

How Do Saudis Choose Their Surgeons? A Cross-Sectional Study in Riyadh, KSA

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ABSTRACT

Objectives: Even though there has been much research regarding which factors influence patients' choice of healthcare providers, only a restricted number of them have examined why patients choose their surgery providers. This study attempts to answer that question with the Saudi context in mind. Furthermore, it compares the opinions of those who visited private and governmental hospitals to achieve a more nuanced analysis. This information will allow surgeon providers with an opportunity to optimize their delivery based on the factors that influence Saudi healthcare choices. **Methods:** A self-administered questionnaire was administered to 393 patients who came to be evaluated for any number of operations at surgical clinics, either private or governmental hospitals, throughout Riyadh, KSA. The questionnaire consisted of thirty-nine items, which utilized a five-point Likert scale. It was used to assess the patients' level of understanding of the seven-recognized clinical and nonclinical metrics, which patients are known to consider when choosing surgical providers as well as examine the level of importance that patients gave to a number of other pertinent factors such as patients' ability to effectively find and utilize quality information. **Results:** Patients rated *physician manner* (average Likert; 4.5) and *customer service* (average Likert; 4.2) as most important in their selection of surgical provider. Despite the expressed importance of surgeon and hospital quality, only 63.6% of patients were able to find useful information to compare outcomes among surgeons and 64.7% for hospitals. **Conclusions:** *Physician manner* and *customer service* were the most important considerations for patients when choosing a surgical provider in Riyadh, KSA. There were only a few significant differences between the opinions given by private and governmental hospital patients.

Keywords: Governmental hospital, hospital choice, private hospital, Saudi Arabia, surgeon choice

INTRODUCTION

Several studies have examined how patients choose their primary care physicians, healthcare plans, specialist providers, and hospitals.^[1-5] When it comes to healthcare providers, patients choose their physicians based on many factors, both medical and nonmedical, such as access to care, board certification, office or hospital esthetics, physician manner, and hospital standards.^[6,7] Overall, though, there has been little research on how patients choose surgery providers. The majority of studies examining either surgeon *or* hospital qualities, with only a minority exploring them both.^[8]

In Saudi Arabia, however, the majority of studies examine patients' perceptions of hospitals rather than that of surgeons: namely patients' perceptions and experiences of hospitals in Riyadh in general, their level of satisfaction with hospitals throughout the Kingdom, and the determinants which influence

Saudis to choose hospitals in Riyadh.^[9-11] Even though there has been one study, which examined the factors which Saudis take into consideration when choosing their treating physician in the private sector, a study which specifically scrutinizes the factors which affect the patient choice of the surgeon (regarding treating physician) in terms of both the private and governmental sectors is required.^[12]

Another important consideration expanded on in the literature is to what extent quality information affects the

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patient choice of surgery provider. Evidence suggests that, in general, when selecting surgeons to perform surgeries, those patients who are not responsive to performance data rely instead on their physicians to refer them to specialists who are well-educated in their fields and who would thus be able to perform the surgery being requested of them. Indeed, in one survey of 18,000 patients, 58% stated that they chose medical experts based on their primary care doctor or physician recommendation. It is further interesting to note that most primary care doctors tend to refer to medical experts in virtue of their professional involvement and relationships and not on quality information.^[13] The question then becomes, what is the most important factor contributing to patient choice: quality information which can be obtained by the patients themselves or information gained from those who the patients trust (i.e., primary care physicians, friends, family, and others). This too, however, has not been adequately researched in the Saudi context.

It can safely be said, then, those gaps exist in the literature on multiple fronts. For one, there are only a minority of studies worldwide that examine *both* surgeon *and* hospital qualities of surgery providers *at the same time*. Examining both of those qualities in tandem, however, would be especially instructive seeing as it would allow researchers to draw invaluable inferences about how disparate factors influence patients' overall choice of surgery provider. For example, one possible question researchers would be able to answer on gaining such information would be "Are concerns regarding the surgeon that will be performing the surgery more important, on par, than those regarding the hospital at which the surgery will be performed?" It would, therefore, be very beneficial to conduct a study, which examined both of those qualities, not only because it would contribute to the international literature. The role of quality information and testimony on patient choice of surgery provider should be assessed in this regard as well seeing as they have been demonstrated as being important factors. Given the growing importance of social media in the modern world, it would also be interesting to examine whether social media has any effect on patient choice as a form of testimony. Finally, seeing as patients' ability to go to private versus governmental hospitals may have an effect on the results of such a survey; these should be taken into consideration as well.

