

# Treating Common Illnesses among Children under Five Years: A Portrayal of Health-Seeking Behaviours and Practices in the Northern Areas of Pakistan

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## Abstract

**Background:** Inappropriate practices and behaviours while treating a child's illness impede correct medical consultation. We studied the health seeking behaviours of people engaging with healthcare systems for the treatment of under-five children.

**Methodology:** In the Ghizer District of the Northern Areas of Pakistan, a descriptive cross-sectional household survey was conducted in a random sample of 25 communities. Respondents were either a parent or caregiver of the child.

**Results:** Malaria, fever and diarrhea were found in almost one third of the children under five. One third of respondents did not know the cause of the child's illness. For seeking quality care, the majority visit private clinics, but home remedies, traditional practices and consultation with a faith healer were also common. Lack of knowledge about the child's illness and not making it a priority, lack of money and restricted women's social mobility are factors behind the delayed consultation (median delay: two to three days).

**Conclusion:** Health education and health promotion programs must address the knowledge gaps about children's illnesses and advocate appropriate health-seeking behaviours. Issues around quality of care in government centres and affordability in the private health sector must be addressed in order to improve health service utilization.

## Introduction

To understand how people use healthcare systems, it is extremely useful to study the health-seeking behaviours of individuals, especially in relation to their socio-cultural, economic and demographic circumstances. Factors determining these behaviours may be seen in various contexts: physical, socio-economic, cultural and at times political (Kroeger 1983; Shaikh and Hatcher 2005). Therefore, utilization of healthcare systems, public and private, formal and informal, is strongly influenced by these factors. Researchers have grouped them as socio-demographic factors, cultural beliefs and practices, gender discrimination, economic and political systems, dynamics of communities, environmental conditions, the disease pattern and the healthcare system itself (Andersen 1995; MacKian 2001).

*Socio-demographic factors* include family size and parity, mother's education and sources of livelihood of the family (Goldman and Heuvline 2000; Thorson et al. 2000; Yip et al. 1998). In both the preventive and curative aspects of healthcare, a mother's behaviour in seeking health services is an important factor that influences child survival by affecting the child's health and nutritional status as well the mother's own health. Some inappropriate practices and behaviours result in delay of appropriate medical consultation and treatment seeking and are more commonly observed among women for their own health problems and for children's illnesses (de Zoysa et al. 1984; McNee et al. 1995; Perez-Cuevas et al. 1996; Stuyft et al. 1996). Delay in child healthcare seeking has been attributed to the cultural barriers that deter mothers from taking their children to a formal health facility. As a result, mothers experiment with folk remedies at home, trying drugs purchased from a non-qualified private health provider, or delay the consultation because of other priorities at home (Hoa et al. 2007; Källander et al. 2008; Malik et al. 2006).

*Economic and financial accessibility factors* include the varying levels of earning a living, which result in greater health inequalities. Higher out-of-pocket expenditures on health reflect the consultation fee and the fare spent to reach the healthcare facility, a burden to families with few financial resources. Also, financial constraints compel individuals or households to resort to home remedies and self-medication (Granich et al. 1999; Sreeramareddy et al. 2006). As for *physical accessibility factors*, the effect of distance and travel time to healthcare facilities is an important barrier, and becomes amplified when combined with lack of transportation and poor roads (D'Souza 2003). *Health service factors* include the features of the healthcare facility and confidence in the service provider, both of which facilitate the choice of health facility. The private sector in developing countries flourishes because it focuses mainly on quality and range of services (Berman and Rose 1996). Moreover, easy access, shorter wait times, longer or more flexible opening hours, greater availability of staff and drugs, and an empathetic attitude in the health provider attract more clients to private healthcare (Aljunid and Zwi 1996; Bhattia and Cleland 2001).

