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'What Makes a Good Doctor?' – Views of the Medical Profession and the Public in Setting Priorities for Medical Education

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ABSTRACT

Aim: The concept of the 'good doctor' was systematically studied by determining the views of doctors and non-physicians regarding the qualities and attributes of an ideal physician.

Method: A list of characteristics of a good doctor was compiled from a Medline search, and from opinions generated by three focus groups (medical school academics, general practitioners and non-medical professionals). This was qualitatively categorised into five domains: 1. Cognitive, 2. Conative, 3. Emotional, 4. Interpersonal, and 5. Moral-ethical. An inventory comprising 25 statements, which reflected the most commonly and consistently identified characteristics was administered to 274 doctors and 400 members of the public. Each item was scored on a Likert scale (0 = not important, to 4 = absolutely essential).

Results: The public regarded being 1. knowledgeable and 2. keeping up-to-date most important; physicians regarded being 1. honest and 2. responsible and trustworthy as the two most important items. There was significant difference ($p < 0.001$) between physicians 'and the public' item ratings for 13 of the 25 items. The public rated cognitive qualities most highly; the ethical domain was most important to doctors. Healthcare consumers were significantly more concerned than doctors about domains of emotional regulation, and communication. Overall, the two groups had strong agreement on the rank order of both items and domains (Spearman r, 0.88 and 0.91).

Conclusion: Medical education should inculcate the values and qualities desired by both the medical profession and public. Basic medical knowledge and reasoning are of prime importance; moral-ethical issues and communication skills should also be emphasised. Selection criteria for admission to medical school should also consider humanistic, non-cognitive traits.

Keywords: medical education, doctors, qualities, attributes, profession

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INTRODUCTION

"Not everything that counts can be counted, and not everything that can be counted counts"

– Sir George Pickering.

The ultimate goal of medical education is to produce the 'good doctor' – someone who is able to provide excellent medical care to patients under his care. However, the concept of what constitutes a good doctor remains nebulous and ill-defined. Conceivably though, if we are able to determine the desired 'ideal end-product' of medical education[1], we should be better able to set priorities in the training of future physicians.

While medicine like any other profession, relies to a large extent on self-regulatory mechanisms to determine standards of our vocation, including the desired values to be espoused; it is also important to consider the views of the public – the consumers of health care services. Indeed, modern medical practice has become increasingly patient-centered, with an emphasis on ensuring consumer satisfaction. Healthcare providers in the West have been more apt to be concerned with consumer issues; research has looked into the factors contributing toward patient satisfaction, including what are desired physician attributes[2]. The medical profession has always espoused a set of noble values, as represented for example by the Hippocratic Oath[3]. Periodically, essays and editorials appear, discussing issues like professionalism[4], humanism[5], ethics[6] or the doctor-patient relationship[7], in the literature. There has however, been little effort to systematically study what indeed, are the desirable qualities and attributes of an ideal doctor[8]. Our study is unique in that it utilises research methodology to investigate the question of 'What makes a good doctor?' and furthermore, contrasts the views of doctors and the public in Singapore. We postulated that there could be disparate views held by the profession compared with that of the community that they serve (ie. the public/patients).

From the standpoint of medical education, the findings allow for setting of priorities in the training of doctors. Certain traits, which are deemed important

for doctors to possess, could also be preferentially considered in the selection of medical school applicants. The information is also useful in efforts to enhance patient satisfaction and influencing values and standards to be adopted by the medical profession.

METHODS

In order to define characteristics deemed important for any 'good doctor' to possess, two sources of information were utilised. Firstly, a search of the literature (Medline 1980 – 97) generated a list of qualities and attributes previously cited as important or desirable in an ideal physician. This included studies, which surveyed patients' satisfaction with medical services. Secondly, three groups of people provided their views on what they regarded to be important characteristics of a good doctor. They comprised 1. a group of medical school academics from clinical and non-clinical fields, 2. a group of general practitioners and 3. a group of non-medical professionals (teacher, lawyer, accountant, psychologist etc.). The 'good doctor' was defined as a practicing clinician, and the hypothetical question of 'What sort of doctor would you like to be treating yourself or your family member should yourself or they fall ill?' was posed. This constituted the Delphi method of polling opinions from a panel of 'experts' by questionnaire, without the inhibiting factors of a round-table discussion[9].

