

Assessment of Beneficiaries' Satisfaction with Access to Health Care and Barriers within the Health Delivery System in Saudi Arabia

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Keywords

Access · Health care · Satisfaction · Long-term beneficiaries

Abstract

Introduction: Health care system navigation and communication with the providers are the barriers to health care access. Recently, a new health care model with the provider's reform mechanism was introduced in Saudi Arabia. The national goal of financial reform is to provide Saudi nationals, residents, and visitors with timely access to health care. This study aimed to assess the long-term beneficiaries' satisfaction with access to health care and explore the influencing factors and barriers, including cost and communication with the providers and probable solutions. **Methods:** In this cross-sectional self-administered online survey, we used the validated "6A," namely, affordability, acceptability, adequacy, accessibility, availability, and awareness (30 items) of perceived access to health care questionnaire. The primary outcome variable was the overall satisfaction with access to health care among the long-term beneficiaries and caregivers. Demographic variables were used as predictors of the level of satisfaction. **Results:** A total of 118 health care long-term beneficiaries completed the questionnaires. The mean age of the participants was 49 years. Most participants were beneficiaries from the Ministry of Health ($n = 62$; 52.5%). Only 42 participants (35.6%) reported a high level of satisfaction. Low satisfaction level was mainly reported by non-Saudi, re-

tired males living in big cities. Similarly, those who paid the health care services in cash reported a significantly low level of satisfaction. Moreover, the level of satisfaction was significantly associated with insurance coverage. **Discussion:** The first application of the "6A" perceived access to health care questionnaire in Saudi Arabia identified that 35.6% were poorly satisfied with access to health care. However, the rate is lower than that reported in six European countries, which ranged from 53% to 55%. Since after 4 years of health reform, payment methods for health services were identified as a significant predictor of variation in the mean scores of accesses to health care. Further national-level studies exploring access to health care are needed on long-term beneficiaries who are retired and those who live in rural and remote areas. In future health sector reform and health system research, addressing unaffordable to pay services is required.

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Introduction

Access to health services is a critical factor in the health care domain in the social determinants of health. The definition for access to health care is provided by the US National Academies of Sciences, Engineering, and Medicine – formerly known as the Institute of Medicine: "having the timely use of personal health services to achieve the best health outcomes" [1].

In 2016, the European patient's forum concluded the definition and measurement tool for access to health care from a patient's perspective. The conclusions were based on the "5A" of Panchansky and Thomas's original concept, which included "adequate, accessible, affordable, appropriate, and available health care." The concept reflects the fit between the characteristics of the health care providers and the expectations of the patient [2].

In 2015, a cross-national European survey assessed patients' perspectives about access to health care. The "5A" dimensions of the access questionnaire were used to inform decision-makers about the issues in chronic patients' access to health care. The respondents indicated difficulties accessing health care and inadequate information from health insurers, authorities, schools, and work sites. Difficulty in accessing the health care delivery system includes geographic distances from health specialists, difficulties in paying for the health services, and postponing intervention usually attributed to high costs. Moreover, patients with chronic diseases encounter stigmatization and discrimination [3].

All Saudi and non-Saudi nationals have access to free public health services as the Saudi constitution guarantees. However, AlMalki et al. [4] reported the accessibility issues in the health care system in 2011, which mentioned inequity in geographical distributions and accessing health care professionals, long waiting lists for health care services, and shortage in services provided to disadvantaged groups such as the elderly, adolescents, and those with special needs, particularly in rural areas.

In 2017, the goals of the Saudi Ministry of Health (MOH) transformation strategy were released with the objectives for a healthy nation to be driven by access, value, and public health. Value-based health care was introduced and identified enabler in achieving the vision 2030 target. Along with the new model of care, MOH was working on provider reform through clusters and integrating accountable care organizations. The goal of financial reform was to achieve government commitment to providing Saudi nationals, residents, and visitors with timely access to health care via government corporatized providers as well as to provide the beneficiaries with the essential benefit package with a system of supplementary health insurance through private health insurers [5].

Despite the national laws and regulations for the cooperative health insurance law (No. 71), since 2013, regulations have been monitored by the Council of Cooperative Health Insurance (CCHI) [6]. The national value-based payment model was yet to be determined for beneficiaries and other stockholders. The recently published ambitious

5-year plan (2021–2025) released by the Saudi Public Investment Fund (PIF) identified "health care" as one of the 13 strategic sectors targeted to support the national economy, focusing on access to health care services through various initiatives in the field of supply chains, health technologies, and telemedicine [7].

