sustainability

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Gender Sensitivity in Accessing Healthcare Services: Evidence from Saudi Arabia

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Abstract: Good health and reduced inequality are factors of sustainable development. Healthcare systems are considered on68e of the most important activities of the creative economy that arise from research and development activities. Therefore, facilitating access to healthcare is one of the most important challenges guiding the development of the healthcare systems. Access is a complex concept and requires at least four aspects of evaluation. These include whether services are available, whether there is an adequate supply of services, whether people could obtain healthcare, and finally, evaluating whether a population may have access to services. Most countries are working hard to explore the means of providing better healthcare services to their population, especially in the pandemic age of crisis. The Kingdom of Saudi Arabia (KSA) is one such country that is continuously trying to enhance healthcare access to its citizens by adopting different means and policy interventions. The primary objective of this study is to assess whether gender differences exist with unmet healthcare needs among the citizens of the KSA. In this study, we examined the factors affecting the healthcare system in the Kingdom through access to and use of primary healthcare centres in urban and rural areas and whether there is a gender gap in access to healthcare services. In addition, we have tried to explore the current challenges faced by the healthcare system and key points about immediate measures to overcome the crisis in this sector. A well-structured questionnaire was designed covering different dimensions of the study objectives. The population of the study includes both male and female citizens of Makkah city of the KSA. In a survey of 529 respondents, it was found that people's access to the healthcare service system in the area is good. Test statistics confirm the significant difference in healthcare access across the gender categories of respondents. The availability of services, as well as the barriers to access, must be evaluated in the context of varied groups in society's differing perspectives, health requirements, and material and cultural surroundings. Some theoretical and managerial implications, limitations, and scope of future research are also presented in the study.

Keywords: healthcare access; socioeconomic condition of women; gender discrimination

Citation: Habib, S.; Khan, M.A.; Hamadneh, N.N. Gender Sensitivity in Accessing Healthcare Services: Evidence from Saudi Arabia. *Sustainability* **2022**, *14*, 14690. https://doi.org/10.3390/su142214690

Academic Editors: Panagiotis Petrakis, Pantelis Kostis and Elias Carayannis

Received: 25 September 2022
Accepted: 1 November 2022
Published: 8 November 2022

1. Introduction

An efficient health system aims not only to increase population health but also to achieve equity in health. The cascading and interrelated problems, such as COVID-19, endanger any country's agenda for sustainable development. The creative economy contributes to the growth of inclusive societies. Various studies associate sustainable development with the creative economy [1–3] as the creative economy helps in developing the economy and enhancing competitiveness. Enhancing access to the healthcare system is a topic of much interest to policymakers and academics. A large portion of the GDP is spent on healthcare, including payments for hospitals, pharmaceutical medications, medical researchers, physicians, nurses, and dentists. An understanding of the unique economics

of healthcare is necessary to comprehend the modern economy. A common requirement for living a long, healthy life is the use of limited resources, which is an economic issue. The objective of sustainable economic growth can be achieved only by developing equal access and facility of the healthcare system for its population without gender disparity. Facilitating access is concerned with helping people to command appropriate healthcare resources to preserve or improve their health. Access to healthcare is a complex subject and involves many socioeconomic considerations.

Global instability in the past few years has affected public and private services and encouraged the KSA to explore alternative sources of revenue. The National Vision 2030 of the KSA seeks to achieve long-term sustainability of the economy through diversifying sources of income and developing all sectors, including the health sector [4]. Additionally, the technological revolution, which is one of the pillars of the creative economy, and its extensive uses in the healthcare system are reshaping society and transforming it into an informed society. The quality of health services is essential in terms of healthcare access. Access is defined by a variety of factors, including the availability of healthcare facilities over a large geographic distribution [5]. Of late, the healthcare system in the KSA is making extensive use of technologies in enhancing consumer awareness, healthcare accessibility, patient treatment, and follow-up. In the KSA, an individual's right to healthcare is protected through Articles 27 and 31 of the Saudi Basic Laws, which stress the provision of healthcare for all citizens in crises, disease, disability, and old age. The Ministry of Health published a PBR in 2006, and these health rights are affirmed in its policies and procedures manual as well as monthly circulars. Following this, numerous institutes and institutions in the nation have brought medical education to serve the country's health needs. Looking at the medical education participation today, about 38% of doctors in the KSA are nationals, with women constituting one-third of all Saudi doctors. The KSA is one of the wealthiest countries in the world and, in many respects, as modern as any others in terms of public health services, transportation, and infrastructure.

The KSA, established in 1932, is the largest Arab state [6]. It is an Islamic monarchy with a population of 35,442,665, two-thirds of which are Saudi nationals. The World Economic Forum's 2016 Global Gender Gap Report has ranked the KSA 147 out of 156 countries for gender parity. In 2015, Saudi women constituted only 13% of the native workforce. However, the number of employed Saudi women with professional careers is increasing, made possible by free education and the rapid expansion of institutes of higher education [7,8]. However, in highly patriarchal societies, strict sociocultural and/or religious norms and practices not only demarcate gender roles but also restrict social and physical contact between men and women [9]. Plans for NEOM, a futuristic new city near the Red Sea and the Gulf of Aqaba, were presented in October 2017. The crown prince has touted the endeavour as a "civilizational leap for humanity". Prince Mohammed bin Salman promised to restructure the monarchy and restore "moderate Islam" through innovation, education, and technology. A theocratic state is a common description of the KSA. The royal family has historically relied on Wahhabi interpretations of Islam to justify their authority and develop a distinctive Saudi national identity, in addition to tribal devotion. Since the creation of Saudi Vision 2030, state actors have also questioned the status quo between Islamic authorities and the state [10]. In recent years, the KSA government has issued an order that allows women in the KSA to access government services such as education and healthcare without their male guardian's consent. Gender disparities in health and how effectively healthcare systems satisfy the needs of men and women are extensively documented. There is a growing awareness that health policy can worsen gender inequality. The current study examines the many ways utilised to address gender sensitivity in accessing healthcare systems and discusses how these may be expanded in the context of Saudi Arabian health policy. The underlying reasons for the gender gap in health that health systems and services may address include disparities between men and women in access to preventative healthcare and treatment that adversely affect the economic sustainable development of the nation. Even though there is a growing body of research on Islam

and health, few studies have addressed the challenges that Muslim women confront in obtaining high-quality healthcare. The research question here is whether, despite reforms in the healthcare system and policies, gender discrimination exists in the KSA in terms of ability, affordability, acceptability, availability, socioeconomic factors influencing healthcare access, and technological adaptation in healthcare access. The accessibility of researchers to respondents in the cities of Medina has sparked interest in using this topic for the proposed research work.

