



RESEARCH PAPER

Healthcare Behavior, Utilization and Associated Factors in the Rural Areas of Khyber Pakhtunkhwa-Pakistan

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ABSTRACT

Health care seeking behavior, utilization and its associated are important for the economic development of a country. However, the subject has not caught enough attention in Pakistan. Therefore, current research study is implemented in the rural areas of Khyber Pakhtunkhwa Pakistan. The study used mixed method approach and data were collected from 278 respondents and 20 key informants. Data were analyzed through descriptive statistics and thematic analysis. The use of formal health facilities was found a bit high (56%) as compared to the informal healthcare facilities (44%). The private healthcare utilization was high as compared to government healthcare facilities. Gender, education, income, and location were found as the important factors affecting healthcare utilization in the study area. It is concluded that although rural people tend to utilize formal healthcare, but still the informal system is active. Therefore, the government healthcare system must emphasize on quality and timely service provision.

KEYWORDS Health Care Utilization, Healthcare Behavior, Khyber Pakhtunkhwa, Rural Areas

Introduction

Healthy workforce is a vital requirement for the economic development of a country (Eggoh et al., 2015). However, it depends on the health care seeking behavior and health care utilization of the country's population. Health care seeking behavior refers to the process of a person's decision making or action taking towards the attainment of good health and preventing illness. This action or decision consisted of considering all available health care options such as visit to a health facility (i.e. public or private, modern or traditional), the use of home remedies, self-medication or to not utilize any health care service (Chauhan et. al., 2015). Further, the healthcare seeking behavior of an individual may be influenced by various factors like the type and extent or degree of illness or sickness, economic background, social belief system, the available health care facilities, quality, and its cost, education, and gender (Yadav et. al., 2022; Hussain et. al., 2011). Hence, healthcare seeking behavior is a multidimensional phenomenon which primarily depends on the person's time and context he or she is into (Poortaghi et. al., 2015).

Health care seeking behavior of people mostly depends on the health care infrastructure of a country (Yadav et. al., 2022). In the developed world, government funded universal health coverage (UHC) covers peoples' health expenses. However, there is no such system in the developing countries including Pakistan and people mostly bear their health care cost by themselves (Naz et. al., 2021; Khan, 2019; Mushtaq et. al., 2011). Although, the government is making an effort in this regard to provide health care facilities and coverage to people in the country, but still the access to health care system is a prime issue (Mushtaq et. al., 2011).

Pakistan is the fifth largest country of Asia, with a population of 207.7 million with a population growth rate of 2.4 which highest as compared to the neighboring countries (Naz et. al., 2021). The health budget in the country is not enough which is merely 0.4% of the total GDP and thus cannot meet the over growing population health demands. Therefore, in the country, 78% of population bear their own health care costs (Khan, 2019). The skewness of health care facilities can be found in the country which shows lower health facilities in the rural areas as compared to urban areas (Mushtaq et. al., 2020).

Pakistan's healthcare system comprised of both the public and private sector. The public health care system consists of primary health care to tertiary referral centers. The primary health care consists of BHUs (basic health units) and RHUs (rural health units) which provides services in the rural areas. Large majority of the country's population (70%) used private health care facilities as compared to only 30% people's utilization of public health care facilities (Naz et. al., 2021).

The health utilization behavior of people is similar to health care seeking behavior which depends on time and thus dynamic in nature (Yadav et. al., 2022). Literature in this regard showed that access to health care service, quality of the health care service, and continuity of the care are the general factors which influence health care utilization (Da Silva et. al., 2011). Similar to health seeking behavior, health care utilization is also affected by various factors (Askari & Gupta, 2022). These factors can be divided into two sets i.e. user factors and service factors. The later one is the availability, accessibility and quality of the health care system, while the former one is related to the patients' characteristics like age, gender, education, cultural factors, income etc. In addition, an individual's self-perceived health status, user characteristics, and the quality and availability of health care services also affect a person's decision towards the health care facility utilization (Fernandez- Olano et. al., 2006).

