

# What Are The Most Important Attributes Of A 'Good' Doctor Among Clinical Phase MBBS Students In Malaysia?

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## ABSTRACT

Non-academic attributes are not taught in medical school and mostly learned from home and the upbringing of certain people. Theories and clinical learning are taught in medical schools by experienced professors. A survey and study were done in the United Kingdom with 10 specialists and asked the doctors to rank the most important attributes needed in a good doctor. A cross sectional study was conducted on medical students in a private medical university in Malaysia in April 2021 to study the relationship between demographic profile and the most important factor attributes of a 'good' doctor among clinical phase MBBS students. Purposive non-probability sampling method was used, and data was collected through a questionnaire via Google form. Epi info v7.2.4 was used to analyse the data and mean, standard deviation and range was calculated. Based on our results, certain demographic details such as gender, academic performance, race, academic performance, parent monthly income, parent highest education, family members work in medical field had significant association with certain attributes. In conclusion, we were able to understand that certain demographic details had an impact on how medical students in the clinical phase ranks the most important attributes needed in a good doctor.

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## INTRODUCTION

Are you a professional doctor? Patients, governments, third-party healthcare payers, and reporters from newspapers, radio, and television are constantly asking this issue. As we known doctor is a professional duty, this job involves knowledge, skills, attitudes, behaviour and also humanity [1].

Every student has ideas to become a good doctor but are they going to fulfil patient expectation? Medical education should instil the ideals and qualities that are needed in the medical profession. The importance of basic medical knowledge and logic should be emphasised, as should moral-ethical problems and communication skills. Humanistic, non-cognitive characteristics should be included in medical school admissions requirements [2].

The 'good doctor', every patient wants. However, what makes a good doctor, is a difficult question to answer. A study carried out by Verena Steiner-Hofbauer, et al had shown good doctors must have few characteristics such as general interpersonal qualities, communication and patient involvement, medical competence, ethics and medical management [3].

Besides that, The European Task Force on Patient Evaluations in General Practice conducted a comprehensive analysis of the literature on patients' preferences for general practise treatment as part of a programme (EUROPEP). "Humaneness" was the most highly rated aspect of treatment. Following that came the words "competence/accuracy," "patients' confidence in decisions," and "treatment time." Themes that are similar have been found in studies that used various approaches to determine the preferences of patients in Scotland, for example, valued having a "doctor who listens and does not rush me," and most studies of patient satisfaction or disappointment emphasise the availability of knowledge and opportunities for participation. Patients are increasingly expecting to have a say in their treatment, but this expectation is rarely fulfilled. Communication breakdowns and erroneous assumptions regarding patients' expectations are all too popular [4].

Medical professionals' education must be presented not only in terms of academic excellence, but also in terms of the development of an intrinsic being surrounded by human values and ethical standards, with the goal of making their professional success in society more humanised and less commodified. We must not ignore the Hippocratic Oath, which establishes the doctor's moral code, which includes confidentiality and professional secrecy. The findings show that medical students in the United States of America have little understanding of the human principles that a doctor in the twenty-first century must understand and apply in his professional performance. Values that he ought to perform his position as a doctor in society, treating the sick as human beings, based on the idea that "there are no diseases, but sick people." Human values and ethics must be prepared, organised, coordinated, and applied as a recommendation in every subject and discipline in the Medical Career and all Careers of the Faculty of Medicine. It must first be developed as a cross-cutting topic in academic management and then integrated into the curriculum of medical careers with sufficient time load [5-12].

To be a good doctor, you need to be a good person: "a supportive partner, a good colleague, a good supermarket customer, a good driver on the route." It's easier to be a good doctor if you like people and genuinely want to assist them. A general practitioner from Wolverhampton wrote: "To like others, from this all else follows. Patients you like will help you get through the tedium of your workday, and patient interaction will provide you with motivation and renewal. You may even do some good." Finally, in contrast to good engineers, accountants, or firefighters, good doctors are not simply above average at their jobs. They're special in a differently way. Extra hardworking, extra compassionate, or extra selfless. Ancient contributors wished for doctors to create personal sacrifices for the sake of their patients. Others argued that doctors must take care of themselves first, otherwise they won't be able to support others. Doctors are also patients [13-15].

Professional expectations of medicine are determined by how the profession and community define a "healthy doctor's" medical practise [16].

