



Submitted: July 15<sup>th</sup>, 2020

Accepted: July 22<sup>th</sup>, 2020

## The State of Saudi Arabi Healthcare Service Delivery: Public Perceptions

Noor Alshareef<sup>1,\*</sup>, Khadijah Angawi<sup>1</sup>, Immanuel Azaad Moonesar<sup>2</sup>

<sup>1</sup> Assistant Professor, Health Services and Hospital Administration, Faculty of Economics and Administration, King Abdulaziz University, Jeddah, KSA. `

<sup>2</sup> Associate Professor, Health Administration & Policy, Academic Affairs, Mohammed Bin Rashid School of Government, Dubai, United Arab Emirates.

### Abstract

**Background:** The understanding of the public's perceptions concerning health services provides valuable insights for health system improvements. Thus, this study aims to examine the public perceptions of the state of the healthcare service delivery in KSA concerning healthcare quality, affordability, availability/ access, and responsiveness.

**Methods:** This is a cross-sectional descriptive study. Between July 2019 and March 2020, an online self-administrated questionnaire was distributed using convenience sampling. Data was collected from 1,232 respondents and were then analyzed using the Statistical Package for Social Sciences (SPSS).

**Results:** The study found that the public generally possessed positive perceptions towards quality, accessibility. The overall agreement on most of the healthcare statements related to quality, accessibility, and satisfaction was greater than 50%, whereby the overall agreement was significantly low for responsiveness and varied for the affordability factor. In reference to responsiveness, the results show that more than 60% of the participants agreed that doctors act do not spend plenty of time with them. For the healthcare service affordability factor, 30% of the respondents were uncertain if they can get medical care without being set back financially.

**Conclusion:** Although Saudi Arabia offers free of charge health services to the public, shortcomings related to healthcare affordability are a concern and should be a priority on the country's agenda as they move towards privatization. Also, to strengthen the healthcare system, attention should focus on healthcare system responsiveness.

**Keywords:** Saudi Arabia Healthcare; Quality; Access; Affordability; Responsiveness.

<sup>1</sup>Noor Alshareef, Ph.D., Assistant Professor, Health Services and Hospital Administration. King Abdulaziz University, Jeddah, Saudi Arabia.; Tel: 00966 53 565 3535; Email: [naalshareef@kau.edu.sa](mailto:naalshareef@kau.edu.sa).

## 1. Introduction

Worldwide, many countries strive to create an effective healthcare system that best serves the interest of their populations [1]. Ideally, health systems should be accessible and responsive to the 'populations' health needs to safeguard the public against illness and associated financial burdens of illness [2]. Gallagher (2002) stated that on a national level, Saudi Arabia provides a high level of healthcare services to all sections of the population in comparison to other nations [3]. According to the latest 2019 World Health Organization measuring health system performance report, the Saudi healthcare system ranks 26th among 191 countries in terms of overall health efficiency ahead of other Arabian Gulf countries such as the United Arab Emirates, Bahrain, and Kuwait; while, Oman is ranked in the top 10 (8th) in the world [4].

The Saudi Arabian government provides comprehensive and free health care for all Saudi nationals through the Ministry of Health (MOH) [5]. Although the MOH is responsible for providing care for the entire population, governmental institutions, and private facilities, however, are also foremost healthcare service providers. The private sector relies on out of pocket expenses and health insurance premiums. Government hospitals such as the military hospitals, the National Guard, Armed Forces, funded outside the MOH budget, are considered to provide a higher level of healthcare quality services. These hospitals offer services to a specific population, specifically employees and their dependents, referral patients with chronic illnesses from other hospitals, and to all residents during emergencies [3]. The government places a significant priority on health and spends a considerable amount of its budget on healthcare services. Between 2010 and 2015, the 'government's overall spending on free healthcare, and costly chronic diseases treatments had increased by 15.4% [6]. Worldwide, KSA was reported to have the highest prevalence rate of diabetes, hypertension, and coronary heart disease [7]. Recent health sector reforms in the country require employer-based health insurance to be provided to both Saudi- nationals and expatriates working in the private sector [8]. The introduction of the employer-based health insurance scheme is to shift the cost and to increase access and the level of quality of healthcare for both 'Saudi's and expatriates [9].