A comprehensive list of characteristics of a 'good doctor' was thus generated. This was further qualitatively categorised, a priori into 5 domains: 1. Cognitive (eg. knowledge/skill, intelligence, thinking and decision-making). 2. Conative (eg. drive and motivation). 3. Emotional (eg. sensitivity and stability) 4. Interpersonal (eg. personality, teamwork and communication skills), and 5. Moral-ethical (consideration, trustworthiness and honesty).

A series of statements were then generated, reflecting the most commonly and consistently identified characteristics. An inventory of 25 items ultimately constituted the final questionnaire. Each item was scored on a Likert scale (0 = not important, 1 = useful, 2 = important, 3 = very important, 4 = absolutely essential). Item order was randomised before administration to a sample of 274 doctors and 400 members of the public in non health-care professions. Doctors polled were practicing clinicians, including specialists and general practitioners, who were members of the Singapore Medical Association, the main professional body of doctors in Singapore. The 'patient' group comprised people in waiting rooms of hospital or primary health clinics, and others who attended health education talks. All had seen a doctor at least once in the previous one year.

Data analysis

We examined the mean score of the 25 individual items for both groups. One-way analysis of variance (ANOVA) with corresponding F ratios are reported in the comparison of mean item scores for doctors vs. public respondents. The relationship between respondents' age and item score was examined through correlational procedures, while Student's t tests (α = 0.05) were used to determine the possible effect of gender on response. We also analysed items when aggregated into the five domains. For each respondent, a domain-specific importance rating was obtained by calculating the average rating assigned to items constituting that domain. The perceived relative importance of each domain was analysed by computing the mean rank; the Kruskal-Wallis one-way ANOVA compared differences between the group means. The Spearman rank-order correlation compared physicians' and the publics' patterns of response in rating the relative importance of items and domains.

RESULTS

Characteristics of physicians and public respondents

Questionnaires were sent out to 2800 members of the Singapore Medical Association. Complete returns were obtained from 274 doctors (response rate of 9.8%). About two-thirds (65.7%) were primary care physicians. The mean age was 45 years; 71.8% were male.

Response rate from the public was 92%. The mean age was 34 years; females constituted 62.7%. Ethnicity was generally reflective of the Singaporean population distribution.

Individual item ratings

All items on the questionnaire were considered to be 'important' by all respondents – even the lowest rated item had a mean score of 1.94 (Table I). The top two items of importance to the public related to physicians being, 1. knowledgeable and 2. keeping up-to-date (Table II). In contrast, physicians regarded the top two items as being 1. honest and 2. responsible and trustworthy. However, of the top five rated items among both groups, four items were identical. Overall, the public and doctors agreed strongly about the rank order of the 25 items (Spearman r, 0.88). The age and sex of respondents did not affect their pattern of response on items.

There was however, significant difference between physicians and the public on their ratings for a substantial number of individual items. Disagreement was statistically significant ($p < 0.001$) for 13 of the 25 items (52% of the items). The greatest difference in mean item scores related to the importance of, 1. keeping up-to-date with medical advances, 2. teamwork, 3. ability to explain things clearly and 4. being intelligent or bright. On all of these items, the rating of importance given by the public was considerably higher than that by physicians.

The public tended to consistently rate items with a higher score compared with physicians. Significantly, the only item that received a higher mean rating among physicians was the importance of a doctor being 'an honest person'. This was the most important item for doctors, while the public rated this item seventh in importance.

