

Research Article

Factors Associated with Access to the Saudi Primary Healthcare in Light of Vision 2030

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Abstract

Objective: Primary healthcare is a comprehensive approach to ensuring universal access to essential healthcare services. The Ministry of Health in Saudi Arabia has developed health-related objectives to enhance the accessibility of healthcare services and refining its policies. However, certain obstacles may impede the delivery and accessibility of healthcare, particularly to primary healthcare centers. The current study explored the variables associated with the accessibility of primary healthcare services in the context of Saudi Vision 2030. In particular, the research focused on examining the organizational and doctor-patient communication factors that are linked to primary healthcare accessibility.

Methodology: In this cross-sectional study, an electronic questionnaire is used to collect data from patients visiting the primary healthcare facilities located within the second health cluster in Riyadh, Saudi Arabia.

Results: The findings indicate that the organizational factors that have the greatest influence on primary healthcare accessibility are the proximity of the primary healthcare centers, the rapid and convenient nature of the registration and payment procedures, the cleanliness, design, and clarity of the facility, and the availability of up-to-date technologies and equipment. As for the factors affecting access to primary healthcare in doctor-patient communication, the most notable factors include the provision of respectful treatment by the doctor toward patients, attentive listening to patients' concerns and questions, and clear explanation of treatment plans and outcomes.

Conclusion: The findings of this study demonstrated the effect of several factors on primary healthcare accessibility, which will benefit the policymakers in healthcare planning in Saudi Arabia to improve the quality and accessibility to primary healthcare centers.

Keywords: primary healthcare, access to care, healthcare quality, organizational factors, doctor-patient communication factors

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1. Introduction

Saudi Arabia is undergoing a significant healthcare reform driven by the goals and aspirations outlined in the country's 2030 vision, which emphasizes the importance of ensuring that healthcare services are accessible, affordable, and of high quality to the entire population. The Saudi Vision 2030 encompasses a range of strategic objectives and performance indicators that are grounded in the fundamental pillars of our shared commitments. The achievement of these objectives will be pursued through collaborative efforts among the public, private, and third sectors[1]. However, certain obstacles may impede the delivery of healthcare services that are accessible, particularly at primary healthcare centers (PHCs). Various factors have been identified as being linked to PHC accessibility in Saudi Arabia, with particular emphasis on organizational, patient-related, and healthcare professional-related factors [2].

PHC is a comprehensive approach to ensuring universal access to essential healthcare services. Its overarching goal is to address healthcare challenges by offering a range of services that promote health, prevent disease, provide treatment, and support rehabilitation [3]. The Ministry of Health (MOH) in Saudi Arabia has developed health-related objectives to enhance the accessibility of healthcare services and refining its policies. Despite significant developmental efforts and support, it has been reported that PHC services in Saudi Arabia have been underutilized and accessed poorly[4]. In addition, disparities in accessibility and quality of care exist between rural and urban regions [5]. There were a limited number of scientific studies on access, utilization, and satisfaction with PHCs in areas that are most central to Saudi Arabia at present [6].

Several studies conducted in Saudi Arabia have revealed that there exist impediments to accessing healthcare services at PHCs. These barriers include a shortage of essential facilities and infrastructure, as well as an insufficient number of healthcare professionals [7, 2]. Additionally, the excessive number of patients in PHCs led to extended waiting periods and reduced physician-patient interaction[8]. The heightened demand for healthcare has resulted in challenges such as delayed delivery of test results and radiation tests, as well as insufficient technological and medical equipment [9].

The Saudi 2030 vision has emphasized the necessity for healthcare that is accessible of superior quality, in accordance with global standards [10]. Vision 2030 aims to eliminate technological challenges in the healthcare sector through the utilization of cutting-edge technologies, e-health applications, digital health, and the provision of required infrastructure and facilities to respond to the growing demand for healthcare

services [11]. This study attempts to determine the organizational and doctor-patient communication factors that contribute to the accessibility and utilization of PHC in the Riyadh Second Health Cluster to assess patients' perspectives on the factors related to PHC access in the context of the 2030 vision.

2. Methods

2.1. Study design

The current study employed a cross-sectional research design to identify the organizational and doctor-patient communication variables linked to PHC access and utilization. The design has been developed by the formulated research questions. The aforementioned inquiries were derived from the researcher's empirical observations and the extant scholarly literature.