The primary goal of this study, therefore, is to assess the particular medical and nonmedical factors, which patients consider when they are in the process of choosing their surgery providers. The secondary goal of this study is that of determining whether patients sought quality information regarding their surgery provider and to what extent testimony was used to make a choice. The researchers asked in the questionnaire whether the respondents sought quality information regarding their surgery providers presurgery. The questionnaire also inquired as to the respondents' ability to find and understand the different types of information and testimony that they sought. Furthermore, the researchers wanted also to measure whether the patients believed if their role in searching

for that information was important, whether they were able to decide regarding that information, and whether money had any role in their decision-making process. Finally, the researchers also examined whether there are any differences in the answers provided by those choosing government versus private hospitals.

MATERIALS AND METHODS

This cross-sectional study was conducted between September and October 2018. The target population comprised of Saudi patients who had come to be evaluated for all kinds of elective operations at different surgical clinics. There were three hospitals, which were studied by the researchers. They consisted of Kingdom hospital, which is a private hospital, and two governmental hospitals. The two governmental hospitals, one was a military hospital and the other one was a tertiary hospital, were supported by the Ministry of Health.

Based on the following formula, the estimated sample size for achieving a 95% confidence interval was estimated to be 385 participants:

$$\frac{z^2 \times p(1-p)}{e^2} \\ 1 + \left(\frac{z^2 \times p(1-p)}{e^2 N} \right)$$

We collected data from 393 patients by means of a self-administered questionnaire, which had been sent out to the respondents electronically via E-mail. The participants were recruited using a nonprobability convenience sampling method. We excluded patients whom either could not select their own surgeons or who had been admitted to the hospital for the purpose of undergoing emergency operations. The aim of the study was to evaluate what the patients stated they preferred before their respective surgeries.

The questionnaire

The survey consists of 39 questions. The participants were requested to order the importance of medical and nonmedical factors, which influenced their selection of surgery provider in terms of a 5-point Likert scale, with 1 signifying "unimportant" and 5 signifying "very important." This study borrowed a validated questionnaire from another study, which had previously been utilized to assess factors that patients considered when selecting orthopedic surgeons for their joint replacement.^[14] We translated their questionnaire utilizing forward and backward translation. The initial translation was made by two independent translators. Then, the translations were independently backtranslated so as to ensure their accuracy. After the translation process, the authors consulted an expert to produce the prefinal version of the questionnaire.^[15] In addition, 3 questions were added to the questionnaire, which were not in the original as conceived by Bozic *et al.* (namely questions 8–10 of Part II). These questions directly asked the participants, which sources of information other than quality information had the greatest

impacts on their decision-making process and were added to ameliorate what the authors believed to be an oversight by Bozic *et al.*

A pilot questionnaire with 50 interviewees was then conducted to approximate how long the respondents would need to answer the questionnaire, as well as to lessen any comprehension or linguistic issues, which might arise using the questionnaire in its prefinal form. Based on the results derived from this pilot questionnaire, some final alterations were made. Evaluating their content validity demonstrated the clarity of the questions asked, whereas face validity was conducted by faculty members of Al Jouf University who received specializations in both orthopedic surgery and epidemiology. Furthermore, the internal consistency of Parts 1 and 2 of the questionnaire was assessed using a Cronbach's α test.

Part I of the questionnaire assesses seven components related to medical care, which have been shown in previous researches to have had an effect on how patients select primary care physicians and hospitals: namely, physician reputation; physician manner; physician quality; physician qualifications; hospital factors; customer service; and other nonmedical factors. Furthermore, for the purpose of measuring the extent to which patients sought quality information, if at all, Part II of the questionnaire asked the participants to gauge the level to which they agreed with statements regarding their selection of surgery provider utilizing a 5-point Likert scale, with 1 signifying "disagree strongly" and 5 signifying "agree strongly" [Table 1].

Statistics

All the data were entered into the Statistical Package for Social Sciences version 23 analytic program (Armonk, NY, USA: IBM Corp.). Descriptive and factor analyses, as well as independent sample *t*-tests, were also applied to both groups (governmental and private hospital). $P \leq 0.05$ was considered as statistically significant.

