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Research Article

FACTORS AFFECTING PATIENTS' CHOICE OF PRIVATE HOSPITALS IN RIYADH, SAUDI ARABIA

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Abstract:

Objectives: The study aims to determine patients' preference levels and the factors that influence their choice between public and private hospitals in the Riyadh district, Saudi Arabia.

Methods: This study used a quantitative observational cross-sectional study and a convenience sample of 384 Saudi citizens (31.5% male, 68.5% female) aged 18-65 years who live in Riyadh and were treated in one of its public or private hospitals in Riyadh. The respondents completed an electronic questionnaire (254 respondents) or a hardcopy questionnaire (130 respondents) distributed to visitors of the King Khalid University Hospital. Most preferred to be treated at public hospitals, and women's choice of a public or private hospital was explored and measured by the questionnaire by considering factors including their preference for privacy.

Results: Public hospitals were preferred by 50.30% of participating Saudi patients, and 49.70% preferred private hospitals. Private hospitals were preferred by 58.30% of participating females for reasons of privacy, and 41.70% preferred public hospitals. The most important factors when selecting a hospital were the quality of medical care, the flexibility of appointments, and cost of treatment, in that order.

Conclusion: The preference between public and private hospitals was almost equal with no significant difference.

Key words: *Hospital Preference; Public Hospitals; Private Hospitals; Riyadh district; Saudi Arabia*

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INTRODUCTION:

The health care system in Saudi Arabia is managed by the Ministry of Health, which is directly linked to 244 public hospitals and 2,037 primary care centers [1,2] that provide over 60 percent of health services. Public (government) hospitals provide health care services and medications free of cost for all Saudi citizens, while private hospitals require payment for the health care they provide. In recent years, there has been a marked increase in the preference of Saudi citizens for private hospitals. The choice between public and private hospitals is usually affected by a variety of socio-economic and environmental factors.

Hammoud [3] defined privacy in health care as the “personal privacy and dignity of an individual while being examined clinically by a health professional.” The privacy of patients is of paramount importance, and health care providers should maintain a well-ordered privacy system to meet this priority. Privacy is not only related to clinical examination but also to patient information.

In Saudi society, women may feel more comfortable if the health care provider is female; however, the patient cannot always choose the gender of the health care provider. If the health care provider is a male, a woman may request a relative or nurse female to be with her in the room. [3,4]

The present study investigated whether female patients can obtain this privacy by selecting the gender of a health care professional and choosing a female doctor. This may impact on patient preference for either public or private hospitals. Financial problems and the burgeoning number of patients in public hospitals may restrict the ability of patients to select the gender of health professionals. “A paucity of financial resources and infrastructure in public hospitals often precludes the separate examination of one patient at a time. An unmanageably high patient load is another driving force for cascading patient clinical examinations in the outpatient department, as a result of which patient privacy is inadvertently sacrificed.”[5] Privacy is therefore often linked to the financial status of patients and is not existent with patients low on the socio-economic ladder. [5]

Several issues have been hotly discussed over past years. The first of these is the factors that influence a patient’s choice to be treated in a private or public hospital. The second issue is the preference for private hospitals by Saudi citizens, and the third concerns the privacy of Saudi females who are concerned about the gender of their physicians. Improvements in health care services and the developing health care system

means that these issues can now be addressed. The present study seeks to do this, as we believe that it is important to contribute to the provision of data that could improve the health care system in our society.

The objectives of this study were (a) to determine the preference level of patients in their choice of hospitals in Riyadh, and (b) to determine the major factors associated with this choice that impact on patients’ preference for private or public hospitals. Our hypothesis was that more than half of Saudi citizens would prefer private hospitals due to factors including the privacy concerns of Saudi females, and that other factors including age, gender, level of education, income status, cost of treatment, and facilities of hospitals would be associated with the patients’ preference of hospitals.

METHODS:

The study used a cross-sectional observational quantitative design to investigate the factors that influence a patient’s choice for treatment in public or private hospitals. Participants were asked to complete a self-administered questionnaire.