2.2. Participants

A sample of adult patients who have visited the PHC in Riyadh Second Health Cluster hospitals was randomly selected. As per the data provided by the MOH, Riyadh Second Health Cluster comprises 13 PHC centers (PHCs) with an average of 200 patients per day, resulting in a cumulative number of 2600 patients across all PHCs in Riyadh Clusters. A power calculation was performed to determine the sufficient sample size. We employed G*Power software to perform the calculations. The effect size was estimated at $d = 0.5$, with a Type I error probability of 0.05 and a power of 0.8. Based on these parameters, the necessary sample size was determined to be $N = 128$. To accommodate for an anticipated non-compliance rate of 30% among accelerometers (i.e., instances with inadequate wear time) and a possible attrition rate of 10%, recruitment of at least $N = 204$ patients is necessary.

2.3. Instrument

An electronic survey was distributed to the designated cohort of patients seeking primary medical care. The questionnaire items were formulated through a comprehensive review of existing literature and prior research on the determinants of PHC accessibility [12], with a particular focus on the organizational and doctor-patient communication factors.

The present survey comprises two distinct sections. The initial segment of the questionnaire included questions about the characteristics of the study's participants. The second segment of the survey comprised two sections, namely the organizational components linked to PHC accessibility (11 items) (Cronbach's Alpha = 0.82) and the doctor-patient communication components linked to PHC accessibility (7 items) (Cronbach's Alpha = 0.78). The Likert scale, consists of five ratings ranging from "strongly agree" to "strongly disagree," is the rating scale employed in this questionnaire. The survey instrument was composed in the Arabic language.

The research participants were informed of the research goals and their consent was obtained to participate in the study. Additionally, the participants were thoroughly informed that their responses would be utilized solely for research purposes and would not have any impact on them in any way. Moreover, the security of the information is guaranteed. The institutional review board of Riyadh Second Health Cluster granted ethical approval.

The questionnaire's face validity was established by a group of experts through a process of confirming that the instrument accurately assesses the intended construct. The survey has been distributed to experts who possess expertise in the relevant domain. The researcher has revised the questionnaire based on feedback received from the experts. Specifically, items that lacked clarity and relevance to the intended goal were rephrased.

2.4. Statistical analysis

The SurveyMonkey platform (San Mateo, CA) was utilized for the administration of the online questionnaire. Subsequently, the entirety of the data was transferred to SPSS 23.0 software (SPSS Inc, Chicago, Illinois) for the purposes of both data cleansing and analysis. The primary objective of the preliminary analysis was to derive descriptive statistics, including frequencies, proportions, and mean scores, for all variables. The Likert-scale variables were subjected to summation and analyzed as continuous variables.

3. Results

The study involved a sample of 268 patients. The demographic characteristics of the respondents are presented in Table 1.

TABLE 1: The participants' characteristics.

Variable	Frequency	Percentage
Gender		
Male	156	58.2%
Female	112	41.8%
Total	268	100%
Age		
18 - 20	4	1.5%
21 – 30	61	22.8%
31 – 40	130	48.5%
41 – 50	59	22%
51 – 60	10	3.7%
60 <	4	1.5%
Total	268	100%
Educational level		
Middle school	2	0.7%
Secondary school	11	4.1%
Diploma	62	23%
Bachelor	124	46.3%
Master/Doctorate	69	25.7%
Total	268	100%

Table 2 presents the responses of the participants regarding the organizational factors related to the accessibility of PHC.

The participant's responses to the organizational factors related to access to PHC resulted in an overall mean score of 3.50 out of 5. The respondents generally displayed a high level of agreement toward the statements presented in this segment of the survey, as evidenced by the mean scores which ranged from 3.95 to 3.08.

Table 3 demonstrates the responses of the participants regarding the factors of doctor-patient communication that are connected with the accessibility of PHC.

The overall mean of participant responses to the doctor-patient communication factors associated with access to PHC is 3.95, as shown in Table 3. The participants' mean scores for this section of the questionnaire ranged from 4.17 to 3.33, indicating strong agreement with the statements.

4. Discussion

The findings indicate that there exist significant organizational and doctor-patient communication elements that influence the accessibility of PHC services in Saudi Arabia,

TABLE 2: The organizational factors associated with access to primary healthcare.