RESULTS

Of the 465 patients who were invited to participate, 393 agreed to participate, with a response rate of 84.51%. Therefore, there was a total of 393 participants in this study, with 204 patients from the governmental group and 188 patients from the private group.

Based on the questionnaire, the patients, when selecting surgery provider, rated the following metrics in decreasing order of importance: *physician manner*, *customer service*, *physician quality information* and *nonclinical features*, *physician reputation*, *hospital*, and *physician qualification* [Table 2].

The mean difference between the two groups (i.e., government hospitals and private hospitals) was significant with relation to two dimensions, namely *physician manner* and *physician reputation*, both of which had $P < 0.001$ [Table 3].

When considering providers and hospitals at which to choose for procedures, patients frequently searched for data regarding those providers and hospitals. With regard to the

second statement, i.e., "I had adequate information to choose the surgeon for my procedure," 72.2% agreed and strongly agreed (average Likert in both groups 3.7, with a mean of 3.5 in the governmental group versus a mean of 3.9 in the private group), albeit with a significant difference ($P < 0.001$). Regarding the sources from where the patients retrieved information to choose their surgeon, 71.7% agree and strongly agree that they sought information other than from their primary health doctor (relatives and friends, other patients, and social media) with average Likert in both groups is 3.7 (mean of 3.8 in governmental hospital and 3.6 in private group, $P = 0.023$). We divided the possible sources into friends and relatives, other patients who had been treated by similar surgeons, and social media. Between 66.7% and 69% agreed and strongly agreed (mean 3.7) that the information provided, either by other patients or by relatives and friends, respectively, had the greatest impact on their decision to choose their surgeon. No significant difference was seen in either of the two groups. The avenue of retrieving information via social media, on the other hand, received the least agreement, with 42.2% agreeing and strongly agreeing versus 34% either disagreeing or strongly disagreeing, with a significant difference of $P < 0.001$ (average Likert in both groups is 3.1, with a mean of 3.3 in the governmental group vs. a mean of 2.8 in the private group).

Regarding the quality of care provided among different surgeons, 85.5% (mean 4.2) agreed and strongly agreed that there is a difference, with no significant difference between the two groups ($P = 0.61$). Furthermore, 88% of the patients (mean 4.3 and $P = 0.9$) believed that their choice of the surgeon would have a significant effect on the outcome of their chosen surgery.

With regard to the questions regarding the hospitals, 77.4% of the patients agreed and strongly agreed that it is important, which hospital their procedure will take place in (mean = 3.9, $P = 0.8$). Many patients (64.7%; average Likert in both groups is 3.7, with a mean of 3.7 in the governmental group versus a mean of 3.5 in the private group) ($P = 0.02$) agreed and strongly agreed that they searched for information regarding how the hospital compares to other hospitals in the vicinity, whereas 22% of the patients reported that they were "unsure." Only 66.1% (mean 3.7 with $P = 0.6$) of the respondents agreed that they found enough data to compare hospitals, with 21% of the patients reporting that they were "unsure."

The patients were also asked whether the amount of money that they are willing to pay out of their own pockets for their surgery significantly influenced whether they chose one surgeon and/or hospital over another. Those who agreed and strongly agreed were 57.5% (average Likert in both groups is 3.4, with a mean of 3.6 in the governmental group versus a mean of 3.1 in the private group) ($P < 0.001$), whereas 24.2% disagreed.

DISCUSSION

Physician manner (average Likert, 4.5) was judged by all participants in this study as being the most important

Table 1: Percentage of participants who strongly agree, disagree, agree, strongly agree, and who are unsure, as well as the average importance given, regarding the questions given in Part II of the questionnaire