Previous studies on gender discrimination in healthcare in developing countries have largely focused on the excess mortality of females as seen in low population ratios of women to men to explain the issue of missing women. Rapid reforms in the KSA are opening the door for female "role models and leaders of the future", and the Kingdom's women are seizing the opportunity and bringing "passion, energy and enthusiasm" to the workplace in greater numbers than ever. Healthcare discrimination has been extensively studied, but its relationship with economic dimensions has received less attention. Several studies in a similar field of study were undertaken, but with an emphasis on gender sensitivities in healthcare from different socioeconomic viewpoints. From an economic point of view, healthcare disparities across gender were related to high healthcare expenses, social security costs, and lower labour productivity. Gender sensitivities in healthcare impose significant economic costs, and attempts to decrease this gap may have long-term economic advantages. Many studies indicate that the rising number of women participating in the economy is bringing to light the years-old traditional discrimination of gender in accessing healthcare services and contributing towards sustainable economic goals. However, several studies have indicated that despite the digital revolution and its extensive application in healthcare services, gender discrimination in accessing healthcare services is prevalent among the citizens of the KSA and affects sustainable economic development. Hence, the investigation must be conducted to explore its prevalence, reasons, and policy intervention in bridging the gender divide in accessing healthcare services. As a result, it is important to understand the existence of gender differences prevailing in the KSA in terms of ability, affordability, acceptability, availability, and socioeconomic factors influencing healthcare access. The research question arises whether gender sensitivity exists in accessing healthcare services in the KSA. To answer these questions, this study aims to examine the status of gender discrimination in assessing healthcare services in the KSA and examine reasons for the delay in accessing healthcare services by the respondents of Medina city of the KSA and assess whether there is a gender divide in accessing the healthcare services in the province.

2. Literature Review

The concept of gender inequality in healthcare access has drawn the attention of many researchers in developing and developed countries and is being analysed by many researchers from different dimensions. There is an ample amount of research work that has been completed in the past related to concepts of gender as well as relatively ahistorical and decontextualized descriptions of gender roles. Access to healthcare consists of four components, namely, health coverage, different disease prevention services, obtaining medical services in a timely manner, and being equipped with a competent workforce. There was higher female participation compared to males, which could be reflective of more general patterns of healthcare utilization [11,12]. However, research on health service usage in Islamic communities has revealed that females frequently have lower rates of healthcare utilization. This is often because they continue to rely on men to make healthcare decisions, with women not normally permitted to visit a health facility or provider alone [13]. Al-Amoudi [14] indicated that patient empowerment resulted in favourable health outcomes such as increased decision-making power, freedom in making choices, and accepting of responsibility. Waqas et al. [15] used repeatable statistical and scientometric approaches to assess academic work performed in the Arab world and discovered a dearth of innovation in the field of digital health in Arab nations. Adequate healthcare access

is not just about the provision of facilities but also their affordability and knowledge of their availability. This collection brings together the experiences and perspectives of global leaders to create inexpensive, sustainable, and widely available access to healthcare services. It also aims to support various options to support financial needs to bear healthcare-related expenses. Alsaleh [16], in his research work on gender inequality in the KSA: "Myth and Reality", indicated that women in the KSA, like women everywhere, have their perspectives on equality. They play an important role not just inside their families but also outside of them. The KSA's prosperity has resulted in increased possibilities for women in education, work, and political engagement, as evidenced by the elections for the Shura Council and local councils [17]. Western activists and academics think that women in the KSA are repressed and have no say in decision-making, whether at home or work. They think that progress towards equality in the home, the workplace, education, healthcare, and political power will remain one of the most critical challenges confronting the Saudi government in the twenty-first century [18]. Alanazy et al. [19] investigated the reasons and outcomes of nonattendance at prenatal care in the KSA and reported that the country accounts for 12% of all maternal fatalities globally. Many of these issues can be prevented if women have better access to prenatal care. Despite the extensive healthcare system available in Saudi Arabia, more than 4% of women do not use it and present to the hospital for the first time when in labour, according to the authors. This raises the possibility of problems. Women who are empowered are better equipped to defend their health. Women may lack information or resources to safeguard their health, owing to a lack of education, poor income, uneven control of home resources, and mobility constraints [20]. Improved gender equality in income and education, it is hoped, will enable women to be more knowledgeable about illness prevention and have better access to healthcare for themselves and their children. Dhaher [21] examined gender discrimination in obtaining healthcare for 151 women in the KSA's southern area. The study found that the majority of women (94.2%) experienced at least one barrier in obtaining healthcare. Concerns varied from locating a female healthcare practitioner (72.2%) to gaining consent from her husband (25.2%). Furthermore, data show that women in this region have mobility challenges since they are not authorized to drive (51.7%); there is also a reluctance to obtain healthcare on their own (53%). Women in the KSA will be able to get healthcare more easily with more freedom of travel.

Gender norms about appropriate health-related behaviour interact with individuals' ability to seek treatment based on their monetary resources, time and availability, and power or authority to act. Women are particularly vulnerable to poverty due to income and wealth disparities between men and women. This makes it difficult for individuals to obtain healthcare essentials in various areas of the world. Azad et al. [22] discovered this in their investigation. Women expressed a far lower ability to obtain more cash (68.6%) than men (88.8%). When it comes to gender discrimination in healthcare access, studies such as [23] have verified the differences between women and men in several health indicators including their ability and cost affordability, etc.