Table I – Comparison of mean item scores for doctors and the public

Ideal qualities of a good doctor	Mean item score		Mean	ANOVA significance	
	Public	Doctors	difference	F	P
Is knowledgeable about medical matters	3.64	3.34	0.30	19.56	0.000
Keeps himself up-to-date with medical advances	3.51	2.94	0.57	73.45	0.000
Is responsible and can be trusted	3.36	3.33	0.03	0.19	ns
Respects confidentiality	3.25	3.24	0.01	0.02	ns
Inclined more towards helping people than making money	3.28	2.98	0.38	14.27	0.000
Is emotionally stable	3.18	2.90	0.28	13.38	0.000
Is able to explain things clearly	3.17	2.67	0.50	46.18	0.000
Has an orderly and logical mind	3.16	2.89	0.27	12.76	0.000
Is an honest person	3.21	3.36	-0.15	4.16	ns
Able to remain calm under pressure	3.21	2.90	0.31	18.23	0.000
Is willing to take time to listen sympathetically	2.98	2.79	0.19	5.29	0.02
Is decisive	3.15	2.74	0.41	28.90	0.000
Is comfortable dealing with people	3.00	2.77	0.23	7.81	0.005
Has a positive outlook of life	2.82	2.59	0.23	7.80	0.005
Is able to separate important points from details	2.98	2.82	0.16	4.59	0.03
Is considerate of others' feelings	2.83	2.64	0.19	5.31	0.02
Is an understanding sort of person	2.79	2.61	0.18	5.35	0.02
Is able to think independently	2.86	2.65	0.21	6.47	0.01
Is flexible and adaptable to changes	2.73	2.52	0.21	6.68	0.01
Is intelligent and bright	2.72	2.25	0.47	33.03	0.000
Is able to work well in a team	2.61	2.07	0.54	35.45	0.000
Does not mind working long hours	2.35	1.98	0.37	13.35	0.000
Has a likeable personality	2.36	2.13	0.23	6.62	0.01
Tries to understand the cultural beliefs of the patient	2.26	2.24	0.02	0.02	ns
Able to communicate in the patient's dialect/language	2.07	1.94	0.13	1.83	ns

Table II – Top ranked items by the public and doctors with corresponding median scores

	Public		Doctors	
	Ranking	Median	Ranking	Median
Is knowledgeable about medical matters	1st	4.00	2nd	3.50
Keeps himself up-to-date with medical advances	2nd	4.00	7th	3.00
Is responsible and can be trusted	3rd	4.00	3rd	3.00
Inclined more towards helping people than making money	4th	3.00	5th	3.00
Respects confidentiality	5th	3.00	4th	3.00
Is an honest person	7th	3.00	1st	4.00

Domain ratings

The public and doctors agreed strongly about the rank order of the five domains as well (Spearman r, 0.91). The order of importance did not differ substantially as demonstrated in Fig 1.

Consistent with individual item ratings, the domains of top priority for both groups concerned cognitive and ethical items. The public was significantly ($p < 0.001$) more concerned that doctors possessed cognitive qualities. Both groups endorsed items relating to ethics highly; especially so for doctors. Consumers of healthcare were also significantly more concerned about attributes relating to emotional regulation, and communication. Doctors rated communication as the least important domain. Among the public, female healthcare consumers rated the communication domain more highly compared with males ($t = 2.04$, $p < 0.05$), while males regarded cognitive and conative domains as significantly more important ($t = 2.6$ and $t = 2.4$ respectively, $p < 0.05$). Gender and age did not affect physicians' response patterns.

DISCUSSION

Medical education is a costly and rigorous process that begins with being selected from amongst a surfeit of applicants, for entry into medical school. Competition for places in medical schools the world over is stiff and medical study is viewed by many in Singapore as a privilege. The existence of substantial governmental subsidies for medical education also underscores issues of accountability and service to the community and society by doctors. Notwithstanding these considerations, producing competent and excellent future physicians is an important responsibility of a country's medical school. Indeed, a national medical school should ideally tailor its curriculum to cater for the country's specific health care needs. By taking into account the perspectives of both physicians and consumers of healthcare in Singapore, we believe that our findings have better defined the desired goal of medical education – to produce the 'good doctor'.