In the developing countries, the socioeconomic categorization of people plays an important role in the health care utilization (Ngangbam & Roy, 2019). In this case, literature shows that in the developing country like India, people prefer to utilize the private health care facilities as compared to public health care services. The main reason behind the utilization of private health care facilities is associated with its easy access and a more personalized care service provision, while in the public health care facilities long wait, low quality of health care services, remote locations, and insufficient facilities tended people to not utilize these facilities (Ngangbam & Roy, 2019; Patel et. al., 2010; Sudharsanam et. al., 2007). In the case of Pakistan, the situation is not considerably different. People tends to prefer private health care services. In this regard, a study conducted by Naz et. al., (2021) reported that large majority of the country's population (70%) used private health care facilities as compared to only 30% people's utilization of public health care facilities.

In the light of above discussion it is important to understand the local people healthcare behavior and utilization along with the associated factors for the effective provision of health services. Moreover, for the good management and planning of the health system in a country requires sufficient information about health care utilization (Tanser et al. 2001; Baker & Liu 2006) as the underutilization may lead to high mortality rates (Thaddeus and Marine 1994; Singh et al. 2012). The available literature in the country under the mentioned subject is very scarce. There are only few studies available in the country (Naz et. al., 2021; Ariff et. al., 2020; Mushtaq et. al., 2020; Pnezai et. al., 2016; Mushtaq et. al., 2011). However, none of these studies have covered the said topic in a comprehensive way in the country nor in Khyber Pakhtunkhwa province. Therefore, there is a need to fill in the left research gap. Looking into this the current research study has been designed to answer the following research questions.

1. What about the healthcare seeking behavior of the rural people in Khyber Pakhtunkhwa-Pakistan?

2. What about the healthcare utilization behaviors of rural people in the area?
3. What are the important factors affecting the healthcare utilization behavior of rural people?

Material and Methods

Study Site

The study was conducted in the two main districts of Khyber Pakhtunkhwa province of Pakistan. The districts were Mardan, and Nowshehra. The province is located in the north western region of the country, sharing a border with Afghanistan.

Sampling Technique and Sample Size

The study has used the simple random sampling technique to select the respective villages and households. Two districts i.e. Mardan, and Nowshehra were randomly selected as mentioned earlier. Further, two villages from each district was selected randomly making a total of four villages. Data were collected from the 5% of rural households in each village (Table 1) estimated through the use of proportional allocation technique (Cochran, 1977) making a sample size of 278 households described as follow;

$$n_i = \frac{N_i}{N} \times n \dots\dots\dots(1)$$

Whereas;

n_i = Sample rural households for i^{th} village.

N_i = Total number of rural households in i^{th} village.

N = Entire number rural households in the study area.

n = Size of the total sampled households.

Table 1
Sample size details in the study area

S. No.	District	Village	Total Number of Households	Sampled Households
2	Nowshehra	Wazir Garhi	1730	86
		Ali Beg	750	38
3	Mardan	Chamdheri	440	22
		Sawaldher	2650	132
Total			5570	278

Data Collection

Data were collected from the head of the sampled households through a predesigned questionnaire using interview method. Those household heads were interviewed who had experienced any kind of illness within the past 15 days. Before the interviews, verbal consent was sought and the unwilling respondents were replaced with the willing ones. The purpose of the data collection and interviews along with data confidentiality were explained to the respondents. Data were collected on the basis of the set objectives of the study. Key informant interviews (20) were also conducted to identify the factors affecting healthcare utilization in the study area. Key informants included lady health workers (10) and doctors (10).

