

Altruism revisited: a comparison of medical, law and business students' altruistic attitudes

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OBJECTIVE Although the concept of altruism in medicine has a long tradition in Western thought, little empirical research has been carried out recently in this area. This study compares the altruistic attitudes of medical, legal and business students.

METHODS We used a cross-sectional survey to compare the altruistic attitudes of 3 types of contemporary 'professional' students, those in medicine, law and business.

RESULTS The results suggest that medical students report more altruistic attitudes than legal students, but not than business students. Overall, female students reported stronger attitudes consistent with altruism compared with males; African-American and Hispanic students reported more altruistic attitudes compared with White students.

CONCLUSIONS Our results suggest that the recent trend in recruiting more women and under-represented minority group members into medicine may have a positive impact on altruism in the profession, if we can assume that attitudes correlate with behaviours.

KEYWORDS *altruism; students/*psychology; *education, medical, undergraduate; commerce/*education; *attitude; *jurisprudence; male; female; cross-sectional studies; comparative study [publication type].

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INTRODUCTION

Philosophers have long held that altruism is among the basic characteristics separating humans from other species and have suggested that it is part of the essence of humanity. However, there is no generally acceptable definition of altruism.¹ As Bateson and Shaw note, the actual word comes from the sociological writings of Comte in his *System of Positive Polity* (1851–1854), where he defined altruism as 'a motivational state with the ultimate goal of increasing another's welfare'. By contrast, 'egoism is a motivational state with the ultimate goal of increasing one's own welfare'.²

Altruism has been of considerable interest to social scientists, in particular to anthropologists, psychologists and sociologists. Anthropologists see altruism as a part of all major religions and regard it as significant in the maintenance of social systems. For sociologists and psychologists, altruism not only forms an important part of early socialisation, but also constitutes an element of personality. Altruism also poses a challenge for virtually all learning theory and psychoanalytic theory because it is somewhat counterintuitive. In the 1980s, much of the research into altruism was oriented towards finding egoistic motives (that is, self-centred motives) for so-called altruistic behaviour.³ Since then a paradigm shift has occurred, with the acknowledgement that altruistic behaviour does exist without trying to explain it in terms of individual motives. That is, people perform acts that benefit others and not themselves for non-selfish reasons. Bateson and Shaw² have written that understanding altruism from a psychological point of view has been dominated by the 'universal egoism hypothesis', that is, persons act altruistically primarily

Overview

What is already known on this subject

Very little empirical research on altruistic attitudes exists.

What this study adds

This study compares the altruistic attitudes of medical students with those of law and business students. It shows that female students and minority member students have more altruistic attitudes, and shows that medical students have more altruistic attitudes than law students but do not differ from business students.

Suggestions for further research

Future research might involve studies to determine the impact of educational programmes on altruistic/beneficent attitudes.

for egotistical reasons. They feel the strength of this hypothesis is supported by the elegance and parsimony of existing scientific research. Their work suggests a complementary hypothesis, the empathy–altruism hypothesis, which they have tested over a series of experiments that suggest the notion that both egoism and altruism operate simultaneously. In some cases, when people help others, the motive is egoistic (for self gain); in others the motive is altruistic (and, in some cases, both).

One other major field of inquiry into altruism has occurred within neurobiology and evolutionary theory. From an evolutionary point of view, co-operation between non-related individuals is a puzzle.⁴ Co-operation and altruism between genetically unrelated individuals goes beyond anything observed in the animal kingdom.⁵ Reciprocal altruistic behaviour between strangers is at times almost spontaneous in humans. Society punishes non-co-operation and rewards co-operation and altruism, even when there is no obvious benefit and when there may even be some cost.

Much of this work seems to be ‘designed to take altruism out of altruism’,⁶ that is, to find ways to

provide a biological explanation for altruism in terms of an evolutionary principle such as natural selection. The difficulty has been to find a way in which altruism could be shown to confer a benefit on the human species.

Sober and Wilson explore the broad divide between work performed in the field of evolution and that carried out in psychology.⁷ From an evolutionary point of view, acting selfishly has the greatest chance of promoting survival of the individual. As such, to explain altruism from an evolutionary perspective requires adopting the group selection evolutionary theory. In a sense, both psychological theorists and evolutionary theorists confront a similar dilemma with altruism. The former have difficulty with the notion of motives for altruism if self-interest (egotism) is not the motive, or, in other words, with the idea that our ultimate desires are not self-directed. Evolutionary theorists have difficulty if survival of the individual is not the driving force for self-selection.

