

Photographic memory, money, and liposuction: survey of medical students' wish lists

Keith J Petrie, Graham R White, Linda D Cameron, John P Collins

Abstract

Objectives To examine whether medical students made fewer altruistic wishes and more money oriented wishes in later years of the medical course than students in earlier years.

Design Anonymous questionnaire survey.

Setting Auckland University School of Medicine.

Participants 520 medical students from 6 years of the course responded to the questionnaire item "If you had three wishes what would you wish for?"

Main outcome measures Proportion of wishes in various categories.

Results The three most popular categories of wishes were happiness (34% of students), money (32%), and altruistic wishes (31%). Rates of altruistic wishes (odds ratio = 1.05, 95% confidence interval 0.94 to 1.18; $P = 0.36$) and wishes for money (odds ratio = 0.96, 0.86 to 1.08; $P = 0.52$) did not vary over the years of the course. Female medical students were more likely than males to make altruistic wishes (36% *v* 26%; $\chi^2 = 5.68$, $P = 0.02$), intimacy wishes (25% *v* 18%; $\chi^2 = 3.74$, $P = 0.05$), and happiness wishes (42% *v* 26%; $\chi^2 = 18.82$, $P = 0.0001$). Men were more likely than women to make sexual wishes (5% *v* 0.8%; $\chi^2 = 7.34$, $P = 0.01$).

Conclusions We found no evidence that students were less altruistic and more money oriented in the later years of the medical course.

Introduction

Medical education is often criticised for having a detrimental influence on the values of students. Medical courses have been accused of taking in idealistic and caring students and producing cynical and less than altruistic graduates. Some studies have found that medical students report they become more uncaring, cynical, and concerned about making money over the course of their training.^{1,2}

Assessment of such changes, if they exist, is problematical. Retrospective, subjective ratings of changes in attitude over the medical course are difficult to interpret because it is hard to know how such ratings may be influenced by expectations and reporting bias. Another approach is to examine whether personal goals and wishes differ over the medical course. Wishes can be defined as goals that are unconstrained by the limitations of the real world and can be used to reveal values such as helping others and the desire to make lots

of money.³ By asking students what they would wish for if they were given three wishes, we examined how the proportions of different types of wishes vary across the course and between male and female medical students.

Participants and methods

Five hundred and twenty Auckland University medical students from the six years of the undergraduate medical course participated in the research, representing 81% of the school's medical students. The sample comprised 258 men (49.6%) and 262 women; the number of students in years 1-6 were 79, 87, 90, 93, 99 and 74, respectively. Most students were from a European ethnic background (333, 64%), with the remainder comprising Asian (104, 20%), Maori (26, 5%), Pacific Islanders (15, 3%), and other races (42, 8%). During medical school lectures students were asked to complete an anonymous questionnaire which included the following question: "If you had three wishes, what would you wish for?" Wishes were coded by two judges using an established coding scheme.⁴ Interrater reliability was calculated by using the wishes from a subset of 90 students (17% of the sample), and agreement between the two judges was high (Cohen's $\kappa = 0.89$).

Results

The table shows the numbers of students with wishes in the various categories. Some wishes were coded into more than one category—for example, "a great deal of wealth so I can use it to help and enrich the lives of people I love." The three most popular categories were

See Cover note on contents page

Health Psychology Research Group, Faculty of Medical and Health Science, University of Auckland, Private Bag 92019, Auckland, New Zealand
Keith J Petrie
associate professor
Linda D Cameron
senior lecturer

Centre for Medical Education, Faculty of Medical and Health Science, University of Auckland
Graham R White
senior lecturer
John P Collins
associate professor

