

GSJ: Volume 8, Issue 1, January 2020, Online: ISSN 2320-9186

www.globalscientificjournal.com

Patients' Preferences for Attributes Among Health Care Providers in Karachi, Pakistan: A Cross-Sectional Study

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Abstract:

Knowing which attributes constitute an ideal doctor according to patients will help build stronger doctor-patient relationships, increase trust and compliance, and benefit the overall health care system. This cross-sectional study was conducted from January – June 2018 in order to identify, evaluate, and assess the preferences of patients and attendants regarding attributes of health care providers in Karachi, Pakistan. Non-probability purposive sampling was carried out by administering a structured questionnaire at two hospitals in Karachi. Out of 400 adult participants (aged 18-70 years) approached, 384 agreed to fill out the questionnaire. Data was analyzed using SPSS version 21, frequencies and proportions were done for descriptive analysis, and chi-square test was carried out for comparison between groups (p< 0.05 considered as

significant). Males constituted 38.3% of the participants and females 61.7%; 30.5% were uneducated while 69.5% participants had at least some formal education. The options among the most frequently preferred included being *polite/friendly* (48.7%), *speaking the same language as the patient* (40.6%), *more experienced/older trained* (56.8%), and *caring about the total cost* (31.5%). The last two were also frequently selected in all three of the top preferences at the end of the questionnaire, emphasizing their importance. Thus, this study illustrates the most important characteristics of a doctor to this population, and the strength of its application lies in its ability to be imperative in helping current physicians in Karachi create deeper bonds of trust and in preparing future medical students to deliver a higher quality of healthcare in Pakistan.

Keywords: Doctor-Patient relationship, Patient preferences, Attributes of medical doctors, Good doctor, Pakistan

INTRODUCTION:

Patients' preferences about their doctors' attributes is an imperative part of healthcare [1].

Preference can be defined as "a thing that is liked better or best;" hence patient preference refers to the fact that a patient has a choice of selecting the health care providers, which they consider has the best characteristics and qualities, most suited to fulfilling their needs [2]. Factors such as gender, age, language, personality, appearance, availability, and reputation influence a patient's likelihood to feel comfortable with their health care providers [3, 4]. In order to create "meaningful and trustworthy relationships," there must be effective communication between patients and doctors, as it is one of the most important elements of healthcare delivery [5, 6]. Changes in advancing medical practices have led to patient-oriented medicine with more engrossed attention towards patient preferences [6, 7, 8]. Priority is shifting from doctors making all the decisions, to the patient's rights to know about their disease and be informed about treatment options [9, 10, 11].

Globally, studies conducted on patients' preferences about their doctors' attributes have been varied based on location, culture, and social norms. A "good doctor" cannot be defined in fixed terms, but rather depends on the patients' expectations in that specific demographic area [12]. In the United Kingdom, guidelines for a national standard of care have been laid out by the General Medical Council (GMC) which indicate that health care providers should behave with "respect for patients" and act with "honesty and integrity," as well as, be able to "apply knowledge and experience to practice" and "communicate effectively" with their patients about their diagnosis [13]. In the United States, an exploratory study conducted in Minnesota, to describe the best behavior of ideal health care providers, found that the most frequently mentioned theme was

"thorough," which was defined as "conscientious and persistent" [12]. This revealed that for them, a good physician was one that adequately described the disease and its treatment in depth, which would allow them to further make decisions regarding their options for treatment and follow up care. A study conducted in Israel, revealed that participants expressed more importance to the personal and professional skills of healthcare workers rather than their gender [14]. Similarly, another study conducted in Israel to find out the perspective that patients had about a good physician, found that "participating patients selected professional expertise (50%), physician patience and attentiveness (38% and 30% respectively), and informing the patient, representing the patient's interest, being truthful, and respecting patients' preferences (25-36%) as the most essential attributes" of health care providers [15]. Thus, this population strongly believed that the professional skills of a doctor was one of the most imperative aspects of their care. A systemic review, in Denmark, of 19 articles on patient priorities for general practice care "suggested [that] both technical and interpersonal qualities" were crucial for patients; they also prioritized "preventive services and availability, accessibility, and organization of services" in their health care system [16]. This again illustrates that patients' preferences depend on the geographical area in which they reside, and the major issues they face determine what they expect their relationship with their doctor to be like.