For reasons of patient privacy, the private hospitals were unable to provide patient file numbers; hence, we used a convenience sampling technique by which we distributed the survey questionnaire among subjects that fit the inclusion criteria. The survey was developed in English by the authors of the study and then translated in Arabic. It included sociodemographic questions relevant to selecting a hospital. The survey was pretested twice by 25 subjects to ensure its reliability and to confirm that the flow and the contents were appropriate and understandable. Following the initial pretest, some changes were made to the sequence and wording of the questions. After the second pretest, the correlation was calculated using Pearson correlation coefficient. The value of the reliability coefficient always exceeded 0.70, indicating good reliability.

The study was conducted in the Riyadh district in January and February of 2016. A consent form was attached to the questionnaire, which confirmed the patient’s confidentiality. The patients had the right to participate or withdraw, and the study was not financially supported by any third party. There was no conflict of interest. And the institutional review board approved the study proposal.

The sample size was calculated from a previous study that showed that 60.4% of male patients preferred private hospitals and 39.6% preferred public hospitals, while 35.7% of female patients preferred private hospitals and 64.3% preferred public hospitals. By

taking an intermediate proportion among those values, $p=50\%$, $d=5\%$, z_{α} for $95\%=1.96$, $n=z_{\alpha}^2 \cdot P(1-p)/d^2 = 384.16 \sim 384$.

The required sample size was determined to be 384. The inclusion criteria were: being a Saudi citizen, living in the Riyadh district, aged 18 years old or above, and being treated in one of the public and private hospitals in Riyadh. Due to time constraints and to reach a large number of the subjects, an online survey was designed via Google and distributed by Email to 254 Saudi students and families. A hard-copy survey was distributed to 130 outpatients in the medical, surgical, primary care, and obstetrics and gynecology departments of King Khalid University Hospital to reach older patients who did not use electronic devices or have Email addresses.

Excel 2011 was used for data entry and revision. Each question and response was coded. Statistical analysis was performed using SPSS version 21 software (SPSS INC., Chicago, IL, USA). The chi-square test was used to compare the all-nominal variables of participants who preferred public hospitals with those who preferred private hospitals. The current study assumed there was a statistically significant difference when the p-value was less than 0.05.

RESULTS:

A self-administrated questionnaire collected data from patients ($n = 384$) who were being treated or still receiving medical care at hospitals in the Riyadh district. The demographic distribution of the participants is shown in Table 1.

Table 2 demonstrates the participant's preferences for public and private hospitals when compared to the sociodemographic variables. 53.7% of male participants preferred public hospitals and 46.3% preferred private hospitals, while 48.7% of the female participants preferred public hospitals and 51.3% preferred private hospitals. There was no significant difference since $p = 0.358$. Among those who had health insurance, 32.4 % preferred public hospitals and 67.6% preferred private hospitals. Among those with no health insurance, 57.5% preferred public hospitals and 42.5% preferred private hospitals. There was a significant difference since $p < 0.0001$. 58.30% of the female participants preferred private hospitals when seeking privacy and 41.70% preferred public hospitals. The difference was significant since $p < 0.0001$. Table 2

The questionnaire asked about the sources of information used by participants when choosing a hospital; 71.4 % used friends and relatives as a source of information, 59.4% considered previous

experience, 52.3% chose the internet, 3.9% used advertisements, and 5.7% did not use any information when selecting hospital. In general, 50.30% of participants preferred going to public hospitals for their treatment and 49.70% preferred private hospitals.

Figure 1 shows the factors that influence the patients' choice of hospital; 93.80% of participants indicated that the professional skills of physicians were important when selecting hospitals.

When comparing the waiting times at public and private hospitals, 86.70% of participants reported that they spent more than 15 minutes waiting in public hospitals before seeing a doctor, while 68.00% of participants said that they spent less than 15 minutes in private hospitals. See Figure 2.