Health-seeking behaviours evolve over time, so it is imperative to understand how people employ healthcare systems in their respective socio-cultural, economic and demographic circumstances. All these behaviours actually define social position of health and provide a better understanding of the disease process. The study of health-seeking behaviours, therefore, underpins the design of health promotion campaigns, strategies, interventions and programs, and is strongly advocated for effective policy making in priority areas, eventually ensuring appropriate health services utilization.

## Study Aim and Objectives

The aim of this research was to investigate determinants of health-seeking behaviour and health service utilization for under-five children in the Ghizer district of the Northern Areas of Pakistan and to provide evidence to the local health department for prioritizing programs, designing appropriate interventions and rethinking the role of the public sector in healthcare provision.

Specific objectives included:

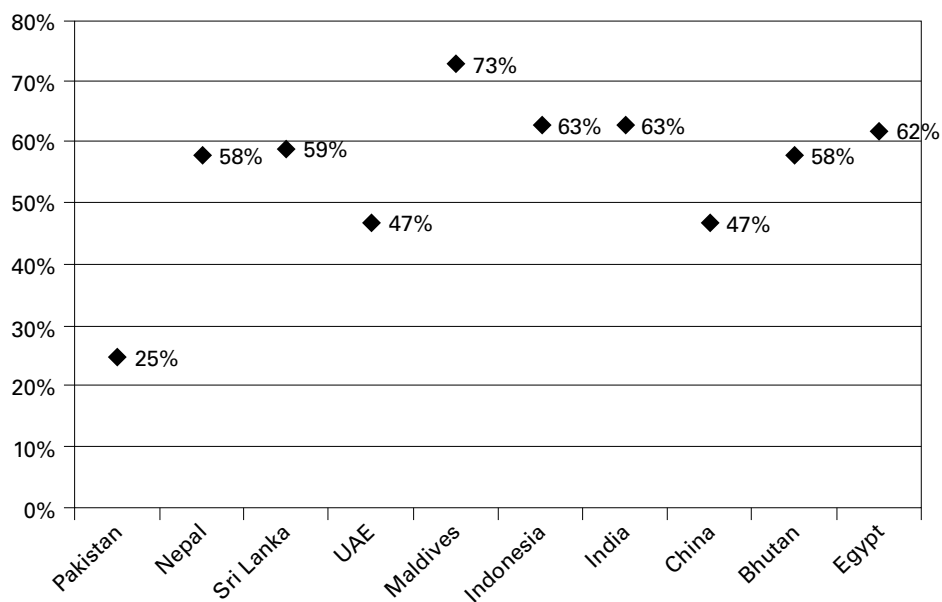
1. Determining the pattern of utilization of healthcare services for the most common health problems in under-five children
2. Investigating major factors responsible for shaping health-seeking behaviour, and thus health service utilization, for under five-children

3. Making policy recommendations to the local health department to develop and design future strategies and programs based on the evidence

### State of the Health of Under-Five Children and the Healthcare System in Pakistan

The World Health Organization (WHO) (2006) has reported that infant, child and maternal mortality in Pakistan is one of the highest in South Asia and in the developing world. This picture reflects the low priority the Government of Pakistan has given to development of the social sector and in particular the low investment in the health sector, below that even of neighbouring countries in South Asia, according to the World Bank (1999). In a country where 74% of the people live below the poverty line (less than 2 US dollars a day) and where out-of-pocket expenditure for health is nearly 80%, health spending has been less than 1% of the central government's total expenditure for over a decade (World Bank 2006). While the health status of the population in general has improved over the past three decades, under-five mortality remains unacceptably high (93/1000 live births) for both male and female children in Pakistan and has been declining at a very slow pace compared to many other countries in the region (United Nations Children's Fund 2008b).

Figure 1. Trends of decline in child mortality since 1990 in Pakistan and neighbouring countries.



Source: United Nations Children's Fund UNICEF 2008b.

