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**Health Care in Sedentarising Communities:
A Case Study in the Jordan Badia**

One volume

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Abstract

The World Health Organisation's (WHO) 'Health for All by the Year 2000' (HFA2000) resolution is intended to promote improvements in the equality of health care provision, the basis of which is universal accessibility to basic health care. The Jordanian government, in accordance with HFA2000, has attempted to improve accessibility in rural communities by providing an extensive network of basic rural health clinics which are intended to be acceptable and accessible to all communities. Within this context, the research considers two interrelated themes.

The first theme considers changes in health and illness practices, and particularly the wide-scale and rapid acceptance of modern medical services at the same time as 'traditional' Arabic medicines are becoming relatively unimportant in the north east Badia. This study highlights the connections between health and illness discourses in the past, Bedu social values, and the wider social economic milieu, and how these are reflected in the forms and use of Arabic medicines. The literature widely assumes that culture, 'traditional' social structures and attitudes inhibit the acceptance and effective utilisation of modern medical services, and that education, for example, is a key way to address this problem. This research engages with this assumption by evaluating the significance of social values, education and health awareness programmes, knowledge of health issues, together with socio-economic changes in explaining the acceptance of modern medicine and the adoption of preventative medicine and practices, together with changing attitudes to children's health.

The second key theme of this research is to examine the extent to which basic government health services have been made accessible to the nomadic, sedentarising and settled rural population of the north east Jordan Badia, and specifically their children, a particularly vulnerable group, and whether this explains patterns of health and illness behaviour. To this end, the importance of geographical, organisational (health service), economic and social factors is evaluated in explaining variations in accessibility mediating the effective utilisation of these services at family level.

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Chapter 1

Introduction

1.1 Research context

Health services in most developing countries¹ are based on the professional bio-medical discourse of health and health care, and reflect the capitalist 'modernisation' model of economic development. The majority of these health systems emphasise technically oriented clinical services, in particular high cost, spatially centralised, tertiary hospital services, which primarily benefit urban elite groups, whilst the needs of most people are frequently neglected. Thus, health improvements in developing countries (measured in terms of infant mortality and life expectancy) are generally characterised by significant spatial and socio-economic inequalities; socially excluded groups, such as the poor, women and children, are frequently the most vulnerable.

It is widely acknowledged by critics of orthodox development that social and regional equality in the distribution of resources, education, the practice of family planning, nutritional levels and equitable health care provision, have been important to health gains, whereas income and economic development generally are of relatively limited importance (Phillips and Verhasselt, 1994). By the 1970s, international health agencies acknowledged that health systems based on the Western professional health and health

¹ 'Developing countries' are defined in accordance with the World Bank (1993) definitions incorporating the following regions: Sub-Saharan Africa, India, China, 'Other Asia and islands', 'Latin America and the Caribbean' and the 'Middle Eastern Crescent'. 'Developed countries' include the 'Established Market Economies' and 'Formerly socialist economies of Europe' (including the Russian Federation).

care concept, were neither cost effective, accessible nor appropriate in the context of the developing world. However, more appropriate health care is significant to health gain in developing countries, and studies show that the provision of health services has been an important catalyst for rapid mortality decreases in a number of countries such as Costa Rica and Sri Lanka. Importantly, these services are appropriate (simple, rather than technologically oriented), accepted by users and geographically and economically accessible to users. Thus, acceptable, accessible and appropriate health services, as part of wider social development programmes, are critical precursors of health improvements in developing countries (Caldwell, *et al.* 1990; Caldwell, 1993).

The World Health Organisation (WHO) set an ambitious agenda in an attempt to address the health problems afflicting a significant proportion of the world's population, summarised by the slogan 'Health for all by the year 2000' (HFA2000). The intention of this is to ensure that all people attain a level of health that allows each individual to lead a socially and economically productive life (Mahler, 1974; 1981). Universal accessibility to appropriate health care is a central plank of HFA2000, and primary health care (PHC) is formally defined in an attempt to accomplish this aim. Most countries have accepted the importance of the WHO resolution, and many have attempted to adopt the recommendations into health systems policy. Whilst this has led to some improvements, a number of factors, not least the imposition of structural adjustment programmes, has meant that overall success is limited, and inaccessibility problems, especially for poor and rural groups, continue to prevail. Promoting universally accessible, acceptable and appropriate health care continues to be a key goal to achieving health improvements within the WHO's revised time frame, 'Health for All in the Twenty First Century',

reinforcing the need to identify groups with poor accessibility and suggesting ways of improving it.

Ensuring accessibility to services is of particular importance in developing countries in Africa and Asia, the majority having high proportions of their populations living in rural areas and with comparatively poor health compared to that in the developed world. An added dimension to effective rural service provision in parts of Asia, the Middle East and Africa is nomadic pastoralism, which has potentially significant consequences for the geographical accessibility of services. However, whilst explaining variations in health service utilisation has been a major topic of research in both medical geography and sociology, very few studies have considered the factors mediating the utilisation of health services by nomadic and sedentarising groups, or by communities undergoing significant social and economic transition, much less attempted to evaluate systematically the main factors influencing the acceptance of, and accessibility to, health care.

The Jordanian Ministry of Health has attempted to incorporate the WHO's resolution, maintaining that its national health policy is based on '...the principle that all citizens have the right to health services' (Jordan Department of Statistics and Ministry of Health, 1992: 3). More specifically the emphasis is on ensuring that '... health services are available, accessible and acceptable in all communities, and [the national health policy] seeks to ensure the equitable distribution of these services'. This is essential, since development in Jordan is concentrated in the urban areas; indeed, planning and provision of health services is focused on the capital, Amman. Since the late 1980s, the

Jordanian government has recognised the extent of urban-rural disparities in incomes, service provision and health levels, by acknowledging the need for rural development, articulated through Social and Economic Development plans. An important element of the government's plans has been to widen rural health service provision and thus attempt to address the problems of poor health care accessibility for rural communities. Honey and Kharmeh (1989) evaluated the Social and Economic Development Plan 1986-90, and found that virtually all rural settlements with a population of 1000 or more residents (and many with fewer) are provided with a health clinic. They assert that the government has been successful in making services available and that '... rural Jordan is actually disproportionately served with government health clinics, relative to the balance of population' (Honey and Kharmeh, 1989: 77). According to UNICEF (1995), 95% of the rural population of Jordan have access to health services. However, the way in which 'access to health services' is measured is not specified, nor the reasons for 5% of the population being excluded.

1.2 Aims and objectives of the study

This research examines the effective delivery of health care to mobile, sedentarising and settled rural communities by engaging with the Jordanian government's policy of redressing regional inequalities in development, and more specifically the Ministry of Health's programme for enhancing the availability, accessibility and acceptability of health care in all communities. To this end, the research comprises two principal aims which correspond to two of these criteria: acceptance and accessibility. The first principal aim considers the acceptance of modern medical services by transitional

mobile/sedentarising communities. The research examines changes in lay health and illness discourses and behaviour that correspond with the recent provision of basic medical services, in order to explain their acceptance and utilisation by the communities of the north east Badia of Jordan. The second principal aim is to consider whether equitable health care accessibility can be achieved for mobile, sedentarising and settled communities by examining the accessibility factors mediating variations in the effective utilisation of basic health services for these groups for specific health care needs.

The first principal aim, which investigates the acceptance of health services, seeks to understand changing patterns of lay health and illness discourses, and health and illness behaviour, and specifically to explain changing patterns of use of 'traditional' Arabic medicines² and the concomitant acceptance and adoption of medical services by the sedentarising communities of the study area. Indeed, whilst African, Indian and Chinese systems of traditional medicine are well documented, the literature has not comprehensively catalogued Arabic and particularly Bedu forms of medicine, including those used in the Jordan Badia; nor has it related these medicines to social structures and health and illness discourses. Much of the literature has emphasised the problems of culture, traditional attitudes and lack of education in the effective health care delivery, suggesting that these inhibit the acceptance and utilisation of modern health services. This research explores these assumptions, identifying the factors mediating these changes, and considering the extent to which traditional Bedu social values have

² Whilst it is difficult to find a completely satisfactory term in referring to non-Western systems of medicine, the expression 'traditional medicines' is used in this study. In referring specifically to Bedu traditional medicines, the expression 'Arabic medicines' is adopted, which reflects the nomenclature widely used in the north east Badia.

influenced changes in health and illness discourses and behaviour since the recent introduction of medical services in the study area.

The second principal aim, which is concerned with health care accessibility for mobile, sedentarising and settled communities, appraises the extent to which the expansion of basic health care provision for children's health needs has led to improvements in the equality of accessibility, in an area in which many groups practice nomadic pastoralism, or are in the process of sedentarising, and have had, until recently, no health care provision. Thus, the impact of accessibility factors, that is those factors intervening between identification of medical need at individual/family level, and the effective utilisation of basic health services, is examined. Groups based on different stages of the sedentarisation process are compared, which requires the identification of distinct groups of families, based on the degree to which they are sedentarised, defined both in terms of range and duration of movement, and economic activities undertaken. The study is particularly concerned with identifying those groups that are excluded, or partially excluded, from effective accessibility to services and the extent to which pastoral management limits the accessibility of health services for mobile pastoralists and their children.

The importance of adopting a broad approach which encompasses both the acceptance and accessibility dimensions of health care delivery and utilisation needs to be emphasised. Examining both of these complementary issues strengthens the study considerably since both acceptance and accessibility are required in order to make health care delivery effective. As suggested in the previous section, the Jordanian Ministry of

Health has articulated the need for acceptance and accessibility within national health policy and the success of health care systems in a number of developing countries is explained by the services being both acceptable and accessible to users in the communities which they serve. Indeed, these factors can be considerably more significant antecedents of health improvement rather than, for example, overall health care expenditure or technologically orientated service delivery. This reinforces the importance of incorporating both of these criteria within an assessment of the effective delivery of health services for mobile/sedentarising groups.

In accordance with these principal aims, this research intends to address the following objectives:

1. to identify the connections between health and illness discourses and behaviour and Arabic medicines (which are catalogued) and their use amongst Bedu communities in the past.
2. to identify and explain changes in health and illness behaviour since the introduction of medical services, and how these reflect changes in health and illness discourses.
3. to investigate the extent to which 'traditional' cultures, attitudes and lack of education inhibit the acceptance and utilisation of modern health services.

4. to identify the main geographical, organisational, economic and social factors of accessibility which explain variations in the utilisation and appropriate utilisation of modern health services for mobile, sedentarising and settled children.
5. to investigate the extent to which the spatial decentralisation of health services brings about improvements in their accessibility for a population comprising mobile, sedentarising and settled groups.
6. to consider the implications of economic crisis and structural adjustment on basic health service accessibility for a sedentarising population.
7. to identify the problems in achieving the effective delivery of basic health care for mobile, sedentarising and settled rural groups in developing countries.

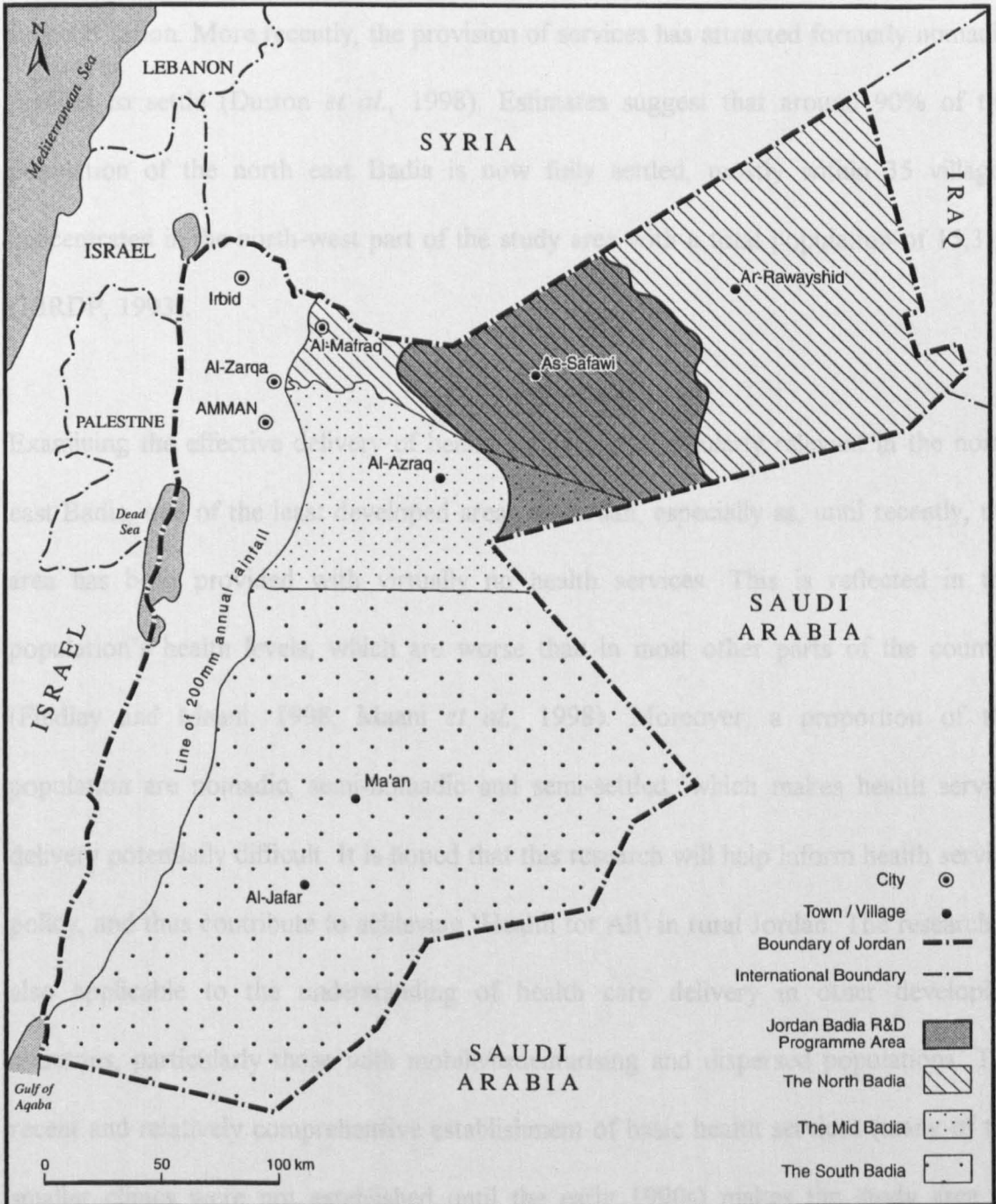
1.3 The study area

The research, carried out under the auspices of the Jordan Badia Research and Development Programme (JBRDP), was conducted in the semi-arid north east Badia³ area, which covers around 26,000 sq km and incorporates over a third of the Hashemite Kingdom of Jordan (Figure 1.1). Temperatures in the area are in the order of a summer mean maximum of 35-38°C and a winter mean minimum of 2-9°C, with recorded extremes ranging from -5°C to 46°C. There are low levels of precipitation, generally less than 50mm per annum, most of which falls in the winter months (December to March),

³ The word 'Badia' comes from the word 'Bedu' (singular Bedui), meaning the (semi) desert areas inhabited by the Bedu (Bedouin).

although there is considerable variation geographically and from year to year. In the north west of the study area, on the southern slopes of Jebel Druze, precipitation reaches 200mm per annum, and this is where the majority of settlements are concentrated.

Figure 1.1 The Jordan Badia



Nomadic pastoralism, a method by which the limited resources of the Badia can be exploited, has traditionally dominated the region's economy, but more recently, the agricultural sector has been in transition. Semi-settled pastoralism, settled livestock production and small scale irrigated arable farming now prevail, even giving way to larger commercial farms further west. The non-agricultural sector is becoming increasingly important and the availability of formal employment has been a significant reason for sedentarisation. More recently, the provision of services has attracted formerly nomadic families to settle (Dutton *et al.*, 1998). Estimates suggest that around 90% of the population of the north east Badia is now fully settled, mostly within 35 villages concentrated in the north-west part of the study area with a total population of 15,318 (JBRDP, 1993).

Examining the effective delivery of health services is particularly relevant in the north east Badia, one of the least developed areas of Jordan, especially as, until recently, the area has been provided with virtually no health services. This is reflected in the population's health levels, which are worse than in most other parts of the country (Findlay and Maani, 1998; Maani *et al.*, 1998). Moreover, a proportion of the population are nomadic, semi-nomadic and semi-settled, which makes health service delivery potentially difficult. It is hoped that this research will help inform health service policy, and thus contribute to achieving 'Health for All' in rural Jordan. The research is also applicable to the understanding of health care delivery in other developing countries, particularly those with mobile/sedentarising and dispersed populations. The recent and relatively comprehensive establishment of basic health services (many of the smaller clinics were not established until the early 1990s) makes the study area an

interesting case study for examining changes in health and illness discourses, health and illness behaviour, and particularly in understanding the rapid acceptance of modern medicine amongst sedentarising groups. The transitional economy of the study area enables nomadic, sedentarising and settled households to be compared, and thus determine the extent to which pastoral mobility in its different forms limits health care accessibility. This also allows the research to consider whether the spatial decentralisation of delivery is actually improving health care accessibility for mobile, sedentarising and settled groups.

Chapter 2

Health and Development

2.1 Health discourses

Whilst professional health discourses determine the delivery of health care, 'lay' discourses influence individuals' utilisation of health care, and behaviour pertaining to health and illness generally. The medical profession defines health (or being healthy) in terms of an absence of diagnosable disease, referred to as the 'bio-medical model' of disease. The bio-medical discourse, the basis of Western health systems, is embedded within the modern scientific paradigm, the origins of which date back to 16th century Europe, in which the functioning of the physical universe (including living organisms) is understood in mechanistic terms, based on physical and mathematical laws. Understanding the laws that explain the functioning of the physical universe requires a reductionist approach; the scientific method involves the study of individual systems, and in the case of medical science, the study of individual bodily systems. Thus, medical symptoms were coupled with specific and identifiable aetiological factors, and chemical substances (or surgical procedures) developed to counteract the cause, and thus ameliorate the symptoms.

There are four central assumptions of the bio-medical discourse (Mishler, 1981). The first is that 'disease' constitutes a deviation from normal bodily functioning. Second, is the assumption that the aetiology of disease is a specific pathological agent. The third assumption is that disease is categorised and identified by sets of symptoms that follow

set patterns during the course of the disease. Fourth, implicit within the bio-medical discourse, is the assumption that the diagnosis of disease is an objective and rational process conducted by professional practitioners, and on this basis, the bio-medical discourse frequently assumes a distinction between illness and disease. 'Disease... refers to a medical conception of pathological abnormality which is indicated by a set of signs and symptoms. Illness... refers primarily to an individual's experience of ill-health and is indicated by the person's feelings of pain, discomfort and the like.' (Curtis and Taket, 1996 after Field, 1976: 334). 'So while patients experience "illness", physicians diagnose and treat "diseases"; illness is subjective, disease is objective' (Curtis and Taket, 1996: 27). Bio-medicine accepts that illness is culturally determined, mediated by lay conceptions of normality and thus, in addition to physical dimensions, has moral, psychological and social aspects, whilst retaining the implicit assumption as to the objectivity and (scientific) rationality of professional practice.

The assumptions which form the basis of bio-medicine have been widely criticised. A central criticism is the recognition that, as with illness, definitions of disease are socially determined, and therefore the diagnosis of disease lacks objectivity. Thus, bio-medicine has been criticised for being ethno-centric; practitioners of medicine are generally Western scientists and clinicians, and predominantly male. This concern was highlighted by a Marxist critique of the medical profession, which is concerned with the '... neutrality and rationality of bio-medical practice,... [which] is seen to be instrumental in maintaining existing power relations within particular societies'. Moreover, the medical profession works in the '... interests of the whole [middle; professional] class rather than [necessarily] representing the interests of the medical profession alone (Curtis and

Taket, 1996: 29, 210). The medical profession has been instrumental in reproducing the distinction between 'normal' (an absence of disease) and 'abnormal' (that is, the patient has a disease). However, social constructions of disease mediate professional (as well as lay) definitions of normal, and therefore the range between which 'normal' becomes 'abnormal' (Nettleton, 1995; Curtis and Taket, 1996). 'At the extremes of physical robustness and well-being or of disabling disease or mental disorder, there may be near-universal agreement about who is in good health and who is not' (Curtis and Taket, 1996: 43). However, between these dichotomous states, concepts of health depend on factors such as '... age, sex, family status, occupation, ethnicity, culture, religion, class position, and geographical and temporal location of the person; the activity of the individual, interaction with, relationships to, and dependence upon others; individual and societal attitudes and beliefs regarding specific symptoms and illness' (*ibid.*). Medical practice has been particularly challenged in the field of psychiatric and mental illness and the diagnosis of these illnesses.

Bio-medicine is based on the reduction of the body into component parts, the separation of the body and mind, and the identification of the bio-chemical pathogens which cause disease. Rather than dealing with holistic and preventative practices, bio-medicine has therefore emphasised the identification and treatment of diseases, '... the ideology of medicine (and particularly the [bio-]medical model) individualises problems rather than laying bare the social causes of ill health, thus constraining the policy solutions produced in response to problems (Curtis and Taket, 1996: 210, after Doyal, 1979; Navarro, 1986; Tesh, 1988). Thus, formalised health systems in the majority of developed and developing countries have reflected the assumptions embodied within bio-medicine.

Health care has tended to emphasise curative treatment rather than to encourage the prevention of disease and the maintenance of health. However, it is widely acknowledged that social, cultural, economic and environmental factors are significant determinants of health and illness (for example, Phillips and Verhasselt, 1994).

Despite its dominance, the bio-medical construction of health is increasingly being challenged both within and from outside the medical profession (Nettleton, 1995; Phillips and Verhasselt, 1994; Curtis and Taket, 1996). The World Health Organisation (WHO) has adopted a more expansive, 'socio-ecological' definition of health as '... a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'. Implicit in this definition is that the health of a population is not simply influenced by the provision of medical services, but also by the complex and interconnected relationships between an individual, and biological and physical environmental factors, as well as socio-economic-political circumstances, variables largely ignored by the bio-medical discourse. Meade *et al.* (1988) suggest that human health is inexorably embedded within a 'human ecology triangle' of interdependent, deterministic interactions. The 'habitat' in which an individual is located has implications for health, whether it is the physical or built environment. The environment defines the sorts of hazards an individual is exposed to, as well as the resources available pertaining to good health, such as fertile land and an uncontaminated water supply. The 'behaviour', or activities of an individual, are important, defined by cultural and social constructs/constraints, economic circumstances and activities and individual preferences. The nature of the 'population' itself, for example, age, sex and genetic predisposition, have implications for health.

Health discourses in the 1990s reflect a tension between attempts to implement comprehensive and equal social development in line with the WHO's health as 'a state of complete physical, mental and social well-being, not merely the absence of infirmity', and the economic means of achieving this. The language used by the World Bank in the 1990s emphasises the need to improve efficiency and maximise health gains within the health sector, reflected in the title of the World Bank's World Development Report (1993), 'Investing in Health', a key statement of World Bank proposals for reforming health sector policy. The report is most concerned with expenditure on health care, and the economic benefits of this expenditure. 'The health sector is recognised as a productive sector of the economy, [involving] gains in worker productivity, improved utilisation of natural resources, benefits to future generations through improved education, and reduced costs of medical care...' (Curtis and Taket, 1996: 267). In sharp contrast, the WHO stress that health is a 'fundamental human right' and that human rights, rather than economics, are central within development.

The meanings of health and illness, the factors that affect health, the causation of illness and the mechanisms through which treatment and cure can be achieved of people who have not received formal medical training have been widely studied. These beliefs and accounts are frequently referred to as 'lay' health and illness discourses. Stainton-Rogers (1991), for example, recognised the complexity of individual accounts of health and illness which, based on personal experiences, vary in different situations and times, and suggested that these accounts can even be contradictory. However, most studies of lay discourses have concerned themselves with identifying broad patterns of lay conceptions

of health and illness, and comparing various social, age and sex groups with the view to explaining variations in the frequency, predisposition and effectiveness of health service utilisation. Indeed, it is recognised that lay discourses are embedded within social/cultural milieux, as well as being determined individually and by an individual's circumstances. '... [I]deas about health and illness are influenced by prevailing ideologies and are mediated by socio-structural circumstances' Nettleton (1995: 41); '... beliefs about health are rooted in wider socio-cultural contexts... ideas, beliefs and practices are socially embedded. Lay health beliefs are not simply diluted versions of medical knowledge; rather, they are shaped by people's wider milieux such as their structural location, cultural context, personal biography and social identity' (Nettleton, 1995: 37).

Health and illness behaviour can be complex and patients are likely to view illness differently to clinicians. They are likely to approach medical services on the basis of pain and lack of general well-being. Having an illness that disrupts everyday social or economic activities, may urge an individual to seek health care, whilst a disease that does not disrupt these activities may not be acted upon. Some individuals may also have non-therapeutic motives for health care seeking, such as taking non-essential 'sick leave' in order to escape from usual obligations (Mechanic, 1995). However, lay discourses do not lack the logic, validity and rationality of profession medicine; Calnan (1987: 8) suggested that '...the meaning [of health and illness] is itself derived from their [an individual's] own complex body of knowledge and beliefs, which is closely linked with the social context in which they live their daily lives. Thus, rather than treating beliefs about health as idiosyncratic, this approach emphasizes their logic and integrity'. Mechanic's (1995) observations on the motivations for health and illness behaviour have

much in common with Herzlich's (1973) study of a 'middle-class' group in Paris, in which three distinctive attitudes to illness, and the implications of illness to the individual, were elicited from different people in the study. Illness was seen as 'destructive' resulting in '... retreat, causing desocialisation, inactivity, dependence, social exclusion, characterised by denial and then passivity (going on till you drop!)' (Curtis and Taket, 1996: 33). Thus, articulating need would be limited and utilisation of health services only takes place as a final recourse. An opposing view is of illness '... as 'liberator', that is an '... opportunity to withdraw and find oneself in a pleasant retreat, a valuable experience freeing the individual from everyday commitments' (*ibid.*). Finally, an 'occupation' view of illness was defined by Herzlich, '... involving active participation by an individual, with professionals, in achieving recovery, and requiring the individual to fight and attempt to control illness' (*ibid.*).