Analytical Techniques

Data were analyzed using the descriptive statistics, frequencies, percentages, and binary logistic regression. The utilization of the healthcare facilities was categorized into two groups i.e. formal and informal. The later one is comprised of treatments received from the traditional healers and self-medication, while the formal healthcare comprised of treatment received from the public and private health care providers. The public health facilities were comprised of the available government, while the private health facilities included private hospitals and private clinics. The factors affecting healthcare utilization behavior of rural people were estimated through thematic analysis. This technique has been used in social sciences for the qualitative data analysis (Naz et al., 2020; Naz et. al., 2022).

Results and Discussion

Socioeconomic characteristics of respondents

Data in table 2 shows the socioeconomic characteristics of the respondents. Data show that 20%, 34%, 28%, and 18% respondents were in the age groups of 20-30, 31-40, 41-50, and above 50 years, respectively. Most of the respondents were male (79%) as compared to female (21%). Regarding marital status of the respondents, 21% were single, 68% were married and 11% were widow. Majority of the respondents were literate (68%) as compared to the illiterate (32%). In the case of occupation, 37%, 20%, 17%, and 18% respondents were engaged in agriculture, business, government sector, private, and other respectively. in the case of income, 18%, 23%, 32%, 16% and 11% respondents were in the income groups of 10,000-20, 000, 20,001-30,000,30001-40,000, 40,001-50, 000, and above 50, 000, respectively.

Table 2
Socioeconomic characteristics of the respondents

Variable	Frequency	Percentage
Age (in years)		
20-30	56	20
31-40	95	34
41-50	78	28
Above 50	49	18
Gender		
Male	220	79
Female	58	21
Marital status		
Single	58	21
Married	190	68
Widow	30	11
Literacy status		
Literate	190	68
Illiterate	88	32
Occupation		
Agriculture	102	37
Business	56	20
Government servant	47	17
Private sector	50	18
Other	23	08
Income level (PKR)		
10,000-20,000	50	18
20001-30,000	65	23
30,001-40,000	88	32
40,001-50,000	45	16

Above 50,000	30	11
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Healthcare Seeking Behavior

Data regarding health seeking behavior of the respondents are presented in Table 3. Data show that all of the respondents (278) encountered with health problems within the last two weeks, of which 74% sought healthcare, while 26% did not. The respondents who did not seek any healthcare were further asked about the reasons behind their no healthcare seeking approach. Of the total (73 respondents), 20%, 38%, 07%, 14%, 07%, and 07% respondents reported for no serious issue, financial constraints, lack of availability of nearby healthcare facility, long waiting hours, and no trust on medical staff, respectively.

Table 3
Healthcare seeking behavior of the respondents

Variable	Frequency	Percentage
Health problem		
Yes	278	100
Sought healthcare		
Yes	205	74
No	73	26
Reasons behind no care		
No serious issue	20	27
Financial constraints	28	38
Lack of availability of nearby healthcare facility	05	07
Long waiting hours	10	14
No trust on medical staff	05	07

Healthcare Utilization Behavior

Information related to healthcare utilization behavior of respondents are presented in Table 4. Data in the respective table show that 56% of the respondents sought formal healthcare services, while 44% availed the facilities of informal healthcare. Among the respondents who availed formal healthcare facilities, 32% availed government healthcare facilities, while 68% sought healthcare from private facilities. In the case of informal healthcare utilization, 53% respondents availed the services of traditional healers, while 47% attained self-medication.

Table 4
Healthcare utilization behavior of the respondents

Variable	Frequency	Percentage
Type of healthcare sought		
Formal	155	56
Informal	123	44
Formal healthcare utilization		
Government facility	50	32
Private facility	105	68
Informal healthcare utilization		
Traditional healers	65	53
Self-medication	68	47

Why Government Healthcare Facilities?

The reasons behind the utilization of government healthcare facilities are compiled in Table 5. Data reveal that 18%, 15%, 12%, 35%, and 20% respondents reported for financial constraints, nearby facility, transport issue, free medicine and less cost, and satisfaction from the medical staff, respectively as the major reasons behind their utilization of government healthcare facilities in the study area.