The healthcare system in Pakistan comprises public as well as private health facilities. An elaborate network of dispensaries, basic health units and rural health centres is in place. However, these basic-level facilities have restricted hours of operation and are often located far away from the population. No more than 20% of people consult a government first-level care facility, and this picture has been unchanged for the last 10 years (National Institute of Population Studies and Macro International 2008; Pakistan Medical Research Council 1998). In the private sector, besides the accredited outlets and hospitals, there is mushrooming growth of general medical practitioners, homeopaths, traditional/spiritual healers, Greco-Arab healers, herbalists, bonesetters and quacks. Nevertheless, the entire health sector with all its ventures and initiatives has not been able to bring about any significant outcomes, especially among rural population groups.

## Study Setting

Our study area, Ghizer district, in the Northern Areas (NAs) of Pakistan, is pre-dominantly a rural area of people with multiple ethnicities and languages. It is located approximately 40 km northwest of Gilgit (630 km from Islamabad), the capital of the NAs, and has an average altitude of 1,500 m. Over the last few decades, non-governmental and government interventions have achieved a marked increase in health facilities; however, the remoteness of areas and difficult terrain force local people to rely on traditional healers. Awareness about health is still very low, and hygiene is difficult to practise in remote communities. The only expenditure that poor people incur on health is on pharmaceuticals or secondary healthcare. Although government health facilities are free, there is a lack of drugs and services are poor. A major constraint to women clients is the shortage of trained female health staff. However, women health workers and health visitors have recently started making a difference. Public sector health infrastructure consists mainly of primary and secondary care facilities, while specialized care is provided by the private sector, predominantly the Aga Khan Health Services Pakistan (AKHSP).

The average number of household members in Ghizer district is nine, and the average annual household income ranges between 800 and 2000 US dollars (International Union for Conservation of Nature 2003). Fertility has declined rapidly since the period 1992–1996, reaching 4.1 children per woman in 2004–2006 (Hakim et al. 1998), yet the demographic pyramid of the NAs is broad based, indicating that the region's population will continue to grow at a high rate for a considerable time, even if fertility declines further. According to the Government of Pakistan (2000) census report, under-five children constitute 10% to 15% of the total population. Government outreach services for far-flung communities are not much visible on ground. Annual population growth rate in the NAs is 3%, much higher than the national growth rate of 1.9% (Government of Pakistan 2007). This relatively rate is due to high levels of fertility combined with relatively high – but decreasing – mortality, especially in children under five. Water is scarce in summers and more so in harsh winters, and general hygiene is poor. Consequently, hand-to-mouth behaviours of children and proximity of animals and their feces promote gastrointestinal and respiratory infections and worm infestation. Abbas and Schlosser (2004) have documented that inadequate sanitation and polluted water affect under-five children most, producing a death toll of 109 per 1,000 live births. The same study maintained that although non-government and government interventions have achieved a marked increase in health facilities, remoteness of areas and difficult terrain still cause local women to rely upon traditional practices for treating even common illnesses.

In Ghizer District, the AKHSP operates 13 maternal and child health clinics, three family health centres and two medical centres. Although a welfare system is also in place for those who cannot afford medical services, generally, clients are charged a nominal fee. The government operates six basic health units, 11 dispensaries, six maternal and child health clinics and 21 first aid posts, and does not charge for services (International Union for Conservation of Nature and Natural Resources 2003). There are quite a few private practitioners and pharmacists, along with scores of traditional healers and faith healers representing the informal sector.

## Study Methods

### Study design

A descriptive cross-sectional household survey was designed to capture the most important determinants of health-seeking behaviours and health service utilization. The household survey helped us gather information on health-seeking behaviours of even those who had never consulted a formal or qualified healthcare provider for their child's illness.

### Sample Population

Ghizer district comprises four administrative sub-districts representing four different valleys with pockets of sub-populations: Puniyal, Ishkomen, Yasin and Gupis. Puniyal is semi-urban, whereas the other three sub-districts are entirely rural. Drawing from the last national census report of 1998 and population data of the district under study, a computer-generated random sample of 25 communi-

ties/clusters was chosen, stratified by the four sub-districts, and in Puniyal sub-district further stratified by urban/rural status. In each of the 25 communities, household interviews were conducted, starting from the centre of the cluster, using the “right hand rule.”<sup>1</sup> A child with a history of illness during the previous month was included in the study, and the parent or caregiver was interviewed in each household; however, where more than one child was found to have had a history of illness, the “pick from a hat”<sup>2</sup> method was used. Subsequently, a total of 539 interviews could be conducted for capturing data on healthcare-seeking and health service utilization for under-five children (female: 258 and male: 281), representing the entire district.