'Certainly a good deal of evidence suggests that aspects at least of lay concepts vary from one social class to another in ways that appear to relate to the material difference between the classes...' (Stacey, 1988: 152). Calnan (1987) identified both 'functional' and 'experiential' definitions of health in different groups of people; the 'functional' view reflects an individual's concern with their participation in normal social and economic activities; illness may only be accepted or admitted by a sufferer if these activities are disrupted. The 'experiential' view emphasises individual experience of illness; rather than concern with responsibility and obligation, a strong sense of self is perceived. Nettleton (1995), in reviewing a number of empirical studies (including Blaxter and Patterson, 1982; Calnan, 1987) showed that 'working class' people are '... more likely to hold functional conceptualisations of health... [because of] material

constraints and situations in which they have little choice but to fulfil their social obligations...' rather than seek health care services. Blaxter and Patterson's (1982) study of 'working class' women in Aberdeen, found that these women stoically accepted high levels of discomfort, had low expectations of health, and consequently low levels of health service utilisation. Illness would only be acknowledged if it interfered with their functioning, for instance in wage work, domestic work and child caring. The study group was also found to emphasise lack of control over their health, perceiving that those factors outside their control were the main determinants of illness, therefore little was done to prevent or treat illness. Calnan (1987) also distinguished 'negative' from 'positive' definitions of health, with the former implying an absence of disease, which reflects the biomedical concept of health. He found that the some 'lay' groups (categorised as 'working class' in the study) tended to view health as an absence of (physical) disease, which would be caused by factors outside an individual's control, whereas others (the 'middle class' groups) conceived health more holistically and 'positively', as a resource and that an individual has both the ability to influence, and a responsibility to maintain it personally. Donovan (1986) suggested that poorer socio-economic groups (that is those with least power) tend to be more fatalistic, having less control over aspects of their lives, including health and illness.

It is useful to recognise that health and illness behaviour is based both on a rational calculation of the costs/benefits of action or non-action, but also has habitual, socially determined dimensions. Lindbladh *et al.* (1996) distinguished between 'economic' and 'sociological' conceptualisations of the determinants/motivation of individual health-related behaviour. The 'economic' account suggests that individuals attempt to

maximise 'life-time utility' through being healthy or improving health, and that decision making is generally rational (although bounded by their knowledge), and based on freedom of choice. '[I]ndividuals are constantly making trade-offs between (expected) health and other activities' (Lindbladh *et al.*, 1996: 1819). An individual's motive for health behaviour (and health care utilisation) is therefore a product of the opportunity costs of various actions (or other resources that an individual may draw on), and an evaluation of the outcome/benefits. This resonates closely with the 'health belief model' (Sheeran and Abraham, 1995), which stresses a calculative process whereby the expected risks/consequences of action/non-action are balanced against the costs and barriers to carrying out these actions. The 'sociological' conceptualisation is concerned with the structural conditions that influence an individual's socio-economic circumstances, and with the concept that health related behaviour is a product of social conditioning. Thus, the social context is a significant determinant of an individual's behaviour (Lindbladh *et al.*, 1996). Lindbladh *et al.* (1996) concluded that groups with more favourable economic circumstances are more likely to exhibit calculative decision-making (the 'economic' model); health behaviour for those with less favourable circumstances tends to be habitual and closely conforms to societal norms rather than individuality (the 'sociological' model).

2.2 Health and development discourses

There is undoubtedly a close association between levels of development and health. However, the association between health and development as a process is complex, and not a simple causal relationship. The health of populations in the economically

developed countries, if measured using indicators such as life expectancy or child mortality, compares favourably with that in developing countries (Table 2.1). This suggests that 'orthodox' economic development (measured in terms of GNP per capita) is an important contributor to improving health levels of a population (Verhasselt, 1997). The economically developed world attained an average child mortality rate (CMR) of 11 per 1000 in 1990, substantially better than the average CMR of 106 per 1000 of the developing world. Life expectancies have risen to levels similar to those in the economically developed West in those countries, such as Singapore, which have experienced recent and significant economic development.

Regionally, health levels are highly varied, reflecting the association between GNP per capita and the basic health indicators (Table 2.1). Sub-Saharan Africa, with a low average GNP per capita, has the highest levels of child mortality, which have improved only marginally in recent decades. The Middle East region fared somewhat better, although improvements were limited over the same period. The average life expectancy in Latin America, is now quite close to that of developed countries, reflecting the significant improvements in the GNP per capita of the region. Health levels have actually improved for the majority of people in developing countries since the 1950s. Overall, their life expectancy rose from 40 years in 1950 to 63 years in 1990 (World Bank, 1993), and the CMR has declined from 280 deaths per 1000 to 100 per 1000. Even amongst the poorest countries, such as Somalia, Sierra Leone and Mozambique, levels of infant and the child mortality rates have improved by 28%, 25% and 13% respectively between 1960 and 1993 (UNICEF, 1995). These indicators suggest that the development process is having a positive effect on health.

Table 2.1 Selected health indicators: 1960 and 1990

Region*	Life expectancy**		Child mortality***		GNP per capita (dollars)
	1960	1990	1960	1990	1991
Developed countries	69	75	46	11	20,570
Developing countries	46	63	226	106	1,010
Latin America and the Caribbean	54	70	161	60	2,390
Asia	50	62	182	97	650
Middle Eastern Crescent	44	61	222	111	1,940
Sub-Saharan Africa	43	52	251	175	350

Source: World Bank (1993).

*Developed countries include established market economies and formerly socialist economies of Europe (including the Russian Federation). Developing countries are those not classified in 'developed countries' group (World Bank, 1993). Asia excludes India, China and the Middle Eastern Crescent group. The Middle East Crescent includes the Middle East, North Africa, Pakistan, Tajikistan, Uzbekistan, Kyrgyzstan, Georgia, Azerbaijan, Turkmenistan, Armenia, Kazakhstan and Afghanistan.

**Life expectancy at birth in years.

***Child mortality is measured as the number of deaths per 1000 children aged under five years in total.

The process of development is associated with considerable changes in the demographic character of populations. Fertility, mortality and morbidity changes are an integral part of development, as reflected in the 'demographic transition model', by which initial (high fertility, high mortality) and final (low fertility, low mortality) stages of equilibrium are separated by a transitional 'developing' period characterised by reductions in mortality rates followed by fertility rates (Haggett, 1975; Jones, 1990). Similarly, Omran's 'epidemiological transition' model portrays '... the shifting web of health and disease patterns in population groups and their links with several demographic, social,

economic, ecological and biological changes' (Omran, 1977, 4). Thus, development is not only associated with changing levels of mortality, but also with changes in the relative importance of different diseases. The expression 'health transition' is now also widely used, which more explicitly emphasises the social, cultural and behavioural determinants of change, and focuses more on health and survival than with death (Caldwell *et al.*, 1990; Caldwell 1993). The transition of the patterns of disease corresponds to the three broad stages of the demographic transition model. The first stage, the 'age of pestilence and famine', represents a pre-modern period in which the major determinants of death were infectious, parasitic and malnutrition-related diseases, resulting in a very low life expectancy of between twenty and forty years. The second stage, the 'age of receding pandemics', is the transitional period in which mortality declines significantly, corresponding to the period of high population growth of the demographic transition model. The third stage is the 'age of degenerative and man-made [*sic*] diseases', in which infectious and parasitic disease is virtually eliminated and life expectancies improve to over fifty years (Omran, 1971, 1977). Whilst degenerative diseases, such as cancers and heart disease, are much more prevalent in developed countries, and these can be accounted for by the increase in life expectancy, it is widely recognised that environmental and social factors, such as pollution, smoking and diet, contribute to the risk of being affected by these diseases. Olshansky and Ault (1986) identified a fourth stage of the epidemiological transition, which they referred to as the 'age of delayed degenerative disease' in which, whilst life expectancies are reaching or exceeding eighty years, the later years are accompanied by chronic, but non-fatal, morbidity (Phillips, 1991).

Whilst these stages broadly describe the experience of many developed countries, there is considerable variation in the rapidity, pattern and extent to which epidemiological change has taken place, an issue that was recognised by Omran (1971, 1977) and incorporated into the central assumptions of his model. He defined three variations based on the demographic transition model; in practice, the rate at which a particular population progresses through the transition would appear to be connected with the speed of development. The first is the 'classical/Western' model, in which the rate of mortality decrease is slow. For example, Sweden took over 200 years to pass through the transition (Omran, 1971), corresponding with the agricultural and industrial revolution periods in that country and many others in Western Europe. The main causes of mortality decline in this case were improvements in public health, particularly sanitation, in the last century. The second variation, the 'accelerated' model, shows a very much quicker rate of improvement (Omran, 1971). Japan, for example, fits into this group since development was rapid, as were both medical advances and social development. Singapore and Hong Kong also fit this model; Hong Kong took around forty years to pass through the demographic/epidemiological transition (Phillips, 1990, 1991).

The third variation, the 'contemporary/delayed' model, describes the changes in the current developing world. Many countries show only recent improvements, which are slow, uncertain and inequitable. The causes of health improvements are often piecemeal public health measures introduced by foreign donors. However, it is difficult to generalise as the factors influencing transition have been varied. Indeed, '[t]he precise balance of the contributions of lifestyles, public health measures, medical care and

general improvements with development to health, however, is quite fiercely debated' (Phillips and Verhasselt, 1994: 13). In developed countries, the inception of the epidemiological transition coincided with improvements in living standards and public health/sanitation, in many cases pre-dating significant medical discoveries such as antibiotics (McKeown, 1965, 1988). Meanwhile, health improvements in developing countries, are more widely attributed to the introduction of Western health care programmes (Findlay, 1987). Technologically oriented health care has brought under control some of the most significant killer diseases, notably measles and polio, by means of extensive immunisation programmes, and this has contributed to significant health improvements (Phillips and Verhasselt, 1994). However, success in dealing with other diseases, such as malaria and schistosomiasis, has been more limited, and the effectiveness of technical interventionist programmes is increasingly challenged as the best means to improve health. Thus, the extent to which developing countries will follow the pattern experienced in developed countries is by no means certain.

A central assumption of the demographic and epidemiological transition models is that the process is linear, and that mortality and fertility change irreversibly when an agricultural/rural/traditional society modernises (Jones, 1990). However, in practice, this is not always the case. Whilst on balance 'orthodox' development is associated with improvements in health, reductions in mortality can be reversible. A number of countries in the poorer developing world continue to be affected by famines and chronic disease epidemics (Phillips and Verhasselt, 1994). A notable example is a major cholera epidemic that affected Latin America in 1991 and 1992. Importantly, the transmission of

this disease is directly related to conditions of poverty, particularly poor sanitation and water supply.

Although the epidemiological transition model acknowledges the close links between socio-economic changes and demographic/epidemiological change, in practice individual developed countries have had very different experiences of epidemiological change. Both the rate and patterns of change vary between regions and individual countries, reflecting the complexity of the links between health and development. The Arab oil producers, for example, have high levels of economic growth, but overall their populations have relatively poor health; Saudi Arabia had a GNP per capita of US\$7,820 in 1990 and an average life expectancy of 69 years (World Bank, 1993). This average life expectancy was matched by a number of countries that have undergone relatively modest economic growth, such as Sri Lanka (GNP per capita of US\$320) and Costa Rica (GNP per capita of US\$1,430), but have shown relatively impressive improvements in health (life expectancy of 67 years and 74 years respectively in 1990; *ibid.*). These examples demonstrate that many factors in addition to economic development influence health change, including environmental factors, education, nutrition, health care provision, and equitable development (Verhasselt, 1993, 1997).

A key assumption of the modernisation discourse is that in order for developing countries to 'progress', change should be in accordance with the capitalist model of the West, which comprises changing modes of production and consumption, involving technological, social, cultural and political changes (Hettne, 1995; Leys, 1996; Preston, 1996). The assertion is that whilst economic growth, through the expansion of industrial

production, will initially be concentrated spatially, and amongst certain socio-economic groups located in urban centres, the ultimate result will be an increase in income for all individuals in that country; that wealth will 'trickle down' to poor and rural groups. However, by the early 1970s, even international development agencies acknowledged the limits to which economic growth was contributing to the elimination of poverty, and that the benefits of economic development (industrialisation, urbanisation, increased production and consumption, provision of services and higher living standards) were only being felt by a small proportion of populations of developing countries. These benefits were rarely, if ever, significantly 'trickling down' to improve the situation of the poor, mostly rural, majorities of developing countries.

As a consequence, many developing countries, are experiencing a 'protracted polarised' epidemiological transition characterised by both social and geographical inequalities of health (Frenk *et al.*, 1989). Indeed, although Table 2.1 supports a positive association between development and health, it should be emphasised that, since the statistics are aggregated at national or regional level, they conceal significant spatial and socio-economic disparities in health levels within those countries. Spatial health disparities have become significant in many developing countries. The health of rural populations in particular, tends to be considerably worse than that of urban populations (Phillips, 1990; Phillips and Verhasselt, 1994). One of the primary causes of these regional and rural/urban disparities in health has been uneven development, reflecting the spatial concentration of resources in urban rather than rural areas. Lipton (1992) explains that these disparities arise from 'urban bias', and that the focus of development has been on the city, thus mirroring the Western development discourse. Although rural areas are

frequently more highly populated than urban areas, they tend to have relatively poor levels of infrastructure. Moreover, increased levels of consumption, together with the expansion of service provision, at a national level, has widened the gap between (urban) rich and (rural) poor (for example, Phillips, 1990; Phillips, 1991; Caldwell, 1993; Phillips and Verhasselt, 1994).

'Epidemiological polarisation' also manifests itself in significant socio-economic health inequalities; richer groups' disease/health profiles approximate those prevalent in the developed countries, whilst poorer groups continue to suffer from infectious and parasitic diseases and nutritional disorders. It has been generally assumed that urban residents benefit most from development, in the form of access to health services, education and cash incomes, and thus are more able to purchase the goods and services pertaining to improved health. However, this assumption is now widely challenged. Population growth in cities is higher than elsewhere, and a high proportion of it is poor. 'The urban poor, typically housed in slums and squatter settlements, often have to contend with appalling overcrowding, bad sanitation, and contaminated water. The sites are often illegal, and dangerous. Forcible eviction, floods and landslides, and chemical pollution are constant threats', all of which are associated with poverty, and are detrimental to health (Harpham, 1994: 114). The absence of community support (resulting from rural-urban migration) and limited employment opportunities make the urban poor more vulnerable. Many cities fail to provide even the most basic of health services, while the deficiencies of other public services such as sewerage, clean water and transport result in little chance of reducing the burden of infectious and parasitic disease (Harpham, 1994; Phillips and Verhasselt, 1994).

The assumption that development has positive implications for health, even if these improvements are limited for marginalised groups or in many regions, is being challenged. Orthodox development is based on the central belief that modernisation, through technical intervention and economic growth, is the most appropriate way of addressing underdevelopment and poverty, and that growth is only achievable through the operation of the free market. Economically oriented development, rather than a way in which underdevelopment could be eliminated, has actually created a scarcity of resources within developing countries, and has therefore been a central cause of worsening poverty, health and the loss of cultures (Yapa, 1995). Indeed, amongst some observers, it is becoming widely accepted that 'orthodox' development is associated with increases in absolute poverty, exacerbates inequality and detrimentally affects the conditions of the poor (for example, Peet and Watts, 1996; Escobar, 1995; Hettne, 1995; Yapa, 1995; Leys, 1996). It is now acknowledged that 'underdevelopment' is not a consequence of the inability of developing countries to develop effectively, but a condition of the capitalist development process.

The basis for Escobar's (1995) critique of the development discourse is that living conditions in developing countries have been worsening since the 1950s and that 'development' is responsible for this dilemma. 'Instead of a kingdom of abundance promised by theorists and politicians in the 1950s, the discourse and strategy of development produced its opposite: massive underdevelopment and impoverishment, untold exploitation and oppression... The fact that most people's *conditions* not only did not improve but *deteriorated* with the passing of time did not seem to bother most

experts' (Escobar, 1995: 4-5; emphasis added). There is little evidence that economic development in the post war period has significantly improved living standards in the developing world (for example, Peet and Watts, 1996; Escobar, 1995). Indeed, it is now recognised that these policies are actually threatening the health of some of the poorest urban and rural communities in the developing world.

The WHO has identified a number of critical concerns relating to the broad development process, which have major consequences in terms of worsening or limiting improvements in health. These include the increasing problems of disease associated with industrialisation, urbanisation and energy policy, particularly diseases arising from pollution and toxic waste management, low quality housing and lack of services for the poor. In rural areas, export-oriented agricultural policies are having implications for local food security. Moreover, irrigation schemes and the extensive use of agro-chemicals are having detrimental implications for health. The WHO also asserts that macro-economic policies are a particular area of concern, particularly structural adjustment and diminishing public expenditure on health and social budgets, both of which are having a considerable impact in many developing countries (Weil *et al.* 1990).

The externalities of modernisation, that is the 'health by-products' of industrialisation/urbanisation, threaten the health of the populations of developing countries (Phillips, 1990). Development represents a double health burden for poor groups. The urban poor face both the health problems of underdevelopment, such as high incidence of infectious diseases and infant mortality, as well as health threats from development/industrialisation/urbanisation, such as increased risk of non-communicable

chronic and degenerative diseases, caused by factors such as pollution and occupational hazards (Stephens and Harpham, 1992). In rural areas, health problems arise from the alteration of habitats and threats to livelihood systems of poorer groups (Yapa, 1995). Economic development projects, such as dams and large-scale irrigation projects, alter the environment and provide new ecological opportunities for disease vectors; the consequences for the health of urban and rural poor may include increased exposure to diseases such as malaria and schistosomiasis.

International pressure to increase exports is frequently a condition of structural adjustment policies. Such forms of rural development also have implications for livelihoods. Land previously used for subsistence and small scale locally-oriented economies has been opened up and used for export-oriented commercial agriculture, resulting in the destruction of livelihood systems and loss of food-security; '... the production of export crops and livestock for export are seldom adequate substitutes for indigenous food supply... [s]uch change in the name of economic development often had a negative impact on local nutrition. This in turn has undermined resistance to disease' (Yapa, 1995: 113 after Goodman and Redclift, 1992). The commercialisation of agricultural production, and its orientation towards the export market, is also having serious consequences for the health of rural populations of developing countries. The wide scale use of agro-chemicals improves levels of agricultural production in Africa and Latin America, and this increase in supply has resulted in reduced costs to consumers in the West. However, unlike the mechanised delivery of agro-chemicals in developed countries, agricultural workers in developing countries are in direct contact with the chemicals, thus '... economic development protects the US consumer while... [t]ens of

thousands of farmers and farm workers and their children die of accidental exposure to agro-chemicals every year in the Third World' (Yapa, 1995: 113).

The fundamental concept that has dominated development practice in the 1980s and 1990s is that of the free-market, articulated through structural adjustment programmes, privatisation and market deregulation policies. Structural adjustment takes two basic forms: shorter-term 'stabilisation programmes', and longer-term 'structural adjustment' programmes. Stabilisation programmes are the means by which state expenditure in developing countries is reduced. Currencies are devalued, resulting in import reduction, and public expenditure is curtailed, especially in non-productive sectors such as health care. Structural adjustment programmes are also intended to promote economic growth in the longer-term, by reducing the participation of the public sector in national economies and by encouraging market-oriented exports (Woodward, 1992). Thus, programmes encourage private sector participation in the economy, which frequently involves the complete privatisation of state industries, together with the partial privatisation of the non-productive sectors, including welfare and services. In addition, markets are deregulated, wage legislation is relaxed and state subsidies are reduced or removed entirely.

Some of the most serious consequences of structural adjustment for health include threats to people's livelihoods, and therefore problems of food security, as well as the decline in expenditure on health care and education (Asthana, 1994a). However, whilst structural adjustment has been widely criticised for the negative effect on health, assessing the exact degree of the impact is problematic. It is difficult to measure the

exact implications of malnutrition, since deaths are frequently associated with decreased resistance to infection rather than starvation in its own right. UNICEF (1983) highlighted the synergistic relationship between nutrition and health; infection reduces appetites, induces bodily rejection of food by vomiting and diarrhoea and decreases the body's ability to absorb nutrients. Thus, malnutrition and infection form a self-perpetuating cycle. It is also difficult to separate the effects of debt from the effects of structural adjustment itself (Asthana, 1994a), or to disaggregate the effects of '... adjustment policies, the underlying economic crisis, and intervening events such as war, famine or political upheaval' (DeJong, 1995: 445-6). The impact on health is cumulative, therefore the full impact will only become evident in the long term (Woodward, 1992). The World Bank argues that it is a reasonable price to pay on the grounds that '... adjustment is clearly needed for long-run health gains. But during the transition period, and especially in the earlier adjustment programmes, recession and cuts in public spending [have] slowed improvements in health' (World Bank, 1993: 8). Clearly, balancing the 'short-term' hardship of the poorest groups with uncertain long-term benefits of structural adjustment, is a highly contentious issue.

Structural adjustment advocates the shift in emphasis from manufacturing to primary commodity production. The International Monetary Fund and the World Bank argue that the urban-rural economic bias is being redressed, in that the economic emphasis from urban focused production/consumption has shifted in favour of rural production. Market deregulation, including cuts in subsidies and price controls, has increased food prices (and other consumable commodities) in some developing countries. Indeed, those rural dwellers with enough land to produce a surplus for sale, have benefited from

increased prices within the free market (Asthana, 1994a). However, commercial agriculture has encroached into areas that previously supported subsistence/smallholding and local market production, and rural economies are becoming more oriented towards wage labour. In practice, this has resulted in the loss of livelihoods and food security for the majority of rural people (Yapa, 1995). Net food purchasers, such as landless labourers and smallholders who purchase food on the open market, are particularly affected. Increased prices, together with reductions in food subsidies, have had a negative impact on the food security of the poorest elements of society who are least able to pay, and in many cases this has contributed to rural-urban migration. In addition, labour market deregulation, relaxation of wages and outright reduction in the number of employment opportunities, particularly in the urban/public sectors, has resulted in a growing labour surplus in some countries, driving down wages further, threatening the previously secure formal sector employment and causing a reduction in household incomes. As a consequence, '[m]any households have lost the purchasing power to meet minimum food needs' (Asthana, 1994a: 56).

Although the World Bank maintains that the health and education sectors are better protected than most other sectors, in practice, expenditure has been reduced (especially in many African countries), depending on level of debts and participation in structural adjustment programmes (Woodward, 1992). For example, Stewart (1992) suggested that in Zambia, real expenditure on health care dropped by nearly 25% in the early 1980s. Government expenditure on health and education systematically decreased during the 1980s, particularly for severely indebted countries, and the health and education sectors, rather than being protected, have been particularly badly affected (Woodward,

1992). Implications for health sector budget reductions include the shortage of (imported) medicines, problems with paying medical personnel, the imposition of user fees and the quality and extent of government health services (Asthana, 1994a; Gilson *et al.*, 1995). One of the results in many developing countries has been a reduction in the coverage of immunisation programmes which has, in some cases, resulted in worsening infant and child mortality due to an upsurge in previously suppressed infectious diseases (Asthana, 1994a). The supply of government subsidised medical drugs and equipment has also been affected by the diminishing ability of many developing countries to import goods. In many cases, this has made it necessary for patients to purchase their own medication from private pharmacists at an elevated price.

In reinforcing and extending market-oriented development, and limiting investment in social development programmes, such as welfare services for the poor, structural adjustment is exacerbating inequalities between rich and poor groups, just as modernisation has been doing throughout the latter part of this century. By the mid-1980s, the health and welfare of the poor had actually deteriorated (Asthana, 1994a). UNICEF's 'Adjustment with a Human Face' programme (Cornia *et al.* 1987), was conceived to protect the poor during structural adjustment. However, projects at both macro- and meso-economic levels aimed at raising levels of employment, promoting small scale production initiatives, maintaining food subsidies and trying to encourage basic needs provision, have had little effect. Moreover, these were clearly at odds with the Bamako Initiative, which, in reflecting the shift towards market-based health care allocation, has been criticised for compromising accessibility by poor groups. Messkoub (1992) argued that the 'Human Face' scheme is ineffective, piecemeal, palliative and

fails to address the root causes of economic crisis, in particular the nature of the prevailing development model itself.

2.3 Health provision discourses

Health delivery systems in developing countries which gained independence in the twentieth century originated from, and continue to be, heavily influenced by policies and infrastructure developed during the colonial period. Health systems were introduced then, primarily for the benefit of expatriate administrators and indigenous elites, and were therefore only accessible by those groups and appropriate to their health needs. They thus helped to establish and maintain colonial rule of subject populations (Curtis and Taket, 1996). Curative treatments prevailed, delivered through 'top-down' hierarchical systems, such that resources were primarily concentrated in urban areas, and the majority of people, particularly those inhabiting rural areas, had very limited, if any, access to services. In addition, health programmes associated with colonial powers, frequently suppressed simple indigenous systems of public health care (Waite, 1987; Phillips, 1990), thus the health of many groups of people in colonised countries initially worsened (Phillips, 1990).

