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SHORT COMMUNICATION

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How open minded medical students really are? A pilot study

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ABSTRACT

Objective: Despite the identified biases in the provision of health, no studies have so far compared stereotypes of medical students with students from other disciplines. The aim of this cross-sectional study was to compare attitudes of medical and social science students toward population groups of different ethnic background, age, and sexual orientation. Given the social desirability biases associated with explicit attitude assessment through self-report, and the feasibility issues of implicit attitude testing, the study also developed and piloted the Attitude and Opinion Scale, a self-report instrument designed to assess attitudes and reduce social desirability.

Method: Ninety third year students from the Medical School and the Social Sciences Department of Aristotle University of Thessaloniki, Greece, completed the Attitude and Opinion Scale.

Results: Results showed statistical significant differences in attitudes toward groups of different sexual orientation ($t = 2.687$, $p = 0.009$) and age ($t = -2.554$, $p = 0.012$).

Conclusions: This pilot study indicated that the medical students have more negative attitudes toward some population groups compared to students of social sciences. Increasing attention has to be paid in undergraduate medical courses to the knowledge, attitudes, and behaviors required for the effective and culturally safe practice of medicine in culturally and gender diverse settings.

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KEYWORDS

Stereotypes; negative attitudes; ageism; homophobia; medical education.

Introduction

Studies have systematically shown that racial and ethnic minority groups often receive different and less optimal care than Caucasians [1]. As a result, the cultural orientation of the medical care system is less congruent with the cultural perspectives of some patient groups than others [2,3]. Prejudices toward age, gender, and sexual orientation interfere with the quality of provided care in many cases [4,5]. Older patients are often viewed by health professionals as set in their ways and unable to change their behavior. In terms of sexual orientation studies show that lesbian, gay, bisexual, and transgendered groups report encountering homophobia and unsatisfactory or unequal healthcare treatment [6]. LGB patients often face negative attitudes when interacting with health professionals, even in the emergency cases [7].

Given the role of biases in the provision of healthcare, it is important to identify when medical professionals acquire negative attitudes towards diverse patient groups. Attitudes are important because they are a mediating link between medical training and clinical competence. A review of initial work on attitudes of medical students concluded that the medical education process can negatively affect student attitudes, while other authors subsequently reported positive attitudes to be maintained throughout the duration of medical school [8]. Woloschuk et al. [9] confirm that as students' progress through medical school their positive attitude scores decline. The academic debate has been rich on the role of education in managing issues of diversity in society and policy responses have been varied. Academic medicine can increase awareness

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and education regarding health disparities through several venues.

To date, the role of medical education in developing negative attitudes toward diverse patient groups has not been clarified. There are no studies that compare attitudes of medical students toward diverse population groups, with students from other sciences.

Given the important role that interpersonal processes, including manifestations of biases and cultural competence, may play in the provision of health care, the accurate assessment of these phenomena might be important indicators of cultural competence for healthcare systems.

The aim of this cross-sectional pilot study was to explore negative attitudes of medical students concerning age, ethnicity, and sexual orientation compared to students of social sciences. Given the social desirability biases associated with explicit attitude assessment through self-report, and the feasibility issues of implicit attitude testing, the study also developed and piloted the Attitude and Opinion Scale, a self-report instrument designed to assess attitudes and reduce social desirability.

Methods

Sample

We invited all third year medical students, and students of social sciences to participate in our study during the period of March–May of 2018. This study was exempted from the institutional review board of the Aristotle University of Thessaloniki. Ethics approval was obtained by the ethic committee of the Aristotle University of Thessaloniki. Ninety students responded to our invitation (N = 90). According to the ethics regulations of the Aristotle University of Thessaloniki, when students participation is anonymous and not compulsory, written informed consent is not necessary. Third year was selected as it is the last year of pre-clinical training. Completed questionnaires were saved in the data protections office of the Medical School.

