

Evaluation of Health Status and Factors Associated with Health Behaviors among Adults in Saudi Arabia

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Abstract

Background and Objectives: Despite the available treatment options, people's attitudes toward health change significantly. Evaluation of health status, and factors associated with health behaviors among adults in Saudi Arabia. **Materials and Methods:** A cross-sectional web-based study was conducted in early, 2021 using a valid, self-administered online questionnaire, the data was analyzed using Statistical Package for Social Science version 26. **Results:** Among the respondents a greater proportion of them were males 68.8% ($n = 574$), slightly more than half 54.6% ($n = 456$) were consulted physicians, while 19.4% of them ($n = 192$) visited pharmacists for seeking health care, 16.4% ($n = 137$) used herbal or alternative medicine. A greater percentage of women seek physicians (56.9%) in comparison to men (53.5%), while more men prefer to consult pharmacists (20%) in comparison to females (18.1%), also women used more herbal medicine for seeking treatment in comparison to men. The health-seeking behavior is significantly associated with being a female gender ($P = 0.0001$), nationality of the participant ($P = 0.0001$, employment ($P = 0.0001$), and age of the individual ($P = 0.0001$). **Conclusion:** Increasing public understanding of the rational choice of seeking health care is a critical issue in maintaining an individual's health.

Key words: Behavior, chronic disease, health care professional, health

INTRODUCTION

In this modernization of society and adoption of the Western culture, the prevalence of chronic diseases is increasing in everyday life, which significantly changes individual's attitudes toward health, which remains one of the most significant challenges for many countries worldwide, especially after the incidence of, the new virus more commonly known as coronavirus or COVID-19, to the world and creates more panic even for minor ailments related to the respiratory system.^[1,2] More recent literature demonstrated that individuals were more sensitive towards their health-seeking behavior and began taking care of their health, even for the incidence of a raise in temperature, and other ailments related to the respiratory system.^[3,4] Understanding the patterns of healthcare-seeking behavior may assist public health practitioners and policymakers in improving the health-care system and health promotion strategies.^[3,4]

The health-care system in Saudi Arabia is primarily operated by the Ministry of Health

and it is free of charge. The health-care professionals such as pharmacists, physicians, and allied health-care professionals who were delivered health care and are regarded as pillars of health care.^[5] The success of any chronic disease mainly depends on adherence to treatment guidelines issued by the relevant health-care professionals, knowledge of the disease, and healthcare-seeking behavior (HSB) of the individuals.^[6,7] Knowledge about the prevention of the disease is crucial for controlling the spread of emerging communicable diseases.^[8,9] Lack of knowledge and practice toward chronic diseases was associated with more severe morbidity and higher mortality, which jeopardizes the prevention or control of the disease.^[8,9] In addition, earlier literature suggested that adequate HSB is linked to good health care, positive health outcomes, and an infection or disease-free environment.^[10,11]

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HSB is defined as “any action undertaken by individuals who perceive themselves to have a health problem or to be ill to find an appropriate remedy.”^[10,11] Although Inappropriate HSB has been linked to worse health outcomes, increased morbidity, and mortality, and poorer health statistics.^[11,12] The previous study from developing countries found inappropriate HSB during their last illness which increases the chance of poor health outcomes and risk of disease-related complications.^[13] Although earlier findings discovered that on average, 40% of individuals and patients with any symptoms or ailments sought medical attention from their health-care provider, though the proportion of seeking healthcare varied significantly depending on the severity of the symptom and the patient’s socioeconomic status.^[14] In addition, previous studies revealed that health-seeking behavior is significantly associated with education,^[9] the presence of health insurance, also the nationality of the individuals.^[15] Some other studies found multiple social determinants influenced by HSB were the patient social status, availability of health services, financial status of the patient, gender, and physical and mental status of the patient.^[16,17] There was a dearth of literature about the health-seeking behavior of individuals, in Saudi Arabia. Therefore, this study was aimed to an evaluation of health status and factors associated with health behaviors among adults in Saudi Arabia.

METHODOLOGY

A cross-sectional web-based online study was conducted in early, 2021 targeting Saudi adults living in Saudi Arabia. Data collection was carried out using a valid, self-administered online questionnaire. All individuals aged ≥ 18 years and living in the capital of Saudi Arabia were considered the source population. The study included only respondents who could read and understand the Arabic language, illiterates, and Saudis who lacked access to the Internet, were excluded. To achieve the maximum sample size, data were collected using the convenience sampling method. The Institutional Ethical Committee at King Saud University’s College of Medicine in Riyadh, Saudi Arabia, approved this study. There was a question in the survey about the study’s objective and the confidentiality of the data; who agreed to continue the survey, we considered it informed consent, and the participants were directed to the original study questionnaire.

