

## STUDYING HEALTH-SEEKING BEHAVIOURS: COLLECTING RELIABLE DATA, CONDUCTING COMPREHENSIVE ANALYSIS

BABAR T. SHAIKH\*, DAVID HARAN\*, JUANITA HATCHER† AND  
SYED IQBAL AZAM†

\**Liverpool School of Tropical Medicine, University of Liverpool, Liverpool, UK and*  
†*Department of Community Health Sciences, Aga Khan University, Karachi, Pakistan*

**Summary.** There is certainly a growing need to justify the significance of studying health-seeking behaviours for designing advocacy campaigns, lobbying for a policy shift and convincing donors to invest in priority areas. Moreover, policymakers need to be encouraged to design evidence-based policies that take into account information relating to health-promoting, -seeking and -utilization behaviour and the factors determining these behaviours. This paper primarily covers the ‘methodology’ used in the study of health-seeking behaviours and determinants of health services utilization in a predominantly rural district of Pakistan. The paper substantiates that this methodology is comprehensive and reliable, and there is potential for replicating this in similar settings. The approach of Kroeger in his research on the study of health-seeking behaviours, particularly in developing countries, provides the most holistic framework for examining, analysing and interpreting factors and determinants of health-seeking behaviours and health services utilization in developing countries. This study endeavoured to validate Kroeger’s framework in a Pakistani setting, exploring all the factors listed through mixed method research, and qualitative supplemented by representative quantitative enquiry. This approach has also helped in understanding the inter-relationship of various factors and drivers of health-seeking behaviours from all angles.

### Introduction

The concept of studying health-seeking behaviours has evolved with time and has ultimately become a tool for understanding how people engage with health care systems in their respective socio-cultural, economic and demographic circumstances. The factors determining these behaviours are socio-demographic factors including education, social structures, cultural beliefs and practices, gender issues, economic and political systems, environmental conditions, the disease pattern and the health care

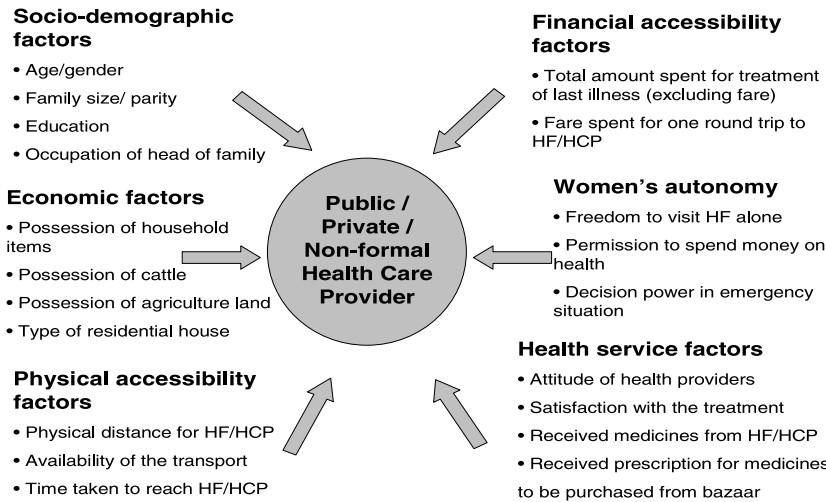
system itself (Kroeger, 1983; Andersen, 1995; Katung, 2001; Navaneetham & Dharmalingam, 2002; Fatmi & Avan, 2002; Uchudi, 2001; Trivedi, 2000; Adamson *et al.*, 2003; Mumtaz & Salway, 2005). An appropriate health-seeking behaviour is not merely dependent on an individual's choice or circumstances; it depends largely upon the dynamics of communities that influence the well-being of the inhabitants (MacKian, 2001). It is, therefore, evident that a more interdisciplinary approach would be indispensable in the study of health-seeking behaviours. Today, there is ample literature and evidence available to justify studying health-seeking behaviours for designing advocacy campaigns, lobbying for a policy shift and convincing donors to invest in priority areas (Trivedi, 2000). *En route*, policymakers too need to be encouraged to design evidence-based policies that take into account information relating to health-promoting, -seeking and -utilization behaviour and the factors determining these behaviours.

During the 20th century, most behavioural and social science research was dominated by quantitative methods with positivism. However, in the last two decades, qualitative enquiry emerged more strongly and was used by those researchers who were not satisfied with quantitative methods alone, especially while studying socially and culturally sensitive behaviours. Many theoretical frameworks have been presented in the literature on health-seeking behaviour, but the conceptual framework of Kroeger for assessing health-seeking behaviour (Kroeger, 1983) encompasses most aspects underlying the typical health-seeking behaviour of a community, especially in developing countries. This framework uses a mixed methodology to study individual behaviours, as well as the social phenomenon of health-seeking behaviour. Other studies and research works, besides that of Kroeger, also narrate a number of factors that eventually determine the patterns of health-seeking behaviours of an individual, a family or that are typical for a community. An extensive literature review has been published to further the rationale of devising a specific methodology for the research (Shaikh & Hatcher, 2004). This paper primarily spotlights the 'methodology' used in the study on health-seeking behaviours and substantiates that this methodology has been appropriate, comprehensive and reliable. Hence there is potential for replicating the methodology in similar settings.