Although all citizens and residents in Saudi are granted access, the quality of healthcare in Saudi in its current form is still suboptimal [10]. According to Almutairi and Moussa, despite significant progress in the quality of healthcare in Saudi Arabia, barriers associated with the patient (e.g. access to care, culture, health literacy) and the provider (e.g., job satisfaction, workload, and culture) still exists [10]. Public

perception of health services quality depends on the experience they had when interacting when receiving care, and this, in turn, impacts their confidence in the healthcare system. This notion of quality in the non-medical aspect of healthcare services is known as health system responsiveness [11]. Responsiveness directly impacts human dignity, satisfaction, and well-being [12]. A previous study in Saudi Arabia shows that the public's views on responsiveness of the private health sector are of moderate level [13].

Nevertheless, in light of recent healthcare reforms in Saudi Arabia directed toward privatization, which aims to increase access and efficiency [14], public perception regarding their current healthcare system remains unclear. Public perception represents valuable insights for health systems in identifying areas for improvements. Therefore, this study aims to examine the public perceptions of healthcare service delivery across the Kingdom of Saudi Arabia regarding healthcare quality, affordability, availability/access, and responsiveness. A more in-depth understanding of all these multilayer dimensions from the patient perspective can help in identifying domains where quality, access, and responsiveness improvements services are needed. The findings of this study can inform policymakers in developing policies that are in line with the current health care reforms. Most previous studies in KSA have focused on patient satisfaction and the quality of health care delivery. To date, this is the first comprehensive study to ascertain the public's perceptions of the KSA healthcare system in general. It is hoped that this study can provide valuable insights for policy and decision-makers in the healthcare industry, ensuring that policies and practices may need to be addressed for better utilization of health services and allocation of resources.

## **2. Subjects and Methods**

### **2.1 Study design and setting**

This was a cross-sectional study conducted to explore public perception of the Saudi healthcare delivery system concerning quality, affordability, accessibility, and responsiveness among residents and citizens of Saudi Arabia.

### **2.2 Settings and Sample**

Convenience sampling was undertaken in this study. A link to the survey was sent out online through different media platforms. The sample size for a population of 34,218,169 was calculated through the Raosoft Sample Size calculator as an estimate. Using a  $\pm 4\%$  margin of error, 99% confidence level, and 50% response distribution, the sample size arrived at 1037 participants. However, the actual sample size was equal to 1232. Respondents living in Saudi Arabia, aged 18 years or older, who understand the content of the questionnaire and agree to participate in the study, were included in

the study. Data collection took place between July 2019 and March 2020

### **2.3 Ethical Consideration**

This research was a collaborative project between Mohammed Bin Rashid School of Government (MBRSG) in Dubai United Arab Emirates and King Abdul-Aziz University, KSA. Approval to conduct the study was granted by the Ethics Committee at the MBRSG (REC-04-017). Ethical standards (confidentiality, privacy, autonomy, and self-determination) were adhered to by the researchers. The online questionnaire detailed the background, aim, the anonymity of the study, and respondents' right to withdraw at any time without giving a reason. Online informed consent was obtained before respondents could proceed with the questionnaire.

### **2.4 Instrument**

A self-administrated questionnaire was used for data collection. The questionnaire was adapted from a previously used questionnaire [15] and contained two sections as follows:

1- Socio-demographic characteristics. This part of the questionnaire included 'respondents' gender, nationality, age, employment status, the region of residence, family size, income educational attainment, and type of health insurance plan. Respondents were also asked to indicate whether or not (1) they have a regular general physician (2) they have visited a physician in the last 3 years (3) they intend to go back to their home countries for medical consultation.

2- Health services factors. The second part of the questionnaire was adapted from Marshall and Hays (1994) survey [16]. Eighteen items of the healthcare services factors survey questions were included. These questions were categorized under overall satisfaction, quality, affordability, accessibility, and responsiveness. Responses to the questions were recorded on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). These factors were measured with a single item statement variable.