### Data Collection

We used a structured questionnaire with close-ended questions, adapted from validated instruments (Ahmed 2005; Kroeger 1983) previously used in other settings and modified in the light of insights gathered from our qualitative study preceding this survey. We collected information on demography, cultural beliefs and perceptions about etiology 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. We investigated patterns for each type of healthcare provider, using case–case methodology to help understand why clients chose a particular type of provider. The questionnaire was translated into Urdu for use in local settings by locally hired data collectors. For pre-testing, the field site was a village outside but close to the study district. A briefing was held with team members, who gave useful feedback on the study instruments, methodology and approach. In all, the team conducted 29 household interviews and 21 exit interviews, under the supervision of the principal investigator. Instruments were then revised for wording, phrase structure, sequence of questions, time spent in the interview and cultural appropriateness. In the final survey, although most interviews were conducted in local languages, responses were translated into Urdu and checked by the study coordinator in the field. The respondent in all the interviews was either a parent or the accompanying caregiver of the child. Exclusion criteria were refusal to give consent and inability to answer due to the severity of the child’s illness. Interviews took place either outside a healthcare facility or inside the household, depending on the convenience and preference of the respondent.

### Ethical Approval and Considerations

The research protocol received formal approval from the Aga Khan University Ethics Review Committee and Ethical Review Committee of the Liverpool School of Tropical Medicine UK, which abide by all international ethics standards. 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. Prior to data collection, village elders and community representatives were given an orientation to the study. An informed consent form was given to the accompanying adult, and they signed it before the interview. Confidentiality and anonymity was assured to the maximum level.

### Data Analysis

Descriptive analyses of the household survey provided the profile of the child’s illnesses during the previous month, whether treated or not, and patterns of care. Analyses also furnished information on the perceptions of quality of care and many other factors associated with health-seeking behaviour and health service utilization. Since multiple responses were allowed for each of the questions, no *p*-values or odds could be computed.

### Results

Results are presented without gender segregation, as no marked differences were found for male and female children. A large proportion of the population (86%) represented low socio-economic status, ascertained based on the head of the household’s monthly income, number and variety of household items including type of house, and other assets or holdings used or owned by the family.

Table 1. Results

Variables	N = 539
<b>1. Gender of the child</b>	
Male	52%
Female	48%
<b>2. Socio-economic status of the family</b>	
Upper	4%
Middle	11%
Lower	85%
<b>3. Child's illness reported</b>	
Malaria/high grade fever	38%
Diarrhoea	37%
Vomiting/abdominal pain/ other gastric problems	15%
Cough/common cold	10%
Pneumonia	9%
Skin diseases	6%
<b>4. Causes perceived for child's illness</b>	
Don't know	34%
Weather	19%
Food related	18%
Unhygienic conditions	17%
<b>5. Health provider consulted for the first consultation</b>	
AKHSP (MBBS or paramedic)	41%
Government (MBBS or paramedic)	29%
Private (MBBS or paramedic or pharmacist)	11%
Faith healer	8%
Home remedy	7%
Self medication	7%
Informal (quack, <i>tabib</i> , herbalist)	3%
<b>6. Reasons for delay in consultation with a trained health provider</b>	
Less priority to health	48%
Busy at home	16%
Self-medication	12%
Economic reasons	12%

Table 1. Continued

Distance	9%
Nobody at home	7%
Faith healer/shrines	5%
<b>7. Reasons quoted for consulting a specific health provider</b>	
Satisfaction with the quality of care	55%
Proximity/convenient access	25%
Fee/cost/affordability	17%
Severity of illness	16%
Medicines received	11%

Note. From 3–7, percentages may not add to 100 because multiple answers were allowed.