### **Kroeger's framework of health-seeking behaviour**

The approach used by Kroeger in his research on studying health-seeking behaviours provides the most holistic framework for examining, analysing and interpreting factors and determinants of health-seeking behaviours and health services utilization, particularly for developing countries. This study endeavoured to validate the same set of indicators in a Pakistani setting, exploring all the factors listed through mixed method research, and qualitative supplemented by representative quantitative enquiry.

The socio-demographic factors include family size and parity, education status and occupation of the head of the family (Yip *et al.*, 1998; Thorson *et al.*, 2000; Goldman & Heuveline, 2000). Cultural beliefs and practices may lead to self-care, home remedies and consultation with traditional faith healers (Nyamongo, 2002). Such practices and behaviours have been shown to result in delay in appropriate medical consultation and treatment seeking and are more commonly observed among women



**Fig. 1.** Conceptual framework of Kroeger for studying determinants of health-seeking behaviours.

for their own health problems and for children's illnesses (de Zoysa *et al.*, 1984; Kaona *et al.*, 1990; McNee *et al.*, 1995; Stuyft *et al.*, 1996; Perez-Cuevas *et al.*, 1996; Yamasaki-Nakagawa *et al.*, 2001). The economic and financial accessibility factors comprise the varying levels of livelihood, which may result in greater health inequalities (World Bank, 2002). Out-of-pocket expenditure on health for consultation fees and fares spent is certainly a burden (Yamasaki-Nakagawa *et al.*, 2001). As for physical accessibility factors, the effect of distance becomes a strong barrier when combined with the dearth of transportation and with poor roads to the health care facilities (Bhuiya *et al.*, 1995; D'Souza, 2003). As for women's autonomy, it is customary in most developing countries that men determine when and where women should seek health care (Rani & Bonu, 2003). Women are usually not allowed to visit a health facility or health care provider alone or to spend money on health care, even in emergency situations (Uchudi, 2001; Navaneetham & Dharmalingam, 2002; Fatimi & Avan, 2002). Their subdued position and limited social mobility affects their access to appropriate health care. Women suffering from an illness seek health care less frequently than men, hence compromising their health (Kaona *et al.*, 1990; Ahmed *et al.*, 2000). The health service factors embrace the physical features of the service outlet and confidence in the service provider, which usually facilitate the choice of health facility (Ndyomugenyi *et al.*, 1998; Newman *et al.*, 1998; Sadiq & Muynck, 2002). The public health sector has, by and large, been under-utilized due to certain weaknesses (World Bank, 1997; Government of Pakistan, 2000). The listless communication and lethargic attitude of health providers has undermined patients' confidence (United Nations Development Program, World Bank & World Health Organization, 1995). However, the private sector in developing countries has flourished because of its easy access, shorter waiting time, longer or flexible opening hours, better availability of staff and drugs and empathetic attitude of the health provider (Bannette *et al.*, 1994; Aljunid & Zwi, 1996; Berman & Rose, 1996; Zwi,

2001; Bhattia & Cleland, 2001). Many of the studies cited above investigated one factor of health-seeking behaviour and only interviewed one group of stakeholders: health providers, health service users or the community at large. The health service providers and users were also restricted to a certain type. Moreover, in most of the studies, the informal health sector has often been ignored. Thus the inter-relationships of the various factors are unknown.

### **The health care delivery system in Pakistan**

Infant, child and maternal mortality in Pakistan is one of the highest in the region and also as compared with the rest of the developing world (United Nations Development Program, 2005; World Health Organization, 2006). This picture reflects insufficient investment in the health sector by the government, even lower than that of other neighbouring countries in South Asia. Yet, progress is visible in immunization coverage and family planning (World Bank, 2004). The health care system in Pakistan comprises public as well as private health facilities. An elaborate network of dispensaries, basic health units and rural health centres was installed even before the Alma Ata conference in 1978. However, these basic level facilities have restricted hours of operation, are often located distant from the population, and only a few have properly qualified female health providers (Islam & Tahir, 2002). More than 90% of deliveries are still performed by untrained or semi-trained traditional birth attendants (Government of Pakistan, 1993; Islam & Aman, 2001). In the private sector, apart from some accredited outlets and hospitals, there is mushrooming growth of medical general practitioners, homeopaths, traditional/spiritual healers, *greco-arab* healers, herbalists, bonesetters and quacks. Nevertheless, the entire health sector has failed to deliver any dazzling outcomes, especially in rural areas. Given the intricate panorama of the health care delivery system in Pakistan, it is crucial to comprehend the complex phenomenon of health-seeking behaviour of people to logically plan and design strategies for the common good.

### **Rationale of the study, field site and methodology**

The initial idea for this study arose from the Aga Khan Health Services Pakistan (AKHSP) in the Northern Areas of Pakistan to understand how better to serve its catchment population. This is a remote and mountainous area, with scattered villages, mainly along the river valley bottoms. Ghizar District was chosen for this study. It lies west of Gilgit (capital of the Northern Areas) and extends up the Ghizar River to the Shandur Pass in the west. The Karakorum Mountains and the Hindu Kush meet in Ghizar. The region is situated at 9000 feet above sea level, and has been called 'the rooftop of the world'.