### **2.5 Statistical analysis**

SPSS software was used to analyze the data. Descriptive statistics were used to determine the 'respondent's demographic and health services factors. A descriptive analysis was performed, describing one variable individually at a time across the data set. A profile of responses to the statements was developed by describing the distributions, frequencies, and percentages in the given sample.

## **3. Results**

The following section presents the socio-demographic characteristics of the sample and the responses to the healthcare services factor statements.

### 3.1 Characteristics of the Study Participants

Table 1 illustrates the socio-demographic characteristics of the sample. In total, 1232 participants responded anonymously to the survey. The sample consisted of 11% male and 89% female participants. Approximately 70% of the sample were between the age of 20-35 years old. Saudi Arabians represented 87% of the sample. Nearly 75% of the respondents indicated they resided in Makkah region. Around 60% of the respondents reported they have a bachelor's degree, and approximately 15% hold a form of a postgraduate degree (Master or Ph.D.). In terms of income, 45% of the participants had a monthly income of below 5000 Saudi Riyals (1330 USD approximately). As of employment, almost 47% were students, 18% worked for public sectors, and 14% in private sectors. Almost half of the respondents had a senior/ managerial position. Almost 48% of the respondents indicated having between 4-6 individuals in their household. Concerning the type of health plan, approximately 42% indicated having a family or individual health insurance plan (Individual: 16%; family: 18%). Nearly 30% received free treatment from public hospitals, and 28% paid out of pocket expenses when seeking medical care. The majority of respondents indicated not having a regular general Physician (GP) or a family doctor, and only 28% have a regular General Physician (GP) or personal doctor in KSA. The majority of 89% of respondents stated that they had a medical visit during the last three years, while 11% had no medical visits. Surprisingly, 27% of the respondents indicated they would consider traveling back to your home country for a medical consultation.

**Table 1: Descriptive statistics for socio-demographic variables**

Socio-demographic Variables	Frequency	Percentage
<b>Gender</b>	n	(%)
Male	138	11
Female	1094	89
<b>Nationality</b>		
Saudi	1074	87
Non-Saudi	158	13
<b>Age (years)</b>		
Below 20	28	2
20-35	865	70
36-50	236	19
51+	103	9
<b>Employment Status</b>		
Public Sector	211	18
Private Sector	171	14
Semi-government	75	6
Non-governmental organization (NGOs)	6	1
Family Business	9	1

Self-employed (including freelancers)	26	2
Student	569	47
Unemployed	133	11
<b>Region of Residence</b>		
Makkah	852	76
Riyadh	91	8
Other	184	16
<b>Family Size</b>		
1-3	295	26
4-6	544	48
7-9	229	21
10+	59	5
<b>Level of Education</b>		
Doctorate (Ph.D.)	41	4
Master's Degree	123	11
Postgraduate Diploma	78	7
Bachelor's Degree	679	60
Other	206	18
<b>Monthly Household Income (Saudi Riyals)</b>		
0-5000	511	45
5001-10000	195	17
10001-15000	137	12
150001-20000	84	7
20001-25000	49	4
25001-30000	29	3
30001-40000	38	3
40001+	84	7
<b>Having a Health insurance Plan</b>		
Yes	468	42
No (receive treatment at public hospitals/ clinics)	338	30
No (Pay out-of-pocket when receiving care at private hospitals/clinics)	321	28
<b>Type of Insurance Plans Held</b>		
Individual Plans	62	16
Family Plan	71	18
Group Plans I	154	39
Group Plans II	107	27
<b>Regular General Physician (GP) or personal doctor</b>		
Yes	275	28
No	709	72
<b>Medical Visit in Last Three years</b>		
Yes	872	89
No	112	11
<b>Preference for traveling back home for a medical consultation</b>		
Yes	32	27
No	88	73

### 3.2 Healthcare Services Factors (Descriptive Data)

As shown in Table 2, the majority of respondents positively agreed or strongly agreed on most items related

to quality, accessibility, and responsiveness. The overall agreement (agree and strongly disagree) on most of the healthcare statements related to quality, accessibility, and satisfaction was greater than 50%, whereby the overall agreement was significantly low for responsiveness. However, responses varied for the affordability factor.