In medicine, altruism normally refers to *overt* behaviour⁸ that is voluntary, has a beneficial outcome,¹ has some cost to the individual, but does not result in substantial gain relative to the contribution made. An altruistic act must not be required by the person’s role and there must be alternatives available, including doing nothing.¹ Pilowsky¹ identifies some attributes of the benefactor that have been shown to be important in altruistic behaviour, including the person’s necessary belief that he or she can act competently. Dependency (the perception that someone is dependent on others), however, is more likely to evoke altruism if the dependency is seen as being externally caused. Self-imposed dependency, whereby the individual is dependent but is judged to have no need to be, is more likely to be seen as malingering. This may not be as likely to elicit an altruistic response. McGaghie *et al.*⁸ note that, although altruism may be an overt act, it is usually driven by an inner core of compassion.

Altruism has been thought to be a defining characteristic of professionalism⁹ and a key feature of medical practice, but a recent article¹⁰ suggests that this may be based on a misunderstanding of the meaning of altruism. The authors claim that true altruism requires one to act in the interest of others with whom one has no formal relationship. In the case of usual medical practice, the doctor clearly has a defined special relationship. What has been previously described as altruism is, for Glannon and Ross,¹⁰ more accurately termed ‘beneficence’. For

this study, which deals with students on 3 different career paths, we have retained the term 'altruism'.

In a professional relationship the doctor is both morally and legally obligated to act in a prescribed manner with beneficence and non-maleficence, assuring the best interest of the patient is met. (In fact, in medical teaching hospitals it is patients who are altruistic in that they allow themselves to be part of the students' education and donate organs, etc. Patients give of themselves voluntarily as a gift to students with whom they have no formal relationship.)

In this exploratory study we focus on the set of beliefs students bring to medicine and compare them with beliefs students bring to business and law. Our data do not deal with overt behaviour, and therefore actual altruism, but rather with the propensity towards altruism reflected in attitudes about behaviour and the reasons why people choose particular careers.

METHODS

Although the administered survey was not about altruism nor about validating instruments to test altruistic behaviour, it did include items that have face validity with regard to altruistic attitudes. The purpose of the broader study of which this paper is part was to examine differences between the values held by 3 distinct groups of professional students (in medicine, law and business). We have adopted the definition of altruism offered by Bateson and Shaw: 'Altruism is a motivational state with the ultimate goal of increasing another's welfare'.²

This study involved students from 3 equally competitive graduate schools (medicine, law and business) at a single California university. All 3 schools are rated in the top 5–10% (US News and World Report) of their respective graduate field and all 3 are highly competitive for admission. The number of out-of-state students at each school is approximately the same. Student demographics for all 3 schools have been reported previously.¹¹ In each school, a self-administered questionnaire was part of freshman orientation. All students received a cover letter describing the project and assuring confidentiality. Non-respondents received a repeat survey 3 weeks later. Response rates varied by area of concentration (92% medicine, 72% law, 69% business).

The questionnaire contained 157 questions and took approximately 30 minutes to complete. In this paper

data from 11 items dealing with altruism and motivations for choosing a career are analysed. Each of the Likert-type items from the questionnaire was classified as assessing the construct of altruism.

For each item, gender, racial and school differences were examined with chi-square tests using SAS Version 8. As multiple (i.e. 33) comparisons were made, Bonferroni adjustment was used and the *P*-value for test of significance was set for 0.0015 (0.05/33) instead of 0.05.

RESULTS

Table 1 lists demographic characteristics by school. There were no significant differences in terms of gender distribution among the 3 schools. For race, however, there was a difference. Column percentages illustrate that 72% of business students were White, compared with 49% of medical students. A total of 14% of medical students were Hispanic, compared with just 2% of business students. African Americans were better represented in medicine (8%), compared with business (3%) or law (2%) (Table 1).

Table 2 summarises the factor analysis loadings for items related to altruism. Eleven items were entered in the factor analysis and 8 items loaded on 1 factor. The 3 eliminated items dealt with income: withholding medical treatment due to cost, income as an important factor for eventual career, and income as a deciding factor for career choice. Descriptions of the 8 altruistic items are listed in Table 2 and their reliability coefficient (i.e. α) is 0.8617.