In Ghizar District, AKHSP operates thirteen Maternal Child Health Clinics, three Family Health Centres and two Medical Centres in the Northern Areas. Clients are charged a small fee for medical services, although a welfare system is also in place for those that cannot afford it. The government also operates six Basic Health Units, eleven dispensaries, six Maternal Child Health Clinics and 21 first-aid posts, and do not charge for these services (IUCN, 2002). Despite the government and AKHSP

offering different services in a given community, there is a perception that these services overlap. There are quite a few private practitioners and pharmacists, along with scores of traditional healers and faith healers representing the informal sector. Pregnant women and young children are more prone to various illnesses. The nutritional status of children and women is certainly not satisfactory. Gender-biased norms largely prevail in the area. Although public and private sector interventions have achieved a marked increase in health facilities, the remoteness of the area and the difficult terrain force local women to rely upon traditional practices for prenatal and postnatal health care. The dearth of female staff in government health facilities is a major constraint for women clients. Government outreach services are almost invisible (IUCN, 2003). Despite the availability of free-of-charge medical facilities by the government and NGO interventions, health-related expenses still pose a significant burden on a mediocre household.

In order to understand the complex nature of the health care system and the variety of services available in the Northern Areas, and in particular to the residents of Ghizar District, it is necessary to capture the views of all the stakeholders. Thus key informants and notables of the area, health care providers of all the different cadres, users of the services and the community at large were interviewed.

### **Study aim and objectives**

The main aim of this research was to investigate the determinants of health-seeking behaviour and their role in health service utilization in the population of Ghizar District in the Northern Areas of Pakistan; and to facilitate the health policy planning process by providing evidence-based information to the local government. The specific objectives included:

1. To determine the pattern of utilization of health care services for the most common health problems at both the community and health care facility level.
2. To investigate the major factors responsible for shaping the health-seeking behaviour, and thus health service utilization, of the people living in the study area, at both a personal and institutional level.
3. To identify key areas, in consultation with the local community and professionals, where improved coordination and planning of future programmes and strategies would improve the overall provision of health care in area.
4. To make policy recommendations to the local government to develop and design future strategies and programmes that reflect equity, efficiency and good governance.

Key informants (village elders, political leaders, community notables, teachers and religious leaders), health care providers (both formal and non-formal), users exiting health services and community members (having a history of illness within the last month), were thus interviewed. Both quantitative and qualitative methods were used to investigate the differences and similarities among perceptions and practices.

### **Methodology**

In this section each phase of the methodology will be described separately and the problems and advantages identified.

*Liaison with partner NGO and local government*

Since this was a comparative study of health-seeking behaviours, it was deemed fundamental to work in liaison with the government, local NGOs and community leaders. A formal permission as well as collaboration was sought from the Northern Areas local government, and the health department in particular was briefed about the study aims and objectives. AKHSP provided practical support throughout the study, in terms of administrative support and accommodation for the study teams in the more remote areas. Prior to launching data collection, the village elders and community representatives were given an orientation about the study. These activities greatly facilitated entry into these remote communities and would be essential for dissemination of the results and implementation of any other initiatives later on.

*Ethical considerations*

The research protocol received two formal approvals from the Ethics Review Committees of the Aga Khan University and Liverpool School of Tropical Medicine. An informed consent form was designed and used for all individual participants of the study. Consent of the health care provider was obtained to interview the clients leaving the facility. Confidentiality and anonymity was assured to the maximum level.

*Selection, composition and training of research team*

A local study coordinator and team of data collectors, fluent in all four local languages, were hired and trained. Both males and females were recruited, as there is usually no problem related to the gender of the interviewer in this area. A training manual was prepared in easy, understandable language for the team members, considering their educational and professional background. An intensive four-day training of the team members was conducted to develop their understanding of concepts of health-seeking behaviour and health service utilization, focusing on Kroeger's conceptual framework (Kroeger, 1983). Moreover, interviewing techniques (household, exit, in-depth interviews), importance of informed consent, training to use the data collection instruments, code of ethics, and potential benefits and outcomes of this research were explained. Data collectors were also prepared for handling emotional upsets during recall of a past illness or casualty in the family.

*Sample population and sampling methodology*

Ghizar District in the Northern Areas of Pakistan is predominantly a rural area with people of multiple ethnicities and languages (total population 120,218). It is subdivided into four sub-districts (Puniyal: 37,773; Ishkomen: 18,406; Gupis: 29,648; Yasin: 34,391). Using the last national census report of 1998 and population data of the district, a complete listing of all communities in Ghizar District was constructed (Population Census Organization, 1998). Where the population in any community was less than 100, that community was grouped with one or more neighbouring communities to ensure a population of at least 100, for a total of 52 clusters of

villages. A computer-generated random sample of 25 communities/clusters was chosen stratified by the four sub-districts, and in one sub-district (Puniyal), further stratified by urban/rural status (i.e. five strata of five communities each). This number of communities was chosen for practical reasons of identifying the appropriate health care facilities, and available resources for travel. For each community selected, the closest AKHSP facility and the closest government facility were identified by the study team. By using 25 randomly selected communities, health facilities were not double sampled too often.