Questions	Percentage of participants who “strongly disagree”	Percentage of participants who “disagree”	Percentage of participants who are “unsure”	Percentage of participants who “agree”	Percentage of participants who “strongly agree”	Average agreement in all groups**	P
1. I felt quite knowledgeable about my ability to select a surgeon before I began searching for one	4.3	7.4	29	48.3	10.9	3.5	0.44
2. I had adequate information to choose the surgeon for my procedure	1.5	9.9	17.3	55.2	16	3.7	0.001*
3. I believe that my choice of surgeon will have an important impact on my outcome	1.3	2.3	8.4	41.7	46.3	4.3	0.9
4. There are big differences in the quality of care among different surgeons	3	2.8	14.8	50.9	34.4	4.2	0.61
5. I sought information from sources other than my primary doctor, including friends, other patients, the internet	5.1	8.4	14.8	47.8	23.9	3.8	0.023
6. I looked for data on how this surgeon compares to other surgeons	4.3	13	22.4	41	19.3	3.6	0.4
7. I found data that helped me understand how this surgeon compares to other surgeons	4.6	10.7	21.1	47.3	16.3	3.6	0.4
8. Social media information had the biggest impact on my decision	13.2	21.6	22.9	28.5	13.7	3.1	0.001*
9. The opinions of relatives and friends had the biggest impact on my decision	4.8	12.7	13.5	48.1	20.9	3.7	0.42
10. Patient information had the biggest impact on my decision	3.8	9.7	19.8	43.3	23.4	3.7	0.85
11. I was aware of substantial differences in the amount I would have to pay for different surgeons	3.1	5.9	22.1	51.7	17.3	3.7	0.002
12. The amount I will pay out-of-pocket for my procedure was an important factor in my choice of surgeon and/or hospital	9.7	14.5	18.3	36.9	20.6	3.4	0.001*
13. It is important in which hospital I will have my procedure	2.5	7.1	13	53.2	24.2	3.9	0.8
14. I looked for data on how this hospital compares to other hospitals in the area	3.1	10.2	22.4	47.3	17	3.7	0.02
15. I found data that helped me understand how this hospital compares to other hospitals in the area	3.6	9.2	21.1	50.6	15.5	3.7	0.6

*Significant mean difference between governmental and private group, **A 5-point Likert scale (1=disagree strongly; 5=agree strongly)

factor while choosing a surgery provider. The importance of *physician manner* is widely attested to throughout the literature.^[16-29] The traits of being understanding, compassionate, empathetic, and trustworthy were all highly valued in surgeons by patients.^[17-20] In addition, patients also preferred surgeons who were attentive to their needs, had good communication skills, and who were able to understand and relate to them.^[21-23] Indeed, one study concluded that this factor alone might even be more important for the selection process than the professional attributes of surgeons.^[16] This may help to explain to some extent why the dimension with the lowest Likert score in the current study was *physician qualifications* (3.1). This is further validated by the relative

level of importance given to “experience” (coefficient: 1.18; standard error 0.06) when compared to other factors examined in the study conducted by Ejaz *et al.*, who studied the factors which influence cancer surgeon choice among patients.^[30] Similarly, another study examining plastic surgeon choice claimed that if no other information was available to the patients, the patients inferred physician competence and professionalism merely based on the way the surgeon interacted with them.^[17] Moreover, in Bozic *et al.*’s study – the study from which the present research borrows its questionnaire – *physician manner* was ranked as being the most important metric that patients took into consideration when choosing a surgeon for elective orthopedic surgery.^[14]

Table 2: Average Importance given to each dimension as identified by type of hospital

Dimension	Type of hospital	Number of participants	Average importance on a 5-point Likert scale (1=unimportant; 5=very important)
Physician reputation	Governmental clinic	204	4.0
	Private clinic	188	3.6
Physician manner	Governmental clinic	204	4.3
	Private clinic	188	4.8
Physician quality information	Governmental clinic	204	3.9
	Private clinic	188	4.0
Physician qualifications	Governmental clinic	204	3.1
	Private clinic	188	3.0
Hospital	Governmental clinic	204	3.6
	Private clinic	188	3.5
Customer service	Governmental clinic	204	4.2
	Private clinic	188	4.2
Nonclinical features	Governmental clinic	204	3.9
	Private clinic	188	3.8

Table 3: Mean Likert scores for dimensions for all groups

Dimensions	Government group mean	Private group mean	Average mean between government and private groups
Physician manner	4.3	4.8	4.5*
Customer service	4.2	4.2	4.2
Physician reputation	4	3.6	3.8*
Nonclinical features	3.9	3.8	3.9
Physician quality information	3.9	4	3.9
Hospital	3.6	3.5	3.5
Physician qualifications	3.1	3.1	3.1

*Significant difference $P < 0.001$

Likewise, after conducting 1059 questionnaires, Mavis *et al.* found that women in Michigan who were contemplating choosing an obstetrician-gynecologist surgeon on average rated interpersonal skills as being more important for their surgeons to have than clinical competence.^[21] All of this is further supported the Saudi case in particular by a study, which focused on the factors influencing the patient choice of hospital in Riyadh, KSA.^[11] Although referring to hospital staff in general, they were quick to emphasize the special significance of physicians' interpersonal skills. It may be concluded, therefore, that the present research's finding (i.e., that *physician manner* was the most important factor when selecting surgeons) falls in line with the importance given to it in the literature overall, not to mention for the Saudi case in particular.