In Pakistan, literature is limited and few studies have been conducted to identify the patients' preferences about the attributes of health care providers. A study was carried out in Karachi to evaluate the attributes most preferred by patients [17]. The research was conducted only in the private sector and the physician's characteristics such as age, gender, and years of experience were not included in their questionnaire [17]. Furthermore, the researchers focused more on the

evaluation and satisfaction aspects of the current healthcare situation in their specific health care facility [17]. As we have seen, literature has suggested that health care providers' characteristics can make a huge difference in a patient's preferences; thus, we included this information in our study to fill some of the gaps in current literature available in Pakistan [7, 8]. We designed our study to identify the ideal doctor from the patients' point of view, focusing on the public health sector, giving importance to the patients' preferences rather than evaluation or satisfaction, and including doctor's behavior, background, relationship with the patient, and cultural and linguistic issues, in order to understand the requirements and expectations of the Karachi population from their physicians. The major aim of this study was to identify, evaluate, and assess the point of views and preferences on the attributes of health care providers in Karachi, Pakistan.



This was a cross-sectional study, carried out in Karachi, Pakistan from January to June 2018. The study was conducted in two public sector health care facilities; one under the administration of provincial level, Jinnah Medical College Hospital, Karachi, Pakistan, and the other federal level, Jinnah Post Graduate Medical Center, Karachi, Pakistan. Non-probability purposive sampling was done to include patients and attendants within the age group of 18-70 years. Sample size (about 400) was calculated using WHO calculator after taking 95% Confidence Interval with anticipated population proportion 0.50 with absolute precision 0.05. Participants who were non-residents of Karachi and those did not provide consent were excluded from the study giving us a final sample size of 384.

Questionnaire:

The structured questionnaire was developed by using previous studies regarding point of views of patients about medical doctors [6, 15, 17]. The first part of the questionnaire had a series of general sociodemographic questions. The questionnaire then moved on to consist of six categories regarding doctor's personal characteristics, attitude, background, relationship with the patient, communication, and availability. Each contained a list of options from which participants had to select one that they felt held the most importance to them. At the end, participants were directed to select the top three options which were of the utmost importance to them from the entire questionnaire. Prior to the commencement of data collection, a pilot study was conducted on 15 participants to ensure the quality and validity of the questionnaire.

Statistical Analysis:

Data was analyzed by using SPSS version 21. Frequencies and proportions were calculated for descriptive analysis. Inferential statistics were carried out using Chi-Square test to compare the frequency of the options chosen with the different sociodemographic groups such as education category and monthly income in Pakistani Rupees. P values < 0.05 were considered as the level of significance.

RESULTS:

Out of 400 people that we approached for our study, 384 participants agreed to fill out the questionnaire, giving us a non-response rate of 3.8%. Table 1 summarizes the socio-demographic characteristics of the participants of this research. The patient's ages ranged from the lowest 18

years old to the highest 70 years old with a median age of 31. There were 50.8% participants equal to or younger than 31 years old while 49.2% were older than 31 years old. The percentage of males were 38.3% and females made up the remaining 61.7%. Of the 384 participants, married people comprised 72.9% while single comprised 25%. The rest of the participants (2.1%) selected the option of other marital status. Employed participants made up 40.4% of our respondents, housewives made up 43.8%, students made up 7.3%, and other occupations were the remaining 8.6%. On education level, the uneducated group came out to be 30.5% while 69.5% were those who were educated. Lastly, there were 19.3% participants with a household income of less than Rs.10,000 per month, 74.7% with an income between Rs.10,000 and 50,000, and the rest (6%) fell into the category of having a household income greater than Rs.50,000 per month.