A review of the literature indicated that utilization may be affected by the time spent with the health care provider and the cost of the service. Sample sizes for the health care provider were determined to detect differences in consultation times of 3 minutes (Deveugele *et al.*, 2002); and three-fold differences in costs between health care providers (Chisholm *et al.*, 2000). The sample size calculations for the exit interviews and the community survey were informed by data on health service utilization in other parts of Pakistan. Analysis of the factors associated with the health-seeking behaviour were undertaken using multinomial logistic regression techniques. The sample size allows an odds ratio of 2.0 to be detected ( $\alpha=0.05$ ,  $\beta=0.80$ ) if the prevalence of any factor is at least 10% in a facility ( $\alpha=0.05$ ,  $\beta=0.80$ ), or the event rate is 50% at the mean of any continuous variable ( $\alpha=0.05$ ,  $\beta=0.70$ ).

In the field implementation of the study, simple and applicable methods of random selection were used. Key informants in each cluster were identified using the 'snowball technique'. Ten focus group discussions were held, one each for males and females for the four rural sub-districts and the urban area in one sub-district. Potential participants were identified by the key informants of the area. Private formal and informal health care providers were also identified with the help of key informants and for each community one health care provider was interviewed in each cadre (government, AKHSP, private formal and informal). For AKHSP and government services, the health care provider interviewed was chosen from potential candidates by using the 'pick from the hat' method if there was more than one health care provider. For the private formal and informal health care providers, the candidate interviewed was chosen from the generated lists using a computer-generated random number. Ten exit client interviews were conducted outside each of the chosen health care provider's outlets, using sequential sampling. In each community, 40 households were randomly chosen, starting from the centre of the community, using the 'right hand rule'. Each cluster comprised one or more villages stratified by size. In each household, one member who had experienced an illness (enlisted in health providers and key informant interviews) in the last one month was interviewed. If no one in the household had experienced an illness then the next household was visited. If there was more than one member who had experienced an illness, the individual to be interviewed was chosen at random using the 'pick from the hat' method. If s/he was not present at the time of the first visit, a convenient time for the interview was agreed upon. In the case of a child less than 15 years old, the parent or a carer was interviewed. A total of 100 health care provider interviews, 100 key informant interviews, 1000 household interviews and 1000 exit interviews were conducted in all.

*Data collection*

Instruments used in other settings and studies were consulted. Four separate interview forms (in Urdu) were designed, pre-tested and finalized for the household survey, exit client survey, and key informants' and health providers' interviews. Local languages are mostly oral and Urdu is the most common written language. A guide containing probes was prepared for conducting focus group discussions. In order to understand how people reach decisions regarding health seeking, one needs to collect not only a wide range of information available from different sources and to interpret it, but also the underlying, unspoken and subconscious feelings and assumptions that support the entire decision-making process. Therefore, a mixed methodology including qualitative and quantitative enquiry was devised.

*Interviews with key informants*

One hundred interviews were held with purposively chosen key informants to collect information on the health profile of the area, commonly held cultural beliefs and practices and the more common health care pathways. They were also instrumental in identifying the health care providers of the area. The key informants included the senior managers from AKHSP, health board members of AKHSP, local government representatives, village elders, religious leaders, teachers and social workers. The information provided by the key informants assisted in the development of the sampling frame for the health care providers, the discussion list for the focus group discussions and the study instruments for the three other components of the study. Most key informants identified were willing to participate in the study. Their stated knowledge of the health system and its utilization varied. One of the major difficulties encountered was non-attendance of the key informant at scheduled meetings. The reasons could be a short-notice invitation, business at work places, improper communication or lack of interest. These restraints could be overcome and taken into consideration whenever such an activity was planned.

*Interviews with health care providers*

In each cluster, one health care provider from each of the cadres of health care provider (government, AKHSP, private formal and non-formal) was interviewed. Appointments were made for the interview if necessary, and informed consent was taken for the actual interview and consent sought for subsequently interviewing his/her clients. Semi-structured interviews elucidated information on the major diagnoses seen, who the clients had seen before attending this practice, who the clients would be referred to if necessary, the average time spent with clients, the health care providers' perception about their communication with the clients, availability of drugs, and the cost of the consultation. Clinic registers and other documentation were reviewed, where available, to confirm the disease profile, clients frequenting various services, age and gender proportions etc. In most instances, the health care providers were willing to participate in the study, but some of the private formal and informal providers refused, or did not want to spend the requisite time on the interview. These interviews provided a disease profile of the community and the health care providers'



perception of the quality and cost of the care they are providing. This information is important for planning innovations in the health care system.