High-profile failures to live up to standards have tarnished this reputation and heightened the debate [17,18], however consistent expectations of what makes a successful doctor should guide medical education design [19], the provision of patient-centered services, as well as the quality assurance of both. Despite much discussion, however, empirical research on the good doctor has been limited [20-26]. A study was conducted to find out what moral values medical students value in their education and what values the university has promoted during their graduation. A total of 153 public university students in the state of Rio de Janeiro participated in this quantitative, descriptive, and cross-sectional analysis. Respect, duty, patience, and modesty were identified as the most essential moral principles for medical education by participants, and responsibility, respect, patience, and prudence were identified as the most stimulated during graduation. Students understand the importance of moral education in vocational training and are interested in learning more about it [27-33].

Referencing the points mentioned above, all these bring us to the question, how are medical students going to become a good doctor in the future? In Malaysia, medical schools have not come to a conclusion about what are the non-attributes of a 'good' doctor. This study aimed to identify the most important non-academic attributes of a 'good' doctor and the factors affecting the attributes of a 'good' doctor.

## **METHODS**

### ***STUDY DESIGN AND SETTING***

A cross sectional study was conducted in the month of April 2021 among the clinical phase students at a private medical university in Malaysia.

### ***SAMPLING***

Previous research about the most important non-academic attributes of good doctors was done in The United Kingdom by Mr. Paul Lambe and Mr. David Bristow from Peninsula College of Medicine and Dentistry, University of Plymouth using The Delphi method. The sampling method that was used is a purposive non-probability sampling. The inclusion criteria consisted of Malaysian and International students of clinical phase from the study institution. The students who did not give their consent and those who failed to complete all the questions were excluded in the data collection.

### ***DATA COLLECTION***

The questionnaire included independent variable consisting of demographic profile and dependent variable consisting of ten attributes of 'good' doctor in our survey form. The Google survey form link was sent via WhatsApp to each class representative to distribute among their class group. Each student volunteered to participate in this survey form.

Independent variables included were age, gender, racial or ethnic identification, religion, nationality, semester, parent highest education, family members working in the medical field, parent's occupation, anyone in family owning nursing home/hospital/medical college, parent's monthly income and academic performance. Independent variable part included recognition if patient care was the primary concern of a doctor, probity (being honest, trustworthy and acting with integrity), good communication and listening skills, recognition of own's limits and those of others, pro-social attitude (empathy and non-judgmental), ability to cope with emergency, change complexity and uncertainty, commitment to lifelong learning, competence and performance development, compassion, motivation and commitment and ability to be a team player. For dependent variables, participants were asked to rate using five-point Likert scale 1 (not at all important), 2 (moderately important), 3 (important), 4 (very important) and 5 (always important) [44].

### ***DATA ANALYSIS***

The data collected was entered into Microsoft Excel and the compiled data was then statistically analysed using Epi Info version 7.2.4.0. In this study, the qualitative data such as gender, race, nationality, religion, highest education, family income, batch, academic performances and attributes of a good doctor were analysed to derive percentage and frequency. For the quantitative data such as age was analysed to derive mean, standard deviation and range. For inferential statistics, Mann Whitney U test and Kruskal Wallis test were used for data analysis.

**ETHICAL CONSIDERATION**

An informed consent was obtained from the participants, and the information was kept confidential. This research approved by the Research Ethics Committee of the Faculty of Medicine, Melaka Manipal Medical College, Melaka, Malaysia.

**RESULTS**

Table 1 shows the demographic profile of the respondents. A total number of 109 responses were received out of 600 clinical phase students from the online questionnaire (response rate of 18.17%). The mean age of the participants was 23 years (SD1.38). Among the participants, 48 (55.96%) were male and 61 (44.04%) were females. For racial/ethnic identification, 10 respondents were Malay (9.17%), 43 respondents were Chinese (39.45%), 39 respondents were Indian (35.78%) and 17 respondents were from other races (15.60%) (Table 1).