As regards to health care delivery quality and satisfaction with health services statements, more than half of the participants indicated that doctors are good about explaining the reason for medical tests and were satisfied with the medical care they have been receiving. Also, 41% agreed that when they go for medical care, doctors are careful to check everything when treating and examining them. Concerning accessibility, nearly half of the sample indicated they could get medical care whenever is needed. However, only 27% of the sample disagreed with having easy access to medical specialists when needed which is significantly very low. However, more than 50% of the participants agreed that where they get medical care, people have to wait too long for emergency treatment. In reference to responsiveness, the results show that more than 60% of the participants agreed that doctors act too business-like and impersonal, and do not spend plenty of time with them. For the healthcare service affordability factor, 30% of the respondents were uncertain about the cost factor (I feel confident that I can get the medical care I need without being setback financially) and 31% agreed (that they have to pay for more of my medical care than I can afford).

**Table 2: Level of agreement of medical care.**

Health Services Factors	Likert Scale (%)				
<b>Quality</b>	1	2	3	4	5
Doctors are good about explaining the reason for medical tests.	3.35	10.47	22.87	48.68	14.63
I think my doctor's office has everything needed to provide complete medical care.	2.34	10.06	30.08	43.80	13.72
When I go for medical care, they are careful to check everything when treating and examining me.	7.42	24.49	27.24	30.49	10.37
<b>Access and Approachability</b>					
I have easy access to the medical specialists I need.	8.33	19.21	24.80	38.41	9.25
I am able to get medical care whenever I need it.	6.61	15.96	25.91	40.35	11.18
Where I get medical care, people have to wait too long for emergency treatment.	2.85	11.18	19.92	34.45	31.61
<b>Responsiveness</b>					
Those who provide my medical care sometimes hurry too much when they treat me.	2.34	12.91	23.58	46.54	14.63
<b>Affordability</b>					
I feel confident that I can get the medical care I need without being set back financially.	9.76	18.90	29.78	28.66	12.91

I have to pay for more of my medical care than I can afford.	8.03	21.44	22.26	31.50	16.77
<b>Overall Satisfaction</b>					
The medical care I have been receiving is just about perfect	3.96	14.53	28.15	43.90	9.45

#### 4. Discussion

This study provides a general overview of the 'public's perceptions of accessibility, responsiveness, affordability, and quality of healthcare delivery services in KSA. We have found that perceptions regarding both quality and access health services factors were positive. However, perceptions surrounding responsiveness were low, and mixed perceptions were observed for the affordability factor. This study found that there was a good overall agreement on most of the items on quality. More than half of the respondents indicated that doctors are good about explaining the reason for medical tests and were generally satisfied with the medical care they have been receiving. Interestingly, 41% of the participants indicated having some doubts about the accuracy of their medical diagnosis, and 31% were uncertain about it.

Moreover, participants' perception of responsiveness was low. Almost 43% of participants believed that physicians do not spend enough time with them during the consultation. It has been shown that poor responsiveness may decrease trust in healthcare providers and delay care-seeking [17]. One plausible factor for this finding is the language barrier or difficulties in communication between the provider and the patient. In KSA, 72 % of physicians are non-Saudi, and most do not speak the local language-Arabic. Even physicians who are non-Saudi may speak Arabic but have difficulty communicating with patients due to language clarity issues [18]. Another contributing factor could be physicians shortage. Although, in 2018, the number of physicians per 10000 population was 31.4 [19], a rate that is higher than that seen in developed countries. Physicians shortage exacerbated by many taking on managerial roles places pressure on physicians to spend less time with the patient and thus resulting in the poor perception of the responsiveness element of the service quality [15,20].

In this study, mixed results were evident for the affordability factor. 42% of participants agreed that they feel confident receiving medical care without a financial setback. This is not surprising, given that 72 % of the participants have medical insurance or receive treatment at public hospitals. This is consistent with Alhenawi et al. [21] finding that showed that Saudi citizens feel good and secure for themselves and family for being provided free healthcare with no financial complications [21]. However,



30 % of respondents were uncertain if medical care can be provided with no financial setback. Although the current findings suggest that nearly half of the participants in the sample agreed on having access to medical care whenever needed, concerns over emergency care waiting times and access to appointments were observed in this study. Long waiting times, coupled with the unavailability of appointments, can force people who often utilize public healthcare services to go and seek care from the private sector, thus incurring out of pocket expenses [21].