No.	Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Mean	Standard Deviation	Rank
1	Registration process and billing payment are easy and simple	63	125	65	10	5	3.86	1.29	2
2	All recent technologies and devices are available	52	101	68	34	13	3.54	1.19	5
3	All kinds of lab tests and X-rays are performed at the PHCC	43	94	57	56	18	3.32	1.03	10
4	All specialties and departments are available at the PHCC	35	69	68	76	20	3.08	1.01	11
5	The facility building is clean, well-designed, and clear.	57	115	44	40	12	3.61	1.23	4
6	The distance to the PHCC is easy	61	148	47	10	2	3.95	1.33	1
7	The staff are highly qualified and experienced	53	112	64	27	12	3.62	1.26	3
8	All services are provided without waiting too much time.	50	94	62	44	18	3.42	1.15	6
9	Telephone and video visits can be conducted	46	87	68	52	15	3.36	1.09	8
10	The PHCC has a special e-application for all its services	57	86	55	46	24	3.39	1.12	7
11	I can access the lab results and medical reports electronically	66	78	43	50	31	3.36	1.06	9
Total Mean		3.50							

particularly in the context of Vision 2030. The factors indicate that the healthcare facility's internal environment plays a crucial role in determining the extent of healthcare accessibility. Additionally, human, and organizational factors serve as fundamental determinants of the quality of care that patients receive.

Regarding the organizational factors that affect access to PHC, the most significant factors were found to be the proximity of the PHC centers, the ease and simplicity of the

TABLE 3: The doctor-patient communication factors associated with access to primary healthcare.

No.	Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Mean	Standard Deviation	Rank
1	The doctor listens carefully	80	132	45	9	2	4.04	1.17	3
2	The doctor spends adequate time with patients	72	127	53	13	3	3.94	1.04	6
3	The doctor treats patients with dignity and respect	89	141	34	4	0	4.17	1.24	1
4	The doctor provides answers to questions	88	140	35	5	0	4.16	1.21	2
5	Treatment is properly explained and fully understood	84	118	53	12	0	4.01	1.09	5
6	Results are explained and understood	82	130	45	10	0	4.04	1.13	4
7	It is easy to contact the physician even if I needed a consultancy at home.	55	79	57	54	23	3.33	1.02	7
Total Mean		3.95							

registration and payment procedures, the state of cleanliness, design, and clarity of the facilities, and the availability of up-to-date technologies and devices. The findings are consistent with those who observed that patients' satisfaction with the care they receive is influenced by factors such as the proximity of the healthcare facility, the facility's cleanliness, and its overall design [11]. Also, such observation is further supported by Otieno et al's research [13], which highlights the significance of contemporary medical equipment and technologies, specifically the electronic medical record and nursing informatics, in providing accessible healthcare to patients while reducing medical errors and ensuring their safety.

Alternatively, organizational factors that have been demonstrated to affect access to PHC services include the provision of services with minimal wait times, the availability of electronic applications for service requests, the availability of telemedicine options such as video visits with healthcare providers, the provision of electronic access to medical reports and laboratory results, the availability of a comprehensive range of laboratory tests and imaging services, and the presence of all relevant medical specialties and

departments within the healthcare facility. The study's results are consistent with those of Panezai et al. [14], who observed that patients' satisfaction with healthcare services is influenced by the duration of waiting times, with shorter waiting times being linked to greater patient satisfaction. In addition, the research conducted by Al-Jaber and Da'ar [9] substantiated this finding by determining that electronic applications guarantee the prompt and dependable delivery of medical services.

Regarding the factors that affect access to PHC in doctor-patient communication, the most significant factors are the doctor's respectful treatment of patients, attentive listening to patients' concerns and questions, and clear explanation of treatment plans and results. Additional factors include the duration of time that the physician spends with their patients and the convenience of being able to contact the doctor for consultation from the comfort of one's own home. The present study's results align with those of previous studies conducted by Alfaqeeh et al [1] and Almutairi [2], which indicated that effective communication between healthcare providers and patients is fundamental to the success of treatment plans and the enhancement of patient satisfaction. Additionally, Rahman and Al-Borie [4] supported this finding by determining that physicians should be aware of their patient's unique needs and respond to their questions and concerns by elaborating on their intervention plans and medications. The absence of the previously mentioned elements presents obstacles to the attainment of PHC services. Alharbi and Alzghool [6] identified various issues related to obstacles in accessing the PHC services. These issues included inadequate facilities and services, inaccessible locations, lack of specialized healthcare workers and services, poor adherence to therapies and management, and insufficient implementation of policy and protocols.