**Table 1:** Demographic of the participants (n=109)

Variables	Frequency (%)
Age	
<22	48 (44.04)
≥22	61 (55.96)
Mean (SD)	23 (1.38)
Minimum – Maximum	20.0 – 30.0
Gender	
Male	48 (55.96)
Female	61 (44.04)
Racial/Ethnic identification	
Malay	10 (9.17)
Chinese	43 (39.45)
Indian	39 (35.78)
Other	17 (15.60)
Parent highest education	
PMR	3 (2.75)
SPM	33 (30.28)
Degree	44 (40.37)
Master	23 (21.10)
PHD	6 (5.50)
Religion	
Islam	15 (13.76)
Buddhist	39 (35.78)
Hindu	30 (27.52)
Christian	22 (20.18)
Other	3 (2.75)
Nationality	
Malaysian	94 (86.24)
Others	15 (13.76)

Anyone in family members work in medical field	
Father	5 (4.59)
Father; Mother	4 (3.67)
Father; Mother; Sibling	2 (1.83)
Mother	1 (0.92)
Mother; Sibling	3 (2.75)
Sibling; No	1 (0.92)
Sibling	10 (9.17%)
No	83 (76.15%)

\* multiple answered can be chosen

Table 2 shows Q1, Q2 and Q3 of the non-academic attributes of ‘good’ doctor. Recognition that patient care was primary concern of a doctor, probity (being honest, trustworthy and acting with integrity), recognition of one’s own limits and those of others, pro-social attitude (has empathy and is non-judgemental), ability to cope with ambiguity, change, complexity and uncertainty, commitment to lifelong learning, competence and performance development, compassion, motivation and commitment and ability to be a team player share the same 4.0(Q1),5.0(Q2) and 5.0(Q3). Good communication and listening skills had shown 5.0 in Q1, Q2 and Q3 (Table 2).

**Table 2:** Non-academic attributes of a ‘good’ doctor (n=109)

Attributes	Q1 (25%)	Median	Q3 (75%)
Recognition that patient care is primary concern of a doctor	4.0	5.0	5.0
Probity (being honest, trustworthy and acting with integrity)	4.0	5.0	5.0
Good communication and listening skills	5.0	5.0	5.0
Recognition of one’s own limits and those of others	4.0	5.0	5.0
Pro-social attitude (has empathy and is non-judgemental)	4.0	5.0	5.0
Ability to cope with ambiguity, change, complexity and uncertainty	4.0	5.0	5.0
Commitment to lifelong learning, competence and performance development	4.0	5.0	5.0
Compassion	4.0	5.0	5.0
Motivation and commitment	4.0	5.0	5.0
Ability to be a team player	4.0	5.0	5.0

Table 3 shows association between various independent variables with recognition that patient care is the primary concern of a doctor (attribute 1). Parent monthly income less than RM 4360 and more than RM 9619 had shown 4.0(Q1), 5.0(Q2) and 5.0(Q3) whereas parent with monthly income between RM 4360 to RM 9619 shows 5.0(Q1), 5.0(Q2) and 5.0(Q3) with P-value 0.018. This showed that only parent monthly income was associated with patient care being the primary concern of a doctor (attribute 1) (Table 3).

**Table 3:** Recognition that patient care is the primary concern of a doctor compared to the characteristics of the participants (n=109)

<b>Attributes 1: Recognition that patient care is primary concern of a doctor</b>				
<b>Independent variable</b>	<b>Q1</b>	<b>Median</b>	<b>Q3</b>	<b>P value</b>
<b>Gender</b>				
Male	4.0	5.0	5.0	0.942
Female	4.0	5.0	5.0	
<b>Race</b>				
Malay	4.0	5.0	5.0	0.096
Chinese	4.0	5.0	5.0	
Indian	4.0	5.0	5.0	
Other	5.0	5.0	5.0	
<b>Parent highest education</b>				
High school	4.0	5.0	5.0	0.365
Undergraduate/ postgraduate	4.0	5.0	5.0	
<b>Anyone in family members work in medical field</b>				
Yes	4.0	5.0	5.0	0.585
No	4.0	5.0	5.0	
<b>Parent monthly income</b>				
< RM 4360	4.0	5.0	5.0	0.018
RM 4360 to RM 9619	5.0	5.0	5.0	
> RM 9619	4.0	5.0	5.0	
<b>Academic performance</b>				
Poor	3.0	4.0	5.0	0.0898
Average	4.0	5.0	5.0	
Good	4.0	5.0	5.0	

Table 4 shows probity and its association with the demographic characteristics of the participants. Parent monthly income less than RM 4360 showed 4.0(Q1), 5.0(Q2), 5.0(Q3) and parent with monthly income between RM 4360 to RM 9619 showed 5.0(Q1), 5.0(Q2) , 5.0(Q3) whereas more than RM 9619 showed 4.0(Q1), 5.0(Q2) and 5.0(Q3) with P-value 0.029 (significant). In terms of academic performance, poor performance showed 3.0(Q1), 4.0(Q2) and 5.0(Q3) whereas average shows 4.0(Q1), 5.0(Q2), 5.0(Q3) and good performance show 4.0(Q1), 5.0(Q2) and 5.0(Q3) with P-value 0.059 (significant) (Table 4).