Also, the majority of the participants in our study reported not having an identified general physician (GP), and about 28% in our sample reported having a (GP). This is in line with Alyain and 'Douglas's findings [22]. Unlike other countries, KSA does not have an integrated health care system, and patients do not have access to an identified general practitioner. Lack of access to primary care is associated with increased visits to ER [23]. Given this high prevalence rate of chronic diseases, it is critical to ensure that individuals have accessibility to healthcare services mainly primary health care centers. Early access to primary health care centers that offer health prevention and promotion services leads to improved healthcare outcomes [7]. The Ministry of Health in KSA had put more attention on hospitals rather than primary health centers. Primary health centers should be seen as a cornerstone for successful health outcomes and should be available to the whole population [20]. One of the most pivotal Sustainable Development Goals (SDGs) was ensuring unbiased and equal accessibility to primary health care centers, which have a central role in sustainable achievement and development across populations [7].

Despite these findings, 44% of participants showed overall satisfaction with the Saudi health system. This finding is consistent with a previous qualitative study conducted in KSA that examined house 'holder's satisfaction of public health services, which found that half of the participants in the sample were generally satisfied with the overall quality of services. [21]

One of the strengths of this study is that this topic was not previously investigated in detail in Saudi Arabia across a large sample of diversified geographical areas. To our knowledge, this was the first descriptive study investigating public perceptions on the healthcare quality, access, affordability, and responsiveness in Saudi Arabia in both private and public sectors. Participant's understood the confidentiality of the questionnaire, which did not require any names or participant information. Thus, it is expected that responses were honest. Another strength was the large sample size and high response rate, which makes the results generalizable across the population. The respondents' views on the health

care services level may be different from those who do not have any internet access or technology platforms, and this may not have involved low-income labor workers. It is also possible that participants who agreed to undertake the survey have had more considerable experience or interest in the subject of health care services than those who did not participate. The questionnaire was translated from English to Arabic by a group of experts in the field. However, particular challenges arise when translating between languages that can have an impact on data analysis. It is possible that meaning can be distorted during translation.

## **5. Conclusion**

This paper aimed at investigating the public's perceptions of accessibility, responsiveness, affordability, and quality in the KSA health sector. The sample is highly representative of the population since it is a close approximation of the national profile of demographics in KSA. The study illustrates that respondents show overall satisfaction with the healthcare system and the quality of care in KSA. Although, there were high concerning issues emphasized in this study in terms of accessibility, responsiveness, and affordability of healthcare services in KSA. These findings have important implications for policymakers and clinicians in delivering healthcare services. Future research in this area could examine if significant differences exist in the perceptions concerning differences in socio-demographic factors and an in-depth investigation of the factors underlying the observed low public perception of responsiveness. Furthermore, more studies should be aimed at exploring why patients lack confidence in physicians' medical diagnosis and whether such a notion exists among both public and private sector patients.

## **6. Declarations**

### **6.1 Ethics approval:**

Approval to conduct the study was granted by the Ethics Committee at the MBRSG (REC-04-017).

### **6.2 Conflict of interest:**

None

### **6.3 Funding:**

None

### **6.4 Authors contribution:**

All authors contributed equally to this manuscript.

### **6.5 ORCID:**

Noor Alshareef (<https://orcid.org/0000-0003-2377-8811>),

Khadijah Angawi (<https://orcid.org/0000-0002-7625-1813>),

Immanuel Azaad Moonesar ( <https://orcid.org/0000-0003-4027-3508>)