DISCUSSION:

The results show that range of factors, including patients' demographic information, influences hospital preference. In this study, we found that the demographic factors that appeared to play a major role in hospital preference were gender, age, educational status, occupation, marital status and monthly income. Our study also shows that males prefer public hospitals while females prefer private hospitals. The study indicated that Saudi women prefer private hospitals when considering privacy, since female doctors are available and accessible. Saudi society is known to be conservative and concerned about privacy. Saudi women prefer to be treated by female doctors, especially for obstetric and gynecological care.[6] It is well-known that private hospitals give patients more opportunity to determine the gender of doctors than public hospitals [7,8]

Younger people were more likely to choose private hospitals. This is perhaps due to the expected longer waiting times in public hospitals, which some young people are not prepared to accept. Older participants showed more interest to public hospitals, possibly because they are less demanding than young people. Previous studies support this approach. [9-12]

People with higher education and income prefer private hospitals because they are more demanding when it comes to health issues [13]. Several studies have suggested that expectations of health delivery and attention are normally better met by private rather than public hospitals. [14-16]

In the current study, we found that both governmental and private sector employees prefer public hospitals, where treatment and drug prescriptions are free. This result suggests that both parties are concerned about

cost, since their monthly income may make it difficult to pay for private hospital care [13]. Students, however, tend to prefer private hospitals because of the shorter expected waiting times. Since they were prepared to pay more in order to have shorter waiting times as in Saudi culture, the living expenses of students are often paid by their parents [17].

Married participants preferred public hospitals, and this probably because Saudi people get married earlier as there is no minimum age for marriage and their families start expanding, which makes it difficult to consider private hospitals with expensive bills [18].

Health insurance is another factor that may have an impact on the preference for public or private hospitals. In this study, we found that people with health insurance prefer private hospitals, and those without health insurance prefers public hospitals with free treatments. This strongly suggests that the cost of treatment is a major factor in selecting the type of hospital.

The current study found that the majority of the study population relied on friends and relatives as a source of information when deciding on a hospital. The second and third sources of information to select hospitals were previous experience and Internet, respectively. This suggests that the participants did not trust the Internet as a source of information and trusted more in the real-life experiences of friends and relatives. Another study showed that the use of internet for purposes besides health information seeking was much less common.[19]

Analysis of the importance of the factors influencing the choice of hospitals showed no significant differences between participants who preferred private and public hospitals.

Some of these factors are considered to be more important than others when choosing hospitals. Working during weekends was found to be a less important factor. We stated that due to the nature of Saudi culture, families prefer to enjoy family time at the weekend rather than going to hospitals.[20]

The study also showed that public and private hospitals are almost equally preferred, since the sum total of weights given to different factors is closely balanced between public and private hospitals. The importance of the quality of health care and medical treatment can be seen in the participants' concern for the professional skills of physicians, and receiving treatment from a specialist ranked highest among the categories of importance. [9, 21] This was expected,

since the main aim of visiting a hospital is to obtain the best diagnosis with the best treatment options.

According to the National Center for Policy Analysis, the first diagnosis may not be correct, and an estimated 10–20 percent of cases are misdiagnosed. [22] People always have concerns about the quality of medical care; thus, they try to go to the best doctors and medical staff. The quality of health care and treatment is neutral because doctors with secure jobs in public hospitals also work part time in private hospitals. Their professional skills are the same in both cases, which suggests that the same quality of care will be provided in public and private hospitals.

However, other factors such as the flexibility of appointments, the cost of treatment, blood supplies, waiting times, the location of the hospital, and the availability of beds were ranked as important, in that order. Location of a hospital is important in the case of emergencies and frequent visits. [9]

Public hospitals offer free treatment and have better availability of beds and blood supply than private hospitals. Private hospitals generally have higher treatment costs and order more pathology tests than public hospitals. [23] According to a 2012 healthcare overview in Saudi Arabia, bed capacity is increasing with time in both sectors; however, the bed capacity in public hospitals is higher than private hospitals. [24] This study showed that more participants preferred public hospitals when a blood transfusion is needed. This may be because public hospital has blood banks more than private hospitals according to Saudi Diploma Blood Banking and Transfusion Curriculum by Saudi Commission for Health Specialties, blood is therefore more available in public hospitals [25].