### *Focus group discussions*

Five focus group discussions were held with adult men and five with women, to obtain an in-depth understanding of the relationship between health-seeking behaviour and cultural beliefs. In each FGD, one of the study team members acted as the facilitator, and one as the note taker. All FGDs were conducted in the local language and were simultaneously recorded on cassette tape after seeking approval of the participants. Information on perceived barriers to, and benefits of, the various types of health care providers were sought. A participation diagram ensured that all members of the group expressed their views. Verbatim notes of focus group discussions were transcribed to provide a record of what was said. Audio recording was used as well. Transcription of data provided a descriptive record. Analysis started during the data collection process, hence sequential and interim analysis was integrally built in the process. Coding or indexing was done for specific themes and probes of focus group discussions. All the data relevant to each theme were identified and examined using a process called 'constant comparison' in which each item was checked and compared with the rest of the data to establish analytical categories. This qualitative stock of information allowed further investigation of patterns of utilization and associated factors in the quantitative survey. Focus group discussions have multi-pronged advantages. They help in building rapport with the community in a congenial environment, sensitize community members on issues raised in the discussions (health problems, care-seeking patterns, inappropriate practices, behaviours, constraints and approaches to overcome and resolve issues), facilitate entry of the study team into the community for quantitative surveys, and help publicize of the initiative going on in the survey area.

### *Exit interviews*

After the interview with the health care provider, ten clients who had already consulted with the health care provider were interviewed. In the case of a child ( $\leq 15$  years) being the client, the adult accompanying them was interviewed. These interviews usually took place close to the facility and within one week of the interview with the health care provider. This may have introduced some bias in the performance of the health care providers, since they were aware that their clients would be interviewed.

Information on demography, cultural beliefs and perceptions about aetiology of the illness, economic factors and financial accessibility, physical accessibility including time to reach the provider and availability and cost of transport, women's autonomy related issues, health service related factors including gender of the provider, and information on care received was collected. Patterns were investigated for each type of health care provider using case-case methodology to help understand why the clients chose a particular type of provider. These interviews decreased the problems of recall bias, as the interviews took place very shortly after the consultation with the

health care provider. However, since the sampling fraction for each type of provider is fixed, the results related to patterns of health-seeking behaviour will be biased by the sampling strategy. Also this sampling method does not include those people who chose not to attend a health care provider.

#### *Community household survey*

In the community survey, similar information to that in the exit interviews was collected but with more information on the health care providers attended and the reasons for the choice. This component of the study allowed the investigation of factors determining use or non-use of any kind of service. In comparison to the exit interviews, these interviews provide an unbiased estimate of health-seeking behaviour, as well as accounting for people who chose not to attend a health facility. The problem of recall bias does exist, as well as the potential for more minor complaints being included in the survey.

#### *Analysis*

The descriptive analysis of the information provided by the key informants provided the sampling frame for the formal and informal health care providers practising in the area, the perceived disease profile of the area and other themes for the focus groups and household and exit client survey. The descriptive analysis of the health providers' interviews provided a more informed picture of the disease profile of the district, patterns of health service utilization and referral for specific illnesses. The descriptive analyses of the exit interviews provided the profile of the illnesses presenting at each type of facility, while the community survey provided the profile of the illnesses occurring during the past month, whether treated or not, and patterns of care. Both surveys provided information on the perceptions of quality of care, and the factors associated with health-seeking behaviour and health service utilization. The study design allows more detailed analyses to investigate multiple relationships between determinants of health-seeking behaviour and health service utilization. Analysis of the factors associated with the health-seeking behaviour and health service utilization was done using multinomial logistic regression. Comparative analyses of these results allowed concordance among key informants, health providers, exit interviews and household survey, which helped validation of Kroeger's framework. The results from the focus group discussions allowed more in-depth understanding of the processes described in the descriptive analysis, and also assisted with the understanding of the complex inter-relationships between the determinants of health-seeking behaviour. Triangulation of the results of the different components of the study allows the robustness of the results to be evaluated, so that appropriate information is available for better health service planning and policy formulation.

#### *Data handling, processing, cleaning and quality assurance*

The questionnaires were pre-coded. All the forms filled by the team members were checked and edited by the study coordinator on a daily basis and queries were

referred back to the interviewer, who made the necessary clarifications and corrections. These forms were then forwarded to the principal investigator (PI) who did the second editing of the forms, for any remaining anomalies. The queries were sent to study coordinator for responses. For each type of interview, a database was designed in Epi Info version 6, where data was entered under the supervision of the PI. Quality control was ensured by following the international data management guidelines. The double data entry was carried out by expert data entry operators. Two data entries were compared for any discrepancies, which were eventually removed. Secondly, 10% of the forms were randomly checked for accuracy in which data entry error rate was less than 0.3%. Logical cleaning of the entered data was carried out by the PI in consultation with the study coordinator. Data were then analysed in SPSS version 13. The qualitative data collected during the focus group discussions were recorded verbatim and transcribed. They were coded and themes were developed. Key findings were aggregated under the themes for analysis.

### **Comparison of the methods**

There are distinctive differences between the results of the four types of interviews. The four most common diseases stated by the household and exit interviewees were in agreement: joint pains, malaria/fever, vomiting and headache, although the order varied. However, the health care providers reported that diarrhoea, pneumonia, common cold and joint pains, and the key informants reported that diarrhoea, malaria/fever, common cold and joint pains, were the four most common diseases. These differences in the respondent group may have been due to the perception at the time of interview (summer) that diarrhoea is not considered an important illness by the household and exit groups as it is so common. Also, the inclusion of pneumonia in this group by the health care providers and not the other groups may be due to the timing of the study, when pneumonia is not a common complaint.