The second most important factor for choosing a surgery provider found by the present study was *customer service* (average Likert, 4.2). In terms of this metric's reflecting the friendliness and cordiality of the hospital and clinical staff, as well as the hospital and clinic's cleanliness and overall appearance, this result would seem to align well with what has already been related in the literature. For instance, patients tend to prefer hospitals, which offer welcoming atmospheres with friendly staff.^[31,32] Furthermore, cleanliness has also been found to be

a significant determinant for patients when choosing hospitals in general.^[6,33] As regards the item relating to whether the length of one's wait to see one's surgeon influenced patients' choice, several studies have likewise concluded that the longer a patient has to wait, the less happy they are to do so, in turn affecting their choice behaviors.^[34-37]

Regarding the second part of the questionnaire, 88% of informants (strongly) agreed that their selection of surgeon would significantly influence the outcome of their surgery (average Likert score, 4.2). Likewise, 85.5% of informants (strongly) agreed that there are significant differences in the quality of medical service offered by different surgeons (average Likert score, 4.1). Nevertheless, only 72.2% attested to their having adequate information about choosing a surgeon for their respective procedures (average Likert, 3.7). Furthermore, an even smaller percentage of informants claimed that they were able to find data, which would have helped them to understand better how their surgeon compared to other surgeons (63.6%; average Likert, 3.6). The same was true of their ability to find data for understanding better how to compare one hospital to another (66.1%; average Likert, 3.6), even though 77.4% believed their choice of hospital to be important for their surgery (average Likert, 3.9). These differences all denote a lack of ability to make a well-informed

decision, notwithstanding their beliefs that their choice regarding the matter would have had a significant impact on their ability to receive the best care possible. Furthermore, considering the fact that the Likert scores for their ability to obtain quality information regarding their surgeons and hospitals are both 3.6, this seems to signify a certain level of uncertainty regarding their ability to even obtain that information effectively or not. This is a troublesome development seeing as, if they are not able to find quality information about candidate surgeons and hospitals for performing their operations, they will not be able to come to a well-informed decision regarding which surgeon or hospital they should choose. Research should, therefore, be conducted regarding whether there is enough quality information available regarding Saudi surgeons and hospitals.

With regard to what types of information source patients were guided by (apart from their primary physician's recommendation), 66.7% of informants stated that they received information regarding surgeon selection from their friends (average Likert, 3.7), whereas a slightly higher percentage said that they received information from other patients who had the same surgery that they wished to have (69%; average Likert, 3.7). On the other hand, 42.2% reported, on average, as being unsure (average Likert, 3.05) about whether they received information via social media, with 34% stating that they either disagreed or strongly disagreed with the statement. Therefore, social media can be said to have played no significant part in how patients obtained data. Furthermore, if, as the literature seems to suggest, patients largely estimate their doctor's reputation based on the recommendations given to them by their primary physician,^[7] especially when the patients are less educated,^[11] then all of these results taken as a whole clearly illuminate the importance that nonvirtual social networking has on patient choice in relation to surgical provider.

Finally, 57.5% of the respondents gave their tentative agreement (average Likert, 3.35) to the proposition that their choice of surgery provider would be affected by any out-of-pocket costs that they should incur. Besides social media, this was the lowest scoring factor of the second part of the questionnaire. It should be noted that governmental hospital respondents differed from their private hospital counterparts when scoring this statement, giving it a 3.6 Likert score versus 3.1. This means that out-of-pocket costs were, as a factor, slightly more important for those visiting governmental hospitals. This is probably due to the fact that low-income patients were more likely to utilize governmental hospitals and therefore would be more affected by any out-of-pocket costs that might be incurred from their treatment.^[11]

