DETERMINANTS AND PATTERN OF HEALTH CARE SERVICES UTILISATION IN POST GRADUATE STUDENTS

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Background: The health care utilisation of a population is dependent on their health seeking behaviour which is determined by their physical, political, socio-economic and socio-cultural aspects. **Objectives**: This particular study is conducted to identify the determinants and the patterns of health services utilisation by the postgraduate students of Allama Iqbal Open University in Pakistan. It was a cross-sectional study and conducted from December 2008 to April 2009 in Allama Iqbal Open University Islamabad. **Methods:** A non-probability convenience sampling was done in post graduate students who were enrolled for Masters Degree at Allama Iqbal Open University Islamabad. Data was collected on a self administered, pre-tested questionnaire to identify the pattern of utilisation of health care services by this educated class. Data was labelled and entered in SPSS version 16. Chi-square test is applied as a test of significance with fixing the *p* value at 0.05 as significant. **Results:** Only 129 students 32 males, 97 females) out of 250 responded to the questionnaire with the response rate of only 51.6%. The socio-demographic profile of the participants shows that 71 (55%) belong to age group 20–29 years, followed by 43 (33.3%) in age group 30–39 years. The marital status of the participants had a significant association with selection of health care services (p=0.04). Twenty-four (75%) of the males and 67 (65%) of the females were using private sector facilities. Age, marital status and income of the study subjects had significant association with selection of the provider with *p* values of 0.000, 0.047 and 0.051 respectively. **Conclusion:** The health care system in Pakistan comprises the public as well as private health facilities. In Pakistan vast majority of doctors resides in urban area and attracts the educated class towards private sector. Utilisation of public health care facility is not the main priority of the educated class of the country. Government officials should pay attention to make it more convenient for general public.

Keywords: Utilisation, Health Care Services, Pakistan

INTRODUCTION

Pakistan ranks 7th in the category of most populous countries of the world, and by the year 2050 will be one of the largest countries of the world with an estimated population of 285 million.[1] Already the existing population, with a growth per annum of 2.4% poses a challenge to the government *vis-a-vis* jobs, education and provision of health services.[2] The health care system of Pakistan is composed of the public and the private sector. The public sector delivers health care through three tiers; primary, secondary and tertiary. The primary level includes rural health centers, basic health units, primary health care centers, dispensaries, first aid posts, mother and child health centers, and lady health workers. The secondary level includes the district and the Tehsil Headquarter Hospitals whereas the tertiary level care is delivered through the teaching hospitals.[3] The total expenditure on health as percentage of GDP is 2.4, with 8 physicians and 3 nurses/midwives available per 10,000 population.[2] The private sector consists of a few accredited hospitals where as, majority is constituted by unregulated hospitals, general practitioners, homeopaths, spiritual/traditional healers, bonesetters, quacks and hakims.[4]

The health care utilisation of a population is dependent on their health seeking behaviour which has many determinants: physical, political, socio-economic and socio-cultural.[5] The literature review identifies different reasons affecting the utilization of health services between the developed and the developing countries. According to a Canadian study the number of contacts with a doctor by adults in America was influenced by their financial status and health insurance coverage and in Canada women are more frequent users of health services as compared to men.[6,7] In contrast to the Canadian women, a woman in Pakistan is unable to travel alone to a close village and has to be accompanied by her mother in law, husband or a relative in order to access a health facility which forms a barrier to their health status improvement.[1] The unavailability of female health staff at health facilities and the lack of knowledge among women regarding their health are also seen as an impediment in females' health utilisation behaviour.[8] Other determinants of health services utilisation in our part of the world are: socioeconomic status, physical accessibility, cultural beliefs and perceptions, women's autonomy, literacy level of mothers, family size, disease pattern and the health care system itself .[4]

The public health sector is under-utilised due to political interference, lack of managerial decentralisation, absence of human resource

management and a lack of integration.[9] It is seen that 70–80% of the people in Pakistan, especially those living in rural and tribal settings use complementary and alternative medicine given their easy access, affordability, family pressure and community acceptability.[10] The consequences of seeking inappropriate and delayed health care includes undesirable health outcomes and medical emergencies.[11] Therefore, in order to improve the health status of the population, it is important to integrate the modern and traditional health care systems prevalent in the country, after providing proper training to the traditional sector.[9] This study was undertaken to describe the patterns of health care utilisation by the postgraduate class of Allama Iqbal Open University and to identify the determinants of health services utilisation.

