵ bodies. In 2004, the Ministry of Labour and Social Issues in Spain coordinated the MIPPA technical meeting,⁶ with Training of Professionals as the main subject matter and aimed to follow the targets set by the United Nations World Assembly on Ageing 2002.

Changes to training programs or academic/official curricula should be based on the best evidence available. Therefore, we performed a study of a small cross section of students from different health care related specialities, who, in the near future, would be involved in the care of older patients. We emphasized two aspects that we considered relevant: attitudes, because of their modifiable nature, and the academic year of the students’ studies, as students in their final year are potentially a short time away from being licensed.
workers in our community. Students of seven different specialities were surveyed. In our study, attitudes are seen as a mediating link between clinical competence and performance, considering their direct influence on practical actions.7

Objective

The objective of this study was to analyze the attitudes toward the elderly among students in their final academic year of seven different health care related careers at the University of Salamanca.

Material and Methods

A survey of pregraduate students at the University of Salamanca was performed.

The instrument we used was the validated Spanish version of the questionnaire designed by the World Health Organization—Ageing and Life Course Programme (WHO-ALC) and the International Federation of Medical Students’ Associations (IFMSA) for the Teaching Geriatrics in Medical Education II Study (TeGeMe II).

This questionnaire incorporates the Aged Semantic Differential (ASD), a scale developed by Rosencrantz and coworkers.8 This instrument measures attitudes toward populations of all ages, using 32 pairs of opposing adjectives on a 7-point Likert scale. The adjectives are grouped into three categories:

I—I (Instrumental—Ineffective), which judges people in terms of their being self-determinant and able to adapt to life changes.
A—D (Autonomous—Dependant), which measures views about the old people’s capacities to contribute to social development and about their independence in society.
PA—U (Personal Acceptability—Unacceptability), which analyzes the opinions about personal acceptability and ability to interact socially.

The ASD has been frequently used as a tool to measure the attitudes of health care students toward older people.9,10 Examples of the questions presented in the scale include the following: “According to your immediate judgment, older people are effective or ineffective?, secure or insecure?” The surveyed students were asked to rate each pair of adjectives from 1 to 7, according to their personal opinion. Lower scores indicated more positive attitudes; specifically, we considered scores lower than 4 as indicating positive attitudes toward the focus population.

In addition to this specific information, the questionnaire asks for demographic characteristic data, which includes the gender and average age of the respondents, data about co-residence with parents and grandparents during their childhood, previous experience of having received training in geriatrics or gerontology, as well their intention to specialize in elderly care.

The survey was carried out between November 2006 and February 2007 with the permission of each faculty’s authorities.

We included in this study students in their last year of their pregraduate training, from the following careers taught at the University of Salamanca: medicine (M), occupational therapy (OT), physiotherapy (P), nursing (N), psychology (PS), social work (Sw), and dentistry (D).

In order to collect the data we have randomly approached students during lectures, ensuring that the great majority of the students in the selected groups were included, and that none was approached twice. An agreement from the lecturer and the university authorities had been obtained.

About 50% of the students in the final year of each of the specialities included in the study were surveyed.

Coding and Analysis

All questionnaires were coded using Microsoft Excel. Coding the questionnaires involved transferring the information given in the questionnaires into definable variables of numeric and text values. Each item on the 7-point Rosencranz scale was assigned a number of equal numeric value from 1 to 7.

For the analysis of the data we have used the SPSS 11.0 statistical software. A descriptive and then a significance analysis were performed.

Results

A total of 472 questionnaires were filled in correctly, of the 500 we collected.

Of the valid ones 374 (79%) were completed by females and 98 (21%) by males. The respondents’ average age was approximately 22 years at the time of completion of the questionnaire (TABLE 1).

Of the valid questionnaires 57 (12%) were filled out by nursing students, 33 (7%) by physiotherapy students, 14 (3%) by dentistry students, 32 (7%) by occupational therapy students, 55 (12%) by social work students, and 223 (47%) by students of medicine.

Only 126 students (27%) had lived together with their grandparents during 5 or more years of their childhood, while 346 (73%) did not have this experience.

Of all those who filled out the questionnaire in a valid manner, 61 (13%) had received some kind of training in geriatrics, while the remaining 404 (86%) had not received any kind of training in geriatric care.

A total of 103 (22%) students had considered the possibility of choosing the care of the elderly as a future speciality, while 367 (78%) had not thought of it as a possibility (TABLE 2).

Our results show that the female students on average had more positive attitudes toward older people than the males. At a general level, particularly low results were found in the categories of I—I and PA—U (TABLE 2).
In our sample, there were no statistical differences between the students who had the experience of living together with their parents and grandparents during childhood and those who did not have this experience.