Figure 1 represents the percentage of each option chosen regarding participants' doctor visits. Starting with the number of doctor visits, about half (55.7%) the participants visit the doctor less than five times a year, 23.2% visit the doctor five to ten times in a year, and 21.1% of participants visit the doctor more than ten times in a year. Moving on to the reason for the doctor visits, 63.8% had acute complaints for which they sought medical attention, while the participants who had chronic problems had various complaints (Figure 2) including diabetes (5.7%), heart disease (4.2%), arthritis/joint pain (4.9%), Respiratory illness/Tuberculosis (1.6%), Gastrointestinal illness/ulcers (6.8%), and other (14.3%).

There were six major categories about each aspect of doctor characteristics, and in each, the participants were asked to select the option that was most important to them; the results are

displayed in Table 2. When asked which doctor's personal characteristic was preferred, the most selected option was that the doctor should be able to speak the same language as the patient with a percentage of 40.6% participants. On the other hand, the option least preferred was that the doctor should be well dressed and groomed with 4.4% choosing this. As for the Doctor's Attitude and Behavior, being polite (friendly) to the patient was the most selected option with almost half (48.7%) of the participants choosing this, while being formal (professional) was least selected amongst the list with 5.7%. Moving on to the Doctor's Background Education and Training that was most preferred by participants was having more experience/being older trained with 56.8% while being freshly trained/having less experience was not opted for by very many (6.5%). Coming to the aspects of Doctor-Patient Relationships, giving adequate time to the patient was the highest selected with 39.1%, followed by the doctor maintaining information about the patient confidential with 33.9%, and lastly the doctor showing sympathy and giving hope came at the end with the remaining 27.1%. Regarding Communication and Interaction between the doctor and patient, the Doctor explaining the treatment and follow up plan to the patient's satisfaction was most important to the participants (32%), very closely followed by the doctor caring about the total cost to the patient (31.5%). The least out of these was the doctor interacting with the patient, focusing on his/her concerns with 11.5%. Lastly, the question inquiring about the availability of the doctor revealed that the participants wanted the same doctor to be available to them for multiple visits (37.5%), while the doctor being easily available and giving their contact number was not as important to them (16.7%).

At the end of the questionnaire, participants were asked to select the top 3 options out of the 26 from all the categories that were the most important to them. The most chosen first preference in

top 5 was option 7 (polite/friendly) with 15.9%, followed by option 14 (older trained/more experienced) with 13.3%, followed by option 1 (being of same gender as patient) with 7.6%, then option 5 (doctor should be able to speak the same language as the patient) with 6.8%, then option 22 (doctor cares about total cost to the patient) with 6.8%.

The most chosen second preference in the top five was option 14 (older trained and more experienced) with 17.2%, followed by option 7(polite/friendly) with 11.2%, followed by option 21 (doctor explains treatment and follow up plan to patient's satisfaction) with 9.4%, followed by option 16 (adequate time) with 8.1%, then option 22 (doctor cares about total cost to the patient) with 7.8%

The most chosen third preference in the top five was option 14(older trained/more experienced) with 11.5%, followed by option 26 (same doctor should be available for multiple visits) with 8.3%, followed by option 21 (doctor explains treatment and follow up plan to your satisfaction) with 8.1%, then option 22(doctor cares about total cost to the patient) with 7% then option 17 (doctor shows sympathy and gives hope) with 6.8%

When comparing the preferences of different groups of participants, we found that there was a significant difference (p=0.003) between educated and uneducated patients in regards to the theme of communication and interaction. There was also a significant difference in the categories of Doctor's Attitude/Behavior (p=0.020), Doctor's Background: Education and Training (p=0.000), and Doctor-Patient Relationship (p=0.000) between participants from JPMC and JMCH. Lastly, there was a significant difference between those with a household income less

than Rs. 25,000/month and those with Rs.25,000/month or higher in the categories of Doctor Personal Characteristics (p=0.007), Doctor's Attitude/Behavior (p=0.029), Doctor-Patient Relationship (p=0.012), Communication/Interaction (p=0.003), and Availability (p=0.012).