Continuous increasing healthcare cost forces the government to intervene in the healthcare system and make the healthcare system accessible and unexpansive, especially for the female gender in underdeveloped countries where women have much less income and are unable to pay for it. According to [24,25], providing low-cost or free healthcare will ensure equal access. The publications, on the other hand, expressed worry over the high cost of medical medications and other services to clients [26]. Lezzoni et al. [27] observed that persons with disabilities were unable to purchase medicines and other medical treatments, owing to poverty. Davidsson and Södergård [25] suggested policy strategies such as health insurance to address the high cost of care. A similar study conducted by Almubark et al. [28] found that about half of the population in the KSA has low health literacy. Risk factors for low HL were older ages, lower income and education, having been formerly married, and a moderate pattern of health use.

In traditional societies, acceptability is considered to be an important determinant of healthcare access. The attitude of healthcare providers and the quality of care are the

two major issues creating gender discrimination in healthcare services. Several studies revealed both positive and negative attitudes that affect healthcare access among the population [29]. These favourable views were influenced in part by intensive efforts aimed at increasing providers' awareness of the need of boosting acceptability and addressing the health requirements of clients with disabilities [30]. Nonetheless, some studies found that negative attitudes from providers, such as discrimination and stigmatization, posed a significant barrier to healthcare access [31]. Several authors indicated that discrimination emanated because of cultural differences between users and health professionals [32,33]. According to Van Hees et al. [34], gender discrimination in healthcare access exists in some cases due to poor self-esteem and a refusal to explain or speak about their health status to service providers.

Provision and availability of healthcare facilities are important factors affecting women's healthcare access. Several studies identified availability as a factor influencing widespread access to healthcare. The authors emphasised that the availability of resources is essential to healthcare access. Availability of human resources, healthcare infrastructure, and healthcare services are among the other resources. Many researchers noticed that a shortage of healthcare providers impeded healthcare delivery [35,36]. Tilahun et al. [37] stated that differences in healthcare provision across locations led to gender discrimination in healthcare. Few researchers reported prejudice owing to a lack of supply and resources [29]. They also emphasized the relevance of customer resource availability. Making mental health treatments available in a community, according to one study, can improve the quality of life, functioning, and productivity of persons with severe mental illnesses [38].

The intersection of religion, culture, and gender for Muslim women has unique implications for their healthcare engagement provision but remains understudied. Women's healthcare engagement is described as actively obtaining information and making decisions about their symptoms, diseases, and treatment options. A broader description involves a thriving collaboration between patients, their families, their representatives, and their healthcare staff. Furthermore, interventions that concentrate on a woman's feeling of significance and prioritizing her own and her daughter's health are critical to addressing these obstacles to treatment. To alleviate the burden faced by women in getting access to healthcare, gender equity is crucial to fully engage women in society.

Gender discrimination in seeking healthcare services and its relationship with mental health has been explored by many researchers who found gender interferes with experiencing discrimination and indicated men have higher rates of perceived discrimination compared to women. Based on the subordinate male hypothesis, discrimination is more detrimental for men as men have a higher preference for dominance and hierarchy. In this view, masculinity ideologies may increase mental health costs associated with perceived discrimination. Individual and social beliefs that devalue women have a significant impact on gender inequalities in health. When compared to males, women are disproportionately affected by the economic vulnerability, poorer social standing, and less access to education. Gender norms that emphasize women as caretakers and men as providers can influence health. The importance of resolving gender disparities in healthcare access has been widely documented in the literature, with demonstrable reductions in mortality and morbidity for both men and women [20], including in the 2019 Lancet series on Gender Equality, Norms, and Health and the 2015 Lancet Women and Health Commission [39]. Women have less decision-making authority, access to resources, and economic and social utility than males in these inferior jobs [40]. These arguments led to the following hypotheses:

H1: *There is no significant difference in the health compliance behaviour across the gender categories of respondents.*

H2: *Various factors influencing healthcare access do not differ significantly across the gender categories of respondents.*

H3: *Factors of healthcare access have no significant effect on health compliance behaviour.*

3. Research Objectives and Methodology

The primary objective of the present study is to have an understanding of the healthcare system in the KSA. The basic aim of this study is to assess whether gender was independently associated with perceived unmet healthcare needs among a representative sample of the KSA.

The other objectives of the study include:

1. Exploring the opportunities provided by the healthcare system in bridging the gender gap for accessing healthcare services for sustainable development in the creative economy.
2. Exploring the factors affecting gender discrimination in accessing healthcare services in the Medina district of Saudi Arabia.
3. To analyse the health compliance behaviour and assess the reasons for the inaccessibility to the healthcare system among a sample of the population in areas of Medina city (KSA).
4. Analysing the effective government policies implemented to support health informatics, digital health, or M-health services in the KSA.

The assessment methodology was partly based on an already-tested gender audit survey tool developed by InterAction [41,42]. The models were developed following the modified Behavioral Model for Vulnerable Populations published by Gelberg et al. [43], in which the use of healthcare services reflects a health behaviour driven by upstream demographic factors. Demographic characteristics, general health conditions, causes of gender discrimination in obtaining healthcare access, healthcare compliance behaviour, and delay in accessing different healthcare services are the major population variables of interest in this study. A descriptive research design was used for the present research work. It is based on data collected from primary as well as secondary sources. Secondary sources of data include books, magazines, research journals, internet resources, etc. The primary data were collected using survey instruments. Secondary data were collected using the questionnaire method. A self-administered questionnaire was prepared to cover different dimensions of gender discrimination factors affecting gender discrimination, healthcare compliance behaviour, and delay in accessing different healthcare services. The measurement variables were further refined and employed for the survey. To ensure the validity of the survey instrument, the questionnaire was given to a panel of experts from academics as well as a subject expert from the industry who judged the validity of its content, the clarity of its items' meanings, and its relatedness with the research goals. The questionnaire was pilot tested with 55 respondents, representing 10% of the overall sample size, who were believed to be typical of the research population, to confirm its reliability. Cronbach's alpha was determined to be 0.773, indicating that the questionnaire had an adequate level of reliability.

The researcher preferred nonprobability sampling, particularly snowball sampling techniques, to select sample respondents from the total population. The population for the study includes both male and female respondents residing in Makka city of Saudi Arabia. Both online and line methods were used to collect the required data. Some responses were collected personally by visiting the local area market, hospitals, and individual residences after taking a prior appointment from the respondents. Email addresses were collected from different sources. Initially, the questionnaire link was sent to 300 people via email and social media platforms such as Facebook and Twitter, and further, it was requested to pass it on to their own network. Researchers collected 600 replies, and after editing, 529 were found appropriate and utilized in this study, eliminating 71 responses that were not trustworthy and or were insincerely addressed.