By the end of 2020, in addition to other Saudi Arabian governmental health sectors, the MOH has provided readily available public services through 2,257 primary health care centers and 287 hospitals, along with various cardiology, oncology, diabetes, and endocrinology centers. Similarly, private hospitals have supported to achieve a total number of 164 plus more than 3,000 medical complexes [8, 9]. The current governmental financing model of health services within the country was associated with high levels of expenditure [10].

In 2013, the Saudi National Health Interview Survey reported that barriers to health care were due to the individual health profile rather than the health care system. Hence, further studies on individual factors affecting access to health care should be conducted [11]. In a review article, individual-level barriers to health care access included financial status, knowledge of health care system navigation, and communication with the health care providers [12].

After the 4 years since the execution of the Saudi health transformation strategy, satisfaction with access to health care along with enablers and barriers should be identified from the beneficiaries' perspective. This study was the first to assess beneficiaries' satisfaction with chronic diseases and long-term conditions, using the six domains of perceived access to health care questionnaire. Moreover, this study provided information about enablers and barriers to access health care in various geographic regions of Saudi Arabia. Our evidence was helpful for government health sectors, CCHI, PIF, other regulators, and providers exploring the relationship between the characteristics of the health care providers and the expectations and satisfaction of long-term beneficiaries in accessing health care.

Materials and Methods

This is a cross-sectional analytic survey.

Inclusion and Exclusion

Saudi and non-Saudi adults aged at least 18 years, Arabic or English speakers, living in Saudi Arabia for the last 1 year, and caregivers of patients with long-term chronic medical conditions were included in this study. The UK National Health Services (NHS) identified long-term conditions as conditions that cannot be cured but can be managed through medication and therapy. They include various

medical problems, such as chronic lung diseases, diabetes, cancer, dementia, and arthritis [13]. The following definition of the national cancer institute was adopted for caregiving status: “A person who gives care to people who need help taking care of themselves. Examples include children, the elderly, or patients who have chronic illnesses or are disabled. Caregivers may be health professionals, family members, friends, social workers, or clergy members. They may give care at home, in a hospital, or other health care setting” [14].

Data Collection Procedures

From September 19, 2021, to February 28, 2022, a bilingual invitation message was posted through various social media platforms, including Twitter and WhatsApp applications, to recruit the criteria met participants. The invitation also included information about the study; no obligation was imposed for participation.

The independent variables included age, gender, citizenship, governorate, and the cities’ size determined by urbanization level [15], level of education, work sector and working conditions, beneficiaries’ characteristics and caregiving status, primary health care provider, and health care payment methods. In this paper, we highlighted the affordability item domain only, including the health care system’s barriers and financial factors. Moreover, the financial barriers were captured as independent variables using either or both dichotomous responses and the four scale items: never, one time, twice, and three or more times. The list of the financial barriers was adopted from the original cross-national European survey to assess patients’ perspectives on health care access [3].

The original survey instrument included 30 items [3, 16], and we developed an Arabic version that was validated by a back-translation before the study (online suppl. Material; for all online suppl. material, see www.karger.com/doi/10.1159/000527562). Permission was obtained from the corresponding author to use the published and validated “6A” modified 30-item questionnaire with a 5-point Likert scale [16]. The items included the three “Affordability” items exploring the financial and incidental cost with 15 points; the nine items on “Acceptability” on communication, the perceived quality of care, and safety of health care with 45 points; six items about “Adequacy” and sometimes referred accommodation with 30 points; four items on “Accessibility” on different types of services, time, and distance with 20 points; three “Availability” on demand and supply to information and services at 15 points; and the last five items on “Awareness” focusing on the aspects of patient education with 25 points. The 30 main outcome variable items ranged from 30 to 150 points. The responses were analyzed by the proportion of the level of satisfaction. Based on previous study, satisfaction cut-off point was identified at 76% and above [17]. The key barriers to access included appropriateness, stigmatization, discrimination, and financial factors [18].

Statistical Analysis

To assess the relation between various factors and the outcome variable, we performed the bivariate analysis using the mean scores of the “6A” domains across the study population subgroups. Shapiro-Wilk test was used to assess the normality of the mean score. Mann-Whitney test was applied to determine the difference between mean scores for not normally distributed data. Similarly, χ^2 or Fisher’s exact tests were used to test the association between the level of satisfaction among the subgroups of beneficiaries. The $p \leq 0.05$ was considered for the significance. The data were analyzed using IBM SPSS statistics (version 21).