Material

To our knowledge there is no validated questionnaire, so we had to construct a new one. The Attitude and Opinion Scale was developed for the purposes of the study in two stages and the internal reliability analysis was satisfactory (a = 0.784). In stage I, a group of experts searched through current news and identified extracts referring to negative attitudes toward age, ethnicity, and sexual orientation. Extracts were then coded by two independent coders as to what type of attitudes they expressed. At the final stage, the selected extracts were evaluated by another two experts concerning the clarity they expressed each attitude (1–10). Only extracts with a mean evaluation of nine and above were selected for the questionnaire. The final questionnaire consisted of 11 extracts: Four concerned attitudes towards ethnicity, three toward sexual orientation, two were about ageism, and two about patients with AIDS.

Students had to indicate using a visual analog scale, the extent of agreement with each statement.

Results

Our sample consisted of 50 medical students and 45 students from Social Sciences. 56 students were female (62.2%) and 33 male (36.7%). Their age was from 20 to 50 year, the 73% of or sample was 20-years old and the 13.5% was 22-year old. The results showed statistical significant differences in attitudes concerning sexual orientation (p = 0.009) (M = 1.6727, SD = 1.76441) and age (p = 0.012) (M = 2.6909, SD = 1.45134). Medical students score higher in negative attitudes concerning people of older age, and different sexual orientation.

Table 1 shows the responses to each question in percentages for each group. 38.5% of medical students agreed that homosexuality is not a mental illness or disorder compared to 71.1% of social sciences students (p = 0.009). Furthermore, 38.5% of medical students agreed that young people must always have priority over older people, in healthcare services, compared to 20% of social science students (p = 0.012).

Discussion

This pilot study indicated that medical students have more negative attitudes toward some population groups compared to students of social sciences.

Increasing attention has to be paid in undergraduate medical courses to the knowledge, attitudes, and behaviors required for the effective and culturally safe practice of medicine in culturally and gender diverse settings. The principles and content of cultural immersion within medical education are similar to those identified by Kai et al. [10] in the context of teaching medical students the value of diversity and include encouraging students to critically reflect on their own and others' attitudes toward differences.

Table 1. Responses to each question in percentages for each group.

Real Excerpts	Medical Students	Social Sciences Students
"Refugees are criminals"	26.9%	20%
"Illegals"	19.2%	11.4%
"Radical right health services"	17.3%	11.4%
"Homosexuality is not mental illness"	**38.5%**	**77.1% ***
"Refugees not accepted"	17.3%	22.9%
"No rights to homosexuals"	25%	14.3%
"Tattoos are not acceptable if working as police officer"	17.3%	17.1%
"Tattoos are not acceptable"	21.2%	22.9%
"Children with AIDS have to wear bands"	3.8%	8.6%
"Prostitutes with AIDS have to exile"	19.2%	20%
"Elderly people have to die because they cost money to the state"	5.8%	0%
"Young must have priority in hospitals"	**38.5%**	**20% ***
"Homosexuality is ok but afflict moral principles"	50%	48.6%

* $p < 0.05$

This was a pilot study, using a newly developed tool to assess attitudes. Given the social desirability issues in directly assessing attitudes using self-reports, we believe that the newly developed tool could be used as a feasible alternative. Future studies should use the tool developed for this study to examine differences in attitudes between medical students across the years of medical education.

It is not clear if different people choose different disciplines or the difference in attitudes identified in this study is due to the different education programs. Previous studies have shown that medical education affects attitudes of the students [11]. In an attempt to reduce health disparities between specific patient populations, cultural competence and cultural humility programs have been developed for clinicians and healthcare personnel [12]. As the research evidence expands to define and understand specific disparities within different patient groups, challenges and barriers have been identified, calling for medical educators to develop and embed a set of educational goals and competencies in the curriculum to directly address issues of race, age, and gender-related clinical care [13]. A recent review of interventions to elicit positive attitude change toward older adults among physicians and medical students showed that interventions with an empathy-building component, such as mentoring, informal contact with older adults, or an aging simulation game appeared to be effective in changing attitudes [14].

Stephen Howe has argued that 'issues of race, ethnicity, and gender have become the central preoccupations of debate, to a considerable degree displacing preoccupation with class and economics' [15]. Comments such as this highlight the perception that the study of race and ethnicity has moved from the margins of academic life to the very core of the curriculum that we teach in disciplines as diverse as sociology, geography, political science, literary theory, and history. This study highlights the fact that for the provision of equal and safe health care, that medical education follows the same trend.

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