DISCUSSION:

We inquired about their number of visits to the doctor in a year and their reason for the visit.

56.7% participants visited less than five times per year, 23.2% visited five to ten times per year while only 21.1% had more than ten visits per year. This elaborates that more than fifty percent of our participants visited less than five times in a year, from this, we can infer the there is a lack in the level of interaction of our participants with their doctors. In our research, most of the participants visited the doctor for acute illnesses. This means that our participants mainly needed medical advice for short term problems which required less visits and less specialty than chronic problems.

We also asked regarding their preference for a good physician's characteristics to whom they would approach the most. Throughout our results we came to know that option 14 (older trained/more experienced) was the most preferred characteristic of a good physician. It was frequently selected among all three top preferences. This reveals to us that in Karachi, Pakistan, patients believe that older trained/more experienced physicians can provide better quality of healthcare than a freshly graduated physician. Furthermore, option 22 (doctor cares about total cost of the patient) was also a commonly chosen characteristic among all three top preferences. Considering this, the people of Karachi think that doctors should keep the patient's financial status in mind and be concerned about the total cost. Doctors' clinical skills must be strong

enough to avoid unnecessary investigations, and the doctor should prescribe medicine of affordable price keeping in mind the patients' financial status. This will make the patient trust their physician more, creating a better bond, which will make it more likely that the patients will adhere to the prescribed treatment plan [18]. Additionally, option 7 (polite and friendly behavior) was also amongst the top preferences chosen. This illustrates that the patients prefer a physician with a friendly nature to make it easier and more comfortable to discuss their health issues.

Moving on to the individual categories, in the Doctor's Personal Characteristics, the most selected option was that the doctor should be able to speak the same language as the patient (40.6%). This means that participants consider that a doctor speaking in their language is very important to them in order to reduce the communication gap and allow them to thoroughly explain their problems, as well as, understand the treatment plan [19, 20, 21]. After analyzing the Doctor-Patient Relationship category responses, we appreciated that the duration of time given to patients by doctors also holds great significance to the participants (39.1%). Adequate time allotted to each patient ensures that there is enough time to feel like they have been heard by their doctor and have shared all their concerns. This also ensures that they will be able to hear out and fully comprehend their management plan and follow up. As for the Communication and Interaction category, Karachi residents most preferred that doctors explain the complete treatment as well as the follow up plans to their satisfaction (32%) so that they would be more involved in their care regarding how to manage it, and what they can do to avoid complications or recurrences. Proper communication that ensures that the patients fully understand the risks and benefits involved will increase patient adherence to the treatment plans prescribed by the doctor [22, 23, 24]. Lastly, within the Availability category, having the same doctor available for

multiple visits was selected the most (37%) which allows us to inference that the participants also believe that a strong patient-doctor bond filled with trust can be made over time with the same doctor that thoroughly understands the patient and their problems, both acute and chronic [25]. While the least selected characteristics were well dressed, professional and sympathy showing physicians which clearly shows that these don't hold much significance to this population.

Regarding the significant difference in the options chosen within the Communication and Interaction category, the uneducated participants were not as concerned about being explained the problem or the treatment, as they were with the total cost. In contrast, those who were educated preferred the explanation of the problem and the treatment/follow up plan to the physician caring about the total cost. This illustrates that those who are educated wish to be more involved in their care and are able to express this desire more because of their ability to better comprehend their doctor's explanations due to their educated background. Indeed, "Doctor's communicative style is influenced by the way patients communicate: patients from higher social classes communicate more actively and show more affective expressiveness, eliciting more information from their doctor" [26].