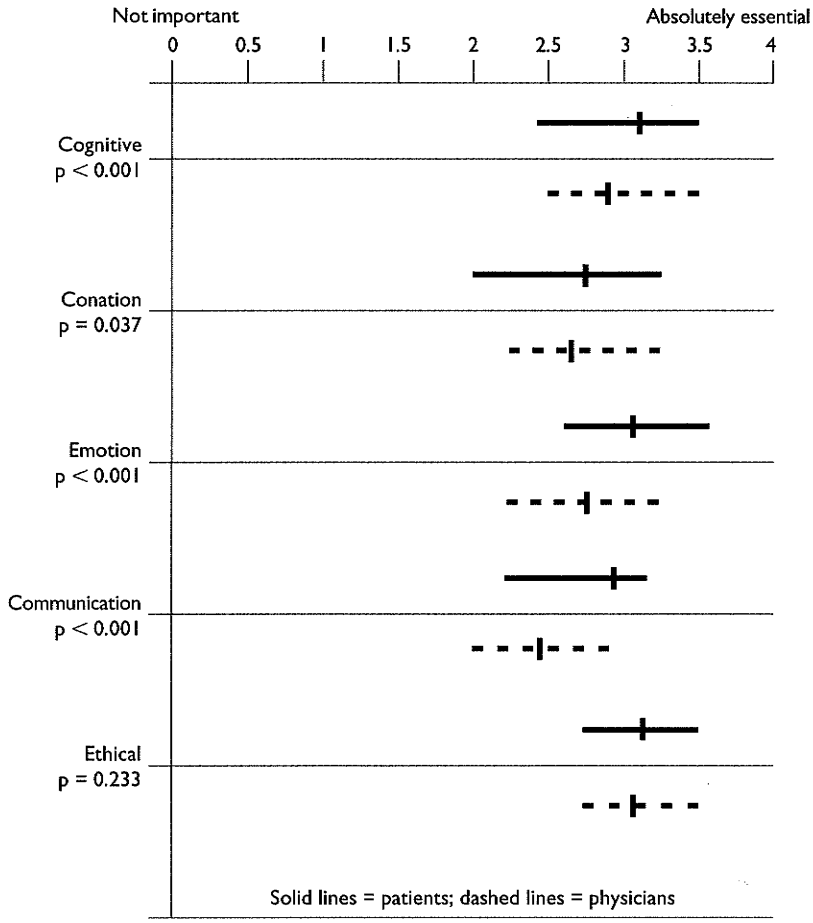

Fig 1 – Ratings of importance by the public and doctors
The vertical lines represent the median importance ratings, the left ends of the bars represent the 25th percentile, and the right ends of the bars represent the 75th percentile. The P values were obtained by using Kruskall-Wallis one-way ANOVA comparing the median ranking for each domain.

Our findings show that patients and doctors are generally in agreement as to what are the important attributes of a good doctor. All the items we identified in the questionnaire were, on average, endorsed as at least 'important' for a doctor to possess. It is gratifying to note, that doctors and their patients basically want the same thing, although some important differences in perspectives exist.

Quite understandably, the main concern of the public was that their doctor should be knowledgeable and up-to-date with medical advances (Table II). While physicians agreed that 'being knowledgeable' was of top priority (2nd ranked vs. 1st ranked by the public), they seemed to regard 'keeping up with latest advances' as less essential (7th ranking). Perhaps the importance of keeping abreast with advances may not be as crucial in primary care practice; in fact two-thirds of our doctor respondents are general practitioners. These two factors were part of the cognitive domain and this was also the top-ranked domain amongst the public. Overall, doctors concurred with the importance of these knowledge/skill and thinking items, rating the domain as second in importance.