Post-colonial health services continue to be based on top-down decision making and planning, and therefore reflect the interests of dominant groups and institutions. High technology hospitals have been considered prestigious by governments, often constructed in an effort to seek political popularity, especially from urban elites, as '... modern medical paraphernalia and state-of-the-art health services may be espoused for

prestige reasons... as symbols of modern development' (Phillips, 1990: 21). Thus, the introduction of technology had the effect of exacerbating spatial and socio-economic disparities of accessibility to health care.

In practice, the health systems adopted in most developing countries are based on Western orthodox, 'top-down' development strategies, and so reflect the bio-medical discourse and the nature of health care delivery prevalent in developed countries. The modernisation discourse of development has asserted that in order for development to take place, 'traditional' attitudes and cultures need to take on the characteristics of 'modern' societies (Preston, 1996; Leys, 1996). An early proponent of this view was Veliz (1966), who stressed that these social and cultural factors are 'Obstacles to Development'. International health development institutions have tended to adopt this discourse, emphasising that to deliver modern medical interventions effectively, 'traditional' attitudes have to be displaced in order for users in developing countries to accept modern medical services and practices (Zaidi, 1994). Foster (1987: 1041), in criticising the interventions of international health care institutions in developing countries, suggested that the main problem with the 'implantation' of Western forms of health care for international health agencies has been to '... persuade people to abandon beliefs and practices in favour of the new'. Thus, most health care interventions have had little sensitivity to local cultural and social values.

Most services are spatially concentrated, technically oriented, high cost, and emphasise treatment, rather than prevention and health promotion. Efficiency was sought through the organisation of services based on a hierarchical system, whereby smaller settlements

are provided with more basic services. These are generally linked to the more spatially centralised, sophisticated and specialised services through a referral system. This, in theory, allows a patient living in a rural area, to be referred to higher order services when necessary. However, in practice, referral may be fairly loosely organised, and accessibility to higher order care is difficult for rural populations (Phillips, 1990). The result is that health services are generally unavailable, inappropriate and inaccessible to the majority of people living in developing countries, as was the case under colonial rule.

More recently, the international dimension has become an important factor in health provision. International agencies are significant in determining the delivery of health systems in developing countries (Zaidi, 1994). The conditionality of aid, access to loans, and rescheduling of loans have determined how budgets are spent, as was made explicit in the World Bank World Development Report (1993). As a result, the vested interests of Western governments and the policies of non-government organisations have significantly influenced the planning of health services in developing countries. Implicitly, the interests of the user/target population have been ignored, and they have little, if any, say in how and where, and indeed whether, health care services should be provided (Zaidi, 1994). Balancing the top-down approach to health care planning by promoting the decentralisation of health care planning is widely accepted as a positive step by the international community in encouraging local level participation and decision making in order to improve appropriateness and increase user acceptability of services. However, in practice, health care planning in most developing countries remains centralised, and this reflects the lack of real democracy in many of these countries. Moreover, a danger of attempting decentralisation is that local elites potentially

dominate the decentralised system in order to meet their own objectives, and that regional inequalities of provision may be exacerbated (Atkinson, 1995). Thus, regardless of whether health care planning takes place at international, national or local level, the agendas of dominant groups tend to define the organisation of provision, rather than the needs of the majority.

Tudor-Hart's (1971) 'Inverse Care Law thesis' reveals that the spatial provision of health care services tends to be inversely proportional to a population's need, even in the developed world. In cases where market forces are responsible for the allocation of resources, health systems tend to have particularly weak 'territorial justice'. The ideal distribution of health care should be based on equal spatial allocation, that is, based on territorial justice (Curtis and Taket, 1996). However, tertiary hospital care very often absorbs a high proportion of total health care expenditure, resulting in considerable regional variations in delivery. Thus rural areas are frequently under-provided for, which limits accessibility to even the most basic health care for large proportions of their populations. Curtis and Taket (1996) distinguished between the provision of health services (or other resources) based on 'equality', that is distribution based on equal accessibility for all, and 'equity' whereby delivery is proportional to a population's need. Health delivery systems in many less developed countries disproportionately serve urban populations compared to the population as a whole; that is, there is considerable 'inequality' of distribution. Moreover, there also tends to be considerable 'inequity' of provision; those with worse health and therefore greatest need, such as rural populations, generally find health care more inaccessible, thus exacerbating health disparities.

The distinction between health care spending and appropriate, accessible health care is significant (Caldwell, 1993). Many Arab countries, such as Saudi Arabia and Libya, have directed relatively high proportions of their budgets towards health care, but this has not resulted in commensurate improvements in health standards. For example, Saudi Arabia spent 4.8% of its GNP on health care and provided one doctor per 690 people, only achieving an average life expectancy of 64 years in 1990. By comparison, some countries with low levels of health expenditure, such as Sri Lanka, which spent 1.7% of its GNP on health care, and provided one doctor per 5,520 people, achieved a much higher average life expectancy of 71 years (World Bank, 1990). Thus, the performance of health care systems is not necessarily associated with levels of medical technology, or even, to some extent, levels of health service financing. The effective planning and implementation of appropriate health-related programmes are far more significant (Caldwell, 1993). Indeed, the World Bank (1993) considered that disease burdens could be reduced in developing countries by a quarter through channelling existing levels of expenditure into low technology basic health care, immunisation and nutrition programmes, which are very cost effective.

A number of countries, notably Sri Lanka, China, Burma, Jamaica, India, Zaire, Tanzania, Kenya, Cost Rica, Ghana and Thailand have had recent health gains that are far better than could be predicted from their per capita income, thus supporting the World Bank's assertion. These countries generally have '... comprehensive and *accessible* health programmes with community involvement and... education, especially female schooling' (Caldwell, 1993: 126; emphasis added). The number and availability

of doctors and nutritional status were to a much lesser extent associated with significant health gain. A significant feature of effective health care in the Indian state of Kerala, for example, was that services were appropriate (simple, rather than technologically oriented, with strong preventative elements, such as children's vaccination programmes), geographically accessible to all groups, free or inexpensive to users and accepted by the community. Accessible and appropriate health services, as part of a multi-sectoral package, are therefore a critical precursor to health improvements in developing countries. However, the success of these services is dependent on 'favourable' social conditions, such as the recipient population's attitudes, levels of education, their acceptance of services and appropriate use of them (Caldwell, 1986, 1993).

The modernisation and bio-medical discourses advocated the introduction of technology as the principal way to improve health. However, by the early 1970s, approaches to health care planning were being widely revised, and an equality discourse was emerging. In recognition of the scale of health problems globally, and particularly those prevailing in low-income countries, the WHO established an ambitious agenda which became known as 'Health for All by the Year 2000' (HFA2000). This was intended to promote improvements in the equality of health care provision, and 'the attainment by all peoples of the highest possible level of health' (WHO, 1988: 2), that is to '... assure all people of the world a level of health that would make it possible for each individual to lead a socially and economically productive life' (Ojanuga and Gilbert, 1992: 613, after Mahler, 1981). A central element of HFA2000 was to promote the universal accessibility of health care (Mahler, 1974), a principle accepted by most developed and

developing countries, many of which have attempted to integrate the recommendations into their national health systems policies. HFA2000 accords closely with the Basic Human Needs approach to development of the 1970s, and coincided with, and was heavily influenced by, ‘... an increasing rejection of the trickle down concept; the increasing importance of debates over social justice and equity; and the recognition of enormous health problems still remaining, particularly in low-income countries...’ (Curtis and Taket, 1996: 255, after Bryant, 1980). A key juncture in the conception of HFA2000, was the adoption by international development institutions, of ‘Primary Health Care’ (PHC).

PHC was formally articulated at the international WHO (1978) Conference at Almaty (formerly Alma Ata) in 1978, and was intended to be one of the principal ways of achieving HFA2000. PHC was conceived in recognition of the weaknesses of orthodox systems of health care delivery in the context of the developing world. However, PHC has actually been practised for many years; indeed, the equitable health gain in countries with low levels of economic growth, such as China, Cuba, Tanzania and regions such as Kerala, have inspired PHC programmes elsewhere. The Chinese have put far more emphasis on equality by emphasising provision at the bottom end of the health delivery hierarchy. Their health system, characterised by spatial decentralisation, preventative measures, community participation, ‘barefoot doctors’, and relatively equitable socio-economic development, was particularly seen as a model that other developing countries could follow (Asthana, 1994b).

PHC, as it was defined in 1978, not only involves a shift in emphasis regarding the location of health care outlets, but also a shift in what is provided, and how it is delivered. PHC is defined as a '... mixture of preventative and promotive activities of a basic nature, involving many segments of economy and society that have a bearing on health and welfare, not solely (primary) medical care' (Phillips, 1990: 151, after WHO (1978)). The WHO (1978) stated that PHC should include health education, provision of adequate food and safe water supply, sanitation, maternal and child health provision, family planning, immunisation programmes and other disease prevention, clinical treatment of basic diseases and an adequate supply of basic medications. Thus PHC embodies the WHO's '... complete state of physical, mental and mental well-being...' rather than a bio-medical 'absence of disease or infirmity' definition. The focus has changed from treating sickness, to considering health in its broader terms. The emphasis on vertical top-down, curative treatment, is therefore being rejected in favour of preventative programmes such as immunisation and public health, and ultimately to comprehensive multi-sector social development.

The HFA2000 resolution recognised that improved health depends on the improvement of socio-economic conditions, and the reduction of poverty, a goal unattainable by the health sector alone. PHC is intended to play a central role in these changes. The emphasis has been to encourage community participation and increase co-operation between users and providers. The de-professionalisation of primary health care workers, by using local volunteers with some basic medical training, was a strategy intended to achieve this. Hence, 'barefoot' doctor' and 'village health worker' have become part of health development vocabulary, and have been integrated into a number of delivery

systems (Phillips, 1990). PHC is intended to be a holistic and a multi-sectoral (horizontal) approach to ensure appropriate health care is available and accessible to entire populations.

In the 1980s and 1990s, the ideals of HFA2000 and PHC have given way to efficiency discourses, which are at the core of contemporary development practices. Long term structural adjustment policies advocate reducing the capacity of the state as the primary provider of social welfare (services), by transferring increased participation to the private sector (World Bank, 1993; Asthana, 1994a; Curtis and Taket, 1996), together with families assuming the burden of their own social support (DeJong, 1995). The promotion of 'diversity and competition' in the health sector is a central component of World Bank policy, outlined in the 'World Development Report: Investing in Health' (World Bank, 1993). This encourages the private financing of clinical services or private social insurance schemes. However, the report admitted that the market is incapable of delivering basic services equitably; '[t]he challenge for most governments is to concentrate resources on compensating market failures and efficiently funding services that will particularly benefit the poor' (World Bank, 1993: 6). The report also advocated the need to improve government spending on health, suggesting expenditure should be reduced on facilities that have low cost effectiveness, such as tertiary facilities. The World Bank stresses the need for governments to '[f]inance and ensure delivery of a package of essential clinical services' that are appropriate to the needs of a user population taking into account incomes, locations, epidemiological and demographic characteristics and socio-cultural values (*ibid.*). Within the context of structural adjustment, it is unlikely that the governments of developing countries will be able to

reconcile the demands of empowered groups for more sophisticated services with the needs of majorities. In practice, the World Bank's 'improved' government spending equates with less spending overall, and in this context it is unlikely that an increasingly privately-oriented health service will be better able to provide more equitable and appropriate health care in practice.

Cost recovery programmes have become the principal strategy within the context of structural adjustment policies for funding, maintaining and improving health services. Whilst cost recovery policy is widely criticised, the reality has been that health service user fees have become an integral part of recent stabilisation and structural adjustment programmes, and have been employed in most low and middle-income countries in the 1980s and 1990s. Advocates of user fees have asserted that fees can protect the poor by a combination of exemptions, and cost subsidies to poor areas or groups, strategies which have been attempted in many developing countries. Other supporters argued that they could improve the effectiveness and efficiency of clinical services by discouraging over-utilisation. Critics of user fees, such as Creese (1991), pointed out that the equity and equality of health care accessibility is compromised. The impact has been the wide scale reduction in health service utilisation rates, particularly by the poorest members of society who are most likely to need health care, especially since their livelihoods are disproportionately threatened by structural adjustment (Gilson *et al.*, 1995). For example, the 'Bamako Initiative', which was supported by UNICEF, was conceived to allay the health crisis in Africa arising from shortages of essential medical drugs. The project introduced user charges for medicines with the intention of using the profits to increase stocks of essential drugs, and to improve the quality of service, as well as to

rationalise household expenditure on health. Critics of the scheme emphasise that the burden of expense is placed on the poorest members of society. Phillips (1990) argued that rural populations should be entitled to lower charges than urban populations, since they are likely to have lower incomes and higher transport costs in reaching services, thus justifying some form of socio-economic or geographical price discrimination.

Although the incorporation of PHC into national development programmes has been widely acknowledged as a key way of achieving HFA2000, in practice the adoption of structural adjustment and economic austerity programmes has led to the reassessment of health care policy in a pragmatic attempt to maximise efficiency and to control costs. Thus, rather than pursuing (comprehensive) PHC, which aimed at concurrently addressing all health problems from the base up, a more limited form of PHC, 'selective primary health care' (SPHC), has been endorsed by the international community. Supported by UNICEF, SPHC prioritises the prevention and treatment of specific, high priority, mostly paediatric diseases (Asthana, 1994b). The specific priorities include the growth monitoring of children, the delivery of oral re-hydration therapy to help alleviate diarrhoea symptoms and therefore promote increased absorption of food into the body, breast feeding promotion, immunisations, family spacing, female education and food supplements. The central criticism of SPHC is that, in addressing only specific diseases, predominantly those of the first stage of the epidemiological transition, it contains little of the broad social, mental and physical well-being dimension of PHC. Instead, a more technological approach is pursued, which Phillips (1990) suggested will benefit urban more than rural residents due to their greater accessibility to SPHC delivery.

Whilst PHC programmes have been implemented in a number of countries, overall adoption has been limited, and inaccessibility to basic health services, especially for poor/rural groups, continues to prevail. This was conceded by the WHO (1998), which has revised its slogan to 'Health for All in the Twenty First Century' (HFA21stC). Improving access to comprehensive essential, quality health care continues to be a key goal to achieving health improvements within the WHO's revised HFA21stC time frame. The principal reasons for the limited success of HFA2000 were: '... insufficient political commitment to the implementation of Health for All, slow socio-economic development, difficulty in achieving intersectoral action for health, insufficient funding for health, rapid demographic and epidemiological changes, and natural and man-made [*sic*] disasters' (WHO, 1998: v). Whilst the WHO draws attention to difficulties arising within developing countries, such as the lack of political will and population growth, it does not acknowledge the most fundamental criticism of PHC, that it fails to address the principal root of poor health, that is poverty and underdevelopment (Phillips, 1990).

2.4 Conclusions

There are clear connections between an individual's social context, their health and illness discourses, health and illness behaviour, and more specifically their health service utilisation. This study draws on the lay health and illness discourse concept to help explain changing patterns of health and illness behaviour in sedentarising communities in a developing country, relating these changes to socio-economic transformations over the last two decades. This research is a useful contribution to the literature, since the

majority of previous studies have considered groups in developed countries, and have therefore represented relatively stable patterns of health and illness behaviour.

Health is intrinsically related to the development process. This chapter has highlighted many of the complexities of the relationship. Discourses have shifted from the uncritical assumption that economic oriented development leads to health improvement, to the recognition that many countries with significant economic growth, have relatively limited health gain, owing to the lack of equality in the distribution of resources and the lack of social equality. Within developing countries, this has resulted in considerable spatial and social inequalities in health, a 'polarised epidemiological transition'. Moreover, it is now widely accepted that development policies are actually threatening the health of many urban and rural groups.

In practice, the majority of health systems in developing countries are inaccessible and inappropriate. This exacerbates limited and unequal health gains. Discourses emerging in the 1970s, emphasised the need to improve equality in health care delivery, articulated through HFA2000 and PHC. However, implementation has been limited and wide-scale inaccessibility to basic health care prevails. International development institutions now dominate health care discourses. The WHO stresses the importance of health for all, that health is a holistic concept, and indeed health is a fundamental human right. The World Bank embraces an efficiency discourse articulated through structural adjustment programmes. Thus, a tension pervades current health care planning and practice between attempts to improve the equality of accessibility to basic health services, and the inescapable need to increase the efficiency of delivery.

There have been important shifts in health discourses from the bio-medical 'health as an absence of disease' definition (embodied in curative, technical health care services), towards a socio-ecological definition which acknowledges that, in addition to health services, other dimensions of development critically affect health, such as poverty alleviation, public health, income, nutrition, environmental quality and education. However, it is important to acknowledge the significance of health care to health improvements. The populations of a number of developing countries have experienced impressive health improvements, but with relatively limited economic growth. Whilst it is suggested that education, particularly female education, contributes to these improvements, the actual provision of health services has been the catalyst for significant health gains. High levels of state expenditure in the health sector do not account for these improvements. Favourable social conditions, together with effective (basic) health care delivery, which is appropriate, acceptable and universally accessible, have been significant precursors of health improvement. Promoting universally accessible, acceptable and appropriate health care continues to be a key goal to achieving health improvements within the WHO's HFA21stC resolution, reinforcing the need to understand how services are inaccessible and unacceptable, to identify groups with poor accessibility and to suggest ways of improving it. The next chapter reviews the literature relating to accessibility and utilisation of health services.

Chapter 3

Health Care Accessibility and Utilisation

3.1 Concepts of health care utilisation

The factors mediating the utilisation of health services are complex, and a number of key concepts have to be defined in order to analyse and discuss these factors. Two forms of health care seeking behaviour were defined by Mechanic (1962, 1968). 'Health behaviour' includes an activity or activities of an individual to remain healthy or to avoid future illness, such as taking preventative medicine, or by following practices such as careful attention to nutrition or diet. 'Illness behaviour' is actively undertaken to cure or ameliorate illness (Joseph and Phillips, 1984). A potential patient's 'need' is generally considered to be an important determinant of utilisation. Moreover, a number of forms of need have been identified, including professionally defined 'normative need', which reflects the bio-medical discourse of diagnosable disease. This can be distinguished from 'felt need', which is perceived or experienced by the individual, that is an 'illness' rather than a disease (Bradshaw, 1972). 'Expressed need', that is illness behaviour, is articulated by seeking or demanding medical care. A further concept, 'comparative need', concerns the overall needs of groups, rather than individuals, allowing these groups to be more easily compared on a regional level.

A similar range of variations surrounds the conceptualisation of accessibility, which Moseley (1979) defined as something that is 'get-at-able'. Joseph and Phillips (1984) refer to accessibility in terms of the factors that intervene between felt need and

expressed need, and more specifically, health care utilisation. They identified 'potential accessibility', which simply implies the existence of a service in a given area. Accessibility to a service can be determined by its geographical proximity to a potential patient, that is 'locational accessibility', which could be measured on a crude distance scale. However, non-geographical factors also explain health service utilisation, thus, 'effective accessibility' is a much more useful concept, since it reflects an individual's or family's '... ability, mobility and time to reach a service' once they have established need (Phillips 1990: 104).

'Utilisation' of health care facilities is also not a simple concept. Utilisation can signify use, as well as the frequency and efficacy of utilisation. Moreover, utilisation is not always appropriate for a patient's need; 'inappropriate utilisation' may occur if an inappropriate form of service has been used for a specific need, for example, the use of highly sophisticated facilities for relatively minor health needs. Inappropriate utilisation may also occur if treatment is administered to a patient without need, that is 'over-utilisation', and is most likely to stem from the over provision of facilities (Payne, 1987). This is less common in developing countries, since a deficit of facilities is more likely to result in overall 'under-utilisation' (Phillips, 1990). Thus, as the previous chapter suggested, an important part of health care planning is to find a balance between problems of inequality and efficiency.

3.2 Accessibility and utilisation

The simplest indicator of the potential accessibility of health services is to measure the ratio between medical personnel, or the number of hospital beds, and the population in a particular region. Akhtar and Izhar (1994), for example, compared doctor to patient and bed to patient ratios in India and Zambia. They highlighted significant spatial disparities in health service provision between regions, and therefore uneven potential accessibility. Knox (1978) and Joseph and Blantock (1982) examined the potential geographical accessibility of general practitioners to different populations using the 'gravity model' approach, which is used to quantify aggregate proximity of health services for potential users. This approach has been used to assist planners in identifying regional disparities in potential accessibility to health care, and thus improve territorial justice by optimising the locations of health services relative to user groups. However, it is also very limited, in that neither the differences between sub-groups' accessibility, nor the non-spatial factors affecting accessibility are addressed.

These limitations can be overcome by considering the factors that enable or inhibit health service utilisation at individual or family level. Studies using this approach incorporate non-geographical accessibility factors and account for variations in need, behaviour and circumstances between individuals or families. A number of studies have attempted to identify and categorise these individual and family level factors. Aday *et al.* (1980) after Andersen (1968), for example, identified factors 'predisposing' the utilisation of health services, such as age, sex, social structures, occupations, education, ethnicity and health beliefs. These factors are distinguished from 'enabling' factors, which

encourage or inhibit utilisation, including the resources of a family or community, such as income and private transportation. Gross (1972) proposed a relatively sophisticated model which incorporated a number of groups of factors. The model recognises predisposing and enabling factors (health knowledge and education were listed as factors), together with a potential user's perceived health level (felt need). He highlighted the significance of accessibility factors for the individual user of health services, such as distance, time and costs in seeking health services, in determining utilisation.

Whilst such studies identify a wide range of variables, their relative complexity makes them difficult to use in practice (Joseph and Phillips, 1984). The Gross (1972) model is very useful in that it identifies a wide range of variables, but their incorporation into a numerical expression in order to measure their relative importance is difficult to implement (Joseph and Phillips, 1984; Phillips, 1990). Indeed, the quantification of most determinants of utilisation behaviour is difficult, particularly for subjective variables such as beliefs and attitudes (Phillips, 1990). Most accessibility and utilisation studies, together with lay health and illness discourse studies, reflect the relatively stable patterns of health and illness behaviour in developed countries. This reduces their applicability within the context of the rapid social, economic and political changes in many developing countries, particularly those in which health services have been recently introduced into communities with little or no previous provision. Constant and rapid changes in education levels, attitudes, understanding and health beliefs, together with changes in social and economic characteristics, occupations, mobility and attitudes within communities of potential health service users, further limit the applicability of the

studies. This is reflected in the rapidity through which many developing countries, especially the 'middle-income' developing countries, are passing through the epidemiological transition. Thus, health and illness behaviour in this context, is likely to be dynamic and rapidly evolving. Another limiting assumption is that potential service users live at fixed locations and travel to utilise health care provided at fixed points of delivery; accessibility and utilisation for nomadic or seasonally nomadic groups have not been addressed.

Moreover, traditional medical systems are frequently more widely used in developing countries than in developed countries. This further limits the applicability of some of the models, such as Andersen (1968), Gross (1972) and Aday *et al.* (1980), which are generally based on the factors influencing the utilisation of modern medical services (Phillips, 1990). Good's (1987) study addresses the issue of medical pluralism by incorporating formal public and private facilities, self-treatment and traditional medical practitioners in a model of health care options and decision-making based on a study in rural Kenya. The study also recognised the importance of the lay referral system in which 'significant others', the senior members of a family or community, have a role in the health care decision making of other members. However, Phillips (1990, 1991) stresses that multiple therapies may be used concurrently or sequentially for a particular illness episode. Ojanuga and Lefcowitz's (1982) study in Nigeria identified a number of types of illness behaviour, embracing separate use, simultaneous use, and having recourse to the other in the event of the failure of the first tried. Other studies have found that people use either modern or traditional medicine depending on the symptoms of a specific illness episode. Traditional medicines may be sought for specific needs,

whilst modern medicine is used for more serious illness episodes (Good, 1987; Phillips, 1991). The type of health care used is therefore based on an individual's perceptions of the quality of services and the efficacy of available treatments. A study of the use of modern and traditional medicine in southern India suggested many reasons for choice of medicine, which include preferences of treatment methods for different conditions, satisfaction of previous experience of health care, '... attitudes, opinions, preferences and experiences' (Phillips *et al.* 1992).

Whilst studies which focus on issues mediating individual and household level accessibility and utilisation of health services can reveal complexity and variation, a common weakness is that they consider health care seeking in isolation from the nature of the health services themselves. A number of studies have attempted to incorporate more explicitly the structure of health service delivery into explanations of accessibility and utilisation patterns. For example, Aday and Anderson (1974) emphasised that utilisation and efficacy, measured in terms of 'customer satisfaction', are products of a patient's characteristics (predisposing and enabling factors and patient need) as well as the characteristics of the service provider, such as resources and how they are organised. Dutton (1996) distinguished patient-controlled factors, such as the recognition of need to seek health care and resultant illness behaviour, from physician-controlled factors, such as decisions relating to which medication to prescribe. Thus, both the patient and the physician/service organisation determine the effective utilisation of health services. However, for Mechanic (1995), the distinction between patient and physician-controlled factors is less dichotomous. He suggested that a medical consultation generally consists of a process of negotiation between the patient, who may choose to withhold

information or ultimately refuse treatment, and the clinician.

Accessibility to health services is a complex process, one that takes place at, at least, three levels. Firstly, factors operating at a 'societal macro-level', including political orientation, macro-economic policy and health policy, determine the overall distribution of health care resources. Secondly, 'institutional level' factors, including the costs of services, profit orientation of the health system, staff training and the behaviour of health professionals, determine the organisation of health services at the local level. Thirdly, 'individual/family level' factors include the characteristics of potential health service users, such as their ability to pay, aetiological beliefs, education, type of health problem and age, and factors relating to behaviour, such as perceptions of the severity of an illness and the effectiveness of a service, which determine predisposition to use a particular service (Puentus-Markides, 1992). However, she primarily considered national health care in isolation. Health policy in developing countries is also determined to a significant extent by international agencies and institutions, and in effect Western governments (Zaidi, 1994). Thus, accessibility to health services is determined at individual/household, institutional, national and international levels.