AKHSP = Aga Khan Health Services Pakistan; MBBS = Bachelors of Medicine and Bachelors of Surgery.

The most common illnesses or symptoms reported in the study included high-grade fever (most of the time attributed as “malaria”), diarrhea, gastrointestinal symptoms like vomiting or abdominal pain, upper respiratory tract infections and respiratory infections. Other problems reported (9%) included asthma, eye and ear infections, headaches, dental problems, psychiatric illness, kidney problems, worms and minor injuries.

Extremely cold weather conditions in the study area, food-related symptoms and unhygienic living conditions within and outside the household were perceived by the parents/caregivers as the probable causes of illness in under-five children. Nearly one third of respondents did not know or could not comment on the cause of their child’s illness (Table 1).

Respondents had consulted the AKHSP healthcare facility more often than the government centre or any other healthcare facility in the vicinity. Private medical doctors, pharmacists or any other paramedics were other providers frequently consulted, besides the AKHSP and government centres (Table 1).

Based on study participant responses, a median delay of three days before resorting to a formal medical consultation was computed, yet the delay could be as long as seven days. This period could be critical in responding to a child’s illness, whatever the reasons for the delay. While exploring the reasons, almost half of the respondents mentioned that they just did not give priority to a child’s illness, or they were too busy to take the child to a doctor, or they had been trying their own stock of medicines at home. Economic reasons and physical distance to a clinic were other concerns (Table 1).

Satisfaction with the quality of care received at any health facility was reported as the topmost reason for consulting any specific healthcare provider. Given the difficult physical terrain of district Ghizer, proximity and convenient access was the next main reason for preferring a certain provider. Affordability of the health provider’s fee was another concern in deciding about the consultation for a child’s illness. Nonetheless, severity of the child’s illness was also a determining factor for a consultation with a specific health provider (Table 1). Other reasons (6%) included type of illness, gender of the health provider, range of services available, community opinion and family pressure.

Since household economics and the affordability factor had been reported as prime for deciding about treating a child’s illness, we enquired about the expenditure on average for one consultation, including fare and other expenses incurred on a trip to a nearby clinic. Results show that in most of the cases, the amount spent was around Rs50 (approximately 0.6 US dollars; inter-quartile range: Rs0-200 i.e 0-2.3 US dollars) for one round trip. Even this meagre amount of Rs50 is a burden on a poor family’s livelihood. Respondents shared that for severe and complicated illness episodes, they had sometimes spent up to Rs500.

## Discussion

All over the world, and including Pakistan, pneumonia, diarrhea and malaria still remain the major killers of children under five (Black et al. 2003). We found the same set of illnesses or symptoms in our study. Poverty compounds the situation further, especially in timely and appropriate healthcare-seeking decisions and service utilization. As in many other developing countries where women's exposure to information is limited, the lack of knowledge on health issues and on child health becomes a serious barrier to a mother seeking healthcare for her children, even in matters of utmost importance such as immunization or a medical emergency. From the study findings, it is evident that at least one third of parents and caregivers were not aware of the exact cause of illness. We can perhaps assume that whether the government health system or the community-based AKHSP program is involved, the health promotion component of healthcare is weak. This is reflected in the community's existing knowledge, behaviours and practices pertaining to illnesses of under-five children. In such settings, cultural myths and illiteracy are the major barriers to health promotion interventions (Zaidi et al. 2004).