Correspondence to: K J Petrie
kj.petrie@auckland.ac.nz

BMJ 1999;319:1593-5





happiness (34%), money (32%), and altruistic wishes (31%). Logistic regression analysis revealed that, contrary to predictions, the rates of altruistic wishes did not vary over the years in the course ($B = 0.05$ (SE 0.06); Wald's $\chi^2 = 0.84$, $P = 0.36$; odds ratio = 1.05, 95% confidence interval 0.94 to 1.18). There was also no evidence that the frequencies of wishes for money increased over the years of the course (-0.04 (0.06); $\chi^2 = 0.42$, $P = 0.52$; odds ratio = 0.96, 0.86 to 1.08). Wishes that related to improving self esteem were more common in the earlier years (-0.17 (0.07); $\chi^2 = 5.30$, $P = 0.02$; odds ratio = 0.84, 0.72 to 0.97); the numbers of students expressing esteem wishes were 16 (22%), 16 (18%), 20 (22%), 9 (10%), 5 (5%), and 13 (18%) for years 1 to 6 respectively. Similarly, affiliation wishes were more prevalent among students in the earlier years of the course (-0.24 (0.12); $\chi^2 = 3.98$, $P = 0.04$; odds ratio = 0.79, 0.63 to 0.99); the numbers of students with affiliation wishes were 5 (6%), 9 (10%), 7 (8%), 5 (5%), 0, and 3 (4%) for years 1 to 6 respectively. There was also a trend for wishes for greater knowledge to be reported more commonly by students in the earlier years of the course (-0.21 (0.11); $\chi^2 = 3.48$, $P = 0.06$; odds ratio = 0.81, 0.65 to 1.00).

Several students wished for vocationally useful powers including "x ray vision," "the power to visit the dead," and the power "to travel through time." Others wished for more generally useful abilities such as "the ability to breathe underwater;" "to fly like a bird," and "to change sex at will." Several innovative combinations of wishes were given, including "a photographic memory, money, and liposuction"; "omnipotence, bodily perfection, and a harem"; and "astral travel, world anarchist revolution, and good skin."

Several differences existed in the proportion of wishes listed by men and women. Women were more likely than men to make altruistic wishes (94 (36%) *v* 67 (26%); $\chi^2 = 5.68$, $df = 1$, $P = 0.02$), intimacy wishes (65 (25%) *v* 46 (18%); $\chi^2 = 3.74$, $df = 1$, $P = 0.05$), and happiness wishes (110 (42%) *v* 67 (26%); $\chi^2 = 18.82$, $df = 1$, $P = 0.0001$). Men were more likely than women to make sexual wishes (13 (5%) *v* 2 (0.8%); $\chi^2 = 7.34$, $df = 1$, $P = 0.01$).

Discussion

We found no evidence that students in the later years of the medical course were less altruistic and more money

Rank order of wishes according to the number of students expressing each wish

Rank	Wish	Examples	No (%) of students (n=520)
1	Happiness	To be happy throughout my life. Happiness in my career and personal life	177 (34)
2	Money	One million dollars. My student loan to go away	165 (32)
3	Altruism	To help others in need. An end to world hunger and poverty	159 (31)
4	Achievement	To become a successful surgeon. To get into a top specialist training position	141 (27)
5	Health	Good health for myself and family. Avoid the health problems of my parents	116 (22)
6	Intimacy	True love. To have good relationships with those I care about	110 (21)
7	Self esteem	To be more confident in the things I do. To have the guts to go for what I really want	79 (15)
8	Religious	That I would honour God in all that I did. That all my friends become Christians	41 (8)
9	Travel	Travel the world. Go to Europe on a ski holiday	41 (8)
10	Time	To have enough time to do what I want to do. Two more hours each day	40 (8)
11	Knowledge	To never sit exams again and still know everything about medicine. To have already finished medical school with all the knowledge I need	33 (6)
12	Appearance	To have the ultimate body. Never go fat	32 (6)
13	Affiliation	To have a larger and supportive group of friends and acquaintances. To see my friends and family more often	30 (6)
14	Power	To be president of the world. World dominance	24 (5)
15	Food	To have a Big Mac right now. A lifetime supply of chocolate	16 (3)
16	Sexual	A gorgeous babe. A constantly available supply of high quality sex	14 (3)
17	Undoing	To see my grandparents, who have died. I wish I had followed a different path	11 (2)

What is already known on this topic

Some studies have shown that medical students become more uncaring, cynical, and concerned about making money during the course of their training

Assessment of such changes is difficult because of expectations and the retrospective nature of such surveys

What this paper adds

Asking individuals about personal wishes can be used to assess underlying motivation

There is no evidence that students became less altruistic and more money oriented over their medical course

The overall rate of altruistic wishes was high (31%)