MATERIAL AND METHODS

It was a cross-sectional survey conducted on the postgraduate class of Allama Iqbal Open University, Islamabad. The sampling technique used was convenient non-probability sampling. Data was collected using a pre-formed structured questionnaire, which was pre tested before adoption of the final version. Out of the 250 questionnaires distributed to the class, 129 were returned. The collected data was analysed using SPSS 16.0. Chi-square test was used to test statistical significance at $p<0.05$.

RESULTS

A cross sectional survey was planned in 250 post graduate students of Allama Iqbal Open University with administration of questionnaire in them. Only 129 students out of 250 responded to this questionnaire with the response rate of only 51.6%. The study subjects comprised 32 males (24.8%) and 97 females (75.2%). The socio-demographic profile of the participants shows that 71 (55%) belong to 20–29 years of age group followed by 43 (33.3%) in 30–39 years. All of them were postgraduate students with 61 (47.3%) having professional degrees. Twenty-eight (21.7%) of the study subjects were not earning any income. We had a varied group of people with different employment status. In this group, we had 25 females (19.4%) as house-wives, and 17 (13.2%) students. Majority of the study subjects were teachers constituting 40 (31.0%) of the total group. Health care professionals and office workers were also present in the group as shown in Table-1. The complete socio-demographic profile of the participants is shown in Table-1.

The participants were asked about the utilisation of health care services and their selection of private or public sector for this. The utilisation of health care services was cross tabulated with socio-demographic profile of the participants and Chi-square test was applied to see the association between them. It was observed that the marital status of the participants has a significant association with selection of health care services as shown in Table-2.

Table-1: Socio-demographic profile of the participants

Socio demographic profile	Frequency	%
Gender		
Males	32	24.8
Females	97	75.2
Age in years		
20–29	71	55.0
30–39	43	33.3
40–49	12	9.3
50–59	2	1.6
60–69	1	0.8
Education		
Graduation	68	52.7
Professional	61	47.3
Income (PKR)		
No income	28	21.7
<10,000	50	38.8
10,000–30,000	34	26.4
30,000–60,000	10	7.8
>60,000	7	5.4
Employment		
House wives	25	19.4
Teacher	40	31.0
Health care	12	9.3
Office workers	28	21.7
Others	7	5.5
Students	17	13.2
Marital status		
Married	68	52.7
Unmarried	61	47.3

Majority of the participants were using private sector for health care services. Out of 129 participants, 24 (75%) of the males and 67 (65%) of the females were using private sector. Regarding age group and utilisation of public and private sector, it was noticed that those participants who were of age group between 20–29 years, 50 (70.42%) of them were using private sector and only 20 (28.16%) were referring towards the use of government hospitals. Only a small fraction 1 (1.40%) reported use of both sectors. It was noted that use of private health care facilities was considerably more in the other age groups as well which constituted 30 (69.76%) in age group of 30–39 years, 10 (83.33%) in age group 40–49 years and 1 (50%) in 50–59 years. It is also evident from Table-2 that regardless of the income participants mostly opt for private health care facilities.

The participants were also inquired about the selection of the provider of health care which include general practitioner (GP), specialist, *hakeem*, *dai* and other spiritual healers. The results of selection of provider of health care services were cross tabulated with socio demographic profile of the

consumers and it was analysed by the application of Chi-square test by taking $p \leq 0.05$ as significant. It was noted that age, marital status and income of the study subjects have significant association with the selection of the provider with p values of 0.000, 0.047 and 0.051 subsequently as shown in Table-3. It was evident that with advancing age more people opt for specialists and more married people opt for specialists. Those participants who have no income has shown pattern of selection of general practitioners and *hakeems* instead of specialists.

It was observed during this study that majority of males, i.e., 18 (56.25%) opt to go to a general practitioner while majority of females, i.e., 47 (48.45%) opt for specialists. Only 5 (5.15%) of the females have reported selection of *Dai* as a health care provider. With advancing age, more participants have opted to go to a specialist as in age group 40–49 years, 5 participants out of 12, (41.66%) have reported it. With professional education, use of specialist has shown increased trend (32, 52.45%) and those who have simple graduation have opted more for a general practitioner constituting 33 (48.52%).

The results of this study show that unmarried mostly (29, 47.54%) go to GPs and most of the married participants (35, 51.47%) opt for specialists. It is evident from this Table-3 that those who have income less than 10,000 (28, 56%) or have no income at all (14, 50%) select GPs more than specialists while with increasing income the selection of health care provider changes to selection of specialists.

The study participants were asked about the reason for selection of particular health care service provision and it was noted that 28% of the participants are influenced by the parental advice for selection of health care services followed by about 10% of the participants admitted that they get influenced by spouse for selection of health care provider.