Those people interviewed in the household were more likely to have only used one mode of treatment (72%) than the exit interviewees (35%), because the people interviewed in the houses include those who have not used any formal or non-formal service and simply self-treated. However, there was very little difference overall in the distribution of which health care provider they had first visited, with approximately one-third visiting AKHSP first, one-third visiting the government health care services first, and one-third other types of health care services first. This is at variance with the opinions of the key informants, of whom 72% believed that the government health services were the preferred services.

When the consultation process is considered, the key informants and health care providers estimated a greater delay in seeking health care (5 days, inter-quartile range (IQR) 3–7 days) than either the household interviewees (3 days, IQR 0–7 days) or the exit interviewees (2 days, IQR 0–5 days). There were also some differences among the types of respondents of the estimated time spent with the health care providers. All exit interviewees visiting either government services, AKHSP or private formal services estimated that they spent less time with the health care provider than the household interviewees. The health care provider estimates are similar to those of the household interviewees. In the case of those who visited non-formal health care

providers, the estimated time spent with the provider is higher for the exit interviewee than the household interviewee. In this case the health care provider estimate is more similar to the exit interviewee. There are also some differences in the cost of treatment estimates among the types of respondent, with government and AKHSP providers estimating higher costs than those given by the clients. All the results on other variables were thus compiled, analysed and triangulated on this pattern to confirm the concurrence or dissonance amongst various sources of information.

### Discussion

Health beliefs and practices carry their own veracity and ought to be understood in the right context by health researchers. Since these beliefs tend to fulfil people's health-promoting sociological, psychological and emotional needs, it becomes even more important to comprehend how and why users, particularly the poor, make health-seeking behaviour decisions in this age of medical pluralism. In such endeavours, a mixed method of research enables researchers to answer confirmatory and exploratory questions, and to verify and generate theory in the same study (Tashakkori & Teddue, 2003). To develop a rational policy to provide efficient, effective, acceptable, cost-effective, affordable and accessible services, it is important to understand the drivers of 'health-seeking behaviour' of the population in a complex health care system. This relates both to the public as well as private sectors. Investing in health with the right understanding, the right approach and the right plan should be the point of advocacy (World Bank, 1993). This necessitates a strong need to understand the demand side to need to change user behaviour, and that is the only way to expect improved health outcomes (Rogler & Cortes, 1993; Standing, 2004). Most of the time, studies conclude that health-seeking behaviour is a convoluted phenomenon, the understanding of which gives an intriguing and informative instrument for designing the right pathway to a rational policy (MacKian *et al.*, 2004). In a pluralistic health care system, with multifarious utilization and health-seeking behaviours, it is highly desirable to introduce a multi-sectoral approach to make health care systems that is more responsive to the needs of the vulnerable segments of the population, especially women. Moreover, it is strongly desirable to further nurture critical, creative and reflective thinking to reorient health systems. Health care providers need to be more compassionate and caring of the needs of the people they serve. Work on achieving targets set by the Millennium Development Goals is in progress. This change in paradigm embodies an opportunity for action on social determinants and to formulate healthy public policies as opposed to policies concerned with mere delivery of health care services (World Health Organization, 2005).

The methodology proposed is rigorous but representative of all the concerned parties in the study area, and encompasses the views of various stakeholders (users, non-users, key informants/notables, health care providers). This allows validation of the sets of information through triangulation and assists in explaining the concordances and dissonances. This approach has also helped in the understanding of the inter-relationships of various factors and drivers of health-seeking behaviours from all angles. Therefore, using the right methodology for collecting authentic information on

all social determinants of health-seeking behaviours, bringing together views from all possible corners and of all reliable sources, and ultimately triangulating them will surely avert confusions and dilemmas that may crop up due to the complex nature of the phenomenon. The study emphasizes the launch of mass health education and health promotion campaigns to address the issue of unawareness and lack of knowledge of various illnesses. Both the government and private sector ought to think of alternative financing models for providing more equitable health care to the population served. A more gender-sensitive approach and ambiance at the outlets is needed in government hospitals to provide better health care for women. This study highlights the highly prevalent non-formal care for which stern action will have to be taken to curb all non-licensed health practitioners. On the other hand, people need to be sensitized on the consequences of utilizing such non-trained health providers. Because all levels of stakeholders and all key players in the arena were involved, they were sensitized to the major issues affecting the delivery and utilization of health care services in the area. A comprehensive study report will be shared with all the partners and stakeholders. All suggestions and recommendations will be disseminated to officials from health, education, population, women's development and rural development departments by conducting results-sharing meetings and seminars. The whole process thus will facilitate developing policy and planning for a more effective health care system, through partnerships among the various health care providers and for most efficient utilization of scarce health care resources.

### Acknowledgments

The authors owe many thanks to the Aga Khan Foundation, Geneva, for funding this study; to the Aga Khan Health Services Pakistan, Northern Areas, and the local government Health Department for facilitating the whole conduct of study, including logistic support; Ms Assis Jahan for coordinating the study; the data collectors for their untiring fieldwork in difficult physical and weather conditions; and last, but not the least, to the scores of respondents whose responses and narrations enriched their knowledge.