The survey tool was prepared after an extensive literature review, with studies published with similar objectives.^[18] The questionnaires for this study are clustered in three parts. The first set of the survey deals with participants’ demographics and basic information with a total of six items including respondents’ gender, age, educational qualification, employment status, nationality, and monthly income. The second set of questions in the survey inquires about a person’s history of any disease, their health-seeking behavior when they are ill, and their treatment options. There were two questions. The last part of the questionnaire asks respondents about the most common conditions to seek health care when

they are unwell. All the study questionnaires were assessed using open-label and open-ended questioners and multiple choice answers.

Similar to earlier studies,^[19-22] the questionnaires were prepared in the English language, and then translated to a forward-backward translation procedure using an Arabic-certified translator. The questionnaire was subjected to face and content validity by a team of three members (senior clinical pharmacy professors, a researcher, and a pharmacist) from the College of Nursing, King Saud University who were experts in preparing the research questionnaires. The questionnaire was then piloted among a randomly selected small number of respondents ($n = 10$). The respondents recruited in the pilot study were young Saudi adults and were not included in the final results. The reliability test was determined using Cronbach’s alpha of the questionnaire 0.70, which suggested that questionnaires can be used to carry out the study.

For data collection, a researcher prepared a survey in Google Forms. The data were collected using social media as the potential platform. For data collection, a researcher and a student were appointed, who targeted individuals, initially the data was collected by sending the Google Forms to our social networks, in families and friends. The data collection followed a snowball procedure, where respondents were approached in person through social media such as WhatsApp, Twitter, or Facebook. Before data collection, there was a separate question in the Google Form, which stated the importance of the study and the confidentiality of the data, respondents who filled out the first questionnaire were considered informed consent and directed to the main study.

Data analysis

The data were analyzed using the IBM Statistical Package for Social Science (SPSS) Statistics 26 (IBM Inc., Chicago, IL, USA) and IBM SPSS 22 (IBM Inc., Chicago, IL, USA) software. Descriptive statistics, frequencies, and percentages were used to summarize the data. The Chi-square test was used, to find any difference between the health-seeking behavior concerning the demographic characteristics of the respondents. A $P < 0.05$ was considered statistically significant.

RESULTS

Based on 864 completed questionnaires 834 were returned with consent, giving a response rate of 96.5%. Among the respondents, a greater proportion of them were males 68.8% ($n = 574$) than females 31.2% ($n = 260$). Of 834 individuals who responded to the questionnaire 28.9% ($n = 241$) of them were aged 18–25 years old, whereas 22.6% ($n = 189$) were between 36 and 40 years old, majority of them were 65.4%

($n = 546$) were Saudi nationals, most of 66.1% ($n = 552$) were employed. Around one-third 69.8% ($n = 583$) of them were graduated from university, only 17.8% ($n = 149$) had attended primary school or below, one-third of the studied population 43.9% ($n = 366$) reported monthly income of >5000 Saudi riyals. Detailed characteristics of individuals are shown in Table 1.

Among respondents, slightly more than half 54.6% ($n = 456$) consulted physicians, whereas 19.4% of them ($n = 192$) visited pharmacists to seek health care, and 16.4% ($n = 137$) used herbal or alternative medicine [Table 2]. The details of the health-seeking behavior of the participants are given in Table 3. The health-seeking behavior is significantly different concerning gender, a greater percentage of women seek physicians (56.9%) in comparison to men (53.5%), whereas more men tend to consult pharmacists (20%) in comparison to females (18.1%), also women used more herbal medicine for seeking treatment in comparison to men. Similarly, 58.3% of non-Saudi consulted physicians for seeking health care in comparison to 52.6% of Saudi, whereas 23.1% of Saudi nationals visited pharmacists for health care in comparison to non-Saudi 12.5%. While pharmacist consultation is significantly higher among male participants (20%), being Saudi (23.1%) and aged between 26 and 30 years old (28.1%) in comparison to others.