The two dimensions with the most significant difference expressed between the two groups were that of *physician manner* and *physician reputation*. The patients of both the government and private hospitals weighed *physician manner* as being the most important factor for choosing a surgery

provider. Nevertheless, the fact that private hospital patients assigned *physician manner*, on average, with a Likert score of 4.8 (versus 4.3 for government hospital patients) emphasizes their near-certain attitude toward that metric's being of such substantial importance to them. This mirrors the finding that with relation to Saudi patients' satisfaction in private hospitals, one of the elements which patients are most satisfied with is the friendliness and cordiality of its staff, including its physicians and one may logically extrapolate, its surgeons.^[11]

The other dimension, which had the greatest mean difference between the private and governmental hospitals, was *physician reputation*. It can be seen that the private group gives less importance to *physician reputation* (average Likert, 3.6) than did the governmental group (average Likert, 4). This may be because private hospital patients may assume that the reputations of the surgeons working at private hospitals are already vouchsafed by the hospital itself; whereas those visiting governmental hospitals may be more skeptical about their surgeons' reputations.

Furthermore, as noted in the results section, whereas the governmental group had a 3.5 mean Likert score with regard to whether they had adequate information when choosing a surgeon for their procedure, the private group had a mean Likert score of 3.9. Similarly, whereas the governmental group recorded a mean Likert score of 3.7 with relation to whether they searched for data on how their hospital compared to other hospitals in that area, the private group recorded a mean Likert score of 3.5. Possible explanations for these statistically significant differences in Likert scores are, first, that private hospitals might provide more information to its patients compared to public hospitals; or, second, that those visiting public hospitals simply do not have as much confidence in those hospitals compared to those who visit private hospitals. These hypotheses, however, are unfounded and should thus be verified.

Al-Briek *et al.* studied what the most important factors which influence patient choice of *treating physician* in the private sector are. They identified the most important factors as being patients having prior experience with the physician in question (be it themselves personally or others they know), as well as what the physician's title and subspecialty is (what the present study would have identified as *physician qualifications*). The present study, on the other hand, has postulated that the most important factors affecting patient choice of surgeon is that of *physician manner* and *customer service*.^[12] First of all, it must be noted that, for the present study, the *physician qualifications* factor was the least important factor, whereas, for the patients they observed, Al-Briek *et al.* identified it as being the most important. Furthermore, it could be said that the finding that the participants of the Al-Briek *et al.*'s study preferred that either themselves or their friends or family have previous experience with their treating physicians which correlates well with what the present study has shown about how patients prefer to receive referrals (i.e., through their doctor, friends or family).

It is strongly recommended that this study be replicated to validate its findings. If replicated, the limitations of the present study should be taken into consideration to resolve certain issues that the authors noticed while conducting the study, which may, in turn, help to improve any future attempt at validating or improving on its results. The present study did not collect demographic data regarding education, age, and income. Had this extra information been researched, the study's analyses might have gained an extra layer of complexity. It is therefore strongly recommended that future researches examine these factors as well.

Furthermore, in retrospect, the researchers, on analyzing the data, learned only too late that certain items of the questionnaire should have been explained out a bit more. *Customer service*, for instance, as a term may be misleading. Even though its meaning is rather straightforward on face value and its items, as laid out by Bozic *et al.*,^[14] did, in some sense, refer to “customer service” as it is traditionally understood, two of its items related to cleanliness and friendliness, whereas the other two related to something which could have more rightly been termed “surgeon accessibility.” Seeing as there were more articles in the literature, which related to the above two items opposite the latter two items, explaining these four items into groupings, which would have been more conducive to analysis might have yielded, not only more fruitful results but also a richer analysis as such. The same can be said for *nonclinical factors*. The two items, which this dimension consists of should be given what the literature states about these factors, should not have been paired together.

On the one hand, the first item measures whether the distance the patients have to travel is a significant factor, whereas the second item attempts to factor comparative costs into the discussion. Nevertheless, the literature strongly supports the proposition that time and distance both are negatively correlated to a patient's willingness to travel for treatment. This is tempered, though, by what the patient is suffering from – i.e., how serious the sickness or how evasive the surgery. In general, patients are more and more willing to travel great distances when they know that they will be provided with better-quality hospitals and surgeons. For example, people from rural areas may travel to cities for treatment instead of being admitted at local or regional hospitals where they think might not receive appropriate care.