Table 5
Reasons behind the government healthcare facilities utilization

Major reason	Frequency	Percentage
Financial constraints to avail the private healthcare facility	30	18
Nearby facility	26	15
Transport issue for private healthcare system availability	20	12
Free medicines and less cost	60	35
Satisfaction from the medical staff	34	20

Note: Multiple responses were allowed so total responses exceeded from the total response in the category (50)

Why Private Healthcare Facilities?

Data in Table 6 show the major reasons behind the utilization of private healthcare facilities in the study area. It has been found that 19%, 19%, 21%, 17%, and 23% respondents reported for quality service, timely service, day and night availability, lab facilities provision, and pharmacy facility, respectively as the major reasons behind their utilization of private healthcare facilities in the study area.

Table 6
Reasons behind private healthcare facilities utilization in the study area

Major reason	Frequency	Percentage
Quality service	89	19
Timely service provision	90	19
Day and night availability	100	21
Lab facilities provision	78	17
Pharmacy facility	105	23

Note: Multiple responses were allowed so total responses exceeded from the total response in the category (105)

Why less utilization of government healthcare facilities?

Data in Table 7 show the major reasons behind the low level of government healthcare services utilization in the study area. It has been found that , , respondents reported low quality of service, long queues, unavailability of facility all the time, no lab facility, and less medicines availability, respectively as the major reasons behind the less utilization of government healthcare facilities in the study area.

Table 7
Reasons behind the less utilization of government healthcare facilities in the study area

Major reason	Frequency	Percentage
Low quality of service	135	
Long wait involved in service provision	105	
Unavailability of the facility most of the time	190	
No proper lab facilities	206	

Less medicines availability	170
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Note: Multiple responses were allowed so total responses exceeded from the total sample size (278)

Factors affecting healthcare utilization

Various themes through thematic analysis have been derived i.e. gender, literacy status, income level, and marital status. These themes have been described and discussed as follow.

Gender

Gender being an important factor affect healthcare utilization in the rural areas of Khyber Pakhtunkhwa. In this regard, the results derived from the key informant interviews show that healthcare utilization is less among women as compared to men. The main reason behind the less utilization of healthcare among women is that in the traditional and patriarchal society of the province, women have first seek permission to visit any healthcare facility. Second, these women must accompany any male member with them to visit the healthcare facility. One of the doctor in this regard presented his views that

“Women in our society is always bound to men will. Women can only avail any healthcare facility when their women allow them and accompany them. If men are not available then their chances to visit a healthcare facility can minimize to zero”.

In this regard, most of the lady health workers were also of the opinion that healthcare utilization of women depends on their men’s willingness, and any male member of the family must accompany them. In some cases, any elder lady of the family must be accompanied with the women to visit any healthcare facility. One of the lady health worker presented her views on the issue as follow;

“This is very unfortunate in our society that women being the child bearers first have to ask their husbands to allow them to seek and visit the nearby healthcare facility. The far-away healthcare facility further arise various other problems like transport issue, finance availability etc. “

Women have been brought up like this that they must not express their healthcare needs more often until it must be a serious issue. These gender norms are very much prevailing in our society that it becomes a normal practice that women must ignore their healthcare needs and must not often visit any healthcare facility. Most of the lady health workers and doctors were of the same opinion. However, men can avail any healthcare facility any time of the day and night and they can visit any nearby or faraway healthcare facility without any hesitation until and unless there are financial constraints.

Educational Status

Education has been derived as an important factor influencing healthcare utilization among the rural people of Khyber Pakhtunkhwa province. It has been found from the key informant interviews that educated people mostly did not ignore their medical conditions and thus have higher level of healthcare utilization prevail among the educated people. In this regard, one of the doctor presented his opinion as;

“Educated people are more conscious and they do not ignore their medical condition. They often visit healthcare facility and for this they first ask from their social circle and then make the decision. However, educated people more often chose a private clinic or healthcare facility”.