On the other hand, private hospitals have the advantage of shorter waiting times and greater flexibility of appointments. The flexibility of appointments has a major impact when selecting hospitals. In both type of hospital the appointment probably takes place in private, but it is likely to take much longer to get an appointment in a public hospital.

A study conducted in Italy showed that 97.6% of patients with coronary artery disease underwent the final therapeutic phase within 30 days of their reservation date.[26] However, long waiting lists may worsen the prognosis.[26] Although emergency cases do not encounter a waiting list, while elective cases are on a the waiting list, the patient's clinical condition may worsen and become an emergency.[27]

Despite the perceived preference for private hospitals in Riyadh, our study found that the participants preferred public more than private hospitals by a tight margin.

CONCLUSION:

In public and private hospitals, we may consider both the needs of patients and the factors that affect their choice of preferred hospital. The choice may be influenced by a single factor or a combination of factors.

Health care services in Saudi Arabia are available free of charge to all Saudi citizens through public hospitals. The Ministry of Health devotes its full attention to enhancing the health care provided to citizens and ensuring that public hospitals meet the expectation of patients.

This study found that more young people in Saudi preferred private rather than public hospitals. Since the majority of Saudi population is young, according to the General Authority for Statistics this may indicate that an increasingly youthful population will increase the popularity of private hospitals at the expense of public ones. [26]

REFERENCES:

1. Al-Yousuf M, Akerele T, Al-Mazrou Y. Organization of the Saudi health system. *East Mediterr Health* (2002)(8):648.
2. Health Statistical Year Book. 1st ed. Riyadh:(2011). <http://www.moh.gov.sa/Ministry/MediaCenter/News/Documents/healthybook.pdf>).
3. Hammoud M, White C, Fetters M. Opening cultural doors: Providing culturally sensitive healthcare to Arab American and American Muslim patients. *American Journal of Obstetrics and Gynecology*.(2005)(193):1307-1311. doi:10.1016/j.ajog.2005.06.065
4. Bhatia J. Health care of female outpatients in south-central India: comparing public and private sector provision. *Health Policy and Planning*. (2004)(19):402–409. doi:10.1093/heapol/czh055
5. Tetali S. The importance of patient privacy during a clinical examination | Tetali | *Indian Journal of Medical Ethics*. *Ijme.in*. (2007). Available from:<http://ijme.in/index.php/ijme/article/view/357/1386>
6. Kim B. A logit analysis of hospital choice behavior in Chollabukdo province of Korea. *Social Science & Medicine*. (1990)(30):1119–1129. doi:10.1016/0277-9536(90)90298-7
7. Patients' will in the medical contract. Zeina Ghanem Younes (2005). Available from: <http://thesis.mandumah.com/Record/161336>
8. Patient gender preferences for medical care. KevinMD.com. (2010). Available from: <https://www.kevinmd.com/blog/2010/11/patient-gender-preferences-medical-care.html>
9. Doghathier A. Factors influencing patient choice of hospitals in Riyadh, Saudi Arabia. *The Journal of the Royal Society for the Promotion of Health*. (2003) (123):105-109. doi:10.1177/146642400312300215
10. Egunjobi L. Factors influencing choice of hospitals: A case study of the Northern part of Oyo State, Nigeria. *Social Science & Medicine*. (1983)(17):585–589. doi:10.1016/0277-9536(83)90301-5
11. Manzambi J, Tellier V, Bertrand F et al. The behavioral determinants for health centers in health districts of urban Africa: Results of a survey of households in Kinshasa, Congo. *Trop Med Int Health*. (2000)(5):563-70.
12. Kang J, Chen C, Chou P. Factors related to the choice of different hospitals providing Chinese traditional medicine. *Zhanghua Yi Xue Za Chi (Taipei)*. (1993)(51):448-56.
13. Shankar J, Ip E, Khalema E, Couture J, Tan S, Zulla R et al. Education as a Social Determinant of Health: Issues Facing Indigenous and Visible Minority Students in Postsecondary Education in Western Canada. (2013).
14. Mandil A, Alhayan R, Alshalawi A et al. Preference of physicians' gender among male and female primary health care clinic attendees in a university hospital in Saudi Arabia. *Saudi Medical Journal*. 2015(36):1011–1011. doi:10.15537/smj.2015.8.12456
15. Yip W. Determinants of patient choice of medical provider: a case study in rural China. *Health Policy and planning*. (1998)(13):311–322. doi:10.1093/hwapol/13.3.311
16. Tengilimoglu D, Kisa A, Dziegielewski S. Patient satisfaction in Turkey: differences between public and private hospitals. *J Community Health*. (1999)(24):73-91.
17. Newspaper article, alriyadh, (2010) (15422). Available from: <http://www.alriyadh.com/559589>
18. Demography Survey [Internet]. (2016). Available from: https://www.stats.gov.sa/sites/default/files/en-demographic-research-2016_2.pdf
19. Hesse B, Nelson D, Kreps G et al. Trust and Sources of Health Information. *Arch Intern Med*. (2005)(165):2618. doi:10.1001/archinte.165.22.2618