CONCLUSIONS

Physician manner and *customer service* were found to be the most significant factors, which patients took into consideration when selecting a surgical provider in Riyadh, KSA. With regard to differences of opinion between private and governmental patients, there were only a few significant differences between the opinions given by private and governmental hospital patients.

Ethical considerations

The present study was approved by the Institutional Review

Board (IRB) of the College of Medicine at Al-Jouf University, Sakaka, Saudi Arabia. After permission from hospitals authorities, the aims and objectives of the study were explained to the participants. Moreover, they were informed about their right to withdraw from participating in the study at any time they should so choose. Before requesting them to provide their verbal consent, the respondents were given the researcher's assurance that their opinions would remain confidential and anonymous. Furthermore, this study did not offer the respondents any incentives, which would have provided them with any further encouragement to participate.

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Conflicts of interest

There are no conflicts of interest.

Author's contributions

ASA, SHA and OSA conceived and designed the study, conducted the research, provided research materials, collected and organized data, analyzed and interpreted data, wrote the initial and final draft of the article and provided logistic support. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

REFERENCES

- Vonberg RP, Sander C, Gastmeier P. Consumer attitudes about health care acquired infections: A German survey on factors considered important in the choice of a hospital. *Am J Med Qual* 2008;23:56-9.
- Tu TH, Lauer JR. Word of Mouth and Physician Referrals Still Drive Health Care Provider Choice. Washington, DC: Center for Studying Health System Change; 2008.
- McGlone TA, Butler ES, McGlone VL. Factors influencing consumers' selection of a primary care physician. *Health Mark Q* 2002;19:21-37.
- Lubalin JS, Harris-Kojetin LD. What do consumers want and need to know in making health care choices? *Med Care Res Rev* 1999;56 Suppl 1:67-102.
- Harris KM. How do patients choose physicians? Evidence from a national survey of enrollees in employment-related health plans. *Health Serv Res* 2003;38:711-32.
- Victoor A, Delnoij DM, Friele RD, Rademakers JJ. Determinants of patient choice of healthcare providers: A scoping review. *BMC Health Serv Res* 2012;12:272.
- Schwartz LM, Woloshin S, Birkmeyer JD. How do elderly patients decide where to go for major surgery? Telephone interview survey. *BMJ* 2005;331:821.
- Yahanda AT, Lafaro KJ, Spolverato G, Pawlik TM. A systematic review of the factors that patients use to choose their surgeon. *World J Surg* 2016;40:45-55.
- Al-Shekh AA. Perceptions of Hospital Experiences in Riyadh City, Saudi Arabi: A Comparison of Service Quality in Public and Private Hospitals. Swansea: University of Wales; 2003.
- Al-Borie HM, Damanhour AM. Patients' satisfaction of service quality in Saudi hospitals: A SERVQUAL analysis. *Int J Health Care Qual*