Figure-1 represents the reasons for selection of health care services by gender difference in which the most important factor is availability of the service.

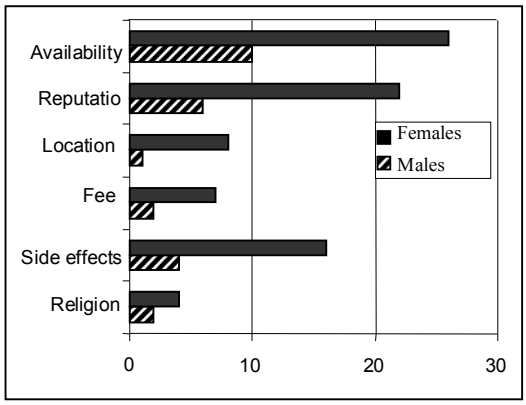

Figure-1: Reasons for selection of health care services by gender difference

Table-2: Utilization of health care services

Socio demographic profile	Health care service utilization						*p* value
	Public sector		Private sector		Both		
	n	%	n	%	n	%	
Gender							
Males	8	25	24	75	0	0	0.316
Females	25	25.7	67	69.0	5	5.1	
Age in years							
20-29	20	28.16	50	70.42	1	1.40	0.653
30-39	9	20.93	30	69.76	4	9.30	
40-49	2	16.66	10	83.33	0	0	
50-59	1	50	1	50	0	0	
> 60	0	0	0	0	1	100	
Education							
Graduation	20	29.41	43	63.23	5	7.35	0.156
Professional	12	19.67	48	78.68	1	1.63	
Marital status							
Married	14	20.58	50	73.52	4	5.88	0.04
Unmarried	18	29.50	41	67.21	2	3.27	
Income							
No income	7	25.0	19	67.85	2	7.14	0.512
Less 10,000	16	32.0	32	64.0	2	4.0	
10,000-30,000	8	23.52	25	73.52	1	2.94	
30,000-60,000	1	10.0	9	90.0	0	0	
> 60,000	1	14.28	6	85.71	0	0	

Table-3: Selection of health care provider

Socio demographic profile	Selection of provider										
	GP		Specialist		Hakeem		Dai		Others		
	n	%	n	%	n	%	n	%	n	%	*p* value
Gender											
Males	18	56.25	10	31.25	2	6.25	0	0	2	6.25	0.132
Females	37	38.14	47	48.45	7	7.21	5	5.15	0	0	
Age in years											
20-29	31	43.66	34	47.88	4	5.63	0	0	2	2.81	0.000
30-39	21	48.83	17	39.53	1	2.32	3	6.97	1	2.32	
40-49	3	25	5	41.66	2	16.66	0	0	2	16.66	
50-59	0	0	1	50	1	50	0	0	0	0	
> 60	0	0	0	0	0	0	1	100	0	0	
Education											
Graduation	33	48.52	25	36.76	6	8.82	0	0	4	5.88	0.191
Professional	22	33.33	32	52.45	2	3.27	4	6.55	1	1.63	
Marital status											
Married	26	38.23	35	51.47	2	2.94	0	0	3	4.41	0.047
Unmarried	29	47.54	22	36.06	6	9.83	2	3.27	2	3.27	
Income											
No income	14	50	11	39.28	3	10.71	0	0	0	0	0.051
Less 10,000	28	56	18	36.0	2	4	1	2	1	2	
10,000-30,000	11	32.35	18	52.94	3	8.82	0	0	2	5.88	
30,000-60,000	3	30	6	60.0	0	0	1	10	0	0	
> 60,000	1	14.28	4	57.14	0	0	2	28.57	0	0	

DISCUSSION

Health care utilisation is the use of health care services by people. Health care utilisation is effected by several factors. Among them the most important ones are: structural (location, and its relationship to access for public transport), administrative (how efficiently the facility is being managed), cost of health care, and the health care seeking behaviour of people.[12] Inappropriate or delayed health care-seeking could lead to medical complications and significant economic burden. The health care system in Pakistan comprises the public as well as private health facilities. In Pakistan the vast majority of the country's doctors resides in and serves urbanized areas, and this is especially true of women doctors.[4]

In studies done by Jnajua *et al* it was noted that in Pakistan, more than 80% of the health care is provided at general practitioners' clinics. Most of these clinics consist of a small, single room structure where consultation, injection administration and drug dispensing is performed.[13] Our comparative literature review was limited because of difference of health care systems in different countries.