### References

- Adamson, J., Ben-Shlomo, Y., Chaturvedi, N. & Donovan, J. (2003) Ethnicity, socio-economic position and gender – do they affect reported health-care seeking behaviour? *Social Science and Medicine* **57**, 895–904.
- Ahmed, S. M., Adams, A. M., Chowdhury, M. & Bhuiya, A. (2000) Gender, socio-economic development and health seeking behaviour in Bangladesh. *Social Science and Medicine* **51**, 361–371.
- Aljunid, S. & Zwi, A. B. (1996) Differences in public and private health services in a rural district of Malaysia. *Medical Journal of Malaysia* **51**(4), 426–435.
- Andersen, R. M. (1995) Revisiting the behavioral model and access to medical care: does it matter? *Journal of Health and Social Behaviour* **36**, 1–10.
- Bannette, S., Dakpallah, G., Garner, P., Gilson, L., Nittayaramphong, S., Zurita, B. & Zwi, A. (1994) Carrot and stick: state mechanisms to influence private provider behaviour. *Health Policy and Planning* **9**(1), 1–13.

- Berman, P. & Rose, L.** (1996) The role of private sector in MCH and family planning services in developing countries. *Health Policy and Planning* **11**(2), 142–155.
- Bhattia, J. C. & Cleland, J.** (2001) Healthcare seeking and expenditure by young Indian mothers in the public and private sectors. *Health Policy and Planning* **16**(1), 55–61.
- Bhuiya, A., Bhuiya, I. & Chowdhury, M.** (1995) Factors affecting acceptance of immunization among children in rural Bangladesh. *Health Policy and Planning* **10**(3), 304–312.
- Chisholm, D., Sekar, K., Kumar, K. K., Saeed, K., James, S., Mubbashar, M. & Murthy, R. S.** (2000) Integration of mental health care into primary care. *British Journal of Psychiatry* **176**, 581–588.
- Deveugele, M., Derese, A., van den Brink-Muinen, A., Bensing, J. & De Maeseneer, J.** (2002) Consultation length in general practice: cross sectional study in six European countries. *British Medical Journal* **325**(7362), 472.
- D'Souza, R.** (2003) Role of health-seeking behaviour in child mortality in the slums of Karachi, Pakistan. *Journal of Biosocial Science* **35**, 131–144.
- de Zoysa, I., Carson, D., Feachem, R., Kirkwood, B., Lindsay-Smith, E. & Loewenson, R.** (1984) Perceptions of childhood diarrhoea and its treatment in rural Zimbabwe. *Social Science and Medicine* **19**(7), 727–734.
- Fatmi, Z. & Avan, I.** (2002) Demographic, socio-economic and environmental determinants of utilization of antenatal care in rural setting of Sindh, Pakistan. *Journal of Pakistan Medical Association* **52**, 138–142.
- Goldman, N. & Heuveline, P.** (2000) Health seeking behaviour for child illness in Guatemala. *Tropical Medicine and International Health* **5**(2), 145–155.
- Government of Pakistan** (1993) *Utilization of Rural Basic Health Services in Pakistan*. Report of evaluation study. Ministry of Health and WHO, Islamabad.
- Government of Pakistan** (2000) *Utilization of Public Health Facilities in Pakistan*. National Health Management Information System, Islamabad.
- International Union for Conservation of Nature and Natural Resources** (2002) *Institutional Systems and Mechanisms in the Northern Areas: A Situation Analysis to Feed into the Northern Areas Strategy for Sustainable Development*. IUCN Pakistan, Gilgit.
- International Union for Conservation of Nature and Natural Resources** (2003) *Health and Environment. Northern Areas Strategy for Sustainable Development*. Background Paper. IUCN Pakistan, Northern Areas Programme, Gilgit.
- Islam, A. & Aman, F.** (2001) Role of traditional birth attendants in improving reproductive health: lessons from the Family Health Project, Sindh. *Journal of the Pakistan Medical Association* **51**, 218.
- Islam, A. & Tahir, M. Z.** (2002) Health sector reform in South Asia: new challenges and constraints. *Health Policy* **60**, 151–169.
- Kaona, F. A. D., Siziya, S. & Mushanga, M.** (1990) The problems of a social survey in epidemiology: an experience from a Zambian rural community. *African Journal of Medical Sciences* **19**, 219–224.
- Katung, P. Y.** (2001) Socio-economic factors responsible for poor utilization of PHC services in rural community in Nigeria. *Nigerian Journal of Medicine* **10**(1), 28–29.
- Kroeger, A.** (1983) Anthropological and socio-medical healthcare research in developing countries. *Social Science and Medicine* **17**(3), 147–161.
- MacKian, S.** (2001) *A Review of Health Seeking Behaviour: Problems and Prospects*. Internal concept paper. Health Systems Development Programme, London School of Hygiene and Tropical Medicine, London.
- MacKian, S., Bedri, N. & Lovel, H.** (2004) Up the garden path and over the edge: where might health-seeking behaviour take us? *Health Policy and Planning* **19**(3), 137–146.