Table 3 illustrates the multiple regression analysis for predicting altruism. The altruism scale for all 3

Table 1 Demographic characteristics by school

	Business (n = 147)	Law (n = 173)	Medicine (n = 120)	chi-square <i>P</i> -value
Gender				
Male	65%	54%	60%	
Female	35%	46%	40%	0.1095
Race				
White	72%	62%	49%	
African American	3%	2%	8%	
Hispanic	2%	10%	14%	
Asian	17%	19%	20%	
Other	7%	7%	8%	0.0011
Total	100%	100%	100%	

Column percentages may not add up to 100% due to rounding

Table 2 Factor loadings and reliability test for altruism items

Altruistic items	Factor 1	Factor 2	Factor 2
Withhold medical treatment due to cost of treatment	0.345	*	0.714
How important each factor will be for eventual career?			
Income	*	0.776	*
Working with the poor	0.760	*	*
Helping under-served communities	0.771	*	*
Doctors should be required to provide medical care to the needy	0.596	0.425	0.406
Doctors/lawyers/business people should volunteer some of their time with the poor	0.690	*	*
I feel personally responsible for providing services to the needy	0.833	*	*
I would be interested in volunteering on my own time for programmes to aid the needy during my school experience	0.710	*	*
All students should become involved in community health efforts	0.660	*	*
Society is responsible for providing health care for all of its members	0.673	*	*
How important is income in deciding between different career specialties?	0.366	0.723	0.378
Reliability coefficients for 8 items		0.8617	

* Factor loading <0.3

Table 3 Multiple regression predicting altruism

Variable	Unstandardised coefficient	Standard error	P-value
Race (omitted: White)			
African American	4.328	1.449	0.003
Hispanic	4.214	0.994	0.000
Asian	1.210	0.724	0.095
Other	0.365	1.053	0.729
School (omitted: medicine)			
Business	-1.402	0.842	0.097
Law	-1.633	0.688	0.018
Male	-1.927	0.564	0.001
Age	-0.779	0.238	0.001
Constant	32.266	0.834	0.000

The dependent variable is Altruism: range 8–38, mean = 28.69, standard deviation = 5.93

schools was normally distributed and ranged between 8 and 38, with a mean score of 28.7 and a standard deviation of 5.9. Eight predictors were entered in the linear regression model: 4 race variables; business school; law school; gender, and age. The findings indicated that African-Americans and Hispanics were more altruistic compared with Whites, with regression coefficient values of 4.33 and 4.21, respectively. Compared with medical students, law students were less altruistic (-1.63 coefficient) and there was no significant difference between business and medical students. Males were less altruistic than females and age was negatively associated with altruism – the older the student, the less altruistic.

This compares favourably with the results of a study by Lee *et al.*, who developed an adult instrument to

measure altruism.¹² They used a 28-item scale, anchored with a Cronbach's α internal consistency of 0.89.

DISCUSSION

It is not surprising that differences exist between different groups of professional students. Although it is not a written requirement for admission to university in the USA, law and medicine applicants are looked upon more favourably if they have had significant volunteer or community experience. Our colleagues in the business school report that although volunteer work is not considered a negative attribute for admission, a far more important criterion for the selection committee is meaningful work experience. So in many ways, the values reported may reflect biases in the admission process.

Differences with regard to race are also important if they are replicated in future studies. In the USA, many schools select students using a variety of criteria, some of which are academic, some test scores, and some social/community contributions. These latter criteria are rated as very important in medicine. Many of our under-represented minority medical and law students have expressed and demonstrated a strong commitment to working in under-served communities. Recent changes in legislation regarding affirmative action may work against making use of such criteria in the selection of students, however.

Gender differences are more difficult to explain but the differences between groups are remarkable.

Perhaps it is the male tendency to focus more on income that drives these differences. The area of gender differences is ripe for further research. If the gender difference observed in this study is supported by further studies, it might presage a considerable change in the practice of medicine as the percentage of female medical students increases across the USA and Europe.

It is interesting that although few business students (3%) or law students (17%) felt that working with the poor was important to their careers, a much larger number of each (business 33%, law 40%) felt that doctors should be *required* to provide medical care to the poor.

There are some limitations of our study that stem from its cross-sectional nature. Reported data do not represent behaviour, but, rather, attitudes. Different professional schools may have different socially desired response sets. Does the response rate correlate with some general measure of altruism? We do not know the answer to this, but if one considers participating in a study that has no reward for the participant but will further the cause of science as an altruistic act in and of itself, we might hypothesise that altruists are over-represented here. Further, although the number of respondents and the percentage responding is adequate for interpretation, it should be pointed out that the data represent only 1 urban school in California. Additional data from other professional schools are needed to explore whether these trends are common. It would also be useful to administer the survey to graduating students in all 3 schools as a possible measure of the impact their professional training has had on their beliefs with regard to altruism.

In summary, we have demonstrated significant differences between professional groups of students, and between students according to gender and race in attitudes that are consistent with concepts related to altruism. Although further attitudinal research is needed, we also need to establish whether these expressed attitudes are consistent with practices long after graduation.

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