- Assur 2013;26:20-30.
11. al-Doghaither AH, Abdelrhman BM, Saeed AA, Magzoub ME. Factors influencing patient choice of hospitals in Riyadh, Saudi Arabia. *J R Soc Promot Health* 2003;123:105-9.
 12. Al-Briek A, Al-Barrak A, Al-Johi K, Al-Anazi M, Al-Ateeq M, Masud N. Factors that influence patients in choosing their treating physicians in the private sector in Saudi Arabia. *Am J Public Health Res* 2018;6:173-81.
 13. Schneider EC, Epstein AM. Influence of cardiac-surgery performance reports on referral practices and access to care. A survey of cardiovascular specialists. *N Engl J Med* 1996;335:251-6.
 14. Bozic KJ, Kaufman D, Chan VC, Caminiti S, Lewis C. Factors that influence provider selection for elective total joint arthroplasty. *Clin Orthop Relat Res* 2013;471:1865-72.
 15. Tsang S, Royse CF, Terkawi AS. Guidelines for developing, translating, and validating a questionnaire in perioperative and pain medicine. *Saudi J Anaesth* 2017;11:S80-9.
 16. Vick S, Scott A. Agency in health care. Examining patients' preferences for attributes of the doctor-patient relationship. *J Health Econ* 1998;17:587-605.
 17. Fiala TG. What do patients want? Technical quality versus functional quality: A literature review for plastic surgeons. *Aesthet Surg J* 2012;32:751-9.
 18. Moser A, Korstjens I, van der Weijden T, Tange H. Patient's decision making in selecting a hospital for elective orthopaedic surgery. *J Eval Clin Pract* 2010;16:1262-8.
 19. Aitken SA, Tinning CG, Gupta S, Medlock G, Wood AM, Aitken MA. The importance of the orthopaedic doctors' appearance: A cross-regional questionnaire based study. *Surgeon* 2014;12:40-6.
 20. Zaidi R, Pfeil M, Macgregor AJ, Goldberg A. How do patients with end-stage ankle arthritis decide between two surgical treatments? A qualitative study. *BMJ Open* 2013;3. pii: e002782.
 21. Mavis B, Vasilenko P, Schnuth R, Marshall J, Jeffs MC. Female patients' preferences related to interpersonal communications, clinical competence, and gender when selecting a physician. *Acad Med* 2005;80:1159-65.
 22. Salkeld G, Solomon M, Butow P, Short L. Discrete-choice experiment to measure patient preferences for the surgical management of colorectal cancer. *Br J Surg* 2005;92:742-7.
 23. Dusch MN, O'Sullivan PS, Ascher NL. Patient perceptions of female surgeons: How surgeon demeanor and type of surgery affect patient preference. *J Surg Res* 2014;187:59-64.
 24. Lux MP, Fasching PA, Schrauder M, Löhberg C, Thiel F, Bani MR, *et al.* The era of centers: The influence of establishing specialized centers on patients' choice of hospital. *Arch Gynecol Obstet* 2011;283:559-68.
 25. Kolstad JT, Chernew ME. Quality and consumer decision making in the market for health insurance and health care services. *Med Care Res Rev* 2009;66:28S-52S.
 26. Orr D, Sidiki SS, McGhee CN. Factors that influence patient choice of an excimer laser treatment center. *J Cataract Refract Surg* 1998;24:335-40.
 27. Schnatz PF, Murphy JL, O'Sullivan DM, Sorosky JI. Patient choice: Comparing criteria for selecting an obstetrician-gynecologist based on image, gender, and professional attributes. *Am J Obstet Gynecol* 2007;197:548.e1-7.
 28. Fasolo B, Reutskaja E, Dixon A, Boyce T. Helping patients choose: How to improve the design of comparative scorecards of hospital quality. *Patient Educ Couns* 2010;78:344-9.
 29. Newton FJ, Ewing MT, Burney S, Vella-Brodrick D. Medical clinic facilities and doctor characteristics: What older rural men value. *Aust J Rural Health* 2007;15:41-5.
 30. Ejaz A, Spolverato G, Bridges JF, Amini N, Kim Y, Pawlik TM, *et al.* Choosing a cancer surgeon: Analyzing factors in patient decision making using a best-worst scaling methodology. *Ann Surg Oncol* 2014;21:3732-8.
 31. Marang-van de Mheen PJ, Dijks-Elsinga J, Otten W, Versluijs M, Smeets HJ, van der Made WJ, *et al.* The importance of experienced adverse outcomes on patients' future choice of a hospital for surgery. *Qual Saf Health Care* 2010;19:e16.
 32. Shah JD, Dickinson CL. Establishing which factors patients value when selecting urology outpatient care. *Br J Med Surg Urol* 2009;3:25-9.
 33. Dijks-Elsinga J, Otten W, Versluijs MM, Smeets HJ, Kievit J, Vree R, *et al.* Choosing a hospital for surgery: The importance of information on quality of care. *Med Decis Making* 2010;30:544-55.
 34. Cheraghi-Sohi S, Hole AR, Mead N, McDonald R, Whalley D, Bower P, *et al.* What patients want from primary care consultations: A discrete choice experiment to identify patients' priorities. *Ann Fam Med* 2008;6:107-15.
 35. Ryan M, McIntosh E, Dean T, Old P. Trade-offs between location and waiting times in the provision of health care: The case of elective surgery on the isle of wight. *J Public Health Med* 2000;22:202-10.
 36. Exworthy M, Peckham S. Access, choice and travel: Implications for health policy. *Soc Policy Adm* 2010;40:267-87.
 37. Ringard Å, Hagen TP. Are waiting times for hospital admissions affected by patients' choices and mobility? *BMC Health Serv Res* 2011;11:170.