The most common conditions for which participants consult health-care professionals are headaches followed by fever, and cough, as shown in Figure 1. Among the respondents, approximately 72% ($n = 736$) of them visited health-care facilities for the headache associated with fever, while a majority of them were 97.8% ($n = 700$) for a cough related to flu. In addition, 85.3% ($n = 687$) of them visited for the treatment or prevention of fever, which is longer than a week, about 68% ($n = 53$) of them sought treatment for sore throat and runny nose. The description of the respondents is given in Figure 1. Health-seeking behaviors are significantly associated with the nationality ($P = 0.0001$) of the participants, being employed ($P = 0.0001$), and older age ($P = 0.0001$).

DISCUSSION

Behavior-related health is crucial in individuals' lives to obtain and maintain a healthy life. Although treatment preferences vary depending on the nature of the symptoms and severity of illness, as well as access to health care. In addition, an earlier study documented that health-seeking behavior is significantly associated with individuals' demographic factors.^[23] In this study, approximately 55% of the Saudis consulted a physician for health care, whereas 19.4% of them consulted a pharmacist. These findings were like previous findings by Dawood *et al.* in 2017, who reported 66.7% of the individual's preferred physician.^[18] However, these results were inconsistent with a previous study by Afolabi *et al.* in 2013,^[19] which reported that 33%

Table 1: Sociodemographic characteristics of the total population

Variables	Frequency (n)	Percentage
Gender		
Male	574	68.8
Female	260	31.2
Age (in years)		
18–25	241	28.9
26–30	96	11.5
31–35	132	15.8
36–40	189	22.6
41 and above	176	21.1
Nationality		
Saudi	546	65.4
Non-Saudi	288	34.5
Employment status		
Employed	552	66.1
Unemployed/students	282	33.8
level of your educational		
Primary school or less	149	17.8
Secondary school	52	6.2
Bachelor Degree	583	69.8
Master's or doctorate	50	6.0
Monthly income		
>SAR 5000	366	43.9
SAR 5000–>10000	164	19.7
SAR 11000–>15000	145	17.4
SAR<15000	156	18.7
Did you get sick in the last 3 months?		
Yes	714	85.5
No	120	14.4

Table 2: Participant's responses toward the frequency of selecting health-care professionals for the management of health status

Health seeking behavior	Frequency (n)	Percentage
Consult physician	456	54.6
Consult pharmacist	162	19.4
Use herbal medicine	137	16.4
Self-medication, under observation	80	9.6

of the participants consulted pharmacists for health care, and 23.8% of them visited health-care centers. Similarly, another study from a Lebanese perspectives reported that almost half of the surveyed participants consulted pharmacists for health care.^[20] Thus, the literature confirmed that the difference in health-seeking behavior is common among individuals both in Saudi Arabia and other countries worldwide.^[18,24] This relatively high preference for physician consultation may be due to the presence of the highest degree of qualification and experience of the prescriber since physicians were the lifesavers of the individuals and were experienced in clinical practice in comparison to other professionals.

Table 3: Association between frequency of selecting health-care professionals for the health care and participant's demographics

Variables	Frequency of selecting healthcare professionals				P-value
	Consult physician	Consult pharmacist	Use herbal/alternative medicine	Self-medication	
Gender					
Male	307 (53.5%)	115 (20%)	93 (16.2%)	59 (10.3%)	0.005
Female	148 (56.9%)	47 (18.1%)	44 (16.9%)	21 (8.1%)	
Nationality					
Saudi	287 (52.6%)	126 (23.1%)	80 (14.7%)	53 (9.7%)	0.002
Non-Saudi	168 (58.3%)	36 (12.5%)	57 (19.8%)	27 (9.4%)	
Disease status					
No	76 (63.3%)	23 (19.2%)	12 (10%)	09 (7.5%)	0.005
Yes	379 (53.1%)	139 (19.5%)	125 (17.5%)	71 (9.9%)	
Employment status					
Employed	333 (60.3%)	106 (19.2%)	67 (12.1%)	46 (8.3%)	0.0001
Unemployed/students	122 (43.3%)	56 (19.9%)	70 (24.8%)	34 (12.1%)	
Age (in years)					
18–25	90 (37.3)	51 (21.2)	66 (27.4)	34 (14.1)	0.0001
26–30	52 (54.2)	27 (28.1)	11 (11.5)	6 (6.3)	
31–35	81 (61.4)	23 (17.4)	18 (13.6)	10 (7.6)	
36–40	120 (63.5)	34 (18)	23 (12.2)	12 (6.3)	
41 and above	112 (63.6)	27 (15.3)	19 (10.8)	18 (10.2)	