Strong sex differences exist, with women making more altruistic, intimacy, and happiness wishes than men

oriented in their wishes than their more junior colleagues. Altruistic and money wishes were as common in later years of the course as they were in earlier years. The overall rate of altruistic wishes is high in this student group and much greater than that reported in American university students (8%).⁴ The higher levels of self esteem, knowledge, and affiliation wishes in the earlier years of the course probably reflect the new demands of the course in these early years. These findings do not fit with the popular view of medical school education turning students into cynical and uncompassionate graduates. The results are, however, consistent with a previous longitudinal study of medical attitudes which showed that measures of empathy and a non-cynical, person oriented approach

to patient care remained stable over a three year follow up at medical school.⁵

The differences in the wishes of men and women have been the focus of considerable debate in both the scientific literature and everyday social settings. We found that female medical students made a greater number of altruistic, intimacy, and happiness wishes than males. By contrast, male students had a higher rate of sexual wishes. These results are surprisingly consistent with those predicted from evolutionary psychology, which has shown the sexes to differ in the domains where they have faced different evolutionary adaptive challenges.⁶

The close grouping of the top four wishes highlights the difficulties many doctors have later in their career of finding a balance between professional and personal goals. However, the high and stable rate of altruism evident in the wishes of medical students throughout their course suggests that this characteristic may be less degraded by the training and economic pressures than many people have thought.

Contributors: KJP had the original idea for the study and led the design of the study, interpretation of the results, and writing of the paper. LDC performed the statistical analysis and contributed to interpreting the data and writing the paper. GRW and JPC participated in data collection and design of the study and in writing the paper. KJP will act as guarantor.

Funding: None.

Competing interests: None declared.

- 1 Kay J. Traumatic deidealization and the future of medicine. *JAMA* 1990;263:572-3.
- 2 Wolf TM. A retrospective study of attitude change during medical education. *Med Educ* 1989;23:19-23.
- 3 King LA. Wishes, motives, goals, and personal strivings: relations of measures of human motivation. *J Person* 1995;63:985-1007.
- 4 King L, Broyles SJ. Wishes, gender, personality and well-being. *J Person* 1997;65:49-76.
- 5 Zeldow PB, Daugherty SR. The stability and attitudinal correlates of warmth and caring in medical students. *Med Educ* 1987;21:353-7.
- 6 Buss DM. Psychological sex differences: origins through sexual selection. *Am Psychol* 1995;50:164-8.

When I use a word ...

Fin de siècle countdown

So, does the new millennium really begin on 1 January 2000, which is when everyone will celebrate it, or on 1 January 2001, as Arthur C Clarke told us it would? I don't think that it matters. If you don't like to think of the year 2000 as the start of the third millennium, just think of it as the start of the two thousands. This is, after all, the Italian way. For instance, trecento art and literature is from the 1300s—that is, the fourteenth century.

Finger counting is the oldest method of reckoning, and because we have 10 digits on our hands, each with its own name, we count in tens, one digit (Latin *digitus*, a finger) at a time. And because we count in tens we make a big thing about multiples thereof, particularly hundreds and thousands. Which is why there's so much excitement about the turn of the millennium, even among those who don't believe that the Messiah was born 2000 or so years ago. But there are many other ways of counting.

The Mayans, for instance, counted in twenties, presumably by including their toes, and so did various tribes in the northern and western parts of what we now call Europe. Vestiges of vigesimal systems are still to be seen in the English words score (alluding to the notch that a shepherd would make on a stick after counting

20 sheep) and ream (20 quires). Modern counting systems have it too: in French, the word for 80 (*quatre vingt*) actually means four twenties, and in Danish the tens words for 50 to 90 mean two and a half twenties, three twenties, and so on.

The Sumerians, on the other hand, counted in sixties, and the Babylonians in a mixture of tens and sixties, which is why we have 60 seconds to a minute and 60 minutes to an hour or a degree. A major advantage of the sexagesimal system is that 60 is divisible by many smaller numbers, making it highly suitable as a fixed denominator for counting in fractions. This advantage ensured the survival of the sexagesimal system until the invention of systematic decimal fractions by Simon Stevin of Bruges in 1582.

Elsewhere there is counting in twos or fives—too many systems to discuss here.

How do you spell millennium, I was asked at the beginning of the year, before everybody learnt how. Two n's, I said. I later realised that I should also have said two l's, but most people get that bit right. Ah well.

Jeff Aronson, *clinical pharmacologist, Oxford*