**Table 4:** Probity (being honest, trustworthy, and acting with integrity) compared to the characteristics of the participants (n=109)

<b>Attributes 2: Probity (being honest, trustworthy and acting with integrity)</b>				
<b>Independent variable</b>	<b>Q1</b>	<b>Median</b>	<b>Q3</b>	<b>P value</b>
Gender				
Male	4.0	5.0	5.0	0.805
Female	4.0	5.0	5.0	
Race				
Malay	4.0	5.0	5.0	0.086
Chinese	4.0	5.0	5.0	
Indian	4.0	5.0	5.0	
Other	5.0	5.0	5.0	
Parent highest education				
High school	4.0	5.0	5.0	0.652
Undergraduate/ postgraduate	4.0	5.0	5.0	
Anyone in family members work in medical field				
Yes	4.0	5.0	5.0	0.117
No	4.0	5.0	5.0	
Parent monthly income				
< RM 4360	4.0	5.0	5.0	0.029
RM 4360 to RM 9619	5.0	5.0	5.0	
> RM 9619	4.0	5.0	5.0	
Academic performance				
Poor	3.0	4.0	5.0	0.059
Average	4.0	5.0	5.0	
Good	4.0	5.0	5.0	

Table 5 shows good communication and listening skills compared to the characteristics of the



participants. In terms of academic performance, poor performance shows 3.0(Q1), 4.0(Q2) and 5.0(Q3) whereas average shows 4.0(Q1), 5.0(Q2), 5.0(Q3) and good performance show 4.0(Q1), 5.0(Q2) and 5.0(Q3) with P-value 0.032 (significant) (Table 5).

**Table 5:** Good communication and listening skills compared to the characteristics of the participants (n=109)

<b>Attributes 3: Good communication and listening skills</b>				
<b>Independent variable</b>	<b>Q1</b>	<b>Median</b>	<b>Q3</b>	<b>P value</b>
Gender				
Male	4.0	5.0	5.0	0.751
Female	4.0	5.0	5.0	
Race				
Malay	4.0	5.0	5.0	0.209
Chinese	4.0	5.0	5.0	
Indian	4.0	5.0	5.0	
Other	5.0	5.0	5.0	
Parent highest education				
High school	4.0	5.0	5.0	0.819
Undergraduate/ postgraduate	4.0	5.0	5.0	
Anyone in family members work in medical field				
Yes	4.0	5.0	5.0	0.139
No	4.0	5.0	5.0	
Parent monthly income				
< RM 4360	4.0	5.0	5.0	0.103
RM 4360 to RM 9619	5.0	5.0	5.0	
> RM 9619	4.0	5.0	5.0	
Academic performance				
Poor	3.0	4.0	5.0	0.032
Average	4.0	5.0	5.0	
Good	4.0	5.0	5.0	

Table 6 shows recognition of one’s own limits and those of others compared to the characteristics

of the participants. Parent highest education where high school shows 4.0(Q1), 5.0(Q2), 5.0(Q3) and undergraduate/postgraduate shows 4.0(Q1), 5.0(Q2), 5.0(Q3) with P-value 0.025 (significant) (Table 6).

**Table 6:** Recognition of one’s own limits and those of others compared to the characteristics of the participants (n=109)

<b>Attributes 4: Recognition of one’s own limits and those of others</b>				
<b>Independent variable</b>	<b>Q1</b>	<b>Median</b>	<b>Q3</b>	<b>P value</b>
Gender				
Male	4.0	5.0	5.0	0.400
Female	4.0	5.0	5.0	
Race				
Malay	4.0	5.0	5.0	0.192
Chinese	4.0	5.0	5.0	
Indian	4.0	5.0	5.0	
Other	5.0	5.0	5.0	
Parent highest education				
High school	4.0	5.0	5.0	0.025
Undergraduate/ postgraduate	4.0	5.0	5.0	
Anyone in family members work in medical field				
Yes	4.0	5.0	5.0	0.108
No	4.0	5.0	5.0	
Parent monthly income				
< RM4360	4.0	5.0	5.0	0.062
RM4360 to RM 9619	5.0	5.0	5.0	
> RM 9619	4.0	5.0	5.0	
Academic performance				
Poor	3.0	4.0	5.0	0.107
Average	4.0	5.0	5.0	
Good	4.0	5.0	5.0	

Regarding pro social attitude, there was no significant association with gender, race, parent highest education, family members working in the medical field, parent monthly income, and

academic performance of the participants (Table 7).