20. Newspaper article, Alyaum, 2014 Available from: <http://www.alyaum.com/article/3138546>
21. Yassini S, Harrazi M, Askari J. The study of most important factors influencing physician choice. *Procedia - Social and Behavioral Sciences*. (2010)(5):1945–1949. doi:10.1016/j.sbspro.2010.07.393
22. Physicians Misdiagnose at an Alarming Rate. *Ncpa.org*. (2016).http://www.ncpa.org/sub/dpd/index.php?Article_ID=23148.
23. Basu S, Andrews J, Kishore S, Panjabi R, Stuckler D. Comparative Performance of Private and Public Healthcare Systems in Low- and Middle-Income Countries: A Systematic Review. *PLoS Medicine*. (2012);9(6):e1001244.
24. Kingdom of Saudi Arabia Healthcare Overview. 1st ed. (2012). Available from: <http://www.csc.org.sa/Arabic/NationalCommittees/NationalCommitteesList/Comm12/Documents/Collier%20Study.pdf>
25. Blood bank and transfusion diploma [Internet]. (2016). Available from: <https://www.scfhs.org.sa/MESPS/TrainingProgs/TrainingProgsStatement/Documents/Blood%20Banking%20and%20Transfusion%20new.pdf>
26. Population projections Kingdom of Saudi Arabia. General Authority for Statistics Kingdom of Saudi Arabia. (2010).<http://www.stats.gov.sa/en/node/5883>.
27. Ciccone M, Scicchitano P, Aquilino A et al. Waiting lists in coronary artery bypass graft patients and role of coronary angiography: the Apulian experience. *CA*. (2013):49

- **Table 1:** Sociodemographic variables (n = 384)

Variable	Number	Percentage
Gender		
Male	121	31.5%
Female	263	68.5%
Age		
< 25 years	275	71.6%
26–40 years	31	8.1%
> 40 years	78	20.3%
Marital status		
Single	276	71.9%
Married	98	25.5%
Divorced	7	1.8%
Widowed	3	0.8%
Education		
No formal education	7	1.8%
Completed primary	5	1.3%
Completed intermediate	10	2.6%
Completed secondary	113	29.4%
Completed university	236	61.5%
Other	13	3.4%
Occupation		
Government sector	47	12.2%
Private sector	23	6%
Unemployed	51	13.3%
Retired	7	1.8%
Student	256	66.7%
Income (monthly)		
Low (< 8,000 SR)	224	58.3%
High (> 8,000 SR)	160	41.7%
Preferred hospital for women seeking privacy (n = 263)		
Private	153	58.2%
Public	110	41.8%

• **Table 2:** Hospital preference by sociodemographic variables

Variable	Public (n = 193)		Private (n = 191)		P-value
	No.	%age	No.	%age	
Gender					
Male	65	53.7%	56	46.3%	0.358
Female	128	48.7%	135	51.3%	
Age					
< 25	116	42.2%	159	57.8%	0.000
26–40	39	62.9%	23	37.1%	
> 40	38	80.9%	9	19.1%	
Education					
Low education	82	55.4%	66	44.6%	0.110
High education	111	47.0%	125	53.0%	
Occupation					
Government sector	34	72.3	13	27.7%	0.000
Private sector	10	58.8%	7	41.2%	
Retired	45	70.3%	19	29.7%	
Student	104	40.6%	152	59.4%	
Marital status					
Single	119	43.1%	157	56.9%	P = < 0.0001
Married	74	68.5%	34	31.5%	
Health insurance					
Yes	36	32.4%	75	67.6%	P = < 0.0001
No	157	57.5%	116	42.5%	
Income (monthly)					
Low income	121	54.0%	103	46.0%	0.081
High income	72	45.0%	88	55.0%	