3.3 Constraints on accessibility

The constraints on accessibility include geographical, organisational/delivery system, economic and socio-cultural factors, which will be examined in turn (McKinlay, 1972; Joseph and Phillips, 1984; Phillips, 1990). The influence of distance-time factors on the utilisation of health services is widely accepted. Models of distance and service

utilisation include those used to establish the optimum location for facilities in relation to user populations, such as 'gravity models'. The importance of the location of health services in relation to individual users was documented in 1851. Jarvis' Law, based on the use of mental health care facilities, illustrates that user rates of a particular facility are adversely associated with distance from the referring practitioner, and therefore patient (Joseph and Phillips, 1984). The 'distance-decay' concept establishes that levels of utilisation are negatively related to both distance and travel time between a potential user and a service (Aday and Andersen, 1974; Joseph and Phillips, 1984; Phillips, 1990).

A health service user's assessment of the nature of an illness episode and perceptions of its seriousness, together with an assessment of the suitability of a medical facility, also influence the distance an individual may be prepared to travel to a medical service. The steepness of the gradient of utility depends on the particular facilities an outlet provides and the seriousness of an illness episode. Stock (1983) carried out a detailed study of the effects of distance on attendance rates at health clinics in Nigeria, finding, unsurprisingly, that utilisation was negatively related to the distance between the user and service, together with the time taken to reach it. It was also found that people suffering from fever were more likely to travel a greater distance to receive treatment than those with a relatively mild ailment, such as a skin rash. Thus, as highlighted in Chapter Two, the prevalent hierarchical health service structures reflect the expectation that users will travel considerable distances to use more sophisticated, tertiary services. These are generally centralised geographically to minimise aggregate journey distances, whilst basic services are geographically dispersed to serve local groups.

Stock (1983, 1987) found that, in addition to the distance between a user and a service, a number of other factors influence utilisation, such as the availability of private transportation, public transport networks and roads, together with the costs involved in travelling. Thus, accessibility to services reflects an individual's or household's location as well as enabling factors, such as their ability to travel, their transport and their financial and other resources (Phillips, 1990). Accessibility may therefore be socio-economically differentiated; higher income groups have better accessibility to transport, and are more likely to be able to travel further, as noted by Habib and Vaughan's (1986) study in Iraq, and Chernichovsky and Meesook's (1986) study in Indonesia. Bailey and Phillips' (1990) study in Jamaica suggested that richer families travel greater distances to use private medical centres, whilst poorer families tend to use local government clinics, illustrating that economic and geographical accessibility are closely interconnected. Indeed, as Chapter Two highlighted, there are significant spatial disparities in the distribution of resources in both developing countries and developed countries. Joseph and Phillips (1984) noted that lower income regions may be relatively poorly provided with health services. Therefore, even within the context of a welfare state health system, potential accessibility may be worse for poorer than for richer groups living in well provided for areas. Higher income groups may have greater proximity to better quality and higher level services (as predicted by the Inverse Care Law), they may have greater mobility, are better able to pay for these services and have a greater range of options (such as private or public services) than poorer groups (Joseph and Phillips, 1984).

The administration and organisation of health service delivery also affect accessibility; 'organisational' factors are time-related variables that cause inconvenience and economic

costs to users (McKinlay, 1972; Wolinsky and Marder, 1983; Phillips, 1990). Carlstein *et al.* (1978) referred to 'coupling constraints' between health services and users of these services. Facility opening times, relative to times when people are able to visit, as well as waiting times and queues for consultations, affect accessibility and therefore utilisation rates (Akin, *et al.*, 1985). This is also true in developed countries. Tivers (1985, 1988) highlighted the time-space 'juggling act' needed in the everyday life of London mothers who balance household activities, including taking children to use medical services, within the physical constraints of space and time. Time-related 'organisational' factors may therefore lead to undue inconvenience, 'hassle' and economic cost to users, due to poor or inappropriate delivery of services *vis à vis* the abilities of target populations to use them within their time-budgets.

Direct medical charges affect utilisation rates in developing countries, making health services less accessible, especially for poorer groups. This is particularly relevant within the context of economic stabilisation and structural adjustment programmes, although Gilson *et al.* (1995: 370) highlighted that '... only fragmentary and contradictory evidence [exists] about the impact of fees on health care utilisation patterns'. While some studies suggest that utilisation will not be affected (for example, Akin *et al.*, 1986), others found that the introduction of fees concurrently with improvements in the quality of health care, resulted in increased utilisation (for example, Litvack and Bodart, 1993). However, most studies (such as Creese, 1991; Huber, 1993; Yoder, 1989) suggest that fees generally reduce utilisation rates, and consequently accessibility may be compromised, particularly for poor and vulnerable groups (Gilson *et al.*, 1995).

Even in publicly-funded health care systems with free or subsidised services, economic factors are relevant to utilisation. Phillips (1990) and Akin *et al.* (1985) highlighted that the full economic implications of health seeking include the opportunity costs of other goods and services that must be foregone in order to pay to use health care. For example, the time an individual spends on health care utilisation may disrupt their economic activities and therefore result in a loss of income. Indeed, many of the lay discourse studies also identified close connections between economic and social obligations and health and illness behaviour, particularly amongst poorer groups. In developing countries, patient waiting times at government clinics may be considerable, and have implications for the accessibility of health care. However, overall, opportunity costs generally favour the use of public services, even if public services are more distant than private services. Other user costs may arise from the shortage of drugs, making it necessary to buy them on the black market, even when they are theoretically free through welfare assisted delivery, or through corrupt practitioners demanding payment for services which should be free.

3.4 Social and cultural factors mediating health care utilisation

Health and illness beliefs and attitudes to health care are important to health and illness behaviour. 'Psychological readiness' to act and to utilise health care was emphasised by Rosenstock (1960). This concept closely accords with the 'predisposing' factors identified by Aday *et al.* (1980), Andersen (1968), and Gross (1972). Suchman's studies (1964, 1966) are applicable within pluralistic health care systems in most developing countries, which found differences between ethnic and social groups in terms of choice

of therapeutic action. 'Cosmopolitan' individuals, according to Suchman, are more oriented towards modern medicine. They therefore seek this form of medicine, whilst rural/'local' people were more likely to seek traditional medicines. These particular studies are clearly embedded within the modernisation development discourse, which assumes that it is necessary to change people's attitudes to those of cosmopolitan groups in order to encourage them to use modern services. However, Suchman's analysis does not account for other factors, the most obvious being that cosmopolitan (urbanised) groups are in closer proximity to services than rural groups, who may find them physically inaccessible.

Gesler (1984) explained variations in utilisation patterns in terms of 'social distance', that is the perceived comfort of, or acceptance by a (potential) patient using a service. Clinician/patient interaction may influence utilisation patterns. A hostile or unsympathetic clinician is likely to inhibit potential patients, particularly in tertiary-hospital level services in which practitioners are technologically and bio-medically oriented, and therefore de-personalise and under-inform patients. Problems may be exacerbated by doctors who are linguistically or culturally distant from their patients (Puentus-Markides, 1992). This suggests that these social barriers may be minimised and social accessibility improved in primary health care, where health care providers are mainly of local origin (Phillips, 1990). Other studies have explored the social and cultural influences on the acceptance of medical programmes in developing countries. Wan and Soifer (1974), for example, suggested that health behaviour in developing countries should be considered within a 'culture-specific framework', in that individuals may not recognise scientific definitions of symptoms and treatment. This may account

for the poor uptake of modern medical services and the continued use of traditional medicines. However, the problematic, and indeed ethnocentric assumption made in that study, is that (potential) patients in Western societies tend to think 'scientifically', and that 'cosmopolitan' groups have cosmopolitan interpretations of health and illness, a distinction also made in Suchman's (1964, 1966) studies. However, as Chapter Two illustrated, even lay health and illness discourses in developed countries tend to vary considerably from professional discourses.

Cultural, social and behavioural factors are important determinants of health, and many studies have identified distinctive patterns of different social/ethnic groups' health seeking behaviour and utilisation of health services. '... [T]here may be major cultural differentials in health reflecting the strength of alternative beliefs in disease causation, beliefs in science, and allocation of responsibility to individuals for action... [and] differences in the priorities given to adults and children...' (Caldwell, 1993: 131). A United Nations study of fifteen developing countries found that the most significant factors determining child mortality were ethnicity and education of the parents, particularly the mother (Mensch *et al.*, 1985). Education appears to reduce differences in child survival patterns between ethnic groups (Caldwell, 1993). Phillips (1990) found that, in both developed and developing countries, ethnicity is frequently associated with socio-economic status and therefore residence in more or less well serviced areas. Thus, poorer accessibility amongst particular social groups, together with different health beliefs, orientations and priorities, may inhibit health care utilisation.

Most research concludes that women have considerably greater problems of accessibility to health care than men. Ojanuga and Gilbert (1992) identified significant disparities between female and male accessibility in the developing world, including Jordan. Social forces discriminating against women's effective health care utilisation may be more significant than service based barriers. 'Institutional barriers' arise from health systems which may not address the interests of women (and their health needs). Indeed, Davis-Lewis and Kieffer (1994) noted that health policies have tended to associate women's health care needs most closely with maternal and child health (MCH) service utilisation, and that illness and health issues of women that are not directly related to MCH, have received little attention. 'Economic barriers' faced by women are more significant than those faced by men, in that women's participation in the formal/wage earning labour force in the developing world is considerably lower, and they often have considerably less discretion over the use of household spending than men (Ojanuga and Gilbert, 1992). 'Cultural barriers' include social seclusion, particularly in Islamic and Hindu countries, making health care utilisation within the context of a male-dominated medical profession difficult, unless their husbands accompany them. Gupta (1987) found that female children in Punjab, India, were also far less likely to be sent to a clinic for treatment than the male children, even when similar symptoms were apparent, since male children are more highly valued in a patriarchal society.

An additional barrier for women is education (Ojanuga and Gilbert, 1992). Education bias is most significant in the Middle East, Africa and South Asia, where women attain considerably lower levels of education than men. Those women who are educated are more empowered in terms of reproductive decision-making and health. Sathar *et al.*

(1988) noted that women's status may be higher in families of wealthier socio-economic backgrounds in an Islamic country, Pakistan, and this will be closely related to their education levels. Obermeyer (1992) suggested that decisions relating to health, education and employment in the Islamic world, are very often outside a woman's domain. Abbas and Walker's (1986) study of women's utilisation of MCH services in Jordan revealed that there is a strong association between aspects of women's empowerment, such as education and length of marriage, and utilisation rates of MCH services. Uneducated women were found to have lower utilisation rates of modern medicine; indeed, only around a quarter of women had received ante-natal care, whereas over two thirds of educated women had used such services.

Whilst the implications of education are difficult to differentiate from income and other socio-economic indicators, many studies conclude that education significantly influences health care utilisation (for example, Abbas and Walker, 1986; Cleland and van Ginneken, 1988; Caldwell, 1993; Hobcraft, 1993; World Bank, 1993; Price, 1994). Women's education in the developing world has received considerable attention and is now recognised as an extremely important part of improving health, reducing fertility, and indeed, an embodiment of development generally. Parents' education (particularly mothers' education) is not only associated with an increased utilisation of health services for their children, but also a more appropriate and better utilisation, which is reflected in the improved health of their children. A study in south India clarified some of the ways through which the education of mothers may improve the survival chances of their children. These ways include increased health care utilisation, particularly of modern services, demands for sick children to be treated, and closer engagement for longer

periods with the physician. Further, they are more likely to listen, understand and follow physician instructions and return to a health centre if the patient does not improve (Caldwell *et al.*, 1983).

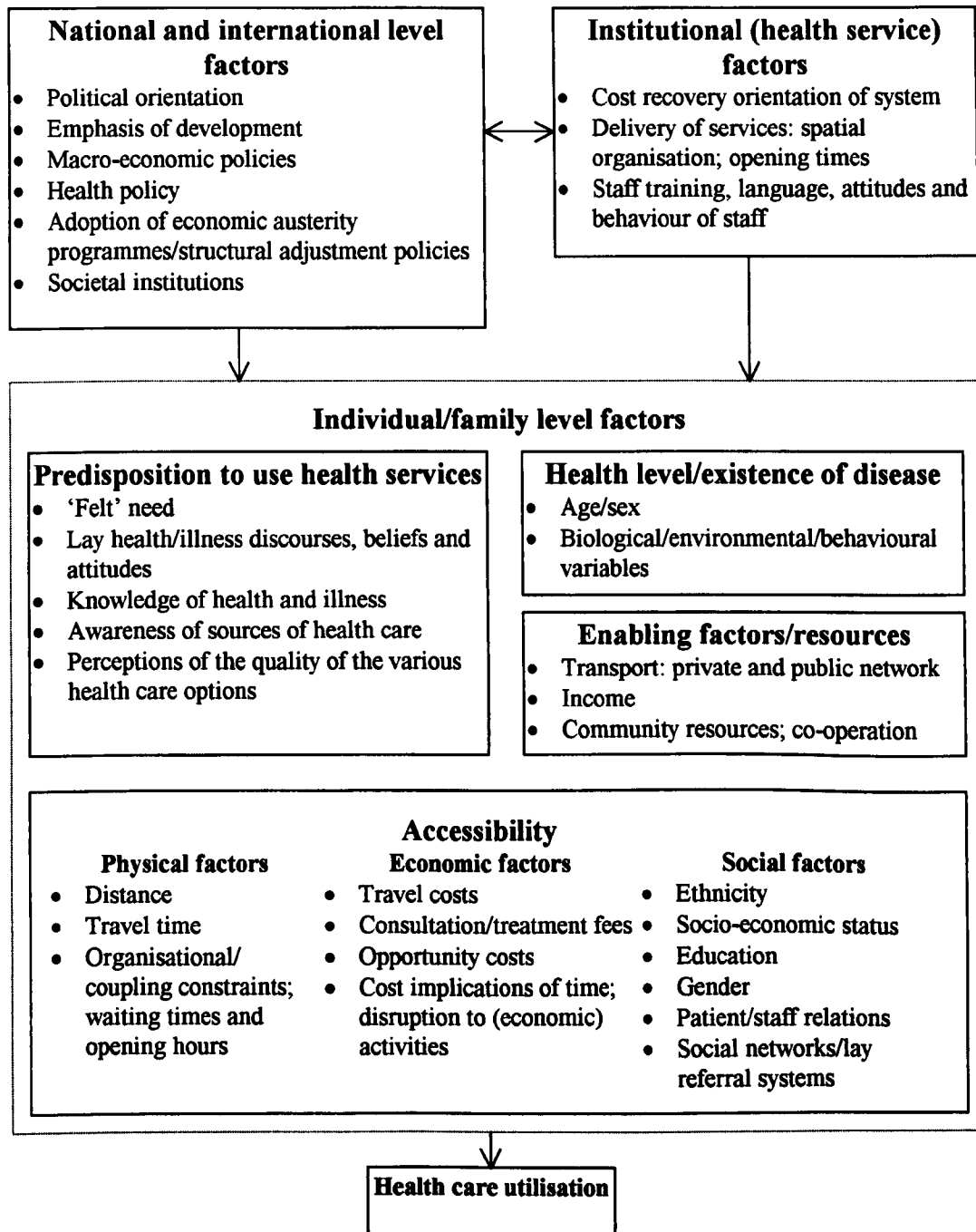
3.5 Conclusions

This chapter has identified a considerable number of factors influencing health and illness behaviour and more specifically health service utilisation. These factors are summarised in Figure 3.1. Factors operating at a number of levels influence individual/family accessibility and utilisation. National level factors, such as development and health policies and societal institutions, are important influences of health service accessibility (Puentas-Markides, 1992). International level factors also influence national level health and development policy in developing countries. In addition, institutional factors, such as the organisation of health service delivery, are recognised as important influences of accessibility and utilisation by, for example, Aday and Andersen (1974), Dutton (1986) and Puentas-Markides (1992).

The chapter has illustrated the complexities involved in explaining patterns of health and illness behaviour by highlighting a number of factors mediating health care utilisation at individual and household level. A number of studies have attempted to identify and group these factors (for example, Gross, 1972; McKinlay, 1972; Aday *et al.*, 1980; Andersen, 1968; Joseph and Phillips, 1984; Phillips, 1990). Gross (1972), particularly, identified three main groups of factors: factors influencing the predisposition to use health services; enabling factors; and accessibility factors. Whilst accessibility factors can

be divided into physical, economic and social/cultural factors, there is considerable overlap and interaction between these categories (Joseph and Phillips, 1984; Phillips, 1990).

Figure 3.1 Factors mediating individual and family health care utilisation



Source: author. Based on studies reviewed in Sections 3.2- 3.4

A shortcoming of the accessibility and utilisation studies (as well as the lay discourse studies reviewed in Chapter Two), is that they are static representations, generally based on developed countries, and therefore do not tend to incorporate the highly dynamic and evolving behaviour that reflects rapid changes occurring in the developing world. Moreover, potential users of health services are assumed to be domiciled at fixed points, and no studies have considered health service utilisation by mobile or sedentarising groups. These studies have also tended to ignore the social contexts of particular groups that are discriminated against, such as rural or mobile in developing countries. Therefore it is relevant to examine in detail the accessibility and acceptance of recently introduced basic health services in communities which are experiencing rapid and considerable socio-economic changes affecting their occupational structure, mobility, education levels, and above all, their knowledge, attitudes and health and illness discourses. Examining the acceptance and accessibility of health care in relation to these issues is the focus of this research.

Chapter 4

Methodology

4.1 Methodological approach

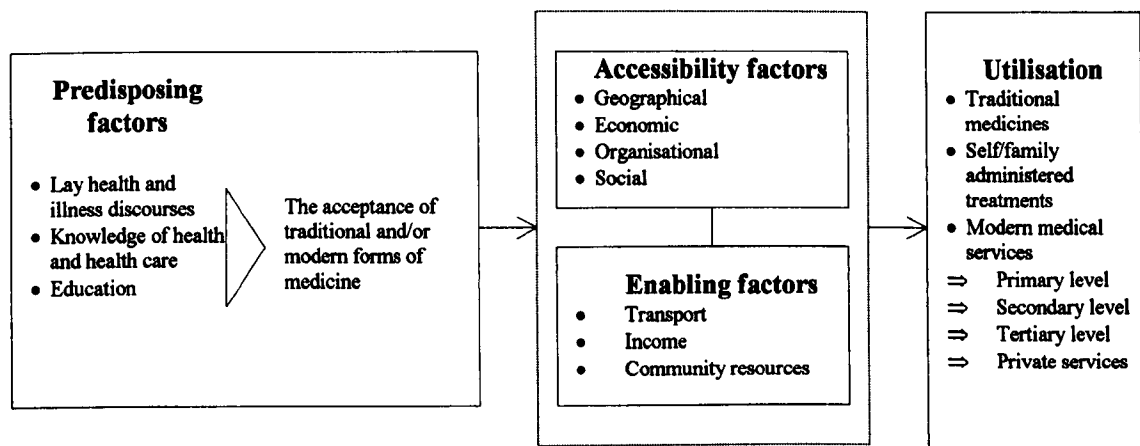
In order to examine the effective delivery of health care services to mobile/sedentarising and rural settled communities, the two principal aims of this research, which are outlined in Chapter One, consider both the acceptance and accessibility of medical services. To address the two aims, it is necessary to suggest a working definition of the key study factors and propose a hypothesised relationship between them. The previous chapter reviewed many of the groups of factors which mediate individual/family level health and illness behaviour and specifically health care utilisation that have been identified in the literature. Predisposing factors encompass health and illness discourses, attitudes, education and knowledge of health and health care. These factors influence the forms of health care that may be accepted (and therefore potentially utilised), in particular whether traditional medicines and/or modern medical services are accepted and therefore used if need arose (Figure 4.1).

Other factors directly influence the ability of an individual or family to utilise specific health care services in order to address specific health or illness needs that have been recognised. Enabling factors include the resources, such as transport, financial resources and community resources, that may be drawn on in utilising health care. Accessibility factors encompass the geographical, economic and social factors inhibiting the utilisation of specific health care facilities (such as primary, secondary and tertiary levels services

and private services) by an individual or family (Figure 4.1). There is therefore a close inter-relationship between enabling and accessibility factors; the availability of transport, for example, has considerable implications for the geographical accessibility of services.

Based on these definitions, the first principal aim of this research examines predisposing factors mediating changes in health and illness behaviour and in particular, the acceptance of modern medical service by mobile/sedentarising communities. The second principal aim of this study identifies the main accessibility factors which have implications for the effective utilisation of health services by these communities. In order to do this, it is also necessary to identify a number of key enabling factors.

Figure 4.1 Principal factors mediating individual/family level health care utilisation



Source: Author

A multiple method approach was adopted in this research incorporating qualitative and quantitative survey methods and analysis. The relative advantages and shortcomings of using qualitative methods (unstructured interviews), quantitative methods (structured

interviews), and multiple methods are well documented (for example, Creswell, 1994; Flowerdew and Martin, 1997; Phillip, 1998; Robinson, 1998). Structured, semi-structured and unstructured interview methods were employed in addressing the aims of this study as follows:

- An extensive structured questionnaire interview survey of 201 families.
- Extended semi-structured interviews with five families.
- A series of unstructured interviews with one family.
- Extended semi-structured interviews with eight health service providers.

The quantitatively oriented questionnaire survey of 201 families was carried out in order to identify patterns of health and illness behaviour, together with the accessibility problems encountered by each family interviewed. The data elicited from the questionnaire survey are important in addressing the first principal aim of this research, which is concerned with the issues encompassing the acceptance of modern medicine by sedentarising groups. The survey elicited health care utilisation patterns and particularly the extent to which Arabic or modern medicines are utilised. Thus, the extent to which modern medical services had been accepted as the primary source of health care by the survey population could be assessed. The survey also determined the educational status of the individuals in these families, allowing for variations in the acceptance of modern health services between families with parents with different levels of educational attainment to be measured.

The main purpose of the questionnaire survey is, however, to address the second principal aim of the research, which is concerned with the accessibility of health services for the survey communities. The questionnaire survey was important in establishing attitudes to health services, identifying broad patterns of health and illness behaviour and accessibility problems, and thus assessing the relative importance of accessibility factors mediating the effective utilisation of health services comparatively between the seven study groups (indicated below). The survey also allowed for the occupation profiles of the survey families to be quantified and thus the relative importance of the economic occupations held by the community to be compared. Whether each family qualified of a health concession card was also established in the questionnaire survey in order to assess the significance of exemption and partial exemption to user fees to health care accessibility within the context of the state cost recovery programmes in Jordan, thus contributing to the discussion on the implications of structural adjustment programmes for sedentarising groups.

The questionnaire survey data are useful in establishing comparative patterns of acceptance, accessibility and utilisation between the study groups. However, analysis of the semi-structured and unstructured interview surveys forms the core of the research in terms of explaining and interpreting many of the patterns identified in the structured questionnaires. Five extended semi-structured interviews were carried out with households selected on the basis of their mobility/sedentarisation status. These interviews provided a more qualitative, in-depth insight to the research questions than was possible in the context of the questionnaire survey. In addressing the first aim of the research (acceptance), the survey considered Arabic medicine utilisation among the interview

families in the past, their explanations of changes that had occurred in their health and illness behaviour and especially the extent to which Arabic medicines continue to be used *vis à vis* modern health services in the event of specific examples of illness episodes. In addition, the interviews addressed the second main aim relating to the accessibility of health services. The interviews examined a number of aspects of the lives of the respondent families, and particularly issues such as the experience of sedentarisation, socio-economic changes at family level and family decision making. This allowed for health and illness decision making, problems of health care accessibility, especially in relation to pastoral mobility, to be better understood within the context of socio-economic change at family level than was possible from the questionnaire survey.

Additional unstructured interviews with a single family were also conducted in order to address the first principal aim (acceptance). The main features of past Bedu health and illness discourses were elicited from the interviews, together with more detailed insights concerning the Arabic medicines used by the Bedu of the north east Badia than was possible either from the structured questionnaires or the semi-structured interviews. The unstructured interviews also examined changes in health and illness discourses, health and illness behaviour and particularly the acceptance of modern health services and present patterns of Arabic medicine utilisation.

A further series of extended semi-structured interviews with eight service providers allowed comparisons to be made between the perceptions of users and the views of health care professionals. These interviews complemented the family interviews in addressing both the acceptance and accessibility aims of the research. The clinicians were

asked about their perceptions of Arabic medicines and how they dealt with patients who use these (in addition to modern medicine). The interviews also encompassed clinicians' perceptions of potential users' accessibility problems and whether they believe that the communities of the study area utilise health services appropriately.

The field research, which took place between October 1995 and July 1996, was carried out within the auspices of the Jordan Badia Research and Development Programme (JBRDP). The programme provided logistical support in the field, in particular transportation, a field assistant and accommodation at the As-Safawi field station. A number of other researchers were also present at the As-Safawi field station, working on a livestock research programme together with geological and social surveys in the north east Badia. As-Safawi village consists of residences, a market serving mostly truck drivers using the Baghdad-Amman highway, a police station, health clinic and primary school together with a Jordanian airforce base which incorporates the JBRDP field station itself. A number of airforce buildings accommodate researchers, technical and support staff together with dining facilities, a library, meeting rooms and offices.