## 7. References

---

1. Coulter A, Jenkinson C. European patients' views on the responsiveness of health systems and healthcare providers. *Eur J Public Health* 2005;15(4):355–60.
2. World Health Organization. *The World Health Report 2000. Health Systems: Improving Performance*. Geneva, 2000.
3. Almalki M, Fitzgerald G, Clark M. Health care system in Saudi Arabia: an overview. *East Mediterr Health J* 2011;17(10):784–93.
4. Tandon A, Murray CJ, Lauer JA, Evans DB. Measuring Overall Health System Performance for 191 Countries. :23.
5. Walston S, Al-Harbi Y, Al-Omar B. The changing face of healthcare in Saudi Arabia. *Ann Saudi Med* 2008;28(4):243–50.
6. GCC-Healthcare-Industry-Report-March-2018.pdf [Internet]. [cited 2020 Jun 22]; Available from: <http://www.alpencapital.com/downloads/reports/2018/GCC-Healthcare-Industry-Report-March-2018.pdf>
7. Alfaqeeh G, Cook EJ, Randhawa G, Ali N. Access and utilization of primary health care services comparing urban and rural areas of Riyadh Providence, Kingdom of Saudi Arabia. *BMC Health Serv Res* 2017;17(1):106.
8. Al-Mazrou Y, Al-Ghaith T, Yazbeck AS, Rabie TS. How Labor Laws Can Transform Health Systems: The Case of Saudi Arabia. *Health Syst Reform* 2017;3(1):26–33.
9. Rahman R, Alsharqi OZ. What drove the health system reforms in the Kingdom of Saudi Arabia? An analysis. *Int J Health Plann Manage* 2019;34(1):100–10.
10. Almutairi KM, Moussa M. Systematic review of quality of care in Saudi Arabia. A forecast of a high-quality health care. *Saudi Med J* 2014;35(8):802–9.
11. Malhotra C, Do YK. Public health expenditure and health system responsiveness for low-income individuals: results from 63 countries. *Health Policy Plan* 2017;32(3):314–9.

12. Gostin LO, Hodge JG, Valentine N, Nygren-Krug H, Organization WH. The domains of health responsiveness: a human rights analysis. Health Hum Rights Work Pap Ser 2003;
13. Alhabib SM. The Responsiveness of the Private Health Sector: Views of Insured Versus Uninsured Patients. 27:10.
14. Alkhamis AA. Critical analysis and review of the literature on healthcare privatization and its association with access to medical care in Saudi Arabia. J Infect Public Health 2017;10(3):258–68.
15. Moonesar IA, Mostafa M, Hameedah Sayani, Moonesar I. The State of UAE Healthcare Service Delivery: Public Perceptions-Preliminary Insights. 2018 [cited 2020 Jun 23]; Available from: <http://rgdoi.net/10.13140/RG.2.2.32456.21760>
16. Marshall GN, Hays RD, Rand Corporation. The Patient Satisfaction Questionnaire short-form (PSQ-18) [Internet]. Santa Monica, Calif.: RAND; 1994 [cited 2020 Jun 22]. Available from: <http://catalog.hathitrust.org/api/volumes/oclc/31191170.html>
17. Joarder T, George A, Ahmed SM, Rashid SF, Sarker M. What constitutes responsiveness of physicians: A qualitative study in rural Bangladesh. PLoS ONE [Internet] 2017 [cited 2020 Jun 23];12(12). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5734771/>
18. Senitan M, Gillespie J. Health-Care Reform in Saudi Arabia: Patient Experience at Primary Health-Care Centers. J Patient Exp 2019;2374373519872420.
19. Ministry of Health. Statistical Yearbook-2018 (MOH) [Internet]. [cited 2020 Jun 23]; Available from <https://www.moh.gov.sa/en/Ministry/Statistics/book/Pages/default.aspx>
20. Al Asmri M, Almalki M, Fitzgerald G, Clark M. The public health care system and primary care services in Saudi Arabia: a system in transition. East Mediterr Health J 2020;26(04):468–76.
21. Al-Hanawi MK, Alsharqi O, Almazrou S, Vaidya K. Healthcare Finance in the Kingdom of Saudi Arabia: A Qualitative Study of Householders' Attitudes. Appl Health Econ Health Policy 2018;16(1):55–64.
22. Alyasin A, Douglas C. Reasons for non-urgent presentations to the emergency department in Saudi Arabia. Int Emerg Nurs 2014;22(4):220–5.

23. Pinchbeck EW. Convenient primary care and emergency hospital utilisation. *J Health Econ* 2019;68:102242.