Table 1. General characteristics of the study group ($n = 118$)

Variable	<i>n</i> (%)
Mean age: 48.94 (± 1.30) years	
Geographic characteristics of residence	
Big/medium cities	106 (89.8)
Remote, rural, or small towns	12 (10.2)
Gender	
Male	52 (55.9)
Female	66 (44.1)
Nationality	
Saudi national	105 (89)
Non-Saudi	13 (11)
Governorate	
Macca	48 (41)
Medina	31 (26.5)
Riyadh	16 (13.7)
Eastern Province	11 (9.4)
Other regions	11 (9.4)
Level of education	
University and postgraduate	96 (81.4)
High school	13 (11)
Middle school	3 (2.5)
Primary school	2 (1.7)
Uneducated	4 (3.4)
Work sectors and working conditions	
Government sector	50 (42.4)
Private sector	15 (12.7)
Retired	31 (26.3)
Unemployed	22 (8.6)
Beneficiary’s characteristics	
Patient with a long-term medical condition	56 (47.5)
Patient with a long-term medical condition and caregiver as well	35 (29.7)
Caregiver only	26 (22)
Patient with multiple medical conditions	1 (0.8)
Primary care provider	
MOH	62 (52.5)
Private sector	34 (28.8)
MOD	10 (8.5)
University hospitals	7 (5.9)
NG	5 (4.2)
Health care payment methods	
Completely free of charge	68 (58.1)
Cash at the point of service	26 (22.2)
Full coverage by insurer	13 (11.1)
Mandatory co-payment	10 (8.5)

MOD, Ministry of Defense; NG, National Guard.

Results

Demographic Characteristics of the Participants

Of 130 electronic responses, only 118 participants met the inclusion criteria with a response rate of 90.7%. The mean age of the participants was 49 years. Most of the

Table 2. Bivariate analysis of payment methods and nationalities across the 6A's domains ($n = 118$)

	Affordability mean	Acceptability and communication mean	Adequacy and accommodation mean	Accessibility and geographic factors mean	Availability mean	Awareness mean
Payment methods						
Completely free of charge	10.53 (± 2.6)	31.93 (± 7.6)	19.3 (± 5.2)	14.19 (± 3.9)	10.53 (± 2.9)	18.04 (± 5.0)
Cash at the point of service	10.5 (± 2.9)	28.9 (± 8.3)	16.77 (± 6.3)	12.4 (± 4.9)	8.27 (± 3.3)	15.9 (± 5.3)
Full coverage by insurer	10.53 (± 2.6)	37 (± 7.8)	23.54 (± 5.3)	16.23 (± 3.2)	12.08 (± 2.9)	20.8 (± 3.5)
Mandatory co-payment	10 (± 2.2)	30.6 (± 7)	19.2 (± 6.1)	13.5 (± 4.1)	8.30 (± 1.76)	16.3 (± 3.4)
p value ^a	0.367	0.026 ^a	0.007 ^a	0.044 ^a	0.001 ^a	0.021 ^a
Nationality						
Saudi national	61.46	60.98	59.35	60.62	62.48	60.61
Non-Saudi national	43.69	47.58	60.69	50.42	35.46	50.54
p value ^b	0.075	0.083	0.894	0.309	0.007 ^b	0.315

^a p value: significant differences in the means for ANOVA testing. ^b p value: significant differences in the mean rank for Mann-Whitney test.

participants were beneficiaries from the MOH ($n = 62$; 52.5%). The demographic characteristics of the participants are shown in Table 1.

Satisfaction to Access Health Care

The mean score for the overall satisfaction with health care access was 103. Except for the affordability, a significant difference in the mean scores of all five domains was observed when compared throughout the four payment methods. The least reported mean score in satisfaction to access to health care was among the group who paid in cash at the point of service (Table 2). Moreover, non-Saudi participants reported lower mean scores within the six satisfaction domains. Similarly, the only significant difference in the mean satisfaction score was reported in the availability domain in Saudi nationals (Table 2).

Factors Influencing the Level of Overall Satisfaction

We identified the two levels of satisfaction with health care access using a cut-off point of at least 114; this is equivalent to 76% and above, as described [17]. The number of participants with low satisfaction was 76 (64.4%), while only 42 (35.6%) reported high satisfaction. Beneficiaries with long-term medical conditions were likely to have low satisfaction (Table 3). Factors influencing the level of overall satisfaction are listed in Table 3.

Satisfaction with access to health care was significantly associated with various methods of health care payment. The highest reported level of satisfaction was significantly associated with full insurance coverage, while the lowest satisfaction to access to health care was reported by participants who paid in cash at the point of service

(Table 3). Males living in big or medium cities were likely to report a low level of satisfaction with their access to health care; however, the difference was not statistically significant.