When using as grouping variable the intention to specialize in geriatric care, we found that the students with intention to specialize had more positive attitudes than those who did not, with a statistically significant difference in the PA—U adjective category. Thus, these students considered older people more personally acceptable and able to interact socially, an attitude that can explain their intention to specialize in older people’s care.

Of the nursing students 12% (22%) and 12% (36%) of the physiotherapy students, had considered specializing in the care of older patients, while none of the future dentists considered geriatric care as a future career. Twenty-one of the psychology students (36%), 9 (28%) of the occupational therapy students, 11 (20%) of the social work students, and 38 (17%) of the future doctors had considered specializing in geriatric care.

In the analysis of each career, and paying particular attention to the three categories of adjectives, we found that the social work students had the most positive attitudes in the I—I category, which refers to the old people’s self-determinacy and their ability to adapt to changes; the nursing students were at the other pole of the scale. The average values were 4.00 and 4.79, respectively.

<table>
<thead>
<tr>
<th>TABLE 1. ASD Rosencranz et al. Questionnaire Model</th>
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*Grouping variable: Male/Female.

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<th>TABLE 2. Gender</th>
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*Grouping variable: Male/Female.

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<th>TABLE 3. Considered Specializing in Geriatrics</th>
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*Grouping variable: Specialization.
Psychology and occupational therapy students showed the most positive attitudes in the A—D category, which measures opinions about the capacity of older people to contribute a share to social development. The average values were 3.48 for Ps and 3.47 for the OT students, compared to 4.32 for nursing students.

The psychology students also showed the most positive attitudes in the PA—U grouping (3.26), which reflect their personal acceptance of old people and their opinion regarding elders’ ability to interact socially.

If we consider the average of all the Aged Semantic Differential (ASD) variables, we find that the students who showed the most positive attitudes are the future psychologists (3.56), followed by students of social work (3.61), occupational therapy (3.76), dentistry (3.78), physiotherapy (4.01), medicine (4.04), and nursing (4.31), respectively.

Discussion
This study is important because attitudes reflect a personal state composed of education, culture, personal values, and other characteristics. In short, a personal state capable of being modified with an opportune and tailored intervention, in this case, in relations to elderly patients.

Aging education issues have become a priority for international organizations such as the International Association of Geriatrics and Gerontology and the World Health Organization, who are working to disseminate worldwide a “Basic Contents Geriatrics Program” at medical schools.11

Despite the changes in the population’s health care needs and their demographic profile, the problems raised in current education programs in geriatrics and gerontology were only recently cited by the Center for Disease Control (CDC) as the “largest education gap in any field.” 12

Attitudes play a key role in people’s behavior. In the particular case of the doctor-patient relationship, health personnel attitudes ultimately are reflected in the quality of the services offered. There are many factors that influence personal attitudes toward a specific issue, with complicated bonds between them.

Using the WHO and IFMSA model designed for medical students, we have tried to analyze the potential factors influencing health care students’ attitudes toward older people approximately a year before they would be working in the community and to compare the results obtained for the different groups of health care related students.

At the time of writing, this is the only study to perform a cross-sectional analysis evaluating aspects related to older people, and health care students’ attitudes toward them.

There are three limitations to this study:
Not all of the students who took part in this study had undergraduate geriatrics training, and this limitation made the evaluation of the impact of training on the students’ attitudes difficult. On the other hand, our study does not include publications about aging attitudes in occupational therapy, physical therapy, psychology, or dentistry students.

Moreover, ensuring that each participating student filled out the questionnaire independently was virtually impossible. If students cooperated in completing the questionnaire, they might have influenced each other's original answers.

Finally, biases might have also been introduced during the process of the selection of the participants; self-selection might have occurred as a result of personal preferences related to the theme of the survey.

Some aspects of our findings deserve clarification. The high percentage of the responders showing positive attitudes toward the older population could be explained by the sensitization gained by the students of the University of Salamanca, living in the Autonomic Community with the highest level of aging of the population in Spain. Simple exposure to aged people might not be enough to generate positive attitudes toward them, but exposing young people to healthy aged in the community could have this effect. 13

In our study, living with grandparents for more than 5 years during childhood or adolescence seems not to have influenced the students’ attitudes toward older people. Our findings might be related to the difficulty of relating cohabitation with grandparents to contacts with healthy aged people.

At a general level, we found that the Ps students have the most positive attitudes toward older people. We believe that this is due to the high level of social awareness of older people in this career.

Another feature that should not pass unnoticed is represented by our findings in the OT group. Their positive attitudes might be due to the fact that this career is frequently taught in medical or health schools, but at the University of Salamanca it being taught by the Faculty of Psychology. Considering the latter, we consider it is appropriate to mention that the Faculty of Psychology at the University of Salamanca is one of the academic institutions of prominence in the area of gerontology in Spain and in Europe. It offers the longest-term master’s degree in gerontology in the European Union.