According to recent studies conducted by Rahman and Al-Borie [4] and Rahman and Qattan [11], the healthcare financing system in Saudi Arabia is confronted with various challenges. These challenges include fiscal sustainability, as healthcare costs continue to rise while government revenues are not sustainable in the long term. Additionally, benchmarks indicate a reduction in the optimal use of resources, and the quality of healthcare services provided in government hospitals differs from those provided in other sectors. Moreover, the regulatory capacity of the Saudi health sector is weak due to its high fragmentation and the presence of many regulatory agencies with restricted powers and overlapping mandates. Similarly, Almoajel et al. [2] observed that patients generally exhibit a positive attitude toward the quality of general practice care. However, the study also identified certain areas of clinical behavior and care organization that require improvement.

The MOH has implemented a contemporary healthcare model that offers an urgent care system. This system offers aid and support to individuals in emergencies, providing them with appropriate treatment services at the appropriate time and place. Additionally, the model emphasizes health preservation through the integration of the roles of individuals, society, and institutions with those of healthcare providers. This integration ensures access to care in accordance with the best health practices [11].

Healthcare quality refers to the degree of value offered by healthcare providers, as assessed through specific metrics. Similar to quality evaluations in other domains, the evaluation of quality entails an appraisal of whether a given entity meets the requisite standards and is suitable for its intended function [15]. The primary objective of healthcare is to offer superior medical facilities to all individuals in need, to guarantee a satisfactory standard of living, treating ailments whenever feasible, and prolong life expectancy, among other objectives [16].

Various quality measures are employed by researchers to assess the quality of healthcare. These measures include the quantification of over- or under-treatment of diseases based on medical diagnosis, a decrease in the number of risk factors among individuals receiving preventive care, an evaluation of health indicators for populations receiving specific types of care through surveys, and the availability of healthcare services [17].

The previous findings demonstrate that the availability of PHC services varies across different contexts. The satisfaction of patients has been demonstrated to be predominantly associated with their ability to obtain healthcare services, which is influenced by a range of organizational, financial, and technical factors that impact access to healthcare.

5. Conclusion

The findings of this study demonstrated the effect of several factors on primary healthcare accessibility, which will benefit the policymakers in healthcare planning in Saudi Arabia to improve the quality and accessibility to primary healthcare centers. It is recommended that further research be conducted on the socioeconomic determinants on a larger scope to ascertain their impact on the utilization of primary care services in a general sense and to implement the results in the community.

References

- [1] Rahman, R., & Al-Borie, H. M. (2021). Strengthening the Saudi Arabian healthcare system: Role of vision 2030. *International Journal of Healthcare Management*, 14(4), 1483–1491. Retrieved May 30, 2022, from <https://doi.org/10.1080/20479700.2020.1788334>
- [2] Alfaqeeh, G., Cook, E. J., Randhawa, G., & Ali, N. (2017, February). Access and utilisation of primary health care services comparing urban and rural areas of Riyadh Providence, Kingdom of Saudi Arabia. *BMC Health Services Research*, 17(1), 106. Retrieved May 22, 2022, from <https://doi.org/10.1186/s12913-017-1983-z>
- [3] Almutairi, K. M. (2017, June). Satisfaction of patients attending in primary healthcare centers in Riyadh, Saudi Arabia: A random cross-sectional study. *Journal of Religion and Health*, 56, 876–883. Retrieved May 15, 2022, from <https://doi.org/10.1007/s10943-016-0268-x>
- [4] Ministry of Health. *Health Statistical Yearbook 2012*. Riyadh, Saudi Arabia. 2012; Retrieved from <http://ghdx.healthdata.org/record/saudi-arabia-health-statistical-yearbook-2012>. Accessed 30 May. 2022.
- [5] Rahman, R., & Al-Borie, H. M. (2021, October 2). Strengthening the Saudi Arabian healthcare system: Role of vision 2030. *International Journal of Healthcare Management*, 14(4), 1483–1491. Retrieved May 29, 2022, from <https://doi.org/10.1080/20479700.2020.1788334>
- [6] Gazzeh, K., & Abubakar, I. R. (2018, June 1). Regional disparity in access to basic public services in Saudi Arabia: A sustainability challenge. *Utilities Policy*, 52, 70–80. Retrieved May 28, 2022, from <https://doi.org/10.1016/j.jup.2018.04.008>
- [7] Alharbi, S. T., & Alzghool, M. M. (2019). Factors associated with access, utilization, and level of satisfaction with primary health care services in Hafar Al-batain City of Saudi Arabia. *Global Journal of Health Science*, 11(13), 1–34. Retrieved May 29, 2022, from <https://doi.org/10.5539/gjhs.v11n10p1>
- [8] Almoajel, A., Fetohi, E., & Alshamrani, A. (2014, November). Patient satisfaction with primary health care in Jubail City, Saudi Arabia. *World Journal of Medical Sciences (WJMS)*, 11(2), 255–264. Retrieved May 15, 2022, from
- [9] Mohamed, E. Y., Sami, W., Alotaibi, A., Alfarag, A., Almutairi, A., & Alanzi, F. (2015). Patients' satisfaction with primary health care centers' services, Majmaah, Kingdom of Saudi of Saudi Arabia. *International Journal of Health Sciences (Qassim)*, 9(2), 163–170. Retrieved May 22, 2022, from <https://doi.org/10.12816/0024113>