**Table 7:** Pro-social attitude (has empathy and is non-judgemental) compared to the characteristics of the participants (n=109)

<b>Attributes 5: Pro-social attitude (has empathy and is non-judgemental)</b>				
<b>Independent variable</b>	<b>Q1</b>	<b>Median</b>	<b>Q3</b>	<b>P value</b>
Gender				
Male	4.0	5.0	5.0	0.296
Female	4.0	5.0	5.0	
Race				
Malay	4.0	5.0	5.0	0.239
Chinese	4.0	5.0	5.0	
Indian	4.0	5.0	5.0	
Other	5.0	5.0	5.0	
Parent highest education				
High school	4.0	5.0	5.0	0.508
Undergraduate/ postgraduate	4.0	5.0	5.0	
Anyone in family members work in medical field				
Yes	4.0	5.0	5.0	0.540
No	4.0	5.0	5.0	
Parent monthly income				
< RM4360	4.0	5.0	5.0	0.090
RM4360 to RM 9619	5.0	5.0	5.0	
> RM 9619	4.0	5.0	5.0	
Academic performance				
Poor	3.0	4.0	5.0	0.141
Average	4.0	5.0	5.0	
Good	4.0	5.0	5.0	

Table 8 shows ability to cope with ambiguity, change, complexity, and uncertainty compared to the characteristics of the participants. Parent monthly income less than RM 4360 shows 4.0(Q1), 5.0(Q2) , 5.0(Q3) and parent with monthly income between RM 4360 to RM9619 shows 5.0(Q1),

5.0(Q2) , 5.0(Q3) whereas more than RM 9619 shows 4.0(Q1), 5.0(Q2) and 5.0(Q3) with P-value 0.014 (significant). In terms of academic performance, poor performance show 3.0(Q1), 4.0(Q2) and 5.0(Q3) whereas average shows 4.0(Q1), 5.0(Q2) , 5.0(Q3) and good performance show 4.0(Q1), 5.0(Q2) and 5.0(Q3) with P-value 0.005 (significant) (Table 8).

**Table 8:** Ability to cope with ambiguity, change, complexity, and uncertainty compared to the characteristics of the participants (n=109)

**Attributes 6: Ability to cope with ambiguity, change, complexity, and uncertainty**

Independent variable	Q1	Median	Q3	P value
Gender				
Male	4.0	5.0	5.0	0.712
Female	4.0	5.0	5.0	
Race				
Malay	4.0	5.0	5.0	0.201
Chinese	4.0	5.0	5.0	
Indian	4.0	5.0	5.0	
Other	5.0	5.0	5.0	
Parent highest education				
High school	4.0	5.0	5.0	0.200
Undergraduate/ postgraduate	4.0	5.0	5.0	
Anyone in family members work in medical field				
Yes	4.0	5.0	5.0	0.082
No	4.0	5.0	5.0	
Parent monthly income				
< RM 4360	4.0	5.0	5.0	0.014
RM 4360 to RM 9619	5.0	5.0	5.0	
> RM 9619	4.0	5.0	5.0	
Academic performance				
Poor	3.0	4.0	5.0	0.005
Average	4.0	5.0	5.0	
Good	4.0	5.0	5.0	

Table 9 shows commitment to lifelong learning, competence, and performance development compared to the characteristics of the participants. Parent highest education where high school shows 4.0(Q1), 5.0(Q2), 5.0(Q3) and undergraduate/postgraduate shows 4.0(Q1), 5.0(Q2), 5.0(Q3) with P-value 0.026 (significant). For family members working in the medical field, results show 4.0(Q1), 5.0(Q2) and 5.0(Q3) for yes and shows 4.0(Q1), 5.0(Q2), 5.0(Q3) for no with P-value 0.021 (significant) (Table 9).