The significant difference between JPMC and JMCH in the Doctor's Attitude/Behavior category revealed that formality and professionalism from the doctor held more preference to participants from JPMC than JMCH, and attentiveness was more preferred by those at JMCH. In the Doctor's Background: Education and Training category, JMCH participants gave more importance to their doctor having a good reputation than those from JPMC who preferred having

a doctor that was freshly trained compared to JMCH responses. In terms of the Doctor-Patient Relationship, JPMC responders preferred that they received adequate time with their doctor, while JMCH responders gave a higher preference to their doctors showing sympathy and giving them hope. The purpose of collecting data from more than one hospital was to observe if it would make a difference in the participants' responses. Because it did, we can speculate that these statistically significant differences may be due to the unique past experiences of the participants including differences in the number of doctors available in that area, the distribution of resources available, and the hospital setting itself, all of which shaped their preferences.

Lastly, significant differences were found in the household income groups (Table 5). Breaking it down into those with household income of less than Rs.25,000/Month and those with Rs.25,000/month or more, the lower income group preferred that the doctor was the same gender as them more than the higher income group in the category of Doctor Personal Characteristics, while the higher income group gave more importance to the doctor being young than those of the lower income group. In the category of Doctor's Attitude/Behavior, the low-income participants selected the option of attentive more than the higher income participants. Regarding Doctor-Patient Relationship, the higher income group selected the option of maintaining information confidential the most out of the three, while the lower income selected the option of gives adequate time the most. In the Communication/Interaction category, low income patients preferred that the doctor care about the total cost much more than those of higher income who gave more preference to being explained the treatment plan and follow up than to the total cost. Lastly, in the Availability category, the option of having the same doctor available for multiple visits was the most important to those of lower income out of all the options, while having proper

instruments/staff prepared in each visit was most selected by the higher income group out of all the options. Thus, just as education level impacts patients' preferences regarding their health care providers, income level also plays a role. From these findings we can inference that factors such as financial conditions, standards of living, and social status of the patient influence certain preferences in specific socioeconomic groups to have different levels of expectations regarding cost, confidentiality, adequacy of time and attention given, and preparedness of proper instruments/staff in each visit.

We can recognize a variety of limitations that existed in our study, starting with the fact that our study was only conducted in the public sector. This was due to permission restraints and lack of time for further processing from private hospitals. Secondly, there were some flaws in our questionnaire that became more apparent as the study proceeded. Some numeric answers were asked as grouped categories instead of open-ended questions, for example the household income and number of doctor visits were both grouped in ranges rather than being left as open ended. Another problem we noticed as we surveyed more and more participants was that the chronic diseases list did not fully encompass the whole range of possible problems. The highest percentage of chronic diseases was in the 'other' category (14.3% of the sample size). This could have been a fewer number if the list had been more comprehensive. Moreover, some of the options offered in each of the six categories may have been able to fall under multiple categories which we had to limit for the sake of our questionnaire. For example, option 17 (Doctor shows sympathy and gives hope) in the category of Doctor-Patient Relationship could have fallen under the category of Doctor's Attitude/Behavior and have been written as "Sympathetic." Additionally, while conducting the questionnaire on those who were unable to read it, we

realized that because there were multiple researches, we may have differed in our explanations of the questions. This also meant that we were unable to approach patients or attendants that spoke in a language that created a language barrier for us (Sindhi, Pashtu, Balochi). Lastly, we were not able to translate the questionnaire into other various languages spoken in our region.

The strength of the application of our study lies in its ability to be imperative in helping prepare future medical students on their journey of becoming practicing physicians and interacting with patients to deliver healthcare in Pakistan. It will prove to be beneficial in influencing the focus of their attention on improving modifiable attributes such as being more sympathetic to the patient or taking time out to ensure that the diagnosis and treatment plan is thoroughly explained to the patient which can start during their clinical rotations in order to practice those attributes early on. For example, our study showed that total cost to the patient was very important to the people of Karachi. Taking this into account, future health professionals can be considerate when it comes to their visit fees, avoid unnecessary expensive investigations, and prescribe affordable treatment according to their patient.