- [10] Al-Jaber, A., & Da'ar, O. B. (2016, November). Primary health care centers, extent of challenges and demand for oral health care in Riyadh, Saudi Arabia. *BMC Health Services Research*, 16(1), 628. Retrieved May 30, 2022, from <https://doi.org/10.1186/s12913-016-1876-6>
- [11] Chowdhury, S., Mok, D., & Leenen, L. (2021). Transformation of health care and the new model of care in Saudi Arabia: Kingdom's Vision 2030. *Journal of Medicine and Life*, 14(3), 347–354. Retrieved May 21, 2022, from <https://doi.org/10.25122/jml-2021-0070>
- [12] Lenzi, J., Mongardi, M., Rucci, P., Di Ruscio, E., Vizioli, M., Randazzo, C., Toschi, E., Carradori, T., & Fantini, M. P. (2014). Sociodemographic, clinical and organisational factors associated with delayed hospital discharges: A cross-sectional study. *BMC Health Services Research*, 14, 128. Retrieved May 22, 2022, from <https://doi.org/10.1186/1472-6963-14-128>
- [13] Rahman, R., & Qattan, A. (2021). Vision 2030 and sustainable development: State capacity to revitalize the healthcare system in Saudi Arabia. *INQUIRY. Inquiry*, 58, 46958020984682. Retrieved May 26, 2022, from <https://doi.org/10.1177/0046958020984682>
- [14] Alqossayir, F. M., Alkhawailed, M. S., Alammar, A. Y., Alsaeed, A. A., Alamri, Y. Y., & Rasheed, Z. (2021, August 21). Factors associated with patients bypassing primary healthcare centres in Qassim Region, KSA. *Journal of Taibah University Medical Sciences*, 16(6), 900–905. Retrieved May 30, 2022, from <https://doi.org/10.1016/j.jtumed.2021.07.012>
- [15] Otieno, P. O., Wambiya, E. O. A., Mohamed, S. M., Mutua, M. K., Kibe, P. M., Mwangi, B., & Donfouet, H. P. P. (2020, June). Access to primary healthcare services and associated factors in urban slums in Nairobi-Kenya. *BMC Public Health*, 20, 981. Retrieved May 12, 2022, from <https://doi.org/10.1186/s12889-020-09106-5>
- [16] Panezai, S., Ahmad, M. M., & Saqib, S. E. (2017, August 18). Factors affecting access to primary health care services in Pakistan: A gender-based analysis. *Development in Practice*, 27(6), 813–827. Retrieved May 18, 2022, from <https://doi.org/10.1080/09614524.2017.1344188>
- [17] Almutairi, K. M. (2017, June). Satisfaction of patients attending in primary healthcare centers in Riyadh, Saudi Arabia: A random cross-sectional study. *Journal of Religion and Health*, 56, 876–883. Retrieved May 18, 2022, from <https://doi.org/10.1007/s10943-016-0268-x>