The ethical domain was of greatest concern for doctors. It may be, that doctors are more aware of the moral pitfalls and ethical dilemmas that exist. As the population becomes more educated and well informed about medical matters, patients are likely to lay greater emphasis on moral-ethical issues. In fact, the ethical domain was ranked second in importance by the public. The greater awareness of moral-ethical issues by doctors points to the importance of professional self-regulation in maintaining standards.

The public also liked items relating to emotion and communication and gave these domains higher mean ratings than doctors. Doctors gave items on communication relatively low ratings. This disparity is important to note, as it may reflect a shift in health care needs. Traditionally, patients have taken a passive role in the doctor-patient relationship, whereas doctors have adopted a paternalistic role. Local patients may now be demanding for more information and education than was previously the case. As patients become ready to assume an active, autonomous role in healthcare decisions, doctors need to be mindful of their own ability or willingness to communicate effectively with their patients.

Before examining some possible implications our findings may have for medical education, it is important to put the study's potential limitations into perspective. The sample size in this initial study was small. The response rate among doctors was low, although this is often the case with postal surveys[10]. Our sample may also not be truly representative of all physicians in Singapore – for example there may be disproportionate representation of specialities or practice settings. The members of the public we surveyed were not sampled from the general population, limiting the generalisability of our findings to the Singapore population. The sample of non-physicians was drawn from people who were accessing a range of different healthcare services and adequately represents healthcare consumers in Singapore. The excess of females among our 'public' cohort is reflective of the approximate gender ratio for patients attending primary care health services. Similarly, there are more male doctors in Singapore as with the sample. The age of doctors was higher than non-physicians; respondents' age was not accounted for in the sampling procedure. However in our analysis, age and sex did not seem to affect the pattern of response on individual items.

We distilled a wide range of desirable factors initially generated, into a final inventory of 25 items to allow for practicable use in a survey. This should not be construed as an effort to restrictively define the concept of the 'good doctor'. The list is not exhaustive or all-inclusive and there may well be other important characteristics that were not included. The main intention was to compare the relative importance of a specified set of items and domains, and to contrast the perspectives of doctors and non-physicians.

We are also mindful that our division into five domains may give rise to a significant degree of overlap. For example, the item 'keeping up-to-date' is classified in the cognitive domain, but may well be construed as an ethical issue as well, if one argues that a physician is morally obligated to keep abreast with

medical advances. Indeed, a factor analysis of the 25 items did not yield any neat separation into discrete categories, but the domains provide a grouping of items with reasonable face validity and allow for a broader general comparison beyond individual items.

Overall, we believe that the list of items and domains creates a generic description of a good general clinician, best characterised by a primary care doctor, although we did not specifically label it as such for respondents. It may be argued that medical disciplines are sufficiently diverse so as to accommodate markedly different personalities or talents. Different specialities emphasise different qualities, and the 'humanistic' qualities deemed to be so important here may be relatively less important in some fields of medicine. The primary goal of the undergraduate medical curriculum in Singapore is still to produce a professional who is able to provide good general medical care. We maintain that these fundamental characteristics are essential for any physician involved in patient care and basic medical education should inculcate these qualities.

Medical education in the last decade has come under increasing scrutiny. The rapid changes that have taken place in medicine underscores the need to be responsive and adaptable in training of future physicians. In the light of the UK General Medical Council's recommendations for reforms in medical education and similar reviews of the medical curriculum in Singapore, our findings have potentially important applications.

Basic medical knowledge and reasoning has always formed the cornerstone of medical education and is acknowledged to be of prime importance by both doctors and non-physicians. Undisputedly this should remain the main emphasis of any curriculum. Moral-ethical issues have not been emphasised in traditional curricula, but the high regard accorded by both doctors and the public may argue for a greater emphasis on such issues. More training in communication skills should also be included, given the importance accorded by the public.