Association with the programme legitimised the researcher's presence in Jordan, which was particularly advantageous in approaching clinicians working in the study area clinics, as well as officials of the Ministry of Health in Al-Mafraq and Amman. A number of complementary studies have been carried out in the JBRDP area, for example, demographic, household, economic and health surveys (JBRDP, 1993; Al-Akour, 1998; Brandenburg, 1998a and b; Findlay and Maani, 1998; Maani *et al.*, 1998). These provided baseline data, which were invaluable in guiding the direction of this study and

for developing an informed sampling strategy, particularly for the villages' survey. This research is primarily based within the JBRDP area, since extensive demographic and household economic data were not available for other villages in the north east Badia. However, the scope of the study extends beyond the boundaries of the programme area, as the basic health clinics serving the survey villages are embedded within an extensive health service referral system within Al-Mafraq governorate. Consequently, a comparative urban survey was carried out in Al-Mafraq city, which is actually outside the JBRDP area.

A preliminary survey was conducted to establish the nature of the Jordanian health system and particularly its delivery within the study area. The survey was also valuable since it allowed the study groups to be defined and appropriate field methods to be determined. The practical and logistical constraints were also identified, particularly the availability of a field translator, vehicle and driver. From the inception of this study, an important research issue was that the field investigation would be carried out amongst communities who speak very little, if any, English. It was therefore necessary to conduct the majority of the interviews with the aid of a field translator. The problems involved in conducting research in a foreign language are extensively documented (for example, Sidaway, 1992, 1993; Smith, 1996), and these problems are intensified in interviews involving communication through a third individual. Whilst the necessity for a translator affected the scope of the field survey, a considerable advantage was that he was local, from a familiar tribe, and sometimes from the same tribe as the respondent. The translator was therefore able to elicit the acceptance and co-operation of the respondent families more easily than an outsider.

4.2 Household questionnaire interviews

4.2.1 Survey preparation

The questionnaire was structured in format, consisting of both open and closed questions (Appendix 1.1). Since a field translator was participating in the interview process, it allowed the researcher to structure, monitor and control each interview, therefore ensuring that the key questions were not omitted. Clearly defined and targeted questioning also minimised linguistic ambiguity. Recording the interviewees' responses on the questionnaire sheets *in situ* was considered to be an important device for ensuring that all the essential information was retained from each interview, rather than recording data on a *post hoc* basis. Indeed, the latter would rely entirely on the translator's memory, and whether he had actually completed the questionnaire fully. The use of structured, and particularly closed questions, also ensured that the answers were standardised, allowing a direct comparison between the survey groups to be made, especially with regard to the principal questions relating to health and illness behaviour and accessibility problems (such as Questions 11 and 25, Appendix 1.1). In addition, a number of open-ended questions encouraged the respondent to suggest issues not anticipated by the researcher, particularly when they were asked to consider problems with, and possible improvements to, health services (Question 14); the best ways to improve their children's health (Question 16); and examples of children's illness episodes and the actions taken in dealing with the illness (Question 28).

The questionnaire consisted of four sections, covering the family's overall circumstances; their utilisation of health services; their accessibility to health services; and other aspects of the utilisation of health services. The first part focused on a family's demographic structure and education, transport availability, mobility, principal economic activities, and whether they held a health concession card. The second part attempted to elicit the key features of illness behaviour, in the event of minor and serious illness, in particular the utilisation of health services, and health behaviour, such as the receipt of children's vaccinations and the utilisation of MCH services. The respondents were asked about their perceptions of problems, their satisfaction overall with the basic government clinics, and whether sufficient information was available relating to children's health and health provision. The third part focused on the key factors mediating effective health service utilisation, considering the geographical, economic, organisational and social dimensions to accessibility, and the extent to which each factor affected utilisation. The final part examined other aspects of the utilisation of health services. The respondents were asked to describe the most recent illness that had affected a child, and how the family had dealt with it. They were also asked whether the children had been vaccinated through a school-administered vaccination programme, their perceptions of the value of vaccinations and which diseases they had been vaccinated against. This question was used to gauge of the awareness of the respondents to vaccinations and therefore health issues generally. The process of decision-making was also considered. The respondent(s) were asked which adult family members were responsible for deciding and/or taking the children to the health clinics. Changes in health care utilisation over the last generation were also examined. This helped to gauge the rapidity of change in health and illness behaviour over one generation.

A small-scale pilot survey of five households was carried out in Al-Bishariya village, which was not included in the ultimate sample, in order to test the questionnaire in the field and refine the survey technique. This tested the extent to which the questions would be understood and received by interviewees, and thus identified any questions or concepts which were difficult to communicate, or were culturally sensitive to the respondents. It also helped in becoming familiar with etiquette appropriate for visiting families in the study area. The pilot survey gave both the translator and the researcher an opportunity to practice implementing the interview questionnaire, establish the likely duration of an interview, and refine the strategy for sampling households within each village.

It was found that during the pilot interviews, the interviewees were sufficiently convivial and co-operative to carry out the interviews without significant difficulty. Only a few relatively minor changes were made to the layout of the questionnaire to make the recording of data simpler, and to clarify the wording. However, the key problem elicited from the pilot survey was the length of each interview, which varied from 35 to 50 minutes. The last few questions of the longer duration interviews were affected adversely, since the interviewee tended to become distracted and bored, and some of the interviews tailed off towards the end. It was decided to reduce the length of each interview by preparing an Arabic version of the questionnaire. This was based on the same layout as the original English version, and avoided the need for the translator to pause and translate each question from English to Arabic.

The pilot survey also suggested that the families interviewed were interested in the agenda of the researcher. By approaching the interviews with frank openness, the researcher was, therefore, far more likely to gain the confidence of the interview respondents, who did not believe that the researcher had a covert agenda and should reciprocate with openness. Thus, it was essential to be candid with the interviewee regarding the nature and purpose of the research, and how the results might be used. This also included stating clearly what the researcher would gain from the study personally. It was therefore necessary to ensure that each interview began with an explanation of who the researcher was and the purpose of the research.

4.2.2 Survey groups selection

An objective of the study is to examine the accessibility of health services for all rural groups. This makes it necessary to compare families living in villages with different levels of health service provision, together with those living in villages without any health services. Consequently, the survey villages were chosen on the basis of service provision; Umm Al-Quttayn had a comprehensive level clinic; Dyr Al-Kahf a primary level clinic; and Abul Farath a peripheral clinic. The smallest villages, including Midwar Al-Qin, were selected since they did not have any health services located within them. Table 4.1 summarises the locations of the groups interviewed in the questionnaire survey, and Figures 4.2 and 4.3 show the location of the survey villages, Al-Mafraq city and Bi'r Al-Qittafi.

The study also considers the significance of accessibility to families at different stages of the sedentarisation process. The initial stages of the fieldwork suggested that the majority of mobile families were in the process of sedentarisation by building permanent residences in a village, or by settling within a village for part of the year. A sampling frame was adopted, based on the extent to which a family had sedentarised. This allowed 'semi-nomadic', 'semi-settled' and 'settled' families to be compared. Fully nomadic families were not interviewed, since they continue to migrate within the more remote parts of the study area, making it impracticable to visit these families within the logistical and time constraints of the survey. Chapter Six defines the study groups, which are summarised in Table 6.2.

Table 4.1 Summary of the location of the questionnaire survey groups

	Village name	Village type	Population (1994)*	Health services
Settled rural	Umm Al-Quttayn	Large village	3,064	Comprehensive clinic
	Dyr Al-Kahf	Intermediate village	930	Primary clinic
	Abul Farath	Intermediate village	612	Peripheral clinic
	Midwar Al-Qin	Small village	156	No health facilities
	Khisha Al-Qin	Small village	159	No health facilities
	Mathnat Rajil	Small village	119	No health facilities
	Ja'da	Small village	116	No health facilities
	Mansura	Small village	20	No health facilities
	Pilot survey	Al-Bishariya	Intermediate village	703
Mobile groups	Bi'r Al-Qittafi	Semi-nomadic families		
	All survey villages	Semi-settled families		
Settled urban	Al-Mafraq city			

*Source: Maani *et al.* (1998).

Note: A full definition and description of the survey groups is given in Chapter Six and summarised in Table 6.2.

Figure 4.2 Survey points: study area villages

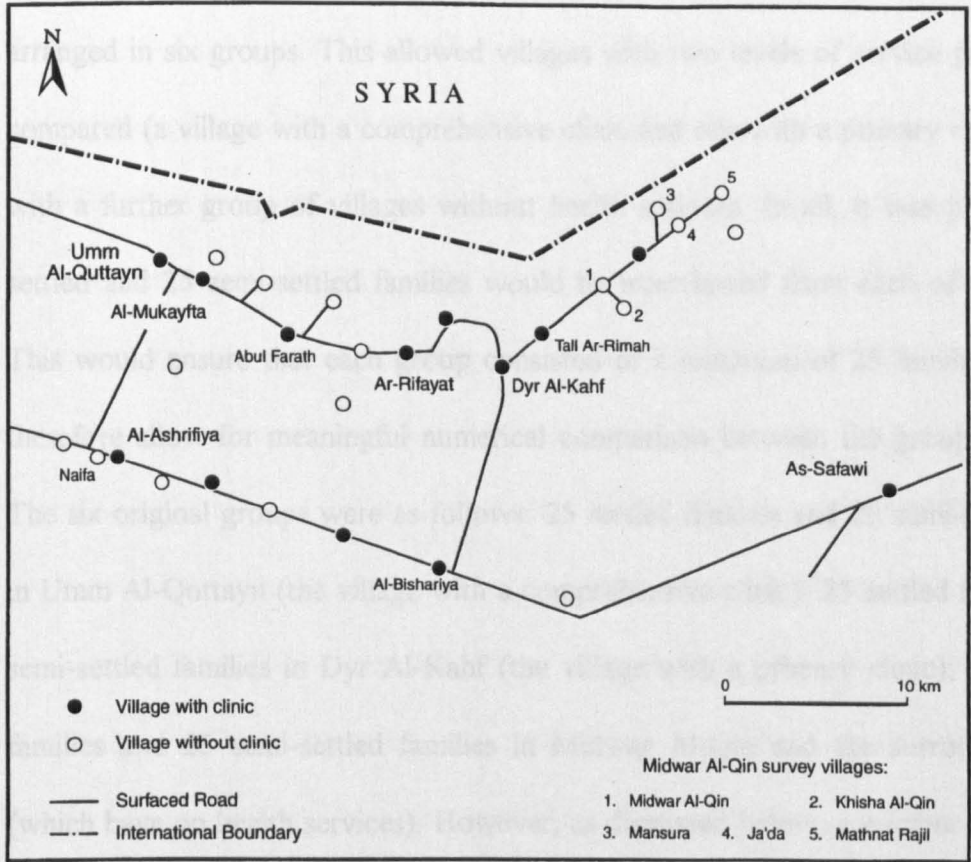
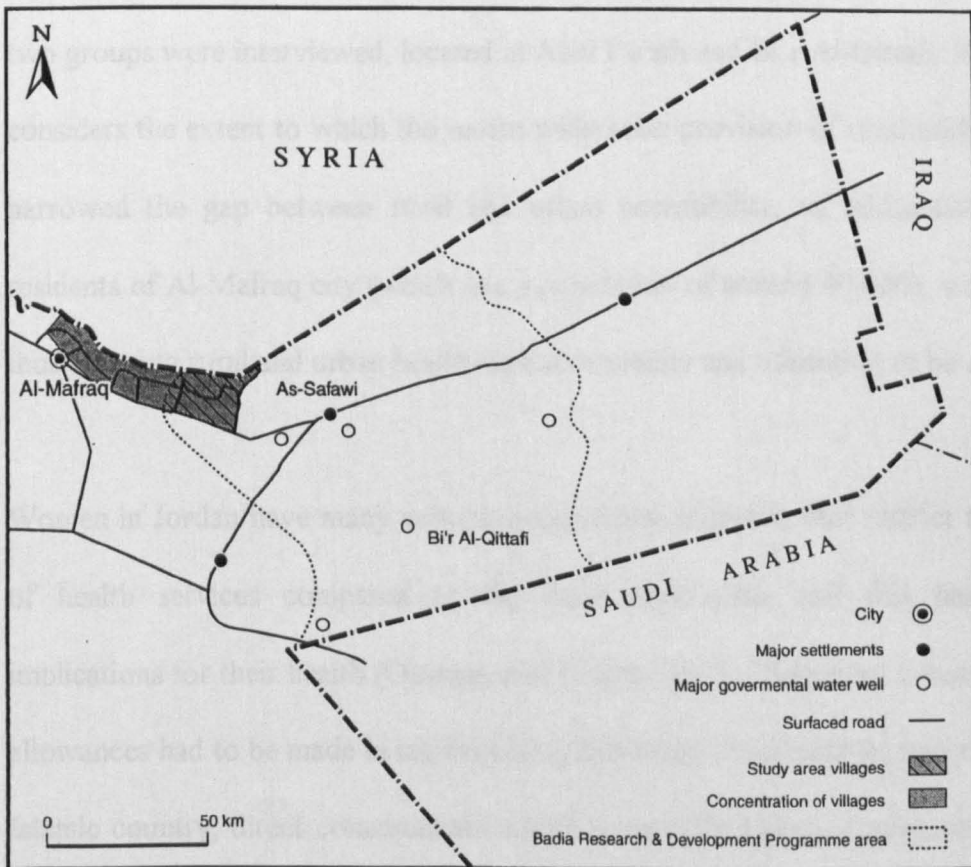


Figure 4.3 Survey points in the north east Badia



It was originally planned to conduct a total of 150 interviews with rural households arranged in six groups. This allowed villages with two levels of service provision to be compared (a village with a comprehensive clinic and one with a primary clinic), together with a further group of villages without health services. In all, it was planned that 25 settled and 25 semi-settled families would be interviewed from each of these villages. This would ensure that each group consisted of a minimum of 25 families, and would therefore allow for meaningful numerical comparison between the groups to be made. The six original groups were as follows: 25 settled families and 25 semi-settled families in Umm Al-Quttayn (the village with a comprehensive clinic); 25 settled families and 25 semi-settled families in Dyr Al-Kahf (the village with a primary clinic); and 25 settled families and 25 semi-settled families in Midwar Al-Qin and the surrounding villages (which have no health services). However, as discussed below, a number of adjustments were made to the numbers interviewed in each group whilst in the field, and an additional two groups were interviewed, located at Abul Farath and Bi'r Al-Qittafi. As this research considers the extent to which the recent wide-scale provision of rural health services has narrowed the gap between rural and urban accessibility, an additional group of 25 residents of Al-Mafraq city (which has a population of around 40,000), was interviewed, thus allowing rural and urban health care accessibility and utilisation to be compared.

Women in Jordan have many cultural accessibility problems that restrict their utilisation of health services compared to the male population, and this has considerable implications for their health (Ojanuga and Gilbert, 1992). However, a number of cultural allowances had to be made in implementing this study. As a male foreign researcher in an Islamic country, direct communication with women (in terms of conducting interviews)

was very limited, especially since women's health is a particularly sensitive topic to discuss with outsiders. It would also be very difficult to speak to a male about women's health issues. Therefore, the vast majority of interviews took place with senior males or male heads of households. Not being able to interview women is therefore a weakness of the study, since settled mothers particularly, are primarily responsible for child caring and accompanying their children to utilise health services in the study area. Nevertheless, the preliminary survey suggested that the Bedu family as a whole, is a key decision making institution; fathers and other adult males do participate to a considerable extent in decision-making relating to children's health, and frequently do also take the children to use health services themselves. Moreover, unlike women's health issues, children's health and illness are freely discussed within the family, and indeed with outsiders. Thus, all family members tend to be well appraised of the decisions made when a child needs medical attention and what actions the family has taken in this context. On this basis, it is believed that interviewing mostly male family members, does not unduly bias the results of the survey, and is a sound foundation on which to conduct interviews relating to children's health.

4.2.3 Sampling strategy

The study villages were initially surveyed and sketch maps were produced, in order to establish the most appropriate way of sampling the families located in each village. These surveys revealed that there is considerable spatial clustering of households of a similar socio-economic status within some of the villages, and especially so in the largest village, Umm Al-Quttayn. It is also a common arrangement in the villages for extended families

to be divided into nuclear families domiciled in houses located adjacently to one another. It was aimed to represent the population of a particular village as fully as possible by adopting a random selection procedure. Avoiding spatially clustered household sampling was considered to be the best way to achieve this aim, as it minimised sampling bias through interviewing a disproportionate, and therefore unrepresentative, number of households from a particular socio-economic group, or indeed, interviewing two households from the same extended family.

Households were selected within each village based on a systematic spatial random sampling framework to ensure that even spatial sampling took place. A grid was superimposed over the map of each of the larger villages (Umm Al-Quttayn, Dyr Al-Kahf and Abul Farath), consisting of five by five cells. In Umm Al-Quttayn and Dyr Al-Kahf, two households (one settled and one semi-settled family), were interviewed from each grid cell, and one household was interviewed from each cell in Abul Farath. However, using a grid sampling system was not practicable in the smaller villages' group. These settlements tended to be either linear in their layout (such as Midwar Al-Qin and Mathnat Rajil), or consisted of a very few scattered households (Khisha Al-Qin, Ja'da and Mansura villages). From each of these villages, five settled households and five semi-settled households were interviewed, making a total of fifty interviews. A linear frame was superimposed on maps of the linear villages consisting of ten equal unit lengths; one household from each unit was interviewed. For the smallest, scattered villages, a system of sampling was used in which ten households were selected at random, whilst ensuring that these families did not live adjacently in order to avoid spatially clustered sampling.

The preliminary survey showed that predicting and finding locations of mobile groups as they migrated within the north east Badia region was difficult. Indeed, this was an area of research that was only beginning to be studied systematically by another researcher at the time of this fieldwork. However, predicting the timing of these groups' residency in the villages' area was generally easier. The incidence of late rains in the winter of 1995-6 had resulted in poor grazing conditions in the north east Badia. Usually in the event of late rains, a high proportion of mobile families would continue to be located in and around the villages in the first few months of the year, rather than travelling in the Badia seeking natural grazing which would be in short supply. After some consideration, it was decided that the most effective way of interviewing semi-settled households would be to identify and approach them during the months that they would usually be settled in years of poor rainfall. The semi-settled households are generally distinguishable from settled families since they usually pitch a tent next to their permanent houses.

4.2.4 Questionnaire interviews in practice

The scope of the survey was bounded by time and logistical constraints, making it appropriate to adopt a flexible approach to sampling. Hence, it was not always practicable to wait for families to be available or willing to participate within each spatial unit of the sampling frames. The key determinant of whether an interview could take place was the presence of an adult male. Whilst it was found that very few individuals who were asked to participate in the survey refused outright, finding potential participants was unpredictable. Generally, it was culturally unacceptable for unknown males to approach a house or tent without an adult male present, although, in fact, 26

interviews did involve women participants. These tended to be with widows who were the heads of their households. The most welcoming houses were those where men were sitting outside, often with friends, drinking tea and coffee; this was the most socially acceptable method of approaching the houses in the villages. If this was not the case, the other indicator of the presence of an adult male, was that their shoes were usually left outside the front door. Without these indications, approaching a house was socially discouraged.

The late rains during the year of the survey should have made interviews with mobile families easier, since it was anticipated that they would be resident in the villages in the early months of 1996, and therefore easy to find. However, it was found that the lack of early rain had, in fact, resulted in highly unpredictable patterns of migration. Indeed, many families sought grazing outside the north east Badia, and fewer families had returned to the villages than would usually have been the case. Thus, a considerable problem was to locate and interview mobile families whilst they were in the villages. In practice, a number of families from this group were found from information from settled families in the villages. Another problem with interviewing mobile households was that the male head of household was frequently absent from the village, even during 'settled' periods of the year, and as a result other family members were not willing to participate in the survey. The original intention had been to interview up to 75 mobile families, but by the end of the first six-month phase of the nine months' fieldwork, only 25 out of a total of 150 rural interviews had been made with mobile families.

A more proactive approach was therefore required to interview mobile groups, rather than simply relying on their chance presence within the villages. Logistical constraints bounded the scope of the study, making extensive travel impracticable within the Badia for the purpose of seeking mobile families. An alternative strategy was to survey pastoralists using a major well in the north east Badia. Local informants suggested that one of the most heavily used wells by semi-nomadic, and a few fully nomadic pastoralists, was at Al-Qittafi (Bi'r Al-Qittafi), approximately 50km south of As-Safawi (Figure 4.2). In practice, this proved to be a very effective method of interviewing mobile groups, since relatively large numbers of semi-nomads used the well, and most were willing to participate in the survey. Indeed, this sampling method had the added advantage that families were being interviewed whilst they were in the Badia, and therefore at a time when they were actually experiencing the problems associated with mobile conditions.

Finding sufficient interview respondents by approaching houses speculatively was not possible for the urban survey. This was due to there being a sharper division between public and private spaces in urban environments. Most rural houses in Jordan consist of a space at the front, usually a porch, which is used extensively as a gathering place by men. The urban houses are enclosed, usually with a gate and a substantial wall surrounding the 'garden' or open area of the houses. The residents use these areas extensively, but they are considerably more private than the spaces surrounding most rural houses. It was therefore more difficult to determine whether a house was occupied in the city, or whether a suitable respondent was present since none of the important indicators suggesting that the house was approachable were visible. Consequently, an alternative

approach to sampling was necessary, using the social networks of a number of key informants to introduce the researcher. Whilst this meant that families were not randomly selected, the desire for variation in the location and socio-economic status amongst respondents was achieved.

Table 4.2 shows the location of the completed structured household interviews. Whilst a total of 25 semi-settled families were interviewed, only a limited number were interviewed in each village. This reflects the particular difficulties involved in tracing families from this group within the time constraints of the limited number of site visits.

Table 4.2 Numbers of interviews completed by location

Location	Category				Total
	Settled rural	Semi-settled	Semi-nomadic	Urban	
Umm Al-Quttayn	50	3	-	-	53
Dyr Al-Kahf	26	5	-	-	31
Abul Farath	25	3	-	-	28
• Midwar Al-Qin	12	5	-	-	17
• Khisha Al-Qin	5	5	-	-	10
• Mathnat Rajil	7	1	-	-	8
• Ja'da	1	2	-	-	3
• Mansura	0	1	-	-	1
Total for Midwar Al-Qin village group	25	14	-	-	39
Bi'r Al-Qittafi	-	-	25	-	25
Al-Mafraq	-	-	-	25	25
Total	126	25	25	25	201

4.3 Extended semi-structured interviews

Five families from the north east Badia participated in extended interviews, which took a discursive and semi-structured format, and thus addressed the research aims in greater depth than the structured questionnaire survey. The structure which formed the basis of the extended interviews is shown in Appendix 1.2. These interviews were a critical dimension of the research since they helped to explain many of the accessibility and utilisation patterns elicited from the questionnaire interviews. The interviews attempted to better understand the issues of acceptance and accessibility, together with health and illness decision making and behaviour more broadly, within the context of people's lives. Thus, a number of contextual topics were raised in order to understand better the families of the Badia, decision-making within families, and socio-economic and mobility transformations.

Rather than using the random sampling strategy adopted for the structured survey, the semi-structured interview families were introduced through local contacts. The families were selected on the basis of their willingness to participate in lengthy extended interviews, since in practice, the duration of each interview was a number of hours, and some took place over two sessions. Members of some of the families were able to speak English and they were therefore selected on the basis of this criterion. The principal respondents of Ahl Abu Hussein (the semi-nomadic family), Ahl Umm Abdallah (the settled family) and Ahl Abu Hussan (the urban family) were well educated to either diploma or degree level. It was the interviews with these families that took place in English. Whilst the possession of higher education qualifications and/or the ability to

Speak English are not common amongst rural communities of the north east Badia overall, the prevalence is increasing. A high proportion of adults under forty years of age are educated beyond primary level, and many villages, especially the larger ones, do in fact contain a number of individuals educated at diploma/degree level (Jordan Badia Research and Development Programme, 1993). Thus, the fact that the rural semi-structured interview families contain educated individuals, does not make them unrepresentative of the communities of the study area. The five families, which are located in the settlements shown in Figures 4.2 and 4.3, represent the main groups from the structured questionnaire survey as follows:

- Ahl Abu Abdallah: a semi-nomadic family based in Al-Bishariya village, who were mobile for most of the year. At the time of the interview, they were living in a tent, which was situated a few kilometres to the west of the JBRDP area.
- Ahl Abu Hussein: a semi-settled family living in Abul Farath. Part of the family was living permanently in the village, whilst others migrated extensively in the Badia.
- Ahl Abu Marson: a permanently settled family living in Tall Ar-Rimah village, who had recently sold its flock of sheep.
- Ahl Umm Abdallah: a permanently settled family living in Naifa village. This family has been permanently settled for a number of years.
- Ahl Abu Hassan: a family living in Al-Mafraq city.

The structured questionnaire was used initially as the basis of each interview. The interviews then considered the nature of community structures for decision-making and those activities that took place at the community level. The ways in which decision-making, responsibilities and economic activities were organised at the household level were also discussed. The interviews considered the recent family history, in particular the purpose, nature, and timing of sedentarisation. They then focused on the implications of such social, economic and spatial changes for health and illness behaviour in greater depth. The researcher asked particularly about specific illness episodes, the actions taken, and the ways in which pastoral mobility affected health care accessibility.

The semi-structured interviews were less problematic to implement than the structured questionnaire interviews. The families tended to be interested in the study topics and particularly sympathetic to the researcher's goals. They were generally willing to offer ideas and opinions relating to health related topics not anticipated by the researcher, to freely discuss a number of other aspects of their lives and to allow the researcher to pursue further lines of questioning beyond the scope that the interviews were originally expected to take.

The researcher requested that the semi-structured interviews involved the participation of more than one family member, thus took on a focal group format. In practice, the interviews were lively, with many members of each family actively contributing to the discussion and thus considerably more views and opinions were offered than would have been the case with one participant. This also meant that women members of the families

contributed to the discussions and therefore provided further detail on a number of issues. These included women's use of, and access to, transportation when they were not accompanied by male relatives and further explanation as to the ways in which Arabic medicines are used for children, since in many families women, rather than men, administer Arabic medicines to their children.