Supported by more general data at the national level, we found in our study that people prefer going to private health facilities, particularly the AKHSP, for children's illnesses. The main reasons are the quality of care and empathetic attitude of the healthcare provider that people anticipate in the private sector; this finding concurs with many other studies. Local *khalifas* (faith healers) are often consulted because they are well versed with the local customs and they offer very compassionate and considerate services, at times even free of charge. Physical distance to the nearest health facility, the availability of public transport and the cost of a round trip are other genuine concerns (Shaikh and Hatcher 2005). Our study found that the utilization of various health services has been markedly influenced by the proximity and availability of the health providers. Many people would consult a *khalifa* because of his presence in every single village and round-the-clock availability. However, for children's diseases, people generally prefer the AKHSP centre. Our study found use of home remedies or previously used medicines for treating children's illnesses at home a particularly common practice. These practices delay the formal medical consultation for even simple symptoms like cough, diarrhea and fever, and the family ends up spending a considerable amount of money for treating a child's illness. Awareness about health and hygiene is still low in remote communities.

Under-five morbidity and mortality could potentially be avoided by putting in place simple interventions that can be integrated and scaled up within community and outreach programs (Bhutta et al. 2008). However, all these programs and interventions must be tuned to socio-demographic characteristics of the area (WHO 2005). This would necessitate a meaningful strengthening of public health programs and social mobilization, as well as concerted action even beyond the health sector (Shaikh 2008a). Health education and health promotion programs must address the knowledge gaps about children's illnesses and advocate the appropriate health-seeking behaviours. Health education by a mass campaign as well as at the district community level is needed, now. Hence, researchers must give enough credence to local social determinants, especially the level of female literacy in the Northern Areas. Although our study captures the issues in one only district, the socio-economic, demographic and geographic strata indicate that the state of affairs would be similar across the northern region of Pakistan. Yet we are not generalizing our findings for the entire country.

## Conclusion

Addressing the issue of child morbidity and the target set in the Millennium Development Goals for reducing child mortality to 43/1000 live births would necessitate an acceptable coverage and continuum of primary care (United Nations Children's Fund 2008a). On the supply side, issues around quality of care in government centres and affordability in the private health sector must be addressed in order to improve utilization of health services. Recommended protocols and childhood illness treatment strategies must be integrated at first-level healthcare facilities for delivering quality services, because that has been the prime reason for the community to use any particular health facility. However, physical access would be an issue because of difficult terrain in the entire area.



Therefore, a more practical approach would be to introduce an outreach health services program with curative and preventive care by skilled community health workers who could reach out to remote villages in the valley of Ghizer district. On the demand side, it is imperative to formulate a behaviour change strategy and a comprehensive advocacy campaign for promoting appropriate practices for reproductive health, infant and child feeding, immunization, home health and healthcare seeking.

In Pakistan, we have case studies where engaging the private sector actually became instrumental in making the healthcare system more responsive (Loevinsohn et al. 2009). Shaikh et al. (2008) argued that a meaningful and well thought out partnership between the government health department's programs and AKHSP interventions can play a large role in improving women's health as well as child health in difficult and remote areas within the district. This research would certainly be substantiated with more in-depth studies across the Northern Areas of Pakistan, informing health services managers and policy makers about health-seeking behaviours and patterns of health services utilization of the people of the area, especially for treating their children. More challenging would be translating such research and understanding into health education, health promotion and policy formulation (Shaikh 2008b). This is undoubtedly an opportunity for action on social determinants of health-seeking behaviours. Bringing together views from all possible corners and all reliable sources will surely deliver appropriate strategies and approaches to find solutions for improving health conditions of under-five children in the Northern Areas of Pakistan.

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## Endnotes

<sup>1</sup> The "right hand rule" is the WHO's recommended method for ascertaining the starting point for community surveys. Villagers help determine the centre of the cluster or village. Then, a pencil is spun on the ground. When the pencil stops, the direction in which it is pointed is taken as the starting point, and first household on the "right hand" is chosen for the first interview. The adjacent household on the right is skipped, and the next one is included, and so on.

<sup>2</sup> "Pick from a hat" is a lottery method. All the names of eligible study participants (in this case all under-five children who were ill in the last one month) are written on small piece of papers and put in a hat or a basket. Randomly and blindly, one is taken out, and that person is included for study. If the individual is not available or willing, the next one is included.