**Table 9:** Commitment to lifelong learning, competence and performance development compared to the characteristics of the participants (n=109)

<b>Attributes 7: Commitment to lifelong learning, competence, and performance development</b>				
<b>Independent variable</b>	<b>Q1</b>	<b>Median</b>	<b>Q3</b>	<b>P value</b>
Gender				
Male	4.0	5.0	5.0	0.536
Female	4.0	5.0	5.0	
Race				
Malay	4.0	5.0	5.0	0.086
Chinese	4.0	5.0	5.0	
Indian	4.0	5.0	5.0	
Other	5.0	5.0	5.0	
Parent highest education				
High school	4.0	5.0	5.0	0.026
Undergraduate/ postgraduate	4.0	5.0	5.0	
Anyone in family members work in medical field				
Yes	4.0	5.0	5.0	0.021
No	4.0	5.0	5.0	
Parent monthly income				
< RM 4360	4.0	5.0	5.0	0.054
RM 4360 to RM 9619	5.0	5.0	5.0	
> RM 9619	4.0	5.0	5.0	
Academic performance				
Poor	3.0	4.0	5.0	0.102
Average	4.0	5.0	5.0	
Good	4.0	5.0	5.0	

Table 10 shows compassion compared to the characteristics of the participants. In gender, male shows 4.0(Q1), 5.0(Q2) , 5.0(Q3) , female shows 5.0(Q1), 5.0(Q2) ,5.0(Q3) with P value of 0.015 (significant). In terms of academic performance, poor performance show 4.0(Q1), 4.0(Q2) and 5.0(Q3) whereas average shows 4.0(Q1), 5.0(Q2), 5.0(Q3) and good performance show 5.0(Q1), 5.0(Q2) and 5.0(Q3) with P-value 0.017 (significant) (Table 10).

**Table 10:** Compassion compared to the characteristics of the participants (n=109)

<b>Attributes 8: Compassion</b>				
<b>Independent variable</b>	<b>Q1</b>	<b>Median</b>	<b>Q3</b>	<b>P value</b>
Gender				
Male	4.0	5.0	5.0	0.015
Female	5.0	5.0	5.0	
Race				
Malay	5.0	5.0	5.0	0.281
Chinese	4.0	5.0	5.0	
Indian	5.0	5.0	5.0	
Other	4.0	5.0	5.0	
Parent highest education				
High school	5.0	5.0	5.0	0.234
Undergraduate/ postgraduate	4.0	5.0	5.0	
Anyone in family members work in medical field				
Yes	4.0	5.0	5.0	0.811
No	5.0	5.0	5.0	
Parent monthly income				
< RM 4360	4.0	5.0	5.0	0.061
RM 4360 to RM 9619	5.0	5.0	5.0	
> RM 9619	5.0	5.0	5.0	
Academic performance				
Poor	4.0	4.0	5.0	0.017
Average	4.0	5.0	5.0	
Good	5.0	5.0	5.0	

Table 11 shows motivation and commitment compared to the characteristics of the participants. In gender, male shows 4.0(Q1), 5.0(Q2), 5.0(Q3), female shows 4.0(Q1), 5.0(Q2) ,5.0(Q3) with P value of 0.046 (significant). Race wise, Malay shows 4.0(Q1), 5.0(Q2), 5.0(Q3), Chinese shows 4.0(Q1), 5.0(Q2), 5.0(Q3) and Indian shows 5.0(Q1), 5.0(Q2) , 5.0(Q3) and others show 5.0(Q1), 4.0(Q2) and 5.0(Q3) with P-value 0.037 (significant). In terms of academic performance, poor performance show 4.0(Q1), 4.0(Q2) and 5.0(Q3) whereas average shows 4.0(Q1), 5.0(Q2), 5.0(Q3) and good performance show 4.0(Q1), 5.0(Q2) and 5.0(Q3) with P-value 0.023 (significant) (Table 11).

**Table 11:** Motivation and commitment compared to the characteristics of the participants (n=109)

<b>Attributes 9: Motivation and commitment</b>				
<b>Independent variable</b>	<b>Q1</b>	<b>Median</b>	<b>Q3</b>	<b>P value</b>
<b>Gender</b>				
Male	4.0	5.0	5.0	0.046
Female	4.0	5.0	5.0	
<b>Race</b>				
Malay	4.0	5.0	5.0	0.037
Chinese	4.0	5.0	5.0	
Indian	5.0	5.0	5.0	
Other	5.0	4.0	5.0	
<b>Parent highest education</b>				
High school	4.5	5.0	5.0	0.589
Undergraduate/ postgraduate	4.0	5.0	5.0	
<b>Anyone in family members work in medical field</b>				
Yes	4.0	5.0	5.0	0.380
No	4.0	5.0	5.0	
<b>Parent monthly income</b>				
< RM 4360	5.0	5.0	5.0	0.111
RM 4360 to RM 9619	4.0	5.0	5.0	
> RM 9619	5.0	5.0	5.0	
<b>Academic performance</b>				
Poor	4.0	4.0	5.0	0.023
Average	4.0	5.0	5.0	
Good	4.0	5.0	5.0	