Conducting the interviews with the educated respondents that took place in English rather than in Arabic through the field translator was advantageous in terms of avoiding any loss of detail in the comments made by the respondents, and indeed any loss of meaning that may result from a third party conveying the comments made by the respondent. It also contributed to expediting the interview process since it was not necessary to work through a third party. In practice, working with a translator inevitably lengthened each interview and therefore tended to be exhausting for all parties.

4.4 Unstructured interviews

A family from the north east Badia, Ahl Abu Muhammed, participated in a number of unstructured interviews intended to address the first principal aim of the research (acceptance issues). These interviews focused on changing health and illness discourses and behaviour, and provided further insights into Arabic medicines. The interviews, which took place over a number of weeks, consisted of four main sessions, each taking a number of hours. The family, who had always lived in the area, was introduced through local contacts and selected on the basis of their willingness to participate in extended interviews, together with their interest in the research topics. The interviews primarily

took place with an adult male (Abu Muhammed), who had a good standard of English. His wife, Umm Muhammed, also participated extensively through her husband's translation. In the past, whilst the family had been nomadic, Umm Muhammed's mother (who was not available for the interviews) had practised a number of Arabic medicine techniques for members of the community, as had a number of other relatives. The family was very familiar with, and therefore particularly well qualified to talk about, Arabic medicines and their use.

The interviews elicited the a number of key aspects of historical health and illness discourses of the Bedu of the north east Badia, which diseases they recognised, how their causation was explained, and how treatments were believed to work. The interviews considered whether connections could be found between health and illness discourses and the Bedu socio-economic system and social values. The significance of recent socio-economic changes, social values, education and health awareness programmes were considered in explaining health and illness discourses, health and illness behaviour and particularly the acceptance of modern medicine.

Within the context of the structured questionnaire and semi-structured interviews, respondents were asked to relate their perceptions, experiences and opinions to their own (extended) family's experiences of health, illness and health care utilisation. Whilst the unstructured interview family also drew on their own experiences of health and illness episodes and their own use of Arabic and modern medicines, the interviews focused on the reconstruction of historical lay discourses held more generally by the Bedu of the north east Badia. The oral propagation of experiences, knowledges and tribal histories

has always been an important Bedu value (discussed in more detail in Chapter Six); the intergenerational dissemination of experience and knowledges by parents to their children was particularly important (Lancaster, 1981; Lancaster and Lancaster, 1990). The respondent family agreed that this had been an important aspect of their own upbringing. They had gained their knowledges, such as those relating to health, illness and Arabic medicines, from their parents, relatives and the community at large. This made them very conscious of the prevailing health and illness discourses of the local communities historically and how these had changed over time, reinforcing their ability to represent the wider community's historical and contemporary popular attitudes, knowledges, experiences and discourses.

4.5 Interviews with health service providers

Semi-structured interviews were carried out with eight health service providers. Clinicians were selected in order to represent different levels of seniority within the health care profession; junior doctors generally staff the smaller and/or rural clinics, whilst more senior doctors staff the urban services and the more important rural clinics (especially the Umm Al-Quttayn clinic). It was not possible to interview (female) nursing staff for similar reasons to those outlined within the discussion of survey groups selection above (Section 4.2.2). Six clinicians working in the permanently staffed clinics of the study area were interviewed as follows: the comprehensive clinic at Umm Al-Quttayn, and the primary clinics at Dyr Al-Kahf, As-Safawi, Ar-Rifayat, Al-Ashrifiya, and Al-Mukayfta (Figure 4.1). However, the part-time clinics were not approached, since doctors from the larger clinics usually staff these. Additionally, two similar interviews

were carried out in Al-Mafraq. One of these took place with a senior paediatrician based at Al-Mafraq general hospital, and one was with a senior official (also a clinician) at the governorate level Ministry of Health offices. The structure of the clinician interviews is outlined in Appendix 1.3.

The highly hierarchical management system prevalent in Jordanian government institutions made it impossible to interview the clinicians without first seeking permission from the director of the Ministry of Health at Al-Mafraq governorate level. Having sought permission, the researcher was issued with letters of introduction from the director corresponding to each of the clinics. These were presented to the clinician working at each clinic before they were interviewed. The researcher was conscious that since these interviews had to be officially authorised, the clinicians could potentially be reticent in expressing their criticisms of the government health system and the government generally. In order to avoid this, the respondents were assured that their names would not be disclosed within reports prepared by the researcher, and the fact that several clinicians work in each of the clinics, should also preserve their anonymity.

The purpose of the clinician interviews was threefold. Firstly, there were no comprehensive secondary data sources outlining the provision of health services in Jordan at the local level. The information that existed, and was accessible, consisted of figures outlining health service provision (the number of hospitals, their capacity and staffing), aggregated at governorate level and published by the Ministry of Health in Arabic (*Wazaara Assaha Al-Ordania*, 1993). It was therefore necessary to use the clinician interviews in order to gain a detailed picture of the local level organisation of

the health services in the study area. The first part of each clinician interview was therefore concerned with the scope of facilities at each health clinic (the specific facilities, staff provision and opening hours), the organisation of the health service referral system, the delivery of immunisation programmes and the extent to which information and health advice was offered to users of each clinic. The government's policy for the payment by users for health service utilisation was also elicited from the Ministry of Health official.

The second reason for visiting the health clinics was to collect data from patient utilisation records. These were maintained on a monthly basis by the staff of each clinic, in order to compile data on the age, sex and disease of the users. A sample of four months' records was transcribed *in situ* from each of the six survey clinics in order to assess the utilisation levels for each demographic group.

Thirdly, the interviews considered clinicians' views relating to the extent to which rural health services were perceived to be accessible to the Badia communities, whether some groups were more adversely affected by inaccessibility than others, and the nature of this inaccessibility. The appropriateness of utilisation was also considered. The clinicians were asked whether they considered the people of the Badia to be well enough informed to recognise and evaluate need effectively, and thus adopt informed and appropriate health and illness behaviour. This allowed for a direct comparison to be made between users' perceptions of accessibility and appropriateness of utilisation, and the views of health care professionals. Another concern was to ascertain clinicians' attitudes as to the value of Arabic medicines, the extent to which they were actively encouraged or

discouraged by the health care profession, and how this was communicated to health service users.

4.6 Key informants and participant observations

This chapter has detailed the main methods employed in addressing the principal aims and objectives of the research. However, the methods detailed above do not exclusively encompass the methods applied during the field survey period in Jordan. Discussions with key informants and participant observation also contributed considerably to a better understanding of the core research issues and importantly in gaining a greater awareness of how the survey communities live and an empathy with the people of the Jordan Badia generally.

There were considerable benefits in working within the established research community formed at the JBRDP research centre at As-Safawi. Extensive discussions were held with Jordanian and British researchers from a number of academic disciplines before and during the field survey, who readily shared their experiences and local knowledge gained through working in the north east Badia. These discussions comprised of both practical advice in conducting field work in the area and disseminating their understanding of socio-economic changes, pastoralism and patterns of migration and sedentarisation. This advice was particularly formative in the survey design stages of the work, specifically in terms of selecting survey groups and how, when and where to interview them.

A number of other informants also contributed to the research. For instance, frequent discussions with regular informants amongst the settled communities became an essential tool used in seeking the mobile families in order to interview them. A key informant was the family who participated in the unstructured interviews. In addition to the topics encompassing Arabic medicines and changes in lay health and illness discourses and behaviour, the family provided accounts of tribal histories, traditional pastoral economies, changes in migration patterns and other social changes in the Badia areas of Jordan and Syria. In addition, the As-Safawi clinician who, as well as participating in the semi-structured interviews, also became a key informant throughout the field work period. Discussions took place on a wide variety of topics, many of which reached beyond the scope of the research, but enriched the researcher's insight into Jordanian history, economics and politics, and thus were useful in interpreting the results of the main interviews.

Participant observations were made in the field during the researcher's use of health services and local transport, together with social visits made to a number of families in the area. The researcher's use of three of the health clinics (at Umm Al-Quttayn, As-Safawi and Dyr Al-Kahf) for medical needs highlighted a number of accessibility problems on a first-hand basis. The inconsistencies of health care delivery in the survey area were emphasised, for example, considerable variations in the opening hours/days of the clinics and waiting times were experienced first-hand. In addition, opinions as to whether, and how much, to charge the researcher for medical treatment differed considerably between various members of staff at the three clinics and at different times. It was learned later that the Ministry of Health had, in fact, a predetermined official

pricing scheme in which foreigners were expected to pay a fixed fee for treatment. In addition, the researcher's extensive use of the local transport services for travelling within the survey area (which were frequently used to visit the clinics in order to interview the staff and to travel between the villages and Al-Mafraq city) allowed first-hand experience of the difficulties and frustrations involved in travelling between the villages to seek services to be gained. These observations tended to support survey respondents' accounts of their experiences of travelling to and using the services.

During the course of the field work, a number of social visits were made to the homes of families resident in the study area. These visits helped the researcher to become more familiar with family life, to see the inside of houses and tents, eat the same food as the families of the region and become familiar with some of the important social customs. Indeed, familiarity with these customs during the preliminary survey and the early stages of the field work period itself proved to be invaluable background for implementing the survey in terms of improving relations between the researcher and respondents. Social visits gave the researcher the opportunity to participate in informal conversations with the residents of the study area (albeit these conversations were held through bi-lingual colleagues earlier on in the field work period) and therefore become considerably more conscious of the topical issues at the time.

The researcher also gained some experience of using Arabic medicines as well as modern medicine whilst resident in Jordan. Herbal infusions were frequently served to the researcher simply as drinks, as well as on a medical basis by families during visits to their homes both socially and during interviews. Indeed, on a number of occasions, dried herbs

and other Arabic medicines were kindly 'dispensed' to the researcher for colds and other perceived minor ailments. This was also useful to the research in that it inspired discussion as to the purpose of a particular medicine, its likely efficacy and where the ingredients been obtained. The frequency in which herbal infusions were served, and the fact that they were served both for pleasure and as medicines, accords closely with the findings of the structured, semi-structured and unstructured interviews.

Participant observation was important throughout the duration of the field work period, as was the experience of living, travelling and working within Jordan generally for nearly a year. This proved to be a very insightful dimension to the survey in terms of helping to understand the ways in which the people of the area live and work. It is therefore the opinion of the researcher, that longer-term residency in a host country is invaluable in contributing to a significantly richer understanding of the host country and its people than would otherwise be possible in the context of a very short-term visit.

4.7 Conclusions

Quantitative and qualitative methods have been employed in achieving the aims of this research. The results of the structured questionnaire interview survey are used in this thesis to identify and quantify broad patterns of health care utilisation, and particularly to compare the survey groups by measuring the significance of health service accessibility factors. The results of the semi-structured interviews are a particularly important element of this thesis, in that they provide an additional level of understanding of the problems of health service accessibility, and how the issues of accessibility and utilisation relate to

socio-economic aspects of the sedentarisation process at family level (Chapter Nine). Thus, these interviews help to explain many of the patterns elicited from the structured survey and to understand these issues within the context of the changing family milieu.

The unstructured interviews provide in-depth insight into the forms of Arabic medicines used by the Bedu of the north east Badia, health and illness discourses in the past and the evolution of these discourses. The results of these interviews, together with data from the semi-structured interviews, were used in this thesis to form the basis of Chapters Seven (Bedu Health Discourses and Arabic Medicines) and Eight (Utilisation and Acceptance of Modern Medical Services). The clinician interviews are used in this thesis to complement the results of the household interviews, in particular, their perceptions of the utilisation of Arabic and modern medical services by the Bedu, are compared to the perceptions of the Bedu themselves. In addition, these interviews were useful in eliciting much of the factual information relating the health service delivery in the study area, which forms the basis of the next chapter (Health Service Policy in Jordan).

Chapter 5

Health Service Policy in Jordan

5.1 Health and development in Jordan

Health in Jordan has improved significantly in recent years: levels of infant mortality, for example, decreased by 75% over the period 1960-93 nationally. Life expectancy has increased, as have nutrition levels, and these changes are concomitant with increased access to doctors, high levels of vaccinations and improved infrastructure (Table 5.1). Such 'indicators' reflect professional definitions of health, and are highly simplified ways of representing 'real' improvements in conditions. In this sense, the regular publication of such figures suggesting rapidly improving health levels, is misleading. The indicators only measure health in a very crude way, since 'conditions' and well-being are difficult to measure numerically. Moreover, the indicators measure health standards at the national level. They may therefore attest to the positive effects of development, but hide substantial variations between rural and urban groups, as well as between socio-economic groups.

Regional variations exist in Jordan, although the overall difference in infant and child mortality between urban and rural areas nationally is not substantial. This can be explained by the significant expansion of rural infrastructure and services, and growing pockets of urban poverty (Jordan Department of Statistics and Ministry of Health, 1992). Large numbers of refugees have congregated in urban, rather than rural areas, thus giving rise to the associated problems of poor living conditions in temporary camps.

DeJong (1995) reported that health conditions are considerably worse in camps in the Amman area than in urban Jordan generally. Findlay and Maani (1998) suggested that Jordan has one of the highest populations of refugees as a proportion of the total population worldwide. Held (1989) estimated that in the late 1980s, nearly 9% (250,000) of the total Jordanian population lived in these refugee camps. This has contributed to the narrowing gap between overall rural and urban health indicators.

Table 5.1 Health indicators: national level, Jordan 1960 to 1990

Indicator	1960	1970	1980	1990	1993
Infant mortality rate (infant deaths per 1000 live births)	111	86	65	45	27*
Life expectancy at birth (years)	50	54	65	66.9	
Calorie supply per capita as percentage of total requirements*	82	84	88	110	
Population per physician	5900	2680	1500	1200	
<ul style="list-style-type: none"> • 97% of the rural population have access to safe water (1988-93)* • 100% of the rural population have access to adequate sanitation (1988-93)* • 95% of the rural population have access to health services (1985-93)* • 95% of infants are fully immunised against polio (1990-3)* 					

Source: National Centre for Education and Development (1991); summarised in UNICEF (1993).
* UNICEF (1995).

In Jordan, economic development is concentrated in the major cities and the East Bank. Manufacturing and oil refining are concentrated in Amman and Al-Zarqa, mineral extraction around Al-Aqaba, and agriculture is concentrated in the Jordan Valley (Held, 1989). The Badia areas are the least developed regions, and incomes in the north east

Badia, where 49% of families have an average income of less than 100JD¹ per month, are lower than in the rest of Jordan (JBRDP, 1993). This is the equivalent of around 190JD per person per annum, which represents approximately a third of the average family earnings for Jordan as a whole. In the north east Badia, indicators reveal that health levels are worse than in most other parts of the country. Findlay and Maani (1998) reported that infant mortality has improved from a level of 174 deaths per 1,000 live births in 1976 to 86 deaths per 1,000 live births in 1993 (both sexes). However, this does not compare favourably with an average of 27 deaths per 1,000 live births nationally in 1993 (UNICEF, 1995). Life expectancy at birth is also worse in the north east Badia than elsewhere; it was 54.7 years for both sexes in 1993 (Findlay 1998) compared to 69 years nationally in 1993 (World Bank, 1993). There have been no comprehensive clinical studies into variations in health between mobile Bedu and those who are settled. However, it may be that health standards are worse amongst mobile groups, who do not have basic services, such as health care, sanitation and piped water, which are now supplied to most villages.

5.2 The Jordanian economic context

The delicate political context of the Middle East, particularly since the creation of the nation states in the 1920s, and the considerable political, ethnic and religious fragmentation which has followed, has diverted resources in most of the Arab countries from economic and social development needs (Findlay, 1994). Military expenditure has been a huge drain on the economies of most of the countries of the Middle East, being higher than in any other region, averaging 30.1% of government expenditure overall,

¹ 1JD (Jordanian Dinar) \approx £1 in 1996.

that is 8.8% of the GNP in 1988 (Sadowski, 1992; DeJong, 1995). State spending on defence in Jordan (average for the years 1981-8) was around 28% of the total (Findlay, 1994). By comparison, the budget of the Ministry of Health, which is 76 million JD annually, represented only 5.8% of the total in 1993 (*Wazaara Assaha Al-Ordania*, 1993). This was, however, an increase from 4% of the total in the 1980s.

Whilst many developing countries have focused on the development of economic sectors at the expense of cohesive social development, in Jordan, social development, specifically education and health services, forms a comparatively high proportion of overall government spending. Education, which received 12% of the state budget in 1990 (Findlay, 1994), has been a specific focus sector; it was aimed to enrol all children in school. Estimates suggest that over 95% of Jordanian children attended school in the early 1990s (UNICEF, 1993). The country also has a relatively high proportion of GNP per person dedicated to health care, and receives more development assistance for health (per capita) than most other Arab countries. It has a higher doctor/nurse to population ratio, and a higher proportion of births are delivered with professional assistance. This emphasis, together with attempts to improve regional equality, is reflected in high levels of life expectancy (nationally) relative to GNP per capita, compared to most other Arab countries.

Development in the north east Badia has been more limited than in other parts of the country, which is reflected in the relatively poor levels of health experienced by the population of the area. Improved rural development has been articulated through a number of Economic and Social Development Plans. Honey and Kharmeh (1989)

indicated that the '... 1986-1990 [Economic and Social Development] Plan is committed to more equitable development among the regions'. The government has been trying to compensate for poor social development by expanding the provision of health services, together with extensive infrastructure provision, such as piped water and electricity in the area, as well as in other rural areas generally. The 1986-1990 plan also acknowledged that many rural areas lacked economic opportunities. As suggested, economic development in the north east Badia is particularly limited; the region is one of the poorest in Jordan.

The government has recognised the importance of pastoralism to the overall economy of the north east Badia. Specific attempts to assist the economy of the region have included the subsidisation of supplementary animal feeds since the late 1980s, allowing the purchase of imported vehicles by pastoralists with tax exemptions, and the funding the construction and maintenance of water bore wells, which can be used for free, or at a subsidised rate by pastoralists. These measures have helped to maintain pastoral production, which continues to be an important part of the economy of the area. For 22% of the population, livestock production is the main source of income and for 32% of the population it is the secondary source of income (JBRDP, 1993). However, the result has been that pastoralism is sustained by government subsidies, and the overall number of animals has increased to a level that is considerably greater than would be sustainable in the region without artificial support (Dutton *et al.*, 1998; Campbell and Roe, 1998). As a consequence, the Badia environment has been degraded to a significant extent by the over-grazing of livestock. Moreover, the increased use of motor vehicles has also facilitated the more extensive use of grazing resources, in that the rapid

transportation of livestock in large trucks means that very few grazing opportunities are unexploited and therefore allowed to recover from grazing damage. The loss of natural resources has compounded the dependence on subsidised inputs.

Recent economic crises and the implementation of structural adjustment programmes have had far reaching implications for the economy of the Jordan Badia. Of particular significance was the phasing out of subsidised animal feeds in 1996. Oakeley (1996) and Oakeley and Al-Tabini (1996) suggested that increased input costs will have a significant impact on incomes in the Badia, and may result in many families being forced out of pastoralism. The substitution of pastoral inputs will have to take place in the short term; either more expensive supplementary animal feeds will need to be obtained, or the natural grazing will need to be more intensively exploited. This is likely to lead to permanent rangeland destruction, and therefore a more long term threat to the sustainability of pastoralism and livelihoods in the Badia.

A further problem is the increase in competition from other land uses, especially for the construction of permanent houses and commercial agriculture. It is likely that these will have an impact on pastoralism and therefore the livelihoods of the population of the area. Cultivation is becoming widespread along the Syrian border, much of it commercial in orientation; there have developed a large number of commercial crop farms between the study area and Al-Mafraq. Significantly, Kirk (1998) found irrigated cultivation on the fringes of the Badia to be unsustainable using present methods (involving low technology pipes and ditches) due to high rates of evapo-transpiration and consequent deposition of minerals and salts which may render a piece of land

impossible to cultivate in less than four years. It therefore seems unlikely that cultivation, particularly small-scale cultivation with limited irrigation, can provide an extensive alternative to pastoralism.

The population of the study area was growing at a rate of 3.1% per annum between 1987 and 1993 (Findlay and Maani, 1998). For the majority of respondents to the survey, children's education is now considered to be one of the primary reasons for building a house in the villages, and part, if not all of the family settling. It was asserted by these families that those children who had received education would subsequently seek employment within the modern formal sector, rather than working in the agricultural sector. As a consequence, there is a growing labour market and therefore demand for employment outside the pastoral economy, which needs to be absorbed by the formal sectors. Indeed, this is a problem that is likely to become increasingly severe, since unemployment rates have increased rapidly through the 1980s to a national level of 18% by 1990. In the past, the state employment sector has absorbed a high proportion of educated individuals from the area. However, in the short term, there are limitations to which the economy, and particularly the public sector, can absorb this increasing pool of labour. Moreover, the implementation of structural adjustment programmes is likely to lead to reductions in the numbers of individuals employed by the government. Thus, for the population of the north east Badia, the threats to household economic security and 'squeezing' of household budgets are likely to reduce expenditure on health and illness related behaviour, such as the costs involved in seeking health services, as well as having implications for the nutritional security of the more vulnerable groups. This is likely to have considerable consequences for health of the population.

5.3 Health planning

Amman dominates Jordan in terms of the location of the government (and royal family), the concentration of population and economic activity. Health service provision in Jordan is characterised by centralisation, both in terms of decision making and the provision of services, a trend which development plans have attempted to reverse, resulting in considerable improvements in health service delivery outside the main urban areas. However, the emphasis remains one of top down planning, incorporating a hierarchical administrative structure. The Social and Economic Development Plan (1986-1990) advocated decentralisation by transferring planning and decision making from central government to regional government, as well as by incorporating 'grass roots' participation. Honey and Khazmeh (1989) questioned whether this will involve meaningful local level decision making and planning, warning that this may result in elites from the regions gaining influence, and that inter-regional disparities may be replaced by intra-regional disparities in Jordan. Within the Jordanian health sector, there is little evidence to suggest that the intentions of the Plan will result in any decentralisation of decision-making capacity. The subsequent development plan for 1993-1997 also raised 'broadening the base of participation' as one of six key areas of action for health. However, the ways envisaged were limited to 'urging' both the voluntary sector and professional organisations to provide local services, and to increase the contribution that community councils make in maintaining an environment conducive to good health. This falls short of actually giving local communities any planning or decision-making powers. Consequently, health planning is based on a highly prescriptive

interventionist delivery system dominated by orthodox health discourses; 'indigenous' alternatives to bio-medicine are barely recognised.

In the study area, where was no indication of any formal participation in health care decision-making and planning taking place at the local level, and the mechanisms that might enable this to happen are limited in their powers. The families in the survey were asked about their participation in health care decision-making, and the consensus was that there was very limited scope for the individual to participate in health care planning. Community village councils (*majalis balady*) serve as conduits with the government, but these councils were generally limited to administering local taxes, recording births and deaths, or in occasionally mediating complaints between residents of the villages and the governorate-level ministries. However, local demands have, in fact, influenced the organisation and scope of rural service delivery. In recent decades, key actors, particularly the tribal sheikhs, are re-asserting themselves within the village milieu, often semi-independently of the government sanctioned *majalis balady*, in an attempt to further political aims. Whilst no formal mechanisms for participating in planning at the local level exist, a number of these actors within the study area have made demands for services; many of the peripheral health centres provided in the 1990s, together with some primary schools, were provided on this basis. However, the result has been that some villages have been provided with clinics, whilst others have not.

The As-Safawi clinician interpreted the provision of services in small villages as a result of the state-tribal political dynamics. He was critical of the system of allocation of services, suggesting that provision was for political purposes. The government installs

services '... to win political friendships with certain tribes; it targets them with favours'. This includes not only clinics, but also schools. One of the local schools is only used by eleven children, although staffed by two teachers who travel from outside the village. He asked why a bus or car to the As-Safawi school was not provided at a fraction of the cost. He suggested that the health strategy should be changed to one of focusing on the centralisation of high quality health services, and of the improvement of transport facilities, which he suggested were poor, but he admitted that this was unlikely to happen. Thus, the spatial distribution of basic health services is based on the interests of the actors involved in planning and decision-making at various levels. These levels include international institutions, the central and governorate level government, and vocal actors representing individual villages. Each claims a stake in service provision.

Although health services in Jordan are spatially centralised, the country has a far more balanced delivery structure than that in many developing countries since the population is comparatively urbanised, with 73% of the population living in urban areas (Jordan Department of Statistics and Ministry of Health, 1992). Nevertheless, until the mid 1980s, provision of health services in the rural areas was negligible, particularly in the north east Badia. An important element of the WHO's 'HFA2000' resolution was to encourage the expansion of rural health services. In accordance with this, the Jordanian government is switching from emphasising the provision of comprehensive urban tertiary health care to the widening of rural service provision, and thus attempting to rectify the problems of accessibility to services for rural groups.

The Ministry of Health has attempted to incorporate the WHO's HFA2000 resolution, by asserting that their national health policy is based on '... the principle that all citizens have the right to health services', and ensuring that '... health services are available, accessible and acceptable in all communities, and [the national health policy] seeks to ensure the equitable distribution of these services' (Jordan Department of Statistics and Ministry of Health, 1992: 3). Certainly, there has been a significant expansion of rural provision throughout the country since the early 1980s. '... [R]ural Jordan is actually disproportionately served with government health clinics, relative to the balance of population' (Honey and Kharmeh, 1989: 77). Virtually all settlements populated by a 1,000 or more residents, and many with populations of as few as 500, have been provided with a clinic. Only an estimated 3% of Jordanians lived more than 10km from a health centre in 1989, meaning that health services are at least 'potentially accessible' for the majority of the population.