Further research is required on a larger scale in different cities of Pakistan. Additionally, studies should be done incorporating both public and private health care sectors to allow better comparison, as previous literature in Pakistan regarding this topic existed only on the private sector, while ours concentrated on the public sector [16]. Another way to extend this research is to evaluate if the specific patient preferences we uncovered in our study and the patient satisfaction level align in our region. As preference and satisfaction are very different, assessing the level of satisfaction in healthcare regarding the specific preferences most opted for by

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Karachi residents would determine if the preferences selected by this population are what they

are actually receiving. In simpler terms, the questions arising would be: are Karachi residents

receiving what they prefer from their doctor? If not, why, and how can we fix that?

CONCLUSION:

We conducted this study regarding patients' and attendants' preferences for their doctor's

attributes specifically in the region of Karachi, Pakistan. It revealed to us that some of the most

important characteristics of a doctor to this population is that the doctor should be older

trained/more experienced and should care about the total cost to the patient. These options were

selected most frequently amongst the top three preferences overall. In order to uncover more

details about why this is the case and if it would still hold true when private hospital patients

were involved, further studies need to be conducted.

Conflict of interest:

The authors declare no conflict of interest.

Source of funding:

Self

Acknowledgement:

We would like to acknowledge the administration of Jinnah Medical & Dental College (JMDC),

Karachi, Pakistan for the facilitation of data collection. We would also like to specifically thank

the Community Health Sciences Department, JMDC, Karachi, Pakistan for providing overall guidance.

Authors' Contribution:

Sarah Kamran Akbani led the project and did main write up of manuscript.

Fazeela Bibi, Sara Jabeen, Fatima Nayyer, Syeda Komal Shoaib: involved in proposal writing, data collection and write-up of manuscript.

Zoya Gul: involved in proposal writing and data collection.

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Table 1. Sociodemographic Characteristics

Characteristics	Frequency	Percentage (%)
Age < 31 years ≥ 31 years	195 189	50.8 49.2
Gender Male Female	147 237	38.3 61.7
Marital status Married Single Other	280 96 8	72.9 25.0 2.1
Occupation Employed Housewife Student Other	155 168 28 33	40.4 43.8 7.3 8.6
Education Uneducated Educated	117 267	30.5 69.5
Income < Rs. 10,000 Rs. 10,000 – 50,000 >Rs. 50,000	74 287 23	19.3 74.7 6.0