Table 12 shows the ability to be a team player compared to the characteristics of the participants. Race wise, Malay shows 4.0(Q1), 5.0(Q2) , 5.0(Q3), Chinese shows 4.0(Q1), 5.0(Q2) , 5.0(Q3) and Indian shows 5.0(Q1), 5.0(Q2) , 5.0(Q3) and others show 4.0(Q1), 5.0(Q2) and 5.0(Q3) with P-value 0.005 (significant). Parent monthly income less than RM 4360 shows 4.0(Q1), 5.0(Q2), 5.0(Q3) and parent with monthly income between RM 4360 to RM 9619 shows 4.0(Q1), 5.0(Q2), 5.0(Q3) whereas more than RM9619 shows 5.0(Q1), 5.0(Q2) and 5.0(Q3) with P-value 0.031 (significant). In terms of academic performance, poor performance shows 3.0(Q1), 4.0(Q2) and 4.0(Q3) whereas average shows 4.0(Q1), 5.0(Q2), 5.0(Q3) and good performance show 4.5(Q1), 5.0(Q2) and 5.0(Q3) with P-value 0.003 (significant) (Table 12).

**Table 12:** Ability to be a team player compared to the characteristics of the participants (n=109)

<b>Attributes 10: Ability to be a team player</b>				
<b>Independent variable</b>	<b>Q1</b>	<b>Median</b>	<b>Q3</b>	<b>P value</b>
Gender				
Male	4.0	5.0	5.0	0.109
Female	4.0	5.0	5.0	
Race				
Malay	4.0	5.0	5.0	0.005
Chinese	4.0	5.0	5.0	
Indian	5.0	5.0	5.0	
Other	4.0	5.0	5.0	
Parent highest education				
High school	4.0	5.0	5.0	0.947
Undergraduate/ postgraduate	4.0	5.0	5.0	
Anyone in family members work in medical field				
Yes	5.0	5.0	5.0	
No	4.0	5.0	5.0	0.052
Parent monthly income				
< RM 4360	4.0	5.0	5.0	
RM 4360 to RM 9619	4.0	5.0	5.0	0.031
> RM 9619	5.0	5.0	5.0	
Academic performance				
Poor	3.0	4.0	4.0	0.003
Average	4.0	5.0	5.0	
Good	4.5	5.0	5.0	



## DISCUSSION

This cross-sectional study investigated association between the demographic factors on clinical phase MBBS students in a private medical institution in Malaysia on selection of the non-academic attributes of a 'good' doctor. Besides that, we aimed to find out what were the most important non-academic attributes of 'good' doctor and its relationship to demographic profile. However, in our study we have found that all clinical phase participants agreed that all the attributes listed are important. Next, academic performance has the most significant association with non-academic attributes of 'good' doctor. A cross-sectional study which involved 153 public university students in the state of Rio de Janeiro have shown respect, duty, patience, and modesty are the most important moral principles for medical education [27-33].

Based on our results, it was found that there was no significant association between gender and recognition that patient care is primary concern of a doctor, probity (being honest, trustworthy and acting with integrity), good communication and listening skills, recognition of one's own limits and those of others, pro-social attitude (has empathy and is non-judgemental), ability to cope with ambiguity, change, complexity and uncertainty, commitment to lifelong learning, competence and performance development, and ability to be a team player. However, there was a positive association between gender and compassion, in which female is higher compared to male. As The Ethics Committee of the American "Society of Academic Emergency Medicine (SAEM)" states: "Compassion is a part of professional competence and is perhaps as technical competence, because both are required to effect meaningful healing" [34].

This came to support the findings of a previous study that compassion is an important moral element for the healthcare system [35], and thus the same finding was found in clinical phase MBBS students. A previous study of gender differences in compassion showed that males had slightly higher levels of compassion than females [36]. As for our study, females had slightly higher compassion compared to male. This might be due to the number of females participating in our study being more than male. There was also a significant association between gender and motivation and commitment. Previous study on motivation as an independent and a dependent variable in medical education showed that female students have significant higher motivation compared to male students [37,38]. Similar to our results, female students have higher motivation and commitment compared to male students.