Participants living in other regions (i.e., Assir, Hail, and Jazan) reported high proportions of low satisfaction. This was followed by the participants from Riyadh, Mcca, Medina, and the eastern regions; the differences between the governorate of residence and the satisfaction level were insignificant.

Beneficiaries who received health care mainly in the private sector were likely to report higher satisfaction than the MOH providers and providers from other sectors. However, the differences were not statistically significant.

Working sectors and conditions influenced the level of satisfaction. Relatively more enormous proportions of retired participants, government sector workers, and those who were unemployed reported low satisfaction; however, the differences are not statistically significant (Table 3).

The Barrier to Health Care Access

For affordability as a barrier to health care access, the highest reported unaffordable services included using pediatric and adult ICU services at 93 (79%), followed by physiotherapy and psychotherapy services at 86 (73%). Reconstructive and cosmetic services were reported as the third on the unaffordability list at 85 (72%). Moreover, 67 (57%) reported no financial barriers to access to the general hospital. Similarly, 50% had no financial barriers to purchasing the required medication. The per-

Table 3. Factors influencing the level of satisfaction in the access to health care (*n* = 118)

	Low satisfaction in the access to health care (<i>n</i> = 76), <i>n</i> (%)	High satisfaction in the access to health care (<i>n</i> = 42), <i>n</i> (%)	<i>p</i> value
Gender			
Male	37 (71.25)	15 (29)	0.174
Female	39 (59)	27 (41)	
Nationality			
Saudi national	66 (63)	39 (37.1)	0.318
Non-Saudi national	10 (77)	3 (23.1)	
Governorate of residence			
Macca	33 (67.3)	16 (32.7)	0.798
Medina	18 (58)	13 (41.9)	
Riyadh	11 (68.8)	5 (31.2)	
Eastern Province	6 (54.5)	5 (45.5)	
Other regions	8 (72.7)	3 (27.3)	
Primary care provider			
MOH	41 (66.1)	21 (33.9)	0.647 ^a
Private sector	19 (55.9)	15 (44.1)	
MOD	8 (80)	2 (20)	
University hospitals	5 (71.4)	2 (28.6)	
NG	3 (60)	2 (40)	
Work sectors and working conditions			
Government sector	32 (64)	18 (36)	0.805
Private sector	9 (60)	6 (40)	
Retired	22 (71)	9 (29)	
Unemployed	13 (59.1)	9 (40.9)	
Beneficiary's characteristics			
Patient with a long-term medical condition	35 (62.5)	21 (37.5)	0.801
Patient with a long-term medical condition and caregiver as well	24 (68.6)	11 (31.4)	
Caregiver only	16 (61.5)	10 (38.5)	
Patient with multiple medical conditions	1 (100)	0	
Payment methods			
Completely free of charge	42 (61.8)	26 (38.2)	0.001 ^b
Cash at the point of service	22 (84)	4 (15.4)	
Full coverage by insurer	3 (23)	10 (76.9)	
Mandatory co-payment	8 (80)	2 (20)	
Geographic characteristics			
Urban: large/medium cities	69 (65.1)	37 (34.9)	0.643
Rural: remote or small towns	7 (58.3)	5 (41.7)	

NG, National Guard; MOD, Ministry of Defense. ^a*p* value: no significant association for Fisher's exact test. ^b*p* value: significant association for χ^2 test.

ceived additional financial support needed to access health care services was assessed by the beneficiary's experience over the past 12 months (Table 4).

Discussion

The study included a small proportion of long-term health care beneficiaries (*n* = 42; 35.6%) with high satisfaction with their access to health care. The overall

mean satisfaction score was 103 for the "6A" domains of the perceived access to health care questionnaire. Low satisfaction was reported by retired participants and males with long-term medical conditions who were living in large or medium cities within the regions of Riyadh and Mecca. Similarly, a significantly low satisfaction was reported among long-term beneficiaries who paid in cash at the point of health care service, whereas satisfaction was significantly associated with insurance coverage.