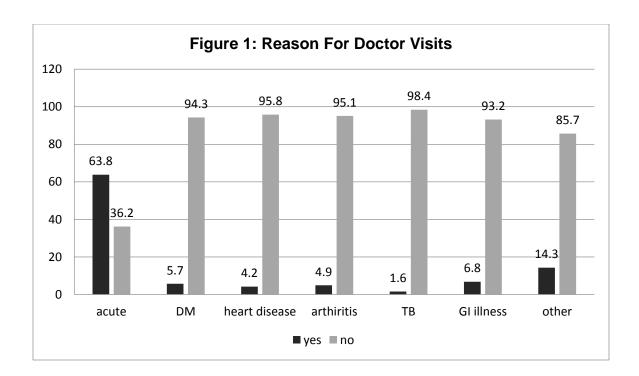




Table 2. Frequency of Attributes of Doctors Selected by Patients

Category	Frequency (n)	Percentage (%)
Doctor's Personal Characteristics		
Of same gender	76	19.8
Young (under 35)	23	6.0
Older (35 or over)	112	29.2
Well dressed and groomed	17	4.4
Speaks the same language	156	40.6
Doctor's Attitude/Behavior		
Confident	29	7.6
Polite (Friendly)	187	48.7
Formal (Professional)	22	5.7
To the point	39	10.2
Attentive	107	27.9
Doctor's Background: Education and Training		
Locally qualified	37	9.6
Foreign qualified	33	8.6
Freshly trained	25	6.5
More experienced	218	56.8
Good reputation	71	18.5
Doctor-Patient Relationship		
Gives adequate time	150	39.1
Shows sympathy and gives hope	104	27.1
Maintains information confidential	130	33.9
Communication/Interaction:		
Interacts with patient and shows concern	44	11.5
Explains the problem	96	25.0
Explains the treatment & follow up plan	123	32.0
Cares about total cost to the patient	121	31.5
Availability		
Easily available (gives contact information)	64	16.7
Visits patient on time	102	26.6
Has proper instruments/tools and staff prepared	74	19.3
Same doctor available for multiple visits	144	37.0

Table 3 Educated vs. Uneducated Patients' Preferences for their Doctors' Attributes

Category	Un- Educated	Educated	Total	P value
Doctor's Personal Characteristics Of same gender Young (under 35) Older (35 or over) Well dressed and groomed Speaks the same language	n(%) 27 (35.5%) 4 (17.4%) 36 (32.1%) 2 (11.8) 48 (30.8%)	n(%) 49 (64.5%) 19 (82.6%) 76 (67.9%) 15 (88.2%) 108 (69.2%)	n 76 23 112 17 156	0.220
Doctor's Attitude/Behavior Confident Polite (Friendly) Formal (Professional) To the point Attentive Doctor's Background: Education and Training	4 (13.8%) 63 (33.7%) 7 (31.8%) 12 (30.8%) 31 (29%)	25 (86.2%) 124 (66.3%) 15 (68.2%) 27 (69.2%) 76 (71%)	29 187 22 39 107	0.302
Locally qualified Foreign qualified Freshly trained More experienced Good reputation	12 (32.4%) 7 (21.2%) 5 (20%) 73 (33.5%) 20 (28.2%)	25 (67.6%) 26 (78.8%) 20 (80%) 145 (66.5%) 51 (71.8%)	37 33 25 218 71	0.432
Doctor-Patient Relationship Gives adequate time Shows sympathy and gives hope Maintains information confidential	55 (36.7%) 27 (26%) 35 (26.9%)	95 (63.3%) 77(74%) 95 (73.1%)	150 104 130	0.106
Communication/Interaction: Interacts with patient and shows concern Explains the problem Explains the treatment & follow up plan Cares about total cost to the patient.	13 (29.5%) 20 (20.8%) 32 (26%) 52 (43%)	31 (70.5%) 76 (79.2%) 91 (74%) 69 (57%)	44 96 123 121	0.003
Availability Easily available (gives contact information) Visits patient on time Has proper instruments/tools and staff prepared Same doctor available for multiple visits	12 (18.8%) 36 (35.3%) 18 (24.3%) 51 (35.4%)	52 (81.3%) 66 (64.7%) 56 (75.7%) 93 (64.6%)	64 102 74 144	0.041