The collected data were systematically arranged, tabulated, and analysed using different statistical software. Descriptive statistics and CFA were calculated with the help of SPSS 22 software. One-way ANOVA and regression analysis were carried out to investigate the link between factors of healthcare access and its impact on health compliance

behaviour and delay in healthcare services and whether gender creates the differences in these relationships. Table 1 indicates the demographic characteristics of respondents.

Table 1. Demographic Characteristics (n = 529).

Demographic Characteristics		Frequency	Percentage
Age	18–25 Years	69	13.0
	25–40 Years	266	50.3
	40–55 Years	129	24.4
	55–70 Years	53	10.0
	More than 70 Years	12	2.3
Gender	Male	303	57.3
	Female	226	42.7
Marital Status	Married	349	66.0
	Unmarried	180	34.0
Educational Level	Primary Level	61	11.5
	Up to Matric Level	131	24.8
	Intermediate	117	22.1
	Graduation	115	21.7
	Postgraduation	30	5.7
	Technical And Other Professional Qualifications	75	14.2
Monthly Income Level (in SAR)	Up to 5000	114	21.6
	5001–15,000	161	30.4
	15,001–30,000	165	31.2
	30,001–50,000	59	11.2
	More than 50,000	30	5.7

4. Results

Enhancing access to the healthcare system is a topic of much interest to policymakers and academics. Many studies in the past indicated that demographic characteristics are important factors in analysing healthcare accessibility. Among the other demographic characteristics, the age, gender, marital status, education, monthly income, and level of education of respondents are considered very important. Gender is one of the important demographic variables affecting access to the healthcare system in Islamic countries. The government of the KSA has come up with reform in the age-old traditional policies to improve the accessibility of healthcare facilities to women. Government initiatives, policies, and resources designed to promote and develop women's accessibility to healthcare accessibility are still being affected by the patriarchal family setup, resulting in gender inequality and discrimination in its approach. With this background in mind, an attempt was made to classify the respondents based on their demographic characteristics. Table 1 indicates that 50.36% of respondents were in the age group of 25.40 years; 13% of respondents were in the age group of 18–25 years; 24.4% of respondents were between the ages of 40 and 55 years; and the remaining 10% of respondents were above 55 years. The majority of the respondents (57.36%) were in the male category, and almost two-thirds of respondents (66%) were married. Looking at the education level of respondents, it was observed that 11.5% of respondents indicated their education level as up to primary school, 24.8% indicated up to matric, 22.1% indicated up to intermediate, and 21.7% respondents indicated their education up to graduation; 5.7% of respondents were educated up to postgraduation. However, a significant number of respondents (14.2%) had qualifications such as a technical degree or diploma certificates and other professional qualifications. Regarding the monthly income level, 21.6% of respondents indicated they are earning up to SAR 5000; 30.4% indicated they are earning from SAR 5001 to SAR 15,000; 31.2% of respondents indicated they are earning from SAR 15,001 to SAR 30,000; and 11.2% of respondents indicated they are earning from

SAR 30,001 to SAR 50,000. The remaining 5.7% of respondents indicated they are earning more than SAR 50,000. (USD 1 = SAR 3.76 as of 18 October 2022).

Saudi's general health status and health services are supplied by three main sectors: the MOH network of hospitals and primary healthcare facilities spread throughout the nation, other governmental institutions, and the private sector. An attempt was made to learn about the availability of healthcare services in the local neighbourhood. According to the findings (Table 2), 79.2% of respondents said the MOH network of hospitals and basic healthcare is available in their location. Other governmental institutions (medical colleges, military hospitals, and other government-supported hospitals) are accessible in 24.6% of areas. Private sector hospitals are available, according to 36.9% of respondents.

Table 2. Availability of healthcare facility within 10 KM (N = 529).

Nature of Healthcare Facilities	Yes	No
MOH network of hospitals and primary healthcare	419 (79.2%)	110 (20.8%)
Other governmental institutions (medical colleges, military hospitals, and other government-supported hospitals)	130 (24.6%)	399 (75.4%)
Private sector hospitals	195 (36.9%)	334 (63.1%)

Health status and healthcare-seeking behaviour are important issues for a healthy society and community, and healthcare-seeking patterns are decided by knowing the activity undertaken by individuals who perceive themselves to have a health problem or to be ill in need of finding an appropriate remedy. The information presented in Table 3 indicated that only 15.3% of respondents indicated that they are having good health; 27% of respondents indicated that they are having fair health; 31.4% of respondents indicated that they are having poor health; 5.7% indicated that they are having some partial disability/sickness; and 20.6% of respondents indicated that their health condition requires regular monitoring, care, or medication. Information related to visiting patterns to the hospital for check-ups and treatment indicates that 14.7% of respondents visit the hospital very frequently, and 26.3% visit once a week; 19.7% of respondents indicated that they visit once a month, and 21.2% of respondents indicated that they have to visit at least once in three months. The survey revealed that almost half of the respondents (49.1%) seek advice from the doctor by visiting the hospital. Another 38.4% of respondents preferred to take advice by calling the doctor at home. However, it is significant to note that a significant number of respondents (12.5%) indicated that they prefer online services for ordering prescriptions. It was observed that more than half of the respondents (53.5%) preferred to obtain treatment from a government district hospital; 33.1% of respondents preferred to be treated by the emergency department; and another 4.9%, 5.5%, and 3.0% of respondents indicated that they preferred to seek treatment from a private health clinic, commune health centre, or university/teaching hospital, respectively. Looking at the companion with whom they go to the hospital for treatment, it was found that 12.5% of respondents go alone, 25.0% of respondents go with family, and the majority of them (62.5%) go with family and spouse for their treatment.