Structural adjustment frequently involves reductions in health sector expenditure (Woodward, 1992; Stewart, 1992; Asthana, 1994a). Structural adjustment programmes have been imposed on most sectors of the Jordanian economy, in particular manufacturing and transport. Despite some attempts to strengthen private sector involvement in the provision of basic health services, government health care and education were not subjected to full-scale structural adjustment programmes in the 1980s (Anani, 1987; Saba, 1987), or the early 1990s (Ministry of Health informants). Indeed, health care spending actually increased overall between the 1980s and the early 1990s, although more recently spending has declined slightly as a proportion of the total

government budget, from 5.9% in 1992 to 5.4% in 1994 (*Wazaara Assaha Al-Ordania*, 1993).

The recent Economic and Social Development Plan (1993-1997) is replete with references to cost-cutting and the need to improve the efficiency of health service delivery, specifically in the rural basic health care centres. Moreover, a cost recovery programme, which took the form of charging patients for prescribed medicines, was introduced in the late 1980s. The 1993-1997 Plan also called for the need for private sector involvement in basic rural services. There has been considerable expansion in private practices, clinics and hospitals, but this has been confined to the urban centres, particularly Amman, which forms the main market for higher cost services. Indeed, total expenditure in the private health sector is now higher than in the public sector (World Bank, 1993). Conversely, the government continues to be the main provider of health services in Jordan both in terms of the number of facilities and the number of patients cared for. However, private investment in health services provision has not taken place in the rural communities in north east Badia. This suggests that greater incentives will be needed to encourage the private sector to provide basic rural services. Thus, the government remains at present the only realistic provider of health services in the rural areas.

5.4 Health service delivery in the north east Jordan Badia

Health care delivery in the Al-Mafraq governorate area, which broadly covers the entire north east Badia, consists of both private and government outlets. Government health services at primary, secondary and tertiary levels are provided by the Ministry of Health (Table 5.2). In addition, the Jordanian Royal Military Medical Service serves military personnel only and provides small hospitals at As-Safawi and Al-Mafraq. A government general hospital in Al-Mafraq city, the main tertiary level outlet for the Al-Mafraq Governorate area, covers the entire north east Badia. Three urban clinics provide secondary care for the main neighbourhoods of Al-Mafraq, and there is a specialist Maternity and Child Health (MCH) centre. Although health service delivery at governorate level in the north east Badia of Jordan is focused in Al-Mafraq city, rural provision is extensive; rural health services include comprehensive clinics at Ar-Rawayshid, Al-Azraq and Subha (Figure 5.1). Civil Defence centres provide emergency support, such as ambulances and fire fighting equipment, and are located in As-Safawi, Saidilia, and between As-Safawi and Ar-Rawayshid. Modern private provision in the area includes a number of large clinics in Al-Mafraq, including four specialising in paediatric care, a number of private general practitioners and a charitable American clinic specialising in chest diseases, especially tuberculosis, which is free to users. Less formal options include many private pharmacists in Al-Mafraq, as well as some in the villages to the west of the study area, although there are none in the study area itself. In Jordan, whilst considerably more medicines are available from private pharmacists 'over-the-counter' than would be available in the UK, a prescription system is administered for medications supplied and subsidised by the Jordanian government.

Table 5.2 Summary of health services: Al-Mafraq governorate

Sector	Type of health service	Location*	
Public Sector	Urban hospital	Al-Mafraq	
	MCH centre	Al-Mafraq	
	Urban community clinic	Al-Mafraq (3)	
	Rural clinics	Peripheral centres**	Smaller villages (7)
		Primary centres**	Medium villages (5)
		Comprehensive centres	Umm Al-Quttayn Subha Al-Azraq Ar-Rawayshid
	Civil defence centres	As-Safawi Saidilia Between As-Safawi and Ar-Rawayshid	
Military	Clinics and hospitals	Al-Mafraq As-Safawi	
Private sector	Private general practices	Al-Mafraq	
	Private hospital	Al-Mafraq	
	Pharmacists	Al-Mafraq	
Charities/NGOs	American clinic	Al-Mafraq	
Popular medicine	Apothecaries	Al-Mafraq	
	Traditional practitioners	Villages	

Source: author survey.

*The Al-Mafraq governorate only.

**Study area villages only.

Thirteen clinics are concentrated in the study area villages (Figure 5.2), which serve a population of 15,318 (JBRDP Baseline Survey, 1993). Before the 1980s, services were concentrated in urban areas such as Al-Mafraq, a city with a population of approximately 40,000. The largest of the study area villages, Umm Al-Quttayn, has had perfunctory services consisting of visiting doctors since 1956, but the first health centre was only established in 1981. This was expanded to a 'comprehensive' level clinic in 1984. A number of the other medium sized villages, such as Dyr Al-Kahf, received

'primary' clinics in the 1980s, and many smaller villages, such as Abul Farath (Figure 5.2), were provided with 'peripheral' clinics in the 1990s. The rural clinics form the basis of a formal referral system, whereby patients are encouraged to approach their nearest clinic initially and are referred to a higher order health centre if necessary. Some of the clinics have ambulances to deal with emergency cases. The comprehensive and primary clinics provide a wide array of basic services, whereas the peripheral clinics are very simple, and only open on a part-time basis. Table 5.3 outlines the main facilities provided at the comprehensive, primary and peripheral level rural clinics.

Figure 5.1 Organisation of health services: Al-Mafraq governorate

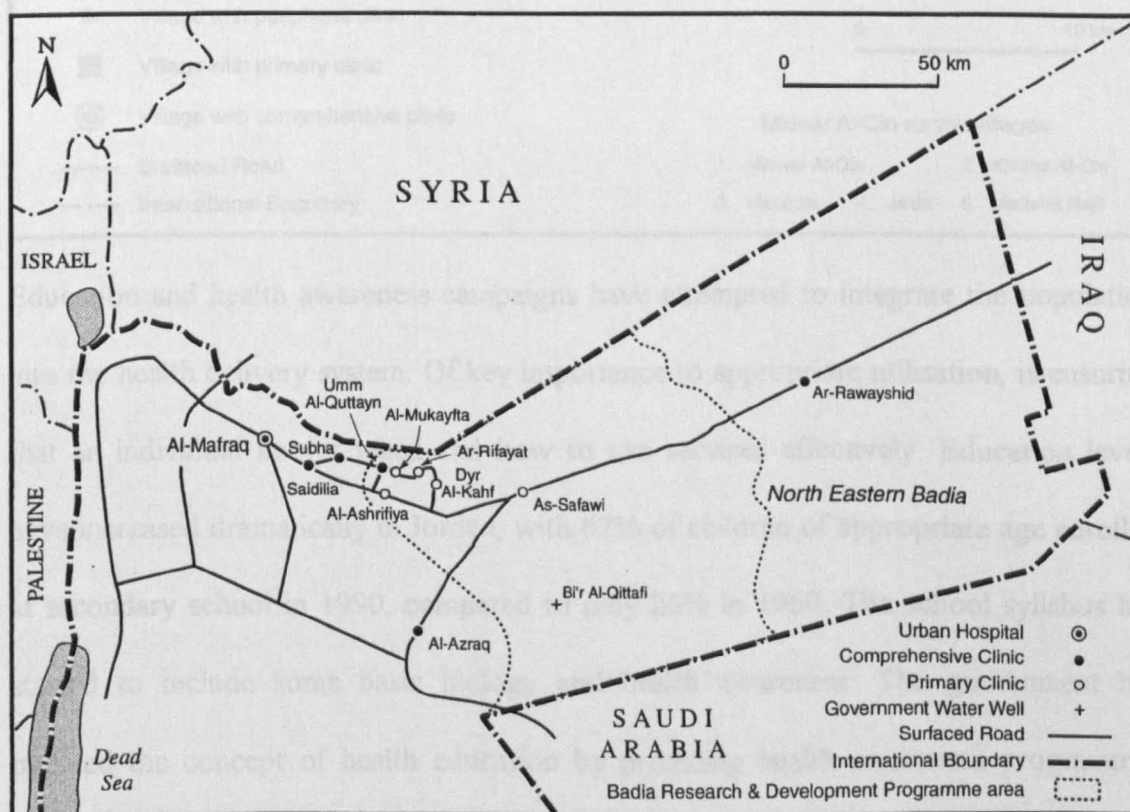
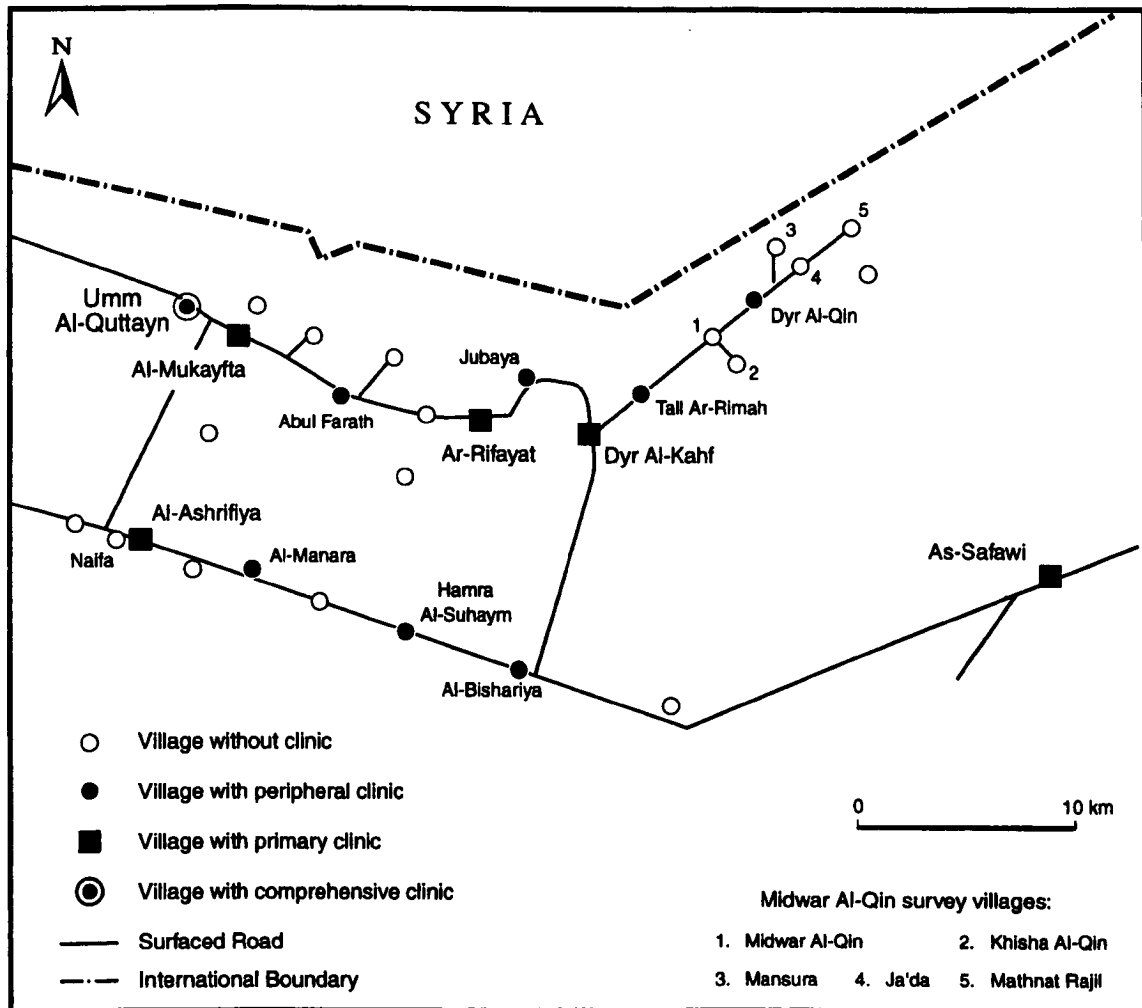


Figure 5.2 Study area villages and clinics



Education and health awareness campaigns have attempted to integrate the population into the health delivery system. Of key importance to appropriate utilisation, is ensuring that an individual knows when and how to use services effectively. Education levels have increased dramatically in Jordan, with 62% of children of appropriate age enrolled at secondary school in 1990, compared to only 25% in 1960. The school syllabus has started to include some basic biology and health awareness. The government has pursued the concept of health education by providing health awareness programmes through the mass media, as well as at local level, by displaying pictorial information posters in health clinics and through seminars provided by the doctors

Table 5.3 Provision of rural health services: study villages

	Clinic type		
	Comprehensive	Primary	Peripheral
Number of clinics	1	5	7
Opening times	24 hours 7 days per week	24 hours 7 days per week	1-2 days per week *
Average patients per month	1700	450	150
Staff			
General practitioners	3 (resident)	1 (resident)	1 (part time)
Nurses**	3 (full time)	3 (full time)	1 (part or full time)
Midwives	2 (full time)	1 (full time)	
Pharmacist	1 (full time)	1 (full time)	
Dentist	1 (full time)		
X-ray technicians	3 (full time)		
Visiting specialists	✓***		
Facilities/services			
Basic medical services	✓	✓	✓
Pre and ante-natal care	✓	✓	
Birth delivery services	✓	✓	
Family planning services	✓	✓	
Vaccinations ****	✓	✓	
School health programmes	✓	✓	
X-ray	✓		
Pharmacy	✓		
Accident and Emergency room	✓		
Dental clinic	✓		
Delivery room	✓		
Pathology laboratory	✓		
Accommodation for staff	✓	✓	
Ambulance	✓	✓	

Source: author survey.

*The doctor is available one or two days per week. A nurse may be available more frequently.

**The nurses have basic medical training, but are not highly qualified.

***Specialists visit the Umm Al-Quttayn comprehensive clinic twice per week, including gynaecologists and paediatricians.

****Vaccinations are also administered to the residents of the surrounding villages and through the schools.

Note: There is considerable variation between the facilities provided at different clinics at the same level. The table shows the services provided at the primary clinic at Dyr Al-Kahf; many other primary clinics have fewer facilities. Dyr Al-Kahf and Umm Al-Quttayn are the only clinics in the study area with MCH services.

within the villages. Health awareness programmes have promoted the importance of children's vaccinations.

Government vaccination programmes are administered through the clinics and schools. In addition, the government has attempted to compensate the smaller villages without schools and health clinics, by providing mobile vaccination programmes. However, delivery does not extend beyond the settled areas. Pre-school and school vaccinations include DPT (diphtheria, pertussis and tetanus), polio, hepatitis B, tetanus (for mothers), BCG (tuberculosis) and measles. The vaccination campaign forms part of the broader initiative to improve the well-being of children. Policy is now emphasising children's health in Jordan and the government recognises the need to tackle children's health from a number of angles. These include tackling poverty, improving nutrition, increasing the number receiving education and health and social development generally (UNICEF, 1993). These intentions have been incorporated into a 'National Programme for Action', although UNICEF recognises that there is still a need to '... translate national commitment to child survival, protection and development into practical programmes...' (UNICEF, 1993: 65). Despite these reservations, the government recently completed a comprehensive polio vaccination campaign, which aimed to vaccinate fully all children under the age of five years. Official figures suggest that 95% of children under the age of one year had been vaccinated against polio by 1993 (UNICEF, 1995). At the time of the survey, the government had initiated a measles prevention campaign administered through the schools to children aged seven and eight years, with the aim of increasing coverage from a national level of 88% in 1993.

5.5 Conclusions

The government of Jordan is pursuing a policy to improve the equitable distribution of health services in line with the WHO's HFA2000 resolution (Jordan Department of Statistics and Ministry of Health, 1992). Indeed, there has been considerable improvement in the provision of services in the north east Jordan Badia, enhancing potential accessibility substantially. A key question, however, is to what extent are these services accepted and 'effectively' accessible to the mobile and sedentarising communities of the area? In order to explain the patterns of acceptance and 'effective' accessibility, it is necessary to understand the Bedu who are expected to utilise these services. The next chapter reviews the main characteristics of Bedu communities in the past, identifying the central ideologies and social values, which are considered in relation to the changing health and illness discourses and behaviour later in the thesis. The chapter also reviews the key political and economic changes in Jordan that have determined changes in family economic, social and geographical circumstances in the Badia in the twentieth century.

Chapter 6

Sedentarising Bedu Communities

6.1 Bedu traditions

Nomadic pastoralism has a long history in the Middle East, dating back at least four millennia. Pastoralists survived by adapting to the harshness of the desert environment, and by constantly moving in search of sufficient grazing and water. Lancaster and Lancaster (1986, 1990) asserted that the main impetus for groups practising nomadism, in particular camel pastoralism, was to maintain an ideology of autonomy and equality, impossible within the urban centred hegemonies, rather than just as a purely economic means of survival. Historical narratives are used to reproduce and reinforce these ideologies (Lancaster and Lancaster, 1990; Shylock, 1995, 1996).

Although autonomy is a primary tenet of the Bedu way of life (*bedaawi*), total autonomy from settled or other nomadic groups has never been practised (Lancaster and Lancaster, 1990). The Bedu often had substantial links with settled people, traders and other mobile groups. The trade of animals and animal products in exchange for crops and manufactured goods, produced by rural settled communities (*felaheen*), was very important to the Bedu. In many cases an '*akhowa*' system evolved, whereby a settled community would supply goods to a Bedu tribe, who would offer protection from other nomadic groups in exchange. Inter-tribal rivalries were common, and the Bedu became skilled fighters, often acting as guards for trade caravans, as well as being guides for travellers and merchants passing through their territories.

Neither were individual families completely independent; although animal products such as meat, wool and milk could, in theory, be used for subsistence, ecological conditions dictated the need for considerable social interaction. Although seasonal movements had certain regularities, variations and irregularity in rainfall over a wide geographical area made the seeking of grazing and water heavily reliant on the availability of accurate and current information. It would be impossible for an individual household ('*ahl*' or '*a'ilia*') to gather sufficient information to support pastoral activities. Information was therefore exchanged within a wider social grouping. Interactions within social networks, formed of kinship (blood) ties with relatives within tribal groups, were central to a household's survival. Exact environmental and geographical considerations were therefore of secondary importance, since access to some sort of grazing is generally possible within the territory available to the wider tribe. Even if various members of a tribe were not blood relatives of those within other branches ('*fukhd*'), strong kinship ties existed and a sense of sharing of grazing and water resources and co-operation have always been important within the tribe (Marx, 1979). These branches are referred to as '*fukhd*'. The *fukhd* is a cohesive five generational unit, within which intra-marriage was, and often still is, common. All members of the *fukhd* are, in theory, related and a common ancestor of five generations, generally a man of some reputation, is recognised.

The use and control of space by the Bedu was organised on the basis of the *dirah* system, a concept differing significantly to that of 'territory'. A tribe's *dirah*, the area they controlled and used, rather than owned, had indistinct boundaries, which changed between seasons and years, depending on the availability of water and grazing and

interactions with other tribes. Very often this area would have to be defended from other tribes to avoid the theft of their possessions and animals. Friendly tribes were given access to land for pastoral use in exchange for payment. The *dirah* system involved a sense of sharing natural resources within the tribe. However, the ownership of animals was not communal within the tribe or *fukhd*. Each extended household had, and continues to have, separate ownership of a flock or herd. Grazing resources were usually exploited on a 'first come, first served' basis, and levels of competition between households for resources depended on how plentiful they were in a particular year.

Social capital, which was more important than material capital, took a particular form. Senior male members of a tribe needed to build a reputation (*suma'*; literally to listen) within the group for a number of qualities, such as generosity (*karam*) and hospitality (*dhyfa*). The reputation of an individual was based on the experience that others had in dealing with him. Thus, his reputation was continually re-assessed. Welcoming visitors, and presenting gifts of animals and other valuable goods, increased the number of visitors an individual would receive. This benefited the individual, who would have more opportunities to gain information on the grazing conditions over a wide area. This also enhanced his reputation for being knowledgeable. The acquisition of surplus animals needed for the 'generosity economy' was usually augmented by conducting raids (*ghazu*) on enemy tribes. The Bedu saw *ghazu* as a chance to display skill and chivalry, both of which would enhance their reputations.

Experience and re-evaluation were key values of the Bedu social system. The 'currency' of reputation and influence had to be sustained through continued demonstrations of

generosity, success as a mediator, and ability to interpret and disseminate information on grazing and water resources. These forms of social currency were critical, since a household's contribution ensured their continuation within that group and therefore their survival. In addition, certain individuals (both male and female) could gain a reputation from being skilled in curing sickness using traditional Arabic treatments and methods. Here too, reputation was continually re-assessed. Influential individuals could only remain so through the experience people had interacting with them.

6.2 Economic and political factors determining sedentarisation

The original foundations of the Bedu economy, the production of animals, the exchange of animal products and the transportation of goods across deserts, have been eroded throughout the twentieth century. Many of the commodities supplied by the Bedu are either no longer required or have become uneconomic. Globalising economies have led to imports of cheaper meat, particularly from countries outside the Middle East, while trucks and tractors have replaced camels for transportation and agricultural work. Both of these factors have contributed to the demise of traditional Bedu economies. This has resulted in nomadic pastoralists either intensifying production, mostly by converting from camel to sheep production with far greater numbers of animals, or diversifying into other activities, such as cultivation and paid employment.

Political changes encouraged the nomadic populations of the Middle East, Africa and Asia to settle. Existing tribal hegemonies were displaced with the inception of the nation state. The Bedu of the Middle East were not able to retain their autonomy from

centralised governments since their territories were no longer safe retreats. Motor vehicles and aircraft have allowed governments to gain access to the previously impenetrable inner deserts. Many countries have been unequivocal in their approach to the settlement of nomadic populations. Israel has forced the Negev Bedu to settle in villages, and denied them access to their tribal *dirah* (Abu-Rabia, 1986; Findlay, 1994).

The British and French negotiations during the treaty of Versailles (1919) led to the formation of the Emirate (principality) of Transjordan in 1921, a British protectorate territory. The establishment of the state boundaries was a significant influence on the Bedu way of life. The eastern 'panhandle' of Jordan cut across the *dirah* of the Rwala and Ahl Al-Jebel tribes, denying those groups their traditional resource bases and making nomadic pastoralism less tenable. Moreover, the tribal *dirah* system was replaced by a nationalised system of land tenure, whereby most of the land area was available to any user, regardless of their tribal origins. To encourage sedentarisation, tribal sheikhs, were conceded sites by the government in the 1930s for permanent settlements in close proximity to wells along the northern border of the north east Badia. Settlement was concentrated on the slopes of Jebel Druze, east of Al-Mafraq city, the area of highest rainfall in the north east Badia. They initially took the form of tents permanently situated around the wells, followed by a few simple buildings.

Provision of services in many of the larger villages, such as piped drinking water, schools, health centres, electricity and surfaced roads from the late 1970s and early 1980s, encouraged more recent settlement. Most of the smaller villages now have many of these services. The most remote settlement in the village area, Mathnat Rajil, with an

estimated population of 119 in 1994 (Findlay and Maani, 1998), was recently connected to the water main, was provided with a surfaced road, and in 1996 to the electricity network. On balance, economic opportunities have favoured settled occupations, and the government has been instrumental in precipitating the sedentarisation process by creating economic opportunities for the Bedu. Indeed, the civil service and the military forces are now significant employers of settled Bedu in the north east Badia. These measures have served the government well in drawing the previously autonomous Bedu and their incompatible practices such as the *ghazu* and *akhowa* systems, into the nation state. The majority of Bedu families are now orientated towards, and linked to the state, both in terms of receiving services and as a source of employment.

The emphasis on camel and mixed flock pastoralism has changed to large commercial sheep herding in Jordan. Trucks have replaced camels as the main means of transport and there is now no significant commercial market for camel meat and milk. The recent construction of deep mechanical government wells and a shift in emphasis from natural grazing to imported feed supplements, subsidised by the government, have facilitated the expansion and commercialisation of livestock (sheep) production. Many pastoralists now rely more heavily on supplementary feeds than natural grazing. Thus, the Jordanian approach to the development of the Badia involves government support and encouragement to continue pastoralism, albeit using greatly modified methods. Chatty (1986) and Lancaster and Lancaster (1990) assert that changes in the Bedu economy, such as the use of trucks, conversion to commercial sheep production, diversification into other activities such as paid employment, and changes in migration patterns, reflect the adaptability that has been historically necessary to retain the ideology of autonomy.

Since camel pastoralism no longer allows them to do this, they have adopted new forms of pastoralism. Rather than a particular pastoral system or even a way of life, Bedu identity is now more of an attitude, ideology or philosophy (Lancaster and Lancaster, 1990). Chatty (1986) concludes that in adopting the truck, new methods of pastoralism and new migratory cycles, the Bedu are not intrinsically resistant to change. Thus, 'Bedu' and 'nomadic pastoralist' are no longer strictly synonymous.

6.3 The sedentarisation process

The foundation of Arab society, the family, has traditionally been the central socio-economic unit based on mutual co-operation, commitment, security, support and shared resources, in which each member has tightly defined roles and expectations towards each other. Indeed, titles of family members reflect the centrality of the family and roles within it rather than individual orientations. When a couple become parents, they adopt the titles *Abu* (father of) or *Umm* (mother of) followed by the name of the eldest son, for example Abu Salim and Umm Salim. Likewise, the children are often referred to as *Ibn* (son of) or *Bint* (daughter of) followed by the family name, for example Ibn Al-Sirhan and Bint Al-Sirhan, until they have their own children. Barrakat (1990) stressed the centrality of the Arab family, particularly among the rural and urban poor as well as among nomadic groups; individuals and wider society are of secondary importance. The family is patriarchal; the father has authority and responsibility to provide for the family. Traditionally, the mother has a supportive (and subordinate) role as the main child carer, and rarely engages in formal employment. The family has, in the past, provided both livelihoods and education, and has been the primary vehicle for the socialisation of the

children, who in turn were expected to contribute to the family economy from an early age.