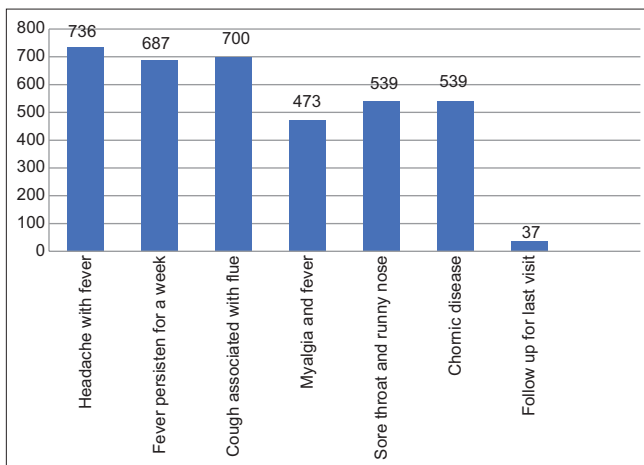


Figure 1: Health status of the respondents

The behavior related to looking for the health of every individual may differ from one study to another and may be influenced by several factors including the study method, types of respondents, and demographics of the subjects. However, in many developed and developing countries health care is increasing, due to the recent incidence of new strains of the virus, people with minor ailments related to respiratory symptoms are proven to visit more health-care facilities, since it was associated with higher morbidity and mortality around the world.^[25,26] The most common justification among the participants in this study to indulge in seeking health care was for the prevention of headaches associated with fever, 72% ($n = 736$) followed by the treatment of cough related which is associated with flu. 97.8% ($n = 700$), the majority of them visited for the treatment or prevention of fever 85.3%

($n = 687$), which is longer than a week. These results were comparable to previous findings by Soubra *et al.* among the Lebanese population, who reported 71.2% of them visited a health-care professional for the common cold, whereas 67.7% for the treatment of cough, 64% of them visited for headache, 60.5% of the for the treatment of gastrointestinal disorders.^[27]

The current findings suggested that visiting physicians is significantly higher among females, non-Saudis, employed, and older adults. Although age, gender, and employment of the participant are significantly associated with health-seeking behavior. These results were similar to previous results.^[9,16-18] In addition, a previous study reported seeking a physician was found to be influenced by the perceived severity of illness among people.^[18] While another study did not find any significant association between behavior related to health and participants' education, or monthly income.^[18] The current findings reported that 20% of the participants consulted pharmacists for health care. Earlier studies reported that seeking a pharmacist is influenced by easier accessibility and less cost.^[27] Previous literature suggested that consulting pharmacists for behavior related to looking health for minor ailments is more common among the general public in developed countries.^[28] Although pharmacists are permitted by law to manufacture pharmaceuticals and dispense both over-the-counter and prescription-based drugs, Furthermore, pharmacists are permitted to counsel patients about the drug and its outcomes, which may explain the public's interest in pharmacist consolation for minor ailments. On the contrary, British participants confirmed that if they had a minor complaint, they would not visit a pharmacist.^[28] The

current findings reported a 26% prevalence of self-medication including herbal or alternative medicine use among Saudi adults. Although multiple studies reported that the prevalence of self-medication is increasing worldwide including in Saudi Arabia.^[29,30] In one study from Saudi Arabia, the prevalence of self-medication was 81.4%.^[29] Similarly, another recent study found a prevalence of 46.8% of self-medication,^[30] while previous findings also suggested that the use of medication (supplements) was upon the advice of health care professionals.^[30] The increased use of self-medication is common among individuals, and might be due to limited health resources or access, lack of time, previous experience with minor ailments, or emergency conditions.^[30]

The current study has some limitations. First, the results were based on a self-completed questionnaire, which may have increased the possibility of biases such as social desirability bias or recall bias. Second, the results were derived from a single region in Saudi Arabia, making them not representative of others and not generalizable globally. Third, the study did not involve participants who were not familiar with Internet use, and do not have access to the web services since the survey was sent electronically. Despite these limitations, our study suggests more emphasis on increasing the awareness of individuals toward health care to make them more competent in raising their health status.

CONCLUSION

Our study showed that a significant proportion of the Saudi population seeks a diagnosis from a physician, and a significant proportion of them prefer pharmacists for health treatment. Only one-quarter of the participants seek treatment with herbal medicine and used self-medication. Therefore, implementation of educational programs and awareness about proper health care using various health-care channels for minor-to-severe complications to achieve the optimum therapeutic benefits.

DATA AVAILABILITY

The data that support the findings of this study are available from the corresponding author.

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the author(s).

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