Concerning medical students, since 1999 their curriculum includes a basic 40-hour course consisting of both practical and theoretical geriatric sessions, offered to the fifth-year clinical students.

One interesting point is that medical students are more likely to be exposed to geriatrics patients rather than older people in their complexity, including healthy old people. For example, at the University of Salamanca, medical students are exposed to old people in elder care homes. Some authors support the importance of using models of the healthy aged or “less complex patients” as in primary care centers. 14

Despite the existence of useful models of geriatrics and gerontology education, which include a hospital centered model, new medical students could find working with aging patients with delirium, polypharmacy, multiple chronic diseases, and occasionally aggressiveness overwhelming and frustrating. 15

Our results for the nursing and physiotherapy students drew our attention to the fact that “geriatric nursing” has...
recently been recognized as a specialty and it is expected
to be an important source of labor opportunities. The same
applies to physiotherapy, where elder patients form a
considerable group of clients. However, personal attitudes can-
not rely on labor opportunities; their origins are far more
complex than the current trends of the labor market and
relate to personal experiences, specific training, and much
more. Different studies from the United States, the United
Kingdom, and Australia analyzing nursing student atti-
dudes toward the elderly have shown that societal and per-
sonal influences and the lack of exposure to older people
could be reliable predictors of nursing students’ attitudes
toward the elderly.16–18 We believe that these two careers
deserve a more specific analysis and a study to explore the
reasons behind students’ having the least positive at-
titudes toward the elderly.19

Undergraduate education can offer an excellent founda-
tion for a good medical practice to serve the needs of older
people better. Investigating the attitudes of students toward
the elderly from different aspects helps us to understand them
better and to design specific interventional strategies in or-
der to improve attitudes toward them. The results of this study
constitute a useful starting point and a basis for future analy-
sis in relation to the cross-sectional approach to elderly pa-
tients’ health care needs. Although this study cannot take into
account the diversity of training and cultural influences glo-
ally, it offers a unique opportunity to assess the opinions of
future health professionals toward the elderly on a large scale.

The evidence for the importance of geriatric topics to
undergraduate education can offer an excellent founda-
tion for a good medical practice to serve the needs of older
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ally, it offers a unique opportunity to assess the opinions of
future health professionals toward the elderly on a large scale.

The evidence for the importance of geriatric topics to
practicing physicians and for patients is based on the World
Health Organization recommendations,19 and Tonks
(1999),20 Ebrahim (1999),4 Fitzgerald (2003),21 and Mc-
Cray (1998).22

We recommend adequate training to increase awareness
regarding the community’s health care needs, and this ne-
cessitates a profound revision of the current contents of the
relevant training, in both quality and quantity.

Conflict of interest: None declared.

References
1. Brooks TR. Attitudes of medical students and family practice residents
2. Deary IJ, Smith R, Mitchell C, MacLennan WJ. Geriatric medicine:
Does teaching alter medical students’ attitudes to elderly people? Med
Educ. 1993;27:399–405
3. Wilson J, Hafferty W. Changes in attitudes toward the elderly one
999.
5. Chiang L. The geriatrics imperative: Meeting the need for physicians
docs/conclusionsmipaa.pdf.
7. Bernard MA, McAtley WJ, Belzer JA. An evaluation of a low inten-
sity intervention to introduce medical students to healthy older people.
8. Rosencranz HA, McKeown TE. A factor analysis of attitudes towards
9. Intrieri RC, Nelly JA, Brown M, Castilla C. Improving medical stu-
dents’ attitudes toward and skill with the elderly. Gerontologist. 1993;
33:373–378.
10. Reuben DB, Fullerton JT, Tschann JM, Croughan-Minihane M. The
University of California Academic Geriatric Resource Program Stu-
dent Survey Research Group: Attitudes of beginning medical students
43(12):1430–1436.
IAGG200831110919.pdf.
14. Adelman RD. Geriatric education, II: The effect of a well elderly pro-
15. Prathibha V. The Ageing Game: Improving medical student attitudes
toward caring for the elderly. J Am Med Directors Assoc. 2006;4(7):
224–229.
16. McKinley A, Cowan S. Student nurses’ attitudes toward working with
17. Happel B. Nursing home employment for nursing students: Valuable
18. Haight BK, Christ M. Does teaching alter medical students’ attitudes
20. Tonks A. Medicine must change to serve and ageing society. BMJ.
21. Fitzgerald JT, Wray LA, Halter JB, Williams BC, Supiano MA. Rel-
lating medical students’ knowledge, attitudes, and experience to an