While most may readily accept that humanistic qualities, such as honesty, consideration and ability to communicate should be cultivated in future doctors, we are less clear as to how best to teach such values. The inculcation of such values is difficult or impossible to teach with traditional methods of instruction. Other teaching methods have to be considered in teaching the 'art' as opposed to the 'science' of doctoring. Medical teachers have pointed to the importance of the 'hidden curriculum'[11] where students more subtly learn by example and observation of their seniors. This emphasises the importance of the apprenticeship and mentoring system of training future physicians, as seen in the earliest medical traditions.

Also important to consider are assessment procedures and measures used to evaluate medical students. Traditionally, assessments have concentrated largely on knowledge and technical competency. Students consequently give a higher regard to these areas. Future evaluation methods should also include other skills and qualities defined as important and desirable in the good clinician.

Others have argued that some qualities may not be easily taught in medical school[12] and feel that the answer is perhaps, to select only individuals who possess certain desired characteristics for admission to medical school. Humanistic traits however, are not easily measurable and the selection process needs to remain objective, transparent and fair. Certainly though, there can be much that can be done to refine the criteria and process of selecting medical students. Already, we have incorporated some of our findings in assessing for humanistic traits to supplement academic results. Certainly, the challenge remains for us to consider both the content and process of medical education.

Even though our discussion has focused on medical education, there are other important implications of our study as well. Ensuring patient satisfaction has been shown to enhance compliance and health promoting behaviours, improving overall outcome. As healthcare priorities move toward community care, preventive medicine and chronic disease management, the human element of medicine may become more important than the technical aspects. For the medical profession, the findings help inform us as to standards and ideals that need to be adopted. The strong public demand for doctors to keep up to date for example, stresses the importance of continuing professional development, or even a need for periodic revalidation of doctors[13], given doctors' own perceptions that this is of less concern. Finally, although we have focused on how we as a profession should develop and adapt, it is important to also consider how patients can be educated as to their rights and responsibilities as consumers of health care.

Medical education should inculcate the values and qualities desired by both the medical profession and public. In considering the question of 'What makes a good doctor?' from the standpoint of both healthcare providers and consumers, we are likely to reach a better understanding of how to provide excellent medical care in Singapore.

REFERENCES

1. Fones C, Kua EH, Goh LG. What makes a good doctor: defining the ideal end-product of medical education. Acad Med 1998; 73:571-2.
2. Laine C, Davidoff F, Lewis CE, Nelson EC, Nelson E, Kessler RC, Delbanco TL. Important elements of outpatient care: a comparison of patients' and physicians' opinions. Ann Intern Med 1996; 125:640-5.
3. Hurwitz B, Richardson R. Swearing to care: the resurgence in medical oaths. BMJ 1997; 315:1671-4.
4. Calman K. The profession of medicine. BMJ 1994; 309:1140-3.
5. Pellegrino ED. Educating the humanist physician. An ancient ideal reconsidered. JAMA 1974 Mar 18; 227:1288-94.
6. Berwick D, Hiatt H, Janeway P, Smith R. An ethical code for everybody in health care. BMJ 1997; 315:1633-4.
7. Li J. The patient-physician relationship: Covenant or contract? Mayo Clin Proc 1996; 71:917-8.

8. Price PB, Lewis EG, Loughmiller GC, Nelson DE, Murray SL, Taylor CW. Attributes of a good practicing physician. J Med Edu 1971; 46:229-37.
9. Jones J, Hunter D. Consensus methods for medical and health services research. BMJ 1995; 311:376-80.
10. McAvoy BR, Kaner EF. General practice postal surveys: a questionnaire too far? BMJ 1996; 313:732-3.
11. Sade RM, Stroud MR, Levine JH, Fleming GA. Criteria for selection of future physicians. Ann Surg 1985; 201:225-30.
12. Hafferty FW. Beyond curriculum reform: confronting medicine's hidden curriculum. Acad Med 1998; 73(4):403-7.
13. Parboosingh J. Revalidation for doctors should reflect doctors' performance and continuing professional development. BMJ 1998; 317:1094-5.