Data are summarized in Table 4 for various factors of healthcare access across the gender categories of respondents. The survey revealed that factors such as the ability to engage scored the highest mean of 3.9868, with SD = 0.70726, among male respondents, followed by customers' affordability of healthcare service (m = 3.9795 and SD = 0.64365). However, customer affordability scored the highest mean among females (m = 3.8655, SD = 0.84114); this was followed by socioeconomic condition (m = 3.8127 and SD = 0.73119. The information presented in Table 4 indicates the difference in the response pattern among male and female respondents. The reliability value of all the constructs was found in the range of 0.567 to 0.851, which is sufficient for further statistical analysis.

Table 3. Healthcare Services-Seeking Pattern (N = 529).

Healthcare Services-Seeking Pattern	Description	Frequency	Percentage
General healthcare condition	Good	81	15.3
	Fair	143	27.0
	Poor health	166	31.4
	Having some partial disability/sickness	30	5.7
	My health condition requires regular monitoring, care, and medication	109	20.6
How frequently do you need to visit the hospital for health check-ups and treatment?	Very frequently	78	14.7
	Once a week	139	26.3
	Once in month	104	19.7
	Once in three months	112	21.2
	Once in six months	96	18.1
Preferred mode of taking advice from a doctor	By visiting the hospital	260	49.1
	Calling the doctor at home	203	38.4
	Taking online advice from a medical professional	66	12.5
Preferred place for treatment	District hospital	283	53.5
	Emergency department	175	33.1
	Private health clinic	26	4.9
	Commune health centre	29	5.5
	University/teaching hospital	16	3.0
With whom do you go to health check-ups and treatment?	Alone	66	12.5
	With family	132	25.0
	With family and spouse	331	62.6

Table 4. Factors Influencing Healthcare Access: Descriptive Statistics.

		Male (n = 303)		Female (n = 226)	
Items and Constructs	α	**Mean**	**SD**	**Mean**	**SD**
Ability	0.791	3.8845	0.62959	3.8639	0.67372
My skill to communicate with healthcare providers, particularly in other languages, affects my ability to access the healthcare system.		4.0132	0.75016	4.0044	0.78030
I have limited resources and financial means to pay for healthcare services.		3.8746	0.98201	3.7699	0.95227
The increasing cost of accessing healthcare facilities and treatment restricts my purchase ability.		3.7855	0.94388	3.7699	0.99339
The stigma associated with conditions in communities, such as mental health or substance abuse, is an important issue in accessing healthcare services.		3.8647	0.80036	3.9115	0.82793
Affordability	0.717	3.9795	0.64365	3.8655	0.84114
The provision of health insurance has increased my access to healthcare services.		3.7855	0.85555	3.7611	0.91189
My healthcare costs are a financial burden on me.		4.0264	1.01608	3.9159	1.06542
It is hard for me to pay for healthcare without sacrificing my other basic needs.		3.8812	0.90934	3.7345	1.09964
My out-of-pocket costs for healthcare are unworkable for my budget.		4.1386	0.83820	3.9956	1.06874
My medical bills strain my financial resources.		4.0660	0.79042	3.9204	0.80157

Table 4. *Cont.*

Items and Constructs	α	Male (n = 303)		Female (n = 226)	
		Mean	SD	Mean	SD
Acceptability	0.567	3.8152	0.59808	3.7124	0.60159
My communication with my healthcare provider is acceptable to my needs.		3.7657	0.86958	3.5708	0.83098
Healthcare policy interventions are easily acceptable to me.		3.8845	0.81166	3.8496	0.80245
I feel that healthcare facilities are appropriate to handle the situation.		4.0000	0.88400	3.9690	0.86611
A flexible healthcare delivery system is acceptable to me in complicated health situations.		3.6106	1.22075	3.4602	1.32017
Mobile technologies are very useful for my improving my access to healthcare processes.		3.7954	0.99886	3.7478	1.03843
Availability	0.831	3.8568	0.76076	3.6823	0.81658
Real-time communications with mobile devices help me access healthcare services.		3.7063	1.07786	3.5133	1.08824
The provision of online doctors' consultation and electronic prescribing has increased the availability and options of healthcare access.		3.8515	1.01368	3.6195	1.01385
If I miss an appointment, it can easily be rescheduled at my request.		4.0330	1.03526	3.8540	1.13173
Healthcare staff is very supportive and useful to improve healthcare access and the related issues.		3.8977	1.01614	3.6770	1.15358
It is difficult for me to find a match between my schedule and the provider's schedule.		4.2013	0.88160	3.9735	1.11124
Ability to Engage	0.851	3.9868	0.70726	3.7743	0.90306
Poor health literacy and lack of knowledge of healthcare services restrict my access to healthcare services.		4.1056	0.99439	3.8363	1.15651
My adherence to therapy is influenced by medical information materials incorporating simple and understandable text and pictograms.		3.8416	1.09241	3.6681	1.16640
Well-described prescriptions influenced me in following doctors' instructions and enhance my adherence to therapy.		3.8020	1.03277	3.5398	1.12377
Clinic appointment assistance and helpfulness of staff influence my engagement with healthcare facilities.		3.9340	0.86254	3.7788	0.94030
I feel a lack of skill in exploring specialist medical services.		4.2508	0.76109	4.0487	0.97174
I have to travel a large distance to get access to medical services.		4.2607	0.80232	4.1106	0.90979
Socioeconomic	0.821	3.9483	0.73447	3.8127	0.73119
The high cost of transportation restricts my access to healthcare services.		4.2310	0.89485	4.1062	0.86782
Poor family support and social stigma pose a problem for me in accessing healthcare services.		3.9604	1.06031	3.9336	1.06668
The stigma associated with conditions in communities, such as mental health or substance abuse, is an important issue in accessing healthcare services.		3.7063	1.21096	3.5841	1.09727
I fear that getting healthcare services will compromise my privacy.		3.9769	1.03393	3.6593	1.07241
The high cost of healthcare services is a challenge for me.		3.5545	1.05299	3.4823	0.96708