Most of the lady health workers were also of the view that educated people tend to visit more healthcare facilities as compared to the non-educated people. This trend can be observed among the educated women of the area as well.

Income Level

Income level plays an important role in the healthcare utilization and thus affecting it significantly. In this regard, results from the key informant interviews portrayed that high income people tend to avail healthcare more often and among these people healthcare utilization is high. These people mostly opt to select the best private clinic facility and also transport did not become an issue for these people. However, in the case of middle and low income level people, healthcare utilization is not that much high as compared to the high income group. However, the middle income group tend to avail the private healthcare facility, while the low income group mostly tend to visit the government healthcare facility. One of the doctor presented his views as:

“We are living in the country where financial constraints limit one’s needs of healthcare and thus they tend to ignore their healthcare needs and visit less often the healthcare facility. They must chose the less expensive healthcare facility and thus mostly tended by the quack doctors”

Women being the economic dependent in the society, mostly visit the government healthcare facility in both the middle and low income groups. A lady health worker said;

“Due to the current inflation, it is very hard for men to meet the household food needs and if the women need healthcare then women mostly ignore their healthcare needs and mostly visit the nearby facility like BHUs or discuss their needs with lady health workers”.

Location

Location served as an important factor in determining the healthcare utilization in the study area. Remote rural areas had less healthcare facilities and thus the inhabitants have to travel and bear the transportation expenses which limit their health care utilization in case of financial constraints. The remote location of an area provide less economic opportunities, educational and health care facilities and thus people in these areas were mostly poverty stricken and uneducated which affect their healthcare utilization as well. In this regard, most of the doctors were of the opinion that people f the far flung rural areas less often visit to a health care and especially private clinics. They visit in the emergency situations which make things mostly complicate and thus mortality rates became high in these areas and also these areas carry most disease burdens. Women in these areas served as the most neglected ones. In these areas, the traditional healers and self-medication practices are more common rather than visiting any formal health care facility.

Discussion

Current study was conducted in Khyber Pakhtunkhwa province of Pakistan to assess the healthcare seeking behavior, healthcare utilization and its associated factors. The study has also provided insights about the major reasons behind the healthcare utilization in the study area. For this, a mixed method approach was adopted (i.e. questionnaire and key informant interviews). Data were collected from 278 household heads who had encountered with any type of illness from the past 2 weeks and were analyzed by using descriptive statistics, and thematic analysis. It has been found that four types of healthcare facilities or sources existed in the study area compiled into two categories i.e. formal (government and private healthcare facilities) and informal (traditional healers and self-medication). Majority of the respondents sought healthcare. Among these, more than half of the respondents sought healthcare from formal healthcare facilities, while less than half of the respondents opted informal healthcare utilization. These findings are in line with the studies conducted

in the developing countries where people utilize informal healthcare sources (Yadav et. al., 2022). The results reveal that although people were seeking healthcare facilities in the study area but still the informal healthcare utilization is at high rates which include the traditional healers and self-medications which cannot be good enough for the treatment of various diseases and thus most complicated health conditions prevail among the rural people (Idriss et. al., 2020).

In the case of formal healthcare utilization, majority of the respondents opted their healthcare from private healthcare facilities. This trend can be seen around the developing world in various countries like Bangladesh, India etc. (Chuhan et. al., 2015; Yadav et. al., 2022). The preference of private healthcare facilities in the area was related to their availability most of the time, quality service, and availability of pharmacy and lab under one roof. Similar findings have been reported by various previous studies conducted around the developing world (Mathiyazhagan, 2005; Mushtaq et. al., 2011; Idriss et. al., 2020; Mushtaq et. al., 2020; Askari & Gupta, 2022). In the case of informal healthcare utilization, a number of respondents opted it (44%), of which traditional healers were ranked high as compared to the self-medication. However, both type of healthcare cannot be considered good for the developmental aspects of rural area and the national levels (Yadav et. al., 2022).