Furthermore, there was no significant association between race and recognition that patient care is primary concern of a doctor, probity (being honest, trustworthy and acting with integrity), good communication and listening skills, recognition of one's own limits and those of others, pro-social attitude (has empathy and is non-judgemental), ability to cope with ambiguity, change, complexity and uncertainty, commitment to lifelong learning, competence and performance development and compassion. However, there was a significant association between race and motivation and commitment. In our study, we have found that Malay, Chinese and Indian have the same median score which is 5.0 whereas others have 4.0 which is slightly lower. Race and ability to be a team player also showed significant association in which Malay, Chinese, Indian and others have shared the same median score, 5.0. McLelland and Steele (1973) found that there were many factors influenced in individual student on motivation and one of the factors was race [39].

This has supported our finding that there is association between race and motivation. Additionally, our study also revealed that parent highest education and recognition that patient care was primary concern of a doctor, probity (being honest, trustworthy, and acting with integrity), good communication and listening skills, pro-social attitude (has empathy and is non-judgemental), ability to cope with ambiguity, change, complexity and uncertainty, compassion, motivation and commitment, ability to be a team player has no association. However, there was a significant association between parent highest education and recognition of one's own limits and

those of others. In our study, we have found that both high school education and graduate have the same median score of 5.0. Next, there was significant association between parent highest education and commitment to lifelong learning, competence, and performance development. From a previous research, parents' education has made a big impact on children's education and aspiration which support our findings today [40].

Nevertheless, children of more educated parents study in their adulthood more in comparison with children with sons of lower-educated parents [42].

Conclusion, parents receiving higher education have a bigger influence on their child in terms of recognition of one's own limits and lifelong learning. Moreover, there was no association between family members in medical field and recognition that patient care is primary concern of a doctor, probity (being honest, trustworthy, and acting with integrity), good communication and listening skills, pro-social attitude (has empathy and is non-judgemental), compassion, motivation and commitment, ability to be a team player. However, there is significant association between family members work in the medical field with commitment to lifelong learning, competence, and performance development. A previous study has proved that parents who are lifelong learners have influenced almost half of their children to be a lifelong learner too. This article indirectly has proven our result as most of their parents who are involved in the medical field are a lifelong learner, and therefore has a big impact on their children too [41].

Thus, our result strongly recommended that parents play an important role model on influencing their children to become a lifelong learner in their life. In our study, we also found out that there was no significance between parent monthly income and good communication and listening skills, recognition of one's own limits and those of others, pro-social attitude (has empathy and is non-judgemental), commitment to lifelong learning, competence and performance development, compassion, and motivation and commitment. Previous study showed that households with higher income are more likely to make their children participate in lifelong learning. In contrast, our study does not reveal the same result as previous study [42].

In other hand, there is significance between parent monthly income and recognition in patient care being the primary concern of a doctor, probity (being honest, trustworthy and acting with integrity), ability to cope with ambiguity, change, complexity and uncertainty, and ability to be a team player. Next, in our study also showed academic performance has no association with recognition that patient care is the primary concern of a doctor, probity (being honest, trustworthy and acting with integrity), recognition of one's own limits and those of others, pro-social attitude (has empathy and is non-judgemental), and commitment to lifelong learning, competence and performance development [43].

On the other side, academic performance has significant association with good communication and listening skills, ability to cope with ambiguity, change, complexity and uncertainty, compassion, motivation and commitment, and ability to be a team player. There are some limitations to this research. First, only clinical phase medical students from a private medical university in Malaysia were allowed to participate in this research due to the study being done in a short span of time and pre-clinical students have not yet been exposed to posting in hospital yet thus the research will not be able to be generalizable. Secondly, there was concern about the low response rate, which could lead to selective non-response bias. Further researchers are recommended to increase their sample size by incorporating students from different universities in order to make the result more generalizable. Moreover, we recommend that more talks should be held by experienced doctors about the attributes that patients look for in a good doctor. This will be able to cultivate the important attribute for a doctor in students even before stepping into clinical practise.

## CONCLUSION

In summary, academic performance is the most important factor affecting clinical phase MBBS students on selection of the non-academic attributes of 'good' doctor. We have also studied the association between demographic profile and non-academic attributes of 'good' doctor in which academic performance has the most significant association. It is significantly associated with good communication skills, ability to cope with ambiguity, change, complexity and uncertainty, compassion, motivation and commitment, and ability to be a team player. Last but not least, all clinical phase MBBS students in this study also agreed that all the attributes listed are the most important non-academic attributes of 'good' doctor.

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