Adherence to medical recommendations is one of the important determinants of the health condition of people and the community. Many studies in the past indicated different reasons and an indication of nonadherence to healthcare recommendations such as taking the medication regularly, returning to a doctor's office for follow-up appointments, and observing preventive and healthful lifestyle changes. Based on previous studies, measurement variables were identified, and respondents were asked to rate on a scale of 1 to 5. Descriptive statistics calculated with the help of SPSS software and as presented in Table 5 indicated that noncompliance attributes such as "Following medication adherence during clinic sessions or with the aid of medical personnel" have scored mean = 4.1089 and SD = 0.62880. Among the male respondents, it was followed by attributes such as "Failure to follow doctor's orders", with mean = 4.0990 and SD = 0.62780. However, in the female group, "Receiving a prescription but failing to complete it" has scored the

highest, with a mean of 3.8274 and SD = 0.62635. It was followed by "Using the improper dosage", with mean =3.7566 and SD = 0.69798. The combined reliability of all measurement variables of noncompliance was calculated, and the value was found to be 0.891, which is higher than 0.6, indicating that the construct is reliable enough to go for further statistical analysis. One-way ANOVA was carried out to test whether the mean of different variables related to noncompliance with healthcare recommendations differs significantly across the gender categories of respondents. From the table, it is clear that the calculated value of F is higher than the tabulated value of F (3.85) at ($p < 0.05$) level of significance. Hence, the null hypothesis is rejected, indicating that the mean of noncompliance with healthcare recommendations differs significantly across the gender categories of respondents.

Table 5. Healthcare Compliance Behaviour.

	Reliability	**Male (n = 303)**		**Female (n = 226)**		**F V1 = 1, V2 = 528**	**Sig.**
	α	**Mean**	**SD**	**Mean**	**SD**		
Healthcare Compliance Behaviour		4.0007	0.45251	3.6540	0.58157		
Receiving a prescription but failing to complete it		3.9274	0.54104	3.8274	0.62635	3.858	0.050
Using the improper dosage		3.8977	0.54539	3.7566	0.69798	6.805	0.000
Taking medicine at inconvenient times		3.9109	0.65254	3.6858	0.75039	13.534	0.000
Dose frequency can be increased or decreased		3.9142	0.65551	3.5796	0.88711	24.883	0.000
Excessive treatment discontinuation	0.897	3.9901	0.52415	3.6770	0.84175	27.592	0.000
Delay in obtaining medical attention		3.9934	0.50161	3.5929	0.86036	45.112	0.000
Nonattendance at clinic visits		4.0858	0.54520	3.5973	0.91980	58.105	0.000
Failure to follow doctor's orders		4.0990	0.62780	3.5841	0.96356	55.161	0.000
Taking advantage of drug vacations		4.0792	0.63062	3.6106	0.90856	55.161	0.000
Following medication adherence during clinic sessions or with the aid of medical personnel		4.1089	0.62880	3.6283	1.01714	44.739	0.000

Unmet healthcare needs and delays in needed care are widespread problems in developing countries. Based on the review of previous studies, some of the measurement variables were developed to identify the nature of the delay in healthcare service, and respondents were asked to rate it on a scale of 1 to 5. Descriptive statistics (mean and SD) and one-way ANOVA calculated using SPSS software and as presented in Table 6 indicated that attributes such as "A visit to a primary care physician (e.g., a general practitioner)" have scored the highest mean (m = 4.1089, SD = 0.57372) among male respondents, followed by "A Doctor's Consultation", with mean = 4.1023 and SD = 0.71370. Looking at the response pattern of females, it is observed that variables such as "A visit to a primary care physician (e.g., a general visit to a primary care physician (e.g., a general practitioner))" has scored the highest mean of 4.0000 with SD = 0.65320. This was followed by "A consultation with a specialist", with mean = 3.9912 and SD = 0.78311. The reliability of all measurement variables of delay in accessing different healthcare services was calculated, and the value was found to be 0.854, which is higher than 0.6, indicating that the construct is reliable enough to go for further statistical analysis. A one-way ANOVA was used to see if the mean of several variables associated with the delay in accessing different healthcare services differed substantially between gender groups of respondents. The table clearly shows that the computed value of F is greater than the tabulated value of F (3.85) at the (V1 = 1, V2 = 528, $p \leq 0.05$). As a result, the null hypothesis is rejected, indicating that different variables related to delay in accessing different healthcare services differ significantly across the gender categories of respondents. This is excluding variables such as "A treatment intervention, such as surgery or other procedure" and "A medical device or medical equipment", where the value is less than the tabled value and the null hypothesis is accepted.

Table 6. Delay In Accessing Different Healthcare Services.

		Male (n = 303)		Female (n = 226)		One-Way ANOVA (F)	p-Value
	α	Mean	SD	Mean	SD	F V1 = 1, V2 = 528	Sig.
Delay In Accessing Different Healthcare Services	0.854	4.0627	0.67059	3.9912	0.78311		
A form of therapy, such as surgery or another operation		4.0132	0.53964	3.9292	0.60688	1.276	0.259
A medical device, often known as medical equipment, is a piece of medical equipment		4.0033	0.65861	3.8761	0.71346	2.818	0.094
A diagnostic examination		4.0693	0.66994	3.8628	0.84524	4.495	0.034
A doctor's consultation		4.1023	0.71370	3.9558	0.81529	9.816	0.002
A visit to a primary care physician (e.g., a general practitioner)		4.1089	0.57372	4.0000	0.65320	4.830	0.028
A consultation with a specialist		4.0627	0.67059	3.9912	0.78311	4.141	0.042

An attempt was made to check the means of various factors of healthcare access across the gender categories of respondents. To measure this, a one-way ANOVA test was carried out between factors of healthcare access and gender categories of respondents. The outcome of the one-way ANOVA as presented in Table 7 indicates that the computed value of F (3.85) is greater than the tabulated value of F (3.85) at the ($p \leq 0.05$) level of significance in the case of availability, ability to engage, socioeconomic factors, noncompliance of health advice, and delay in healthcare services. Hence, it is concluded that factors such as availability, ability to engage, socioeconomic factors, noncompliance with health advice, and delay in healthcare services differ significantly across the gender categories of respondents. However, the value is less than the tabled value, and the null hypothesis is accepted. The computed value of different factors such as ability, affordability, and acceptability is less than the tabulated value of F =3.85 at the $p \leq 0.05$ level of significance, and hence, it is concluded that these factors do not differ significantly across the gender categories of respondents.