In the latter half of the twentieth century, the most profound change for the majority of families of the Jordan Badia, has been the transition from nomadic to sedentary lifestyles. Previous attempts to classify Bedu groups have concerned themselves with distinguishing the various 'traditional' forms of nomadism. Johnson (1969) referred to different groups using different forms of tent, migration patterns and the duration of their migrations, the number and type of animals herded and those mixing pastoralism with cultivation. Others have focused on specific groups at specific times, such as the Iranian Baluchistan nomads (Salzman, 1980) and the Negev Bedu (Abu-Rabia, 1986), without accounting for the breadth of their sedentarisation experiences. The process of sedentarisation experienced by the population of the north east Badia is linear. A number of distinct stages can be identified, making it possible to characterise households at the various stages of the transition. Concomitant with this geographical transition are social and economic changes to the family situation, which are of central importance to the question of accessibility to health services.

6.3.1 Nomadic Bedu

Only around 5% of Bedu pastoral families continue to be fully nomadic, that is live throughout the year in tents. Even fewer families remain on the margins of the formal economy. Most recognise the advantages of livestock production as a business, and thus operate fully in the cash economy. The majority have increased operations within the

commercial pastoral sector and new opportunities have provided scope for entrepreneurialism, reflecting Bedu adaptability and demonstrating their significant business acumen. Those concentrating on commercial livestock production appreciate that marketing their animals themselves, rather than through itinerant traders, increases profits. This is important, as children's education and the employment of some members of the family outside pastoralism, have made it necessary for owners of large flocks to employ shepherds (frequently foreigners such as Syrians or Iraqis), since most family members are no longer available to do this work. Livestock herders are often involved in importing animals from Syria, fattening them in Jordan on a mix of natural and artificial feed, and selling them at a higher price in Saudi Arabia. Government import and export taxes on livestock are high, which has led to the proliferation of illicit cross border trading between the three countries. Thus, in practising 'new pastoralisms', the Bedu have rapidly adapted to the changes in economic and political circumstances. However, the assertion that Bedu have adapted in order to retain their autonomy is questionable. Although Bedu pastoralists have some economic autonomy, in that they are self-employed, adaptability has taken the form of increased dependence on government supplied inputs. In becoming more market orientated, they have tied themselves into a wider economy over which they have relatively little control.

6.3.2 Semi-nomadic Bedu

The classic divisions of Arab society, the tribe-village-urban divisions, supported by Barrakat (1993) in his interpretation of evolving cleavages in Arab society, have a clear geographical basis. However, Chatty (1986) argued that economic strata are now more

relevant, and in doing so distinguishes between groups involved in pastoralism, agriculture and commerce. The Bedu occupy the pastoral component of the division. However, neither system of division reflects the complexities pervasive within the Badia milieu adequately. The pastoral economy is becoming increasingly commercially orientated, and the majority of sedentarising families are active within more than one economic sector, and, in so doing, incorporate elements of both nomadic and settled lifestyles. Reality is therefore more complex than Barrakat's and Chatty's divisions suggest.

Few Bedu in Jordan continue to operate wholly within the pastoral economy. Economic diversification and the education of children have been the primary influences on the transition from nomadism to settlement. This has led to various intermediate stages. 'Semi-nomadic' families are those who have invested in a permanent house in a village as a first stage of sedentarisation. Ahl Abu Abdallah, for example, constructed a house in 1987 in Al-Bishariya village in order to be close to relatives. They occupy this house for up to two months of the year. The house was paid for by selling a proportion of their sheep flock.

However, pastoralism continues to dominate semi-nomadic family economies, with the majority being highly mobile throughout the year. They use trucks to move the animals and to transport inputs to the flocks, such as supplementary feeds and water. Those interviewed using the well at Al-Qittafi (Bi'r Al-Qittafi) were using their trucks to transport water to their flocks, which they had moved to that part of the region for the late spring and early summer period. As with fully nomadic groups, seasonal migration is

based on the location of government mechanical wells and government feed supply centres in certain months of the year, in addition to the availability of natural grazing. In general, those families starting to have settled interests, often with smaller, less commercial flocks, use areas to the west of the region which are more accessible to the villages. Those travelling in the east of the region usually practice extensive commercial pastoralism with larger flocks and frequently travel longer distances to secure natural grazing, or to transport supplementary feeds and water to their flocks.

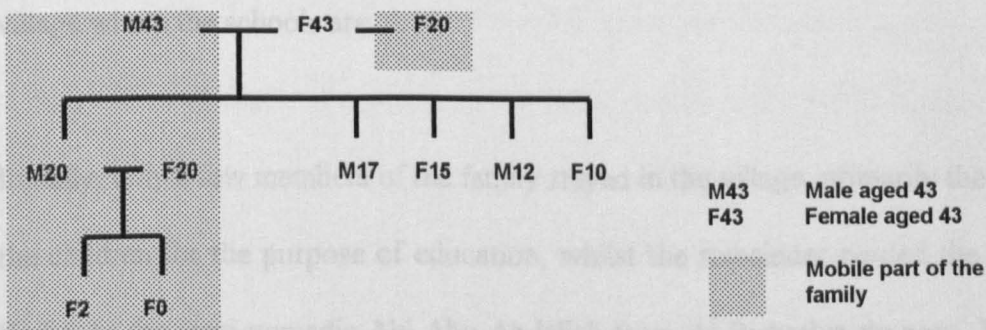
Ahl Abu Abdallah has around 400 sheep, from which they derive most of their income. The sheep are grazed throughout the Badia and are moved seasonally. Their location depends on the annual and seasonal grazing opportunities. The family owns a truck for transporting the flock and for personal use, and they use it to return to the village on a frequent basis. Shbaker, situated around 25km north east of As-Safawi, as well as the water catchment basins (*marab*) in southern part of the study area, such as towards Bi'r Al-Qittafi, were frequently used for grazing. At the time of the interview, they were staying in their tent around thirty kilometres west of their home village.

Over a third of semi-nomadic families interviewed (36%), indicated that one or more members of the family were employed by the government or military forces, and that this contributed to the household income. Most semi-nomadic families are geographically divided. The majority of members of a family tend to be involved in pastoralism, and are therefore mobile throughout the region. Those family members who are employed in the formal sector tend to stay permanently in a family's house in a village. The children are often enrolled in school. These children are therefore settled for most of the year,

generally supervised by the mother or a close relative. However, nearly a half of the semi-nomadic families stated that some or all of their school age children (six to sixteen years) were not enrolled. The vast majority of semi-nomadic families (96%) indicated that some or all of their children would be away from the village for at least part of each year, typically nine or ten months per year for many families, and many of these were pre-school age children. Moreover, most children who are enrolled at school actually travel with their family during the school holidays.

Most members of Ahl Abu Abdallah live permanently in their tents. However, the children aged between ten and seventeen attend school, staying in the permanent house during term time with their mother, and are united with the rest of the family in the tent during the school holidays (Figure 6.1). Ahl Abu Abdallah indicated that the main purpose of building the house in the village was for the children to have access to the school. The children are therefore in the village for most of the year, although the granddaughters under the age of school enrolment, travel with the family for most of the year. This was common in many of the semi-nomadic families interviewed.

Figure 6.1 Ahl Abu Abdallah: family structure and mobility



Source: author survey

6.3.3 Semi-settled Bedu

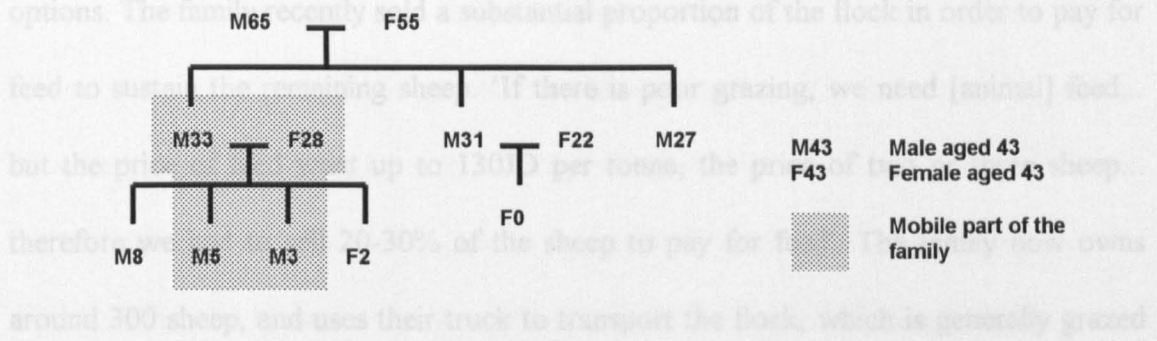
Mobile pastoralism remains a central part of the family economies of 'semi-settled' families. However, they can be distinguished from semi-nomadic families in that their flocks are generally smaller, they travel shorter distances and the duration of seasonal mobility is often around four to six months of the year in the spring or summer. For many semi-settled families, diversification into other occupations forms an important part of family income, and formal education is essential for their entry into the employment market.

Ahl Abu Hussein, a semi-settled family living in Abul Farath village, clarified the connections between education, employment and family structures. Twenty years ago the family was fully nomadic, with a flock of 500 sheep, living permanently in a tent and migrating extensively throughout the region. The primary impetus to settle was the education of the children (who are now the adult sons), once they had reached the age of six years old. The parents, Abu and Umm Hussein had never been enrolled in school, but they considered formal education to be an important step. 'The family has two options, either to stay with the sheep and deny the children education, or to go to the village where the schools are...'

Initially, only a few members of the family stayed in the village, primarily the mother and the children for the purpose of education, whilst the remainder herded the flock in the Badia, as the semi-nomadic Ahl Abu Abdallah from Al-Bishariya do now. Those in the village often stayed with relatives who either had permanent houses or tents pitched in

the village. The Ahl Abu Hussein moved to Abul Farath village partly because Abu Hussein's father had land rights there, and partly because their wider kinship network had settled there previously. The permanent house was built in 1986, and now most of the family stay there throughout the year. Much of the flock was sold to pay for the house, and it made sense for the family to sell some of the flock anyway, since the sons took jobs in the army and government when they finished school, and were therefore unavailable to look after the sheep. The settlement process was consolidated and the family's economic base diversified into the formal economy. Hussein, the oldest son, who only received a primary level education, his wife and two sons, took on the responsibility for the flock, which is still seasonally mobile throughout the Badia. The parents, Abu and Umm Hussein, who had previously managed the flock, were then able to settle permanently.

Family size data from the villages suggest that the nuclear family has become a more common unit than the extended family in the north east Jordan Badia (Findlay and Maani, 1998). However, those undergoing the transition from nomadic pastoralism to settled employment, whilst appearing to be nuclear in that two generations may live together rather than three, frequently act as extended families economically. The Ahl Abu Hussein family is geographically divided. One part, the eldest son's nuclear family, is mobile for much of the year, whilst the majority stay in the family house (Figure 6.2). However, the extended family remains the central economic unit. Hussein manages the flock for the whole family while the adult sons, who are employed in the public sector, also contribute to its total income. Two of Hussein's children, who remain in the village permanently, are cared for by other adult relatives.

Figure 6.2 Ahl Abu Hussein: family structure and mobility

Source: author survey

Compared to semi-nomadic families, fewer semi-settled families (68%) travelled with their children during their mobile seasons (generally only around four to six months per year), although some of these families only travelled with their children during the school holidays. School attendance is the central impetus for a family to settle once a child is aged six years. In all, school attendance is relatively high; 76% of semi-settled families enrol all of their school age children in school. Having finished school, around the age of sixteen to eighteen, formal employment is regarded as the next step. In terms of the sedentarisation process, Ahl Abu Hussein are a generation ahead of the semi-nomadic Ahl Abu Abdallah, in that when their children have finished their education, it is unlikely that they will practice pastoralism. As the following cases show, pastoralism dies out when there are no more uneducated members of a family who are willing to continue practising the mobile way of life.

The family's interests are becoming increasingly orientated towards settlement and settled occupations. Although the background to sedentarisation reflects wider changes, Birks (1981) noted that drought or poor grazing in certain years might be the necessary impetus to sell animals and withdraw from pastoralism. Ahl Abu Hussein believes that

large-scale pastoralism has become less and less tenable, and the family is reviewing its options. The family recently sold a substantial proportion of the flock in order to pay for feed to sustain the remaining sheep. 'If there is poor grazing, we need [animal] feed... but the price of feed went up to 130JD per tonne, the price of two or three sheep... therefore we had to sell 20-30% of the sheep to pay for feed'. The family now owns around 300 sheep, and uses their truck to transport the flock, which is generally grazed within the north east Badia, frequently up to 100km east of As-Safawi. During the year of the survey, exceptionally poor rainfall resulted in some families travelling longer distances than usual or not travelling at all. The eldest son, Hussein, moved the animals to the west to be grazed in the Irbid city area for the first time in seventeen years. However, this did not fully solve their problem, since there was considerable competition between other agricultural uses and the significant number of Badia pastoralists using the area during that particular year.

6.3.4 Settled rural Bedu

The majority of the population within the study area (around 90%), are fully settled, live in the main group of villages (Findlay and Maani, 1998) and have 'formal' employment. Table 6.1 shows the importance of the military forces as employers in the region, and a military pension as a major source of income. A number of families (22% of settled respondent families) can be classified as 'settled pastoralists'. Their small flocks, herded within a few kilometres of the villages' area, are a major source of income to them. However, these families are highly dependent on supplementary animal feeds, which are transported to their flocks on a regular basis. Salzman (1980) calls the continuation of

‘traditional’ occupations, ‘operational generalisation’. The Sinai Bedu, for instance, practice small scale agricultural activities which occupy some members of the family, whilst others are engaged in formal/cash economic activities. The former accrue little or no profit, but their activities are a form of security insuring against uncertainties. Diversification is an important feature of Badia family economies. The semi-settled Ahl Abu Hussein, for example, has strong interests in both pastoralism and public sector employment. The majority of settled families interviewed, whilst relying primarily on formal (or at least non-pastoral) employment, keep a number of animals on the land around the house as well as retaining close connections with village and/or tribal social networks.

Table 6.1 Main economic activities of settled families

A family's main economic activity/income	Number of families	Percentage
Military forces	12	10%
Government employment	7	6%
Settled pastoralist	28	22%
Shop owner*	7	6%
Retired military forces	32	25%
Retired military forces and other occupation**	7	6%
Retired government employment	1	1%
Other occupation	8	6%
Undefined source of income	24	19%
Total	126	100%

Source: author survey.

*Umm Al-Quttayn village only.

**Main income from both military pension and other occupation

An interview with a settled family, Ahl Abu Marson from Tall Ar-Rimah village, highlights the diversity and evolution of economic activities practised within a single family. Before 1970, the family lived in their tent, practising sheep and goat pastoralism. They then 'semi-settled' in the village of Tall Ar-Rimah in a rough constructed building. Marson's grandfather was a sheep pastoralist and his father smuggled both sheep and firearms across the border to the neighbouring countries. The change in economic activities from livestock production to illicit and mixed activities, and then to formal sector employment, has been the main reason for settling. All of the adult children have received at least ten years' education, facilitating their entry into formal employment. School enrolment amongst the children of the settled families interviewed is far higher than the semi-nomadic and semi-settled groups. Only 4% of families indicated that some, or all of their children, were not enrolled. Ahl Abu Marson settled completely in 1988, when they built their present house and sold their remaining flock except for twenty goats, which are now kept on the land surrounding the house, representing a degree of operational generalisation. Their present income comes from their remaining livestock, membership of a syndicate owning a public bus, and their sons' government and army employment.

6.3.5 Settled urban families

Many families settled in Al-Mafraq, the main Bedu market town in the north east Badia. A sense of tribe and continuing connections with pastoralism persists amongst urban families. Whilst economic activities take place in the city, Bedu families frequently retain close linkages with rural relatives, and continue to have rights to tribal land in the Badia.

Ahl Abu Hassan is one such extended family, which derives its income from a variety of occupations within the modern formal sector. The father, Abu Hassan, is now a senior army officer, and his adult sons and daughters, are also employed by both the government and military forces. They remain family oriented in that all members contribute to the joint family income and share responsibility for childcare.

The family originally came from Subha village in the north east Badia, where they were semi-settled pastoralists. Abu Hassan moved to a village north of Al-Mafraq, then to the city of Irbid, where he got married and joined the army. The nuclear family moved between the larger cities in the north of the country, finally settling in Al-Mafraq. Hassan's grandfather originally kept sheep, but these were sold when he became too old to herd them. Abu Hassan's brother continues to live in Mansura village and to herd sheep. Even though they do not practice nomadism or pastoralism, Ahl Abu Hassan are 'urban Bedu'. The eldest son, who works in the civil service, says 'I am a Bedu'. The strength of the Bedu as an identity is particularly strong in Al-Mafraq, where a high proportion of pastoralists have settled.

All families in the urban survey indicated that their children had, or were receiving, schooling, and the majority of heads of households under the age of fifty had some form of formal education. Thus, urban families are considerably better educated than the rural interview respondents. For example, very few heads of semi-nomadic households had any formal education.

6.4 Changes in family and social networks

Salzman (1980: 36) observed that sedentarising or sedentarised families in the Sinai peninsula often retain tribal linkages and 'asserted ideologies' within a state oriented modernising economy; tribes are '... social structures in reserve... reassurance...'. Many rural families indicated that they relied on the local community as a source of co-operation, support and mutual dissemination of information and opinion amongst themselves and their neighbours. Members of the same tribe or sub-tribe frequently settle in the same village. The village, rather than the tribe, has become the central structure within rural communities. Village councils are a formal link between the tribe and the state; councils are endorsed by the state, and they comprise representatives of those tribal sub-units, *fukhd*, within each village, as well as an elected head. Abu Hussein indicated that the population of Abul Farath village consists almost entirely of members of the Musa'yd tribe, and that its council comprises six members, representing each of the *fukhd*, resident in the village. The head refers complaints to the appropriate government office if they cannot be dealt with within the village. Ahl Abu Marson of Tall Ar-Rimah also acknowledged the importance of community cohesiveness and the village council as a source of support, a forum for discussion and a conduit for representation. Within the village community '... we have a well-organised council... the village council is very good'. The eldest son felt that the community should be involved in making decisions and the planning of services. The community has been able to make demands of the government. The '*sheikh* of the village visits the important decision makers [government representatives] to get better services'.

Social cohesion takes different forms in Al-Mafraq, reflecting the relative heterogeneity of tribal origin within urban communities. When asked whether there is a community structure in the city, the eldest son of Ahl Abu Hassan replied that '... there is no community council as there is in the village... [we are] different to [those in] the village, we don't work as a group... the family works independently'. However, information on health and other matters is regularly exchanged by the 'women [in the urban community] talking to each other... this is very important in Jordan'. The importance of his father's social contacts ('*al-wasta*', meaning connections) was also raised, in that they could help them get better services.

6.5 Conclusions

Changing economic activities, mobility patterns, construction of permanent residences, education of children and geographical divisions within a family all characterise sedentarisation. As each generation is educated and joins formal labour markets, a family's ties to the nomadic lifestyles are further eroded. The surveys suggest that the process of transition is linear. This justifies the use of the groups identified in this chapter subsequently in the analysis of accessibility to health care. Whilst it is recognised that artificial boundaries have been formed for defining the groups, it is always possible to classify an individual family within one of the groups. The main features of each group are summarised in Table 6.2.

Table 6.2 Main characteristics of sedentarising groups in the north east Jordan Badia

Group	Residence	Location(s)	Economic activities	Family Divisions	Education and Location of Children
Nomadic	Tent throughout the year	Throughout the region, more frequently in the east than the sedentarising families	1 Pastoralism on the margins of the commercial sector 2 Increasingly commercial pastoralism with large flocks	Family usually travels together	Some families have started to enrol their children in village schools. However, for many families in this group, the children do not attend school, and are therefore away from the villages permanently
Semi-Nomadic	Use the tent during mobile months, have a constructed house in the villages, which may be used for 2-3 months per year. Return trips to villages in the interim	Frequently in the eastern part of the study area, particularly for those involved wholly in pastoralism	Most families are primarily pastoralists, but may start to diversify into other activities	Families are frequently divided; school age children may stay in the village for most of the year with one parent, whilst the rest of the family is mobile	Most families enrol at least some children in school. Those who are not enrolled, especially children under the age of six (pre-school age), travel for most of the year with their parents. Enrolled children often travel with their parents during school holidays
Semi-Settled	Use the tent during mobile months. Live in constructed house for most of the year, usually around 6-8 months	Frequently in the western part of the study area, usually to allow greater access to interests in the villages	The family is primarily involved in non-pastoral activities, but with some members herding sheep	The family is generally divided, often operating on an extended basis, with some nuclear units migrating for much of the year, while others are permanently settled	School enrolment is high. Few families travel with their children, even during school holidays

Table 6.2 Continued

Group	Residence	Location(s)	Economic activities	Family Divisions	Education and Location of Children
Settled-Rural	Live permanently in constructed house in village.	Villages	<p>1 Fully occupied in employment outside pastoralism</p> <p>2 'Settled Pastoralists': A number of settled families have significant pastoral interests (fewer animals than mobile groups) but may not move them beyond the villages' area</p>	The family is not usually divided, although for many, the father works outside the village, and only returns at weekends	Most families in the interview survey indicated that their children were enrolled at school
Settled-Urban	Live in constructed house	Al-Mafraq	A variety of occupations. For the majority, interests are focused within the city	Very little division	All families in the interview survey indicated that their children were enrolled at school

Source: author survey.

Note: the semi-nomadic, semi-settled, settled-rural and settled-urban groups form the principal groups compared in the accessibility study.

The extended family has historically been the primary socio-economic unit with the nomadic Bedu milieu, which relied heavily on the community at large for support and even survival. The family continues to be important, but is no longer directly responsible for the education and 'employment' of the children. Inter-generational wealth flows have reversed; whilst in education, children are dependants of the family, which is the main supporting mechanism, enabling them to attend school and subsequently gain employment. The family is also the central agent of decision-making concerning health, making the examination of health service accessibility at the family level more relevant than focusing on the individual level. This will be considered next.

Chapter 7

Bedu Health Discourses and Arabic Medicines

7.1 Traditional Bedu health discourses

There are close connections between an individual's explanations of health and illness and their wider social context. An individual's '... ideas about health and illness are influenced by prevailing ideologies and are mediated by socio-structural circumstances'; '... beliefs about health are rooted in wider socio-cultural contexts... ideas, beliefs and practices are socially embedded' (Nettleton, 1995: 41, 37). Poorer socio-economic groups may hold 'functional' rather than 'experiential' conceptualisations of health. This reflects their material constraints, and the need to fulfil their economic and social obligations. Thus, need may only be expressed if illness disrupts an individual's usual activities, resulting in low levels of health care utilisation relative to normative need (Blaxter and Peterson, 1982; Calnan, 1987; Nettleton, 1995). Poorer groups also tend to view health in a 'negative' sense, as an absence of disease, which would be caused by factors outside an individual's control, whereas wealthier groups may conceive health more holistically and 'positively', as a resource over which an individual may have some influence. Thus, those socio-economic groups with least power tend to be the most fatalistic, since they may believe that they have no 'control' over health, illness and indeed other aspects of their lives (Donovan, 1986; Nettleton, 1995). Similar distinctions between negative/positive, functional/experiential and release/control aspects of health and illness discourses can also be found between the nomadic Bedu in the past and the settled Bedu in the present.

In the past, health and illness discourses of the Bedu of the north east Badia were embedded within the system of nomadic pastoralism which ensured their survival within a marginal desert environment. The management of livestock was time consuming and physically demanding. The Bedu mostly lived outdoors, making it difficult to maintain hygienic conditions, and they were exposed to extremes of temperature, dust, the prevalence of poisonous snakes, scorpions and spiders, and other hazards. Thesiger (1959) recounted the extreme physical conditions endured by the Bedu of the Arabian peninsula, noting difficulties relating to the limited availability of water, which was extracted from frequently polluted wells or rock pools, and further contaminated through storage in leather bags whilst travelling for long periods of time. Their diet was generally limited to the products derived from pastoralism (Lancaster and Lancaster, 1990), which were often in short supply (Kay, 1978). Droughts resulted in diminished grazing, raising additional implications for health. Doherty's (1936) experiences in the Middle East revealed frequent shortages of food, resulting in virtual starvation. The lack of grazing resulted in the animals being in poor condition and unable to give milk, while close contact with them and consumption of their milk products, increased the potential for succumbing to infectious diseases.

Daily life for the Bedu in the past, in a difficult physical environment, meant that there was little time to deliberate about health, unless it was affected by serious illness. Health problems were simply not thought about until they became urgent and/or interfered with critical economic activities. Thus, a functional view of health and illness was emphasised. Many families stated that life when they were herding sheep in the Badia

was extremely busy, particularly during important seasonal activities such as shearing, lambing and milking. They found that, at certain times of the year, they were too busy to worry about their health and that of their children, acting only if the need could no longer be ignored. However, infants and young children were treated in a very different way to adults. Mothers took special care with infants, monitoring them closely, and possibly giving them some herbs to help prevent illness. Breast-feeding was also recognised as very important in the past and closely connected to the health of an infant. If a breast-feeding mother became ill, a wet nurse would be found to feed the child. These activities were said to strengthen social bonds. However, once children became economically active, their health was viewed according to the functional conceptualisation of health and illness.

In the past, the Bedu did not perceive health to be a 'positive' attribute. Health was simply an absence of disease rather than a resource or an experience. As with many other 'pre-modern' societies, it was of central importance that all members of a Bedu family contributed to the family pastoralist economy from a young age. Provided that work could be undertaken