Table 4. Frequency of reflection on the perceived financial barriers in the access to health care

Questions reflecting financial barriers in the access to health care	Yes, n (%)	No, n (%)	Never, n (%)	Once, n (%)	Twice, n (%)	Three times and more, n (%)
In the past 12 months, did you need to have extra recourses to access private sector or any complementary health insurance to cover your health care cost? <i>n</i> = 88	49 (41.5)	39 (33.1)				
In the past 12 months, did you reduce your spending on essential needs, such as food or clothing, to be able to cover your health care costs? <i>n</i> = 110	56 (47.5)	54 (45.8)				
In the past 12 months, how many times did you forgo (do without) or postpone health care visits because of cost? <i>n</i> = 118			47 (39.8)	15 (12.7)	22 (18.6)	34 (28.8)
In the past 12 months, how many times did you forgo (do without) or postpone treatment because of cost? <i>n</i> = 118			53 (45)	23 (19.5)	21 (17.8)	21 (17.8)

In this study, high satisfaction was observed in only 35.6% of long-term beneficiaries, which was lower than the previous report in 6 European countries ranging from 53% to 55% [19]. Demographic factors can explain the differences. In our study, the retired participants and male beneficiaries living in big cities within the regions of Riyadh and Mecca were mostly reporting low satisfaction with their access to health care. Similarly, significantly low satisfaction was reported in beneficiaries paid in cash at the point of health care service. Therefore, a national biennial long-term care survey in Saudi Arabia is essential to compare with other countries and to draw conclusions about the reasons for the observed differences between countries [20].

Before and during the transformation era, policies such as Compulsory Employment-based Health Insurance were implemented to reduce individual out-of-pocket payments for affordable services. Moreover, evidence supports the advantages of insurance in reducing reliance on government resources [21].

Throughout various payment methods of the beneficiaries, a significant variation was observed in the means of the following domains: adequacy, accessibility, appropriateness, awareness, and availability (Tables 2, 3). The insignificant differences in the means standards of the affordability domain could be explained by confounders such as the cost and the related barriers expressed by all beneficiaries. This information deserves more exploration on larger sample to explore enabling factors for value-based payment in health care service [7].

Between 40% and 45% of the participants needed money and insurance coverage for health care over the last 12 months. Similarly, 18% and 28% of the long-term beneficiaries reported at least three times forgoing or vol-

untary postponing treatment or health care visits due to the associated cost (Table 4). Moreover, the potential financial barriers included the pediatric and adult ICU services at the top of the list, followed by physiotherapy and psychotherapy services, reconstructive and cosmetic services, and access to the general hospital. About 50% of the beneficiaries reported they could afford to purchase the required medication, which was aligned with the findings of Al-Hanawi et al., where 30% of the participants agreed on the importance of sharing the financial responsibilities between the government and health care system beneficiaries [22]. Therefore, cost of care barriers across various kinds and levels of health care services should be addressed in future health sector reform. Moreover, managing the cost of care barriers will allow achieving the goal of financial reform and the government's commitment to providing Saudi nationals, residents, and visitors with timely access to health care [5].

Communication with the health care providers was another potential barrier [12]. This study captured satisfaction in the communication domain and the perceived quality and safety of care within the acceptability domain. Despite the MOH's efforts to improve the communication, quality, and security of health care services free of charge, complete insurance coverage was a significant predictor of the high mean values in the acceptability and communication domains (Table 2). The findings suggested implementing effective communication methods to eliminate barriers to access to health care, targeting those receiving the services free of charge and those who were paid in cash at the point of service. The stigmatization and discrimination were also barriers to accessing health care, which will be discussed later in another paper.

This study has some limitations. First, as we collected the data through convenient social media platforms, some of the targeted beneficiaries who did not have access to social media might be missing. Second, the relatively small sample size restricted the subgroup analysis and might impact the generalizability of the findings. Third, this study was self-funded, making it difficult to reach out to many long-term beneficiaries living in remote rural areas.

Conclusions and Recommendations

Assessment of the access to health care services besides beneficiaries' satisfaction requires further assessment to answer the complex question about providers and system alignment with population affordability to pay at the local and national levels. Moreover, consumer surveys, quality of care data, epidemiology of utilization, and organizational surveys are recommended to address the complex issues in the dimensions of access to the health care [23]. Implementing an effective communication method to capture the barriers to access to health care is required. Further studies exploring access to health care are needed on long-term beneficiaries who live in rural and remote areas. In future health sector reform and health system research, addressing affordability to pay for care is required.

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Statement of Ethics

Study approval statement: Bioethics Committee registered within the University of Jeddah granted declaration form to the proposal with the following application number: UJ-REC-022 and the following approval number: HAP-02-J-094. Consent to Participate Statement: The informed consent complies with the Helsinki Declaration. Informed consent to participate was not directly obtained but inferred by completion of the questionnaire. The invitation letter included information about the study; no obligation was imposed on the participants.

Conflict of Interest Statement

The author has no conflicts of interest to declare.

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Author Contributions

The principal investigator performed idea generation, data collection, analysis, and manuscript writing.

Data Availability Statement

All data generated or analyzed during this study are included in this article and its online supplementary material. Further inquiries can be directed to the corresponding author.

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