Table 7. One-way ANOVA of means of various factors of healthcare access across the gender categories of respondents.

		Sum of Squares	df	Mean Square	F	Sig.
Ability	Between Groups	0.055	1	0.055	0.130	0.719
	Within Groups	221.836	527	0.421		
	Total	221.890	528			
Affordability	Between Groups	1.684	1	1.684	3.121	0.078
	Within Groups	284.304	527	0.539		
	Total	285.988	528			
Acceptability	Between Groups	1.368	1	1.368	3.805	0.052
	Within Groups	189.455	527	0.359		
	Total	190.823	528			
Availability	Between Groups	3.940	1	3.940	6.393	0.012
	Within Groups	324.813	527	0.616		
	Total	328.753	528			
Ability to engage	Between Groups	5.843	1	5.843	9.204	0.003
	Within Groups	334.558	527	0.635		
	Total	340.402	528			

Table 7. *Cont.*

		Sum of Squares	df	Mean Square	F	Sig.
Socioeconomic factors	Between Groups	2.381	1	2.381	4.430	0.036
	Within Groups	283.205	527	0.537		
	Total	285.585	528			
Noncompliance with health advice	Between Groups	15.558	1	15.558	59.438	0.000
	Within Groups	137.941	527	0.262		
	Total	153.499	528			
Delay in healthcare services	Between Groups	1.994	1	1.994	7.381	0.007
	Within Groups	142.369	527	0.270		
	Total	144.363	528			

5. Regression Analysis

Regression analysis was carried out to measure the coefficients of the linear equation between factors of healthcare access service and the health compliance behaviour of respondents. Before performing regression analysis, multicollinearity was tested to assess model fitness and whether multicollinearity is characterized by extremely high intercorrelations or interassociation between independent variables. As a result, statistical inferences drawn from the data may be unreliable. To validate this, the variance inflation factor (VIF) was calculated and found to be within the limit ($1 < VIF < 5$). After ensuring multicollinearity, regression analysis was carried out.

The results of regression analysis (Table 8) show that the impact of factors of healthcare service (ability, affordability, acceptability, availability, ability to engage, and socioeconomic factor) on health compliance behaviour was found significant ($F = 442.864$, $p \leq 0.001$;) and contributed 83.6% ($R^2 = 0.83.6$) to the health compliance behaviour of respondents. The results revealed that the beta values for the various factors of healthcare access have a significant effect on health compliance behaviour. Hence, the research hypothesis is accepted, indicating the factors of healthcare access have a significant effect on health compliance behaviour.

Table 8. Impact of various factors of healthcare access and their impact on health compliance behaviour: regression analysis.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	0.226	0.086		2.631	0.009		
Ability	0.107	0.022	0.128	4.861	0.000	0.452	2.211
Affordability	0.135	0.020	0.185	6.667	0.000	0.410	2.439
Acceptability	0.172	0.020	0.192	8.464	0.000	0.611	1.638
Availability	0.197	0.019	0.288	10.217	0.000	0.396	2.522
Ability to engage	0.182	0.018	0.271	10.290	0.000	0.453	2.208
Socioeconomic factors	0.149	0.016	0.203	9.163	0.000	0.643	1.555
$R = 0.914$		$R^2 = 0.836$		$F = 442.864$		$p \leq 0.001$	
Std. Error of the Estimate = 0.21973				Durbin–Watson = 1.932			
a. Dependent Variable: noncompliance with health advice							

6. Discussion

This study used primary data to look at the availability of healthcare facilities, healthcare services-seeking patterns, factors influencing healthcare access, healthcare compliance behaviour, and delay in accessing different healthcare services. The outcomes of the research findings revealed that various factors of access to healthcare services differ significantly across the gender categories of respondents. Regression analysis indicates that the beta value of all the factors taken as an independent variable has a significant influence

on healthcare compliance behaviour. Access to healthcare is an important determinant of health and economic sustainability [44]. Several studies have shown that the availability of facilities within an accessible distance improves health. This finding is in conformance with the previous findings of [11,17,45,46]. Johnson [47] and Al Mustanyir et al. [46] emphasize the importance of individual characteristics in healthcare-seeking practices rather than system-based potential barriers. The previous finding also indicated that Saudis seem to mostly seek healthcare when sick [11]. Health education needs to be advertised extensively to enhance awareness and manage healthcare compliance among the population in the KSA [45,48,49].

Countries around the world are facing extraordinary challenges in implementing various measures to improve their healthcare systems. However, for these measures to be effective, the public must comply with these rules and recommendations. The present study examined the healthcare compliance behaviour of the respondents, and it was found that beliefs that taking a doctor's advice and adhering to health precautions are effective and important predictors of voluntary compliance behaviour, including following government rules, taking various health precautions, and urging others to do the same. The study indicated that some of the important attributes such as "A consultation with a specialist" have scored the highest rating. It was also found that different variables related to a delay in accessing different healthcare services differ significantly across the gender categories of respondents. This calls for a build-up of trust among patients, as trust is associated with improved chances of getting needed care across most subgroups of the population, although this relationship varies by subpopulation. Hence, the Saudi Ministry of Health needs to implement a comprehensive plan including health education and investigations, to understand the barriers and bottlenecks to healthcare-seeking behaviour. The study indicated that the longer the distance travelled to primary healthcare centres in Makkah, the lower the patients' satisfaction, with 39% of patients considering the primary healthcare centre far or very far. However, in our study, the distance was not an issue, and we did not observe any association between the type of healthcare facilities used and distance to healthcare facilities, and health outcomes or use of health services in the KSA. The study is consistent with the previous findings of [50,51], which also indicated gender discrimination in healthcare access in terms of access to healthcare services as well as medical education. It is found in the study that online healthcare access in terms of prescription and medical delivery is growing and making its presence in society. The finding is consistent with previous research work of [11,52], which indicated reform and adaption of technology in accessing healthcare access.