In our study it was observed that majority of the participants 91 (70%) preferred using private sector for health care services. It is also noted in our study that regardless of the income or age participants mostly opted for private health care facilities. This is similar to another study done by Janjua *et al*[14] which showed that 66.8% of respondents in their study preferred private medical doctors. Our results are consistent with a survey done by Sheikh *et al*[15] in which it was noted that in Pakistan women utilise private medical services far more than men. Zwi A[16] in his study also has noted that the under-utilisation of the health services in public sector has been almost a universal phenomenon in developing countries. The private sector has flourished everywhere because it focuses mainly on antenatal care, immunisation, family planning services, treatment for tuberculosis, and malaria. Bhattia *et al*[17] in their study have noted that the high use of private health care is due to easy access, shorter waiting time, longer or flexible opening hours, better availability of staff and drugs, and better attitude of staff. In Pakistan, the public health sector by and large has been underused due to insufficient focus on prevention and promotion of health, excessive centralisation of management, political interference, lack of openness, weak human resource development, lack of integration, and lack of healthy public policy.[18]

In our study the participants were also enquired about the preference of selection of the provider of health care. It was observed during this study that majority of males 56.25% used general practitioner while majority of females 48.45% went to specialists. Only 5 (5.15%) of the females have reported selection of *Dai* as a health care provider. In similar data noted in Canada it was seen that a higher percentage of women were using specialist care than men of the same age group.[19] Qidwai *et al*[20] reported that 99%, 36.4%, 22.7% and 11.6% of the respondents in their survey done in Karachi, Pakistan had used services of allopaths, homeopaths, *hakims* and spiritual healers respectively. In a another survey

done in Pakistan by Sheikh S *et al*[9] where it was noted that 51.7% of respondents chose complementary and alternative medicine while 48.3% chose biomedicine. In our present study we noted that with advancing age, increase in income and education more participants opted to go to a specialist rather than a general physician. We also noted that mostly unmarried respondents (47.54%) go to GPs and most of the married participants opt (51.47%) for specialists. Janjua NZ *et al* [13] in their study reported that respondents living in urban areas, with monthly household income >PKR 2,500, education level >5 years were more likely to visit private general practitioners. The study participants were also asked about the reason for selection of particular health care service provision and it was noted that 28% of the participants are influenced by the parental advice, followed by the 22% who get influenced by the availability of the health care services for its selection and 14% cited the reputation of the provider as a reason for their selection of a particular provider. In studies done in USA several geographic and spatial behaviour factors, including having a driver's license, distance for regular care, predisposing (age, gender, ethnicity), enabling (household income), and need (physical and mental health measures, number of conditions) were significantly related to health care utilization.[21] In other studies family size and parity, educational status and occupation of the head of the family are also associated with health seeking behaviour besides age, gender and marital status.[22]

Cost has also been undoubtedly been a major barrier in seeking appropriate health care in Pakistan.[4] Consequently, household economics limit the choice and opportunity of health seeking.[12] Shaikh *et al*[4] in their study noted that the utilisation of a health care system may depend on socio-demographic factors, social structures, level of education, cultural beliefs and practices, gender discrimination, status of women, economic and political systems environmental conditions, and the disease pattern and health care system itself. Men play a paramount role in determining the health needs of a woman. Since men are decision makers and in control of all the resources, they decide when and where woman should seek health care.[23] In other studies done in India it was seen that women's access is often governed by their age, education, earning, occupational status, and role in the family, coupled with the cost of health care services.[21] Sadiq *et al*[24] in their study in Rawalpindi noted that the type of symptoms experienced for the illness and the number of days of illness are major determinants of health seeking behaviour and choice of care provider. In case of a mild single symptom such as fever, home remedies or folk prescriptions are used, whereas with multiple symptoms and longer period of illness, biomedical health provider is more likely to be consulted.

LIMITATIONS OF THE STUDY

The study was conducted on selected group of post graduate students which have limited its generalizibilty to the general population. Our study was a snap shot survey and does not tell us the trends in utilization of specific health care services. Overall utilization rates do not tell exactly what services are being provided to specific persons and cannot serve as proxies for either access to specific services or quality of care.

CONCLUSION

The health care system in Pakistan comprises the public as well as private health facilities. In Pakistan the vast majority of the country's doctors resides in urban area and attracts the educated class towards private sector. Utilisation of public health care facility is not the main priority of the educated class of country. Government officials should pay attention to make it more convenient for general public.