Table 4 JPMC vs. JMCH Patients' Preferences for their Doctors' Attributes

Category	JMCH* n (%)	JPMC** n (%)	Total n	P value
Doctor's Personal Characteristics Of same gender Young (under 35) Older (35 or over) Well dressed and groomed Speaks the same language	35 (46.1%) 5 (21.7%) 55 (49.1%) 5 (29.4%) 80 (51.3%)	41 (53.9%) 18 (78.3%) 57 (50.9%) 12 (70.6%) 76 (48.7%)	76 23 112 17 156	0.052
Doctor's Attitude/Behavior Confident Polite (Friendly) Formal (Professional) To the point Attentive Doctor's Background: Education and Training	10 (34.5%) 84 (44.9%) 5 (22.7%) 21 (53.8%) 60 (56.1%)	19 (65.5%) 103 (55.1%) 17 (77.3%) 18 (46.2%) 47 (43.9%)	29 187 22 39 107	0.020
Locally qualified Foreign qualified Freshly trained More experienced Good reputation Doctor-Patient Relationship Gives adequate time Shows sympathy and gives hope Maintains information confidential	10 (27%) 10 (30.3%) 4 (16%) 114 (52.3%) 42 (59.2%) 59 (39.3%) 68 (65.4%) 53 (40.8%)	27 (73%) 23 (69.7%) 21 (84%) 104 (47.7%) 29 (40.8%) 91 (60.7%) 36 (34.6%) 77 (59.2%)	37 33 25 218 71 150 104 130	0.000
Communication/Interaction: Interacts with the patient and shows concern Explains the problem Explains the treatment & follow up plan Cares about total cost to the patient.	21 (47.7%) 45 (46.9%) 51 (41.5%) 63 (52.1%)	23 (52.3%) 51 (53.1%) 72 (58.5%) 58 (47.9%)	44 96 123 121	0.431
Availability Easily available (gives contact information) Visits patient on time Has proper instruments/tools and staff prepared Same doctor available for multiple visits	26 (40.6%) 59 (57.8%) 32 (43.2%) 63 (43.8%)	38 (59.4%) 43 (42.2%) 42 (56.8%) 81 (56.3%)	64 102 74 144	0.076

^{*} Jinnah Medical College Hospital, Karachi, Pakistan (n= 180) ** Jinnah Post Graduate Medical Center, Karachi, Pakistan (n=204)

Table 5 Low vs. High Income Patients' Preferences for their Doctors' Attributes*

Category	Household Income <25,000/ Month n (%)	Household Income ≥25,000/ Month n (%)	Total n	P value
Of same gender Young (under 35) Older (35 or over) Well dressed and groomed Speaks the same language	60 (78.9%) 10 (43.5%) 84 (75%) 14 (82.4%) 121 (77.6%)	16 (21.1%) 13 (56.5%) 28 (25%) 3 (17.6%) 35 (22.4%)	76 23 112 17 156	0.007
Doctor's Attitude/Behavior Confident Polite (Friendly) Formal (Professional) To the point Attentive Doctor's Background: Education and	15 (51.7%) 145 (77.5%) 15 (68.2%) 29 (74.4%) 85 (79.4%)	14 (48.3%) 42 (22.5%) 7 (31.8%) 10 (25.6%) 22 (20.6%)	29 187 22 39 107	0.029
Training Locally qualified Foreign qualified Freshly trained More experienced Good reputation Doctor-Patient Relationship	33 (89.2%) 23 (69.7%) 20 (80%) 158 (72.5%) 55 (77.5%)	4 (10.8%) 10 (30.3%) 5 (20%) 60 (27.5%) 16 (22.5%)	37 33 25 218 71	0.215
Gives adequate time Shows sympathy and gives hope Maintains information confidential	121 (80.7%) 82 (78.8%) 86 (66.2%)	29 (19.3%) 22 (21.2%) 44 (33.8%)	150 104 130	0.012
Communication/Interaction: Interacts with the patient and shows concern Explains the problem Explains the treatment & follow up plan Cares about total cost to the patient.	28 (63.6%) 66 (68.8%) 90 (73.2%) 105 (86.8%)	16 (36.4%) 30 (31.3%) 33 (26.8%) 16 (13.2%)	44 96 123 121	0.003
Availability Easily available (gives contact information) Visits patient on time Has proper instruments/tools and staff prepared Same doctor available for multiple visits	44 (68.8%) 80 (78.4%) 47 (63.5%) 118 (81.9%)	20 (31.3%) 22 (21.6%) 27 (36.5%) 26 (18.1%)	64 102 74 144	0.012

^{*}For this comparison, household income categories were condensed into two groups. The first with less than Rs. 25,000/month (n=289), and the second with Rs. 25,000/month or more (n=95).