Major reasons behind the less utilization of government healthcare facilities were linked with the major reasons of their unavailability of services during full day and night, low quality service, long waits, and no proper lab and pharmacy facilities. Similar findings have been reported in various previous studies where the low level of government healthcare utilization was due to the poor quality of service and long waits (Idriss et. al., 2020; Mushtaq et. al., 2020; Naz et. al., 2021; Askari & Gupta, 2022).

Several factors have been identified during the key informant interviews which affect the healthcare utilization in the rural areas. These factors included gender, education, income and location. Gender being an important determinant of healthcare utilization in rural areas has been identified in previous studies as well (Mustaq et. al., 2020). Mostly women avail the government healthcare facilities because men have no restricted mobility. Due to the patriarchal society, women have to first seek permission to avail the healthcare facility while, men has no such boundaries as they are the decision makers (Shaikh and Hatcher 2005; Morrow 2015). Moreover, the women health is mostly neglected due to the prevailing cultural, social and economic factors in the study area. These findings have been confirmed in various studies around the developing world as well (Askari & Gupta, 2022; Yadav et. al., 2022; Naz et. al., 2021).

Education served as the important factor affecting healthcare utilization behavior of rural people in the study area. Most of the educated people tend to be more conscious about their healthcare and they opt mostly private and best healthcare facilities, while the uneducated mostly opt the quack doctors and government facilities. The educated women also did not neglect their healthcare needs and they tend to avail private healthcare facilities. Similar findings have been reported by various studies in the developing countries (Yunus et. al., 2017; Saeed et. al., 2016; Sekoni et. al., 2016; Paul, 2020). However, some educated people mostly rely on self-medications which can cause great danger to their health (Askari & Gupta, 2022).

Another important factor affecting healthcare utilization in the study area was income level. Financial soundness determine a person's healthcare utilization (Prusty et. al., 2015). Rich people do not compromise on their health needs and thus they prefer private healthcare facilities, while the lower income group prefer government healthcare facilities. In the case of middle income group, they also tend to avail private healthcare facilities. Similar findings have been reported by various researchers that high income is positively related to health care utilization and it increases people purchasing power (Younus et. al., 2017) which further drive people to get treatment from qualified and best private healthcare clinics and hospitals (Askari & Gupta, 2022; Yadav et. al., 2022; Mushtaq et. al., 2020).

The last important factor determining healthcare utilization among rural people was identified as the location of residence. Remote rural locations compel people to avail the services of traditional healers and government facilities, while locations nearby urban areas tend to people to avail the private health care facilities. Similar findings have been reported by various researchers and the possible reasons behind this approach was related to the employment opportunities, people financial status and transport availability (Mushtaq et. al., 2020; Yadav et. al., 2022).

Conclusions

Health seeking behavior and healthcare utilization of rural people along with the determining factors are important for the economic development of a country. In this context the current study was conducted in the rural areas of Khyber Pakhtunkhwa province of Pakistan. From the results of the study, it was concluded that most of the people sought healthcare, however, the formal healthcare utilization was not most dominant as the informal healthcare utilization (self-medication and traditional healers) was still persistent in the study area. Most of the rural people preferred private healthcare facilities due to the quality and timely service provision and lab and pharmacy availability. While, the government healthcare utilization was found low due to the long queues, low quality of services, and unavailability of staff mostly. Gender, education, income and location were found as the important factors affecting healthcare utilization in the study area. Therefore, it is important to consider these factors while designing and implementing government and non-government healthcare projects in the study area. The prevalence of informal healthcare utilization shows the unawareness and other constraints of rural people like financial etc. which must also be addressed on priority basis. Moreover, the government healthcare system must consider quality and timely service provision in the area as well so that people may prefer these facilities as their healthcare needs priorities and thus the healthy workforce may be provided for the overall development of the country.

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