REFERENCES

1. Shah NA, Nisar N, Qadri MH. Awareness and pattern of utilizing family planning services among women attending Urban Health Care Center Azizabad Sukkur. Pak J Med Sci 2008;24:550–5.
2. Report of the Health System Review Mission–Pakistan. Islamabad: World Health Organization, United Nations Children Fund, Department for International Development, United Kingdom, The World Bank; February 19-28, 2007.
3. Akram M, Khan FJ. Health Care Services and Government Spending in Pakistan. Islamabad: Pakistan institute of development economics. PIDE working papers. 2007:32
4. Shaikh TB, Hatcher J. Health seeking behavior and health service utilization in Pakistan: challenging the policy makers. J Public Health 2004;27(1):49–54.
5. Fatimi Z, Avan I. Demographic, Socio-economic and environmental determinants of utilization of antenatal care in rural setting of Sindh, Pakistan. J Pak Med Assoc 2002;52:138–142.
6. Blackwell DL, Martinez ME, Gentleman JF, Sanmartin C, Berthelot JM. Socioeconomic status and utilization of health care services in Canada and the United States: findings from a binational health survey. Med Care 2009;47:1136–46.
7. Kazanjian A, Morettin D, Cho R. Health care utilization by Canadian women. BMC Women's Health 2004;4(Suppl 1):S33.
8. Rizvi N, Nishtar S. Pakistan's health policy: Appropriateness and relevance to women's health needs. Health Policy 2008;88:269–81.
9. Shaikh TB, Hatcher J. Complementary and alternative medicine in Pakistan: prospects and limitations. Evid Based Complement Alternat Med 2005;2(2):139–42.
10. Hussain SA, Saeed A, Ahmed M, Qazi A. Contemporary role and future prospects of medicinal plants in the health care system and pharmaceutical industries of Pakistan. Available at: http://www.telmedpak.com/doctorsarticles.
11. Shaikh BT. Hatcher J. Where do they go, whom do they consult, and why? Health-Seeking Behaviors in the Northern Areas of Pakistan. Health. Qual Health Res. 2008;18:747–55.

12. Balaji R, Dilip T.R., Duggal R. Utilization of and Expenditure on Delivery Care Services: Some Observations from Nashik District, Maharashtra. WHO Regional Health Forum WHO South-East Asia Region. 2003;7(2). Available at: http://www.searo.who.int/en/Section1243/Section1310/Section1343/Section1344/Section1672_7149.htm
13. Janjua NZ, Akhtar S, Hutin YJ. Injection use in two districts of Pakistan: implications for disease prevention. Int J Qual Health Care 2005;17:401–8.
14. Janjua NZ, Khan MI, Usman HR, Azam I, Khalil M, Ahmad K Pattern of health care utilization and determinants of care-seeking from GPs in two districts of Pakistan.. Southeast Asian J Trop Med Public Health. 2006;37:1242–53.
15. Shaikh BT, Haran D, Hatcher J. Women's social position and health-seeking behaviors: is the health care system accessible and responsive in Pakistan? Health Care Women Int 2008;29:945–59.
16. Zwi AB. Private health care in developing countries. Br Med J 2001;323:464–6.
17. Bhattia JC, Cleland J. Health care seeking and expenditure by young Indian mothers in the public and private sectors. Health Policy Plan 2001;16:55–61.
18. World Bank. Pakistan Poverty Assessment. Poverty in Pakistan: vulnerabilities, social gaps, and rural dynamics. Poverty Reduction and Economic Management Sector Unit South Asia Region, 2002.
19. Women's Health Surveillance Report 1 HEALTH CARE UTILIZATION by Canadian Women, Advisory Committee on Women's Health Surveillance. Women's health surveillance: a plan of action for Health Canada. Ottawa: Minister of Public Works and Government Services Canada, 1999.
20. Qidwai W, Azam SI, Ali SS. The utilization of services of health care providers among patients presenting to family physicians at a teaching hospital in Karachi, Pakistan. J Pak Med Assoc 2002;52:269–71.
21. Arcury TA, Gesler WM, Preisser JS. Sherman J, Spencer J, Perin J The Effects of Geography and Spatial Behavior on Health Care Utilization among the Residents of a Rural Region. Health Serv Res 2005;40:135–56.
22. Goldman N, Heuveline P. Health seeking behavior for child illness in Guatemala. Trop Med Int Health 2000;5:145–55.
23. Rani M, Bonu S. Rural Indian women's care seeking behavior and choice of provider for gynecological symptoms. Stud Fam Plann 2003;34:173–85.
24. Sadiq H, Muynck AD. Health care seeking behavior of pulmonary tuberculosis patients visiting Rawalpindi. J Pak Med Assoc 2002;51:10–26.

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