The study outcome indicates that the ability to engage the masses in the healthcare system plays a significant role in improving the health compliance behaviour of the people. This is in conformance with many studies in the past indicating that gender equality and women's and girls' empowerment are key to the agenda for sustainable development [53,54]. The sustainable development of the healthcare system is a major concern today and in the future. The majority of studies and analyses focus on the efficiency and cost-containment of healthcare institutions such as hospitals, ambulatories, and outpatient delivery organizations. Following an examination of changes in public and private healthcare spending, the study addresses the limits of various strategies. It contends that privatization cannot be a solution since health is a human right that cannot be guaranteed by market laws and profit maximization/optimization. The research finding recognized the need of bridging the gender gap in accessing the healthcare system for promoting long-term, inclusive economic growth; encouraging innovation; and providing opportunities, benefits, and empowerment for everyone, as well as respect for all human rights for economic sustainable development. It also recognized the continuous need to assist women in the studied countries for a smooth transition and contribute to the industrial production system for creativity and sustainable growth [22,49,55].

Despite the numerous studies on gender disparities and access to healthcare between the sexes, practical advancements will not be achieved successfully as long as we do

not have a clear understanding of how to put these theories into practice. Our findings show that personalizing opportunities and constraints connected to the professional, organizational, and policy level is part of implementing gender sensitivity. To incorporate gender sensitivity, a multitrack strategy is required because gender inequities are pervasive in healthcare. Interventions should take into account a variety of aspects to implement gender sensitivity in healthcare practice. Changes to processes and structures are necessary for gender-sensitive healthcare, but we also need to improve comprehension and promote awareness.

The study outcome reveals the gender gap in accessing the healthcare system and healthcare compliance. This creates many socioeconomic problems. It is essential to develop a healthcare ecosystem to achieve the sustainable economic goal. This can be achieved by enhancing women's participation in healthcare and economic development [55,56]. Healthcare ecosystems create powerful forces that can reshape industries. They have the potential to improve outcomes and accessibility in healthcare, boost provider efficiency, include formal and informal caregivers, and provide consumers with a tailored and integrated experience [56–58]. To improve consumer and stakeholder experiences and address significant pain points or inefficiencies, it is essential to improve and enrich the capabilities and services that integrate value chain participants such as customers, suppliers, platforms, and service providers through a common business model, transform the healthcare system into the new model [59]. Enhance gender participation in the healthcare delivery system [60,61], and establish virtual data backbone enabled by seamless data capture, management, and exchange to achieve the goal of socioeconomic sustainability [62].

The study indicated that the impact of factors of healthcare services (ability, affordability, acceptability, availability, ability to engage, and socioeconomic factor) on health compliance behaviour was found significant. This may be helpful in reducing healthcare costs and help improve the socioeconomic condition in society. The outcome of the present study is in conformance with the previous work of Breitscheidel et al. [63], who also indicated that improved compliance may lead to reductions in total healthcare costs.

7. Limitation and Future Scope of the Study

Our study is a household survey and reflects only on individual factors that can affect access to, and utilization of, healthcare. Future research must focus on including sociopsychological and economic factors and government policies to assess gender discrimination from broader perspectives. In the current study, the author derived his inferences based on information on individual characteristics that appear insufficient. It is advised that future studies should concentrate on system-based characteristics to better understand key parts of the system, such as care quality. The findings of such research may be used to change and enhance the system to incentivize the Saudi populace to make use of their free healthcare system more fully. Extensive digitalization of the healthcare system has brought a phenomenal change in the healthcare delivery and healthcare information system. The healthcare system has benefitted a lot from society all across the globe. Hence, it is suggested that future research must include this dimension to test the contribution of digital technology in the healthcare system among the population of the KSA.

8. Conclusions

Building trust in the effectiveness of health-promoting behaviour may improve the desire to engage in such activities, minimizing the need for more invasive government interventions. Finding strategies to encourage individuals to engage in such behaviour on their own time will save healthcare resources and, more significantly, lives. Considering that active participation in collective creativity tasks is particularly important for the complex world of healthcare design, we anticipate that our study will be of interest to academics from a variety of disciplines, including psychologists as well as social scientists from a variety of other fields. The outcomes of the research findings revealed that various factors of access to healthcare services differ significantly across the gender categories of respondents. It is

worth noting that the KSA's rapid reforms are opening the door to "women as role models and future leaders" [64], The Kingdom's women are actively participating in developing a creative economy by bringing "passion, energy and enthusiasm" to the workplace in greater numbers than ever before [65]. Legislators have made it simpler for women to enter the labour sector. Currently, one million Saudi women work in the private sector. Three government initiatives, "Wusool", "Tamheer", and "Qurrah", attempt to develop more jobs for women in the Kingdom of Saudi Arabia. Wusool pays 80 percent of working women's transportation expenditures, Tamheer gives on-the-job training, and Qurrah provides child assistance for female employees. According to a Global Entrepreneurship Monitor survey, 17.7 percent of Saudi women are now involved in entrepreneurial activity, comparable to 17 percent of Saudi males. The Saudi Ministry of Human Resources and Social Development (MHRSD) encourages female entrepreneurship. For the first time, women may now attend concerts, movies, and public events. The sustainability concept of gender is narrow, referring mainly to women and focusing on limited roles. Action is needed that is multidisciplinary, going beyond medicine to include social sciences, statistics, or political economy. We need to analyse gender influences in their specific contexts. Such analysis can help shape the transformation of gender as it promotes or hinders equity as a means to health sustainability. A more comprehensive action agenda is needed to improve health equity outcomes while also advancing gender equality and women's empowerment. This will certainly contribute to the push to reach the provision of healthcare to all members of society without discrimination.

Author Contributions: Conceptualization, S.H. and M.A.K.; methodology, S.H., N.N.H. and M.A.K.; software, S.H. and M.A.K.; validation, S.H. and N.N.H.; formal analysis, S.H.; investigation, N.N.H.; resources, S.H.; data curation, S.H.; writing—original draft preparation, S.H., M.A.K. and N.N.H.; writing—review and editing, S.H., N.N.H. and M.A.K.; supervision, S.H.; project administration, S.H.; funding acquisition, S.H. All authors have read and agreed to the published version of the manuscript.

Funding: The authors extend their appreciation to the Deputyship for Research and Innovation, Ministry of Education in Saudi Arabia, for funding this research work through the project no. 7964.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study are available on request from the first author.

Conflicts of Interest: The authors declare no conflict of interest.

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