- McNee, A., Khan, N., Dawson, S., Gunsalam, J., Tallo, V. L., Manderson, L. & Riley, I. (1995). Responding to cough: Boholano illness classification and resort to care in response to childhood ARI. *Social Science and Medicine* **40**(9), 1279–1289.
- Mumtaz, Z. & Salway, S. (2005) 'I never go anywhere': extricating the links between women's mobility and uptake of reproductive health services in Pakistan. *Social Science and Medicine* **60**, 1751–1765.
- Navaneetham, K. & Dharmalingam, A. (2002) Utilization of maternal healthcare services in Southern India. *Social Science and Medicine* **55**, 1849–1869.
- Ndyomugenyi, R., Neema, S. & Magnussen, P. (1998) The use of formal and informal services for antenatal care and malaria treatment in rural Uganda. *Health Policy and Planning* **13**(1), 94–102.
- Newman, R. D., Gloyd, S., Nyangezi, J. M., Machobo, F. & Muiser, J. (1998) Satisfaction with outpatient healthcare services in Manica Province, Mozambique. *Health Policy and Planning* **13**(2), 174–180.
- Nyamongo, I. K. (2002) Healthcare switching behaviour of malaria patients in a Kenyan rural community. *Social Science and Medicine* **54**, 377–386.
- Perez-Cuevas, R., Guiscafre, H., Romero, G., Rodriguez, L. & Guitierrez, G. (1996) Mother's health seeking behaviour in acute diarrhea in Tlaxcala, Mexico. *Journal of Diarrhoeal Disease Research* **14**(4), 260–268.
- Population Census Organization (1998) *Population and Housing Census of Northern Areas*. Government of Pakistan, Islamabad.
- Rani, M. & Bonu, S. (2003) Rural Indian women's care seeking behaviour and choice of provider for gynaecological symptoms. *Studies in Family Planning* **34**(3), 173–185.
- Rogler, L. H. & Cortes, D. E. (1993) Help seeking pathways: a useful concept in mental healthcare. *American Journal of Psychiatry* **150**, 554–561.
- Sadiq, H. & Muynck, A. D. (2002) Healthcare seeking behaviour of pulmonary tuberculosis patients visiting Rawalpindi. *Journal of the Pakistan Medical Association* **51**(1), 10–16.
- Shaikh, B. T. & Hatcher, J. (2004) Health seeking behaviour and health service utilization in Pakistan: challenging the policymakers. *Public Health* (Oxford) **27**(1), 49–54.
- Standing, H. (2004) *Understanding the 'Demand Side' in Service Delivery: Definitions, Frameworks and Tools from the Health Sector*. DFID Health Systems Resource Centre, London.
- Stuyft, P. V., Sorenson, S. C., Delgado, E. & Bocaletti, E. (1996) Health seeking behaviour for child illness in rural Guatemala. *Tropical Medicine and International Health* **1**(2), 161–170.
- Tashakkori, A. & Teddue, C. (eds) (2003) *Handbook of Mixed Methods in Social and Behavioural Research*. Sage Publications, California, pp. 14–15.
- Thorson, A., Hoa, N. P. & Long, N. H. (2000) Health seeking behaviour of individuals with a cough of more than 3 weeks. *Lancet* **356**, 1823–1824.
- Trivedi, P. K. (2000) *Patterns of Healthcare Utilization in Vietnam: Analysis of 1997–98 Vietnam Living Standards Survey Data*. Department of Economics, Indiana University, USA.
- Uchudi, J. M. (2001) Covariates of child mortality in Malawi: does the health seeking behaviour of the mother matter? *Journal of Biosocial Science* **33**, 33–54.
- United Nations Development Program, World Bank & World Health Organization (1995) *Health Workers for Change: A Manual to Improve Quality of Care*. Programme for Research and Training in Tropical Diseases, Geneva.
- United Nations Development Program (2005) *International Cooperation at a Crossroads: Aid, Trade and Security in an Unequal World*. Human Development Report, United Nations, New York.
- World Bank (1993) *Investing in Health*. World Development Report, Oxford University Press, New York.

- World Bank** (1997) *Towards a Health Sector Strategy*. Health, Nutrition & Population Unit, South Asia region, Washington, DC.
- World Bank** (2002) *Pakistan Poverty Assessment. Poverty in Pakistan: Vulnerabilities, Social Gaps, and Rural Dynamics*. Poverty Reduction and Economic Management Sector Unit South Asia Region, Washington, DC.
- World Bank** (2004) *Making Services Work for Poor People*. World Development Report, Washington, DC.
- World Health Organization** (2005) *Action on the Social Determinants of Health: Learning from Previous Experiences*. Background paper prepared for the Commission on Social Determinants of Health, WHO, Geneva.
- World Health Organization** (2006) *Working Together for Health*. World Health Report, WHO, Geneva.
- Yamasaki-Nakagawa, M., Ozasa, K., Yamada, N., Osuga, K., Shimouchi, A., Ishikawa, N., Bam, D. S. & Mori, T.** (2001) Gender difference in delays to diagnosis and healthcare seeking behaviour in a rural area of Nepal. *International Journal of Tuberculosis and Lung Disease* 5(1), 24–31.
- Yip, W. C., Wang, H. & Liu, Y.** (1998) Determinants of choice of medical provider: a case study in rural China. *Health Policy and Planning* 13(3), 311–322.
- Zwi, A. B.** (2001) Private healthcare in developing countries. *British Medical Journal* 323, 464–466.