Figure 1: Factors in selecting a hospital

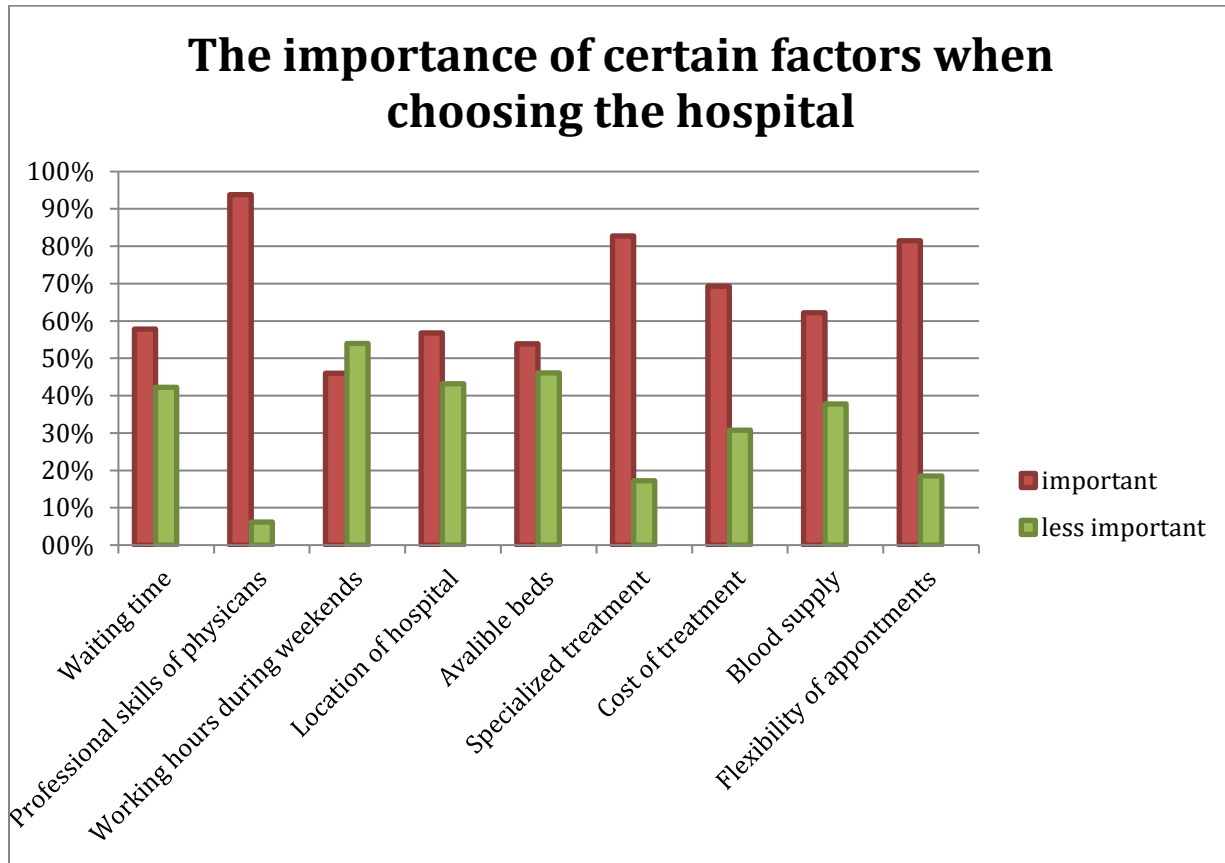


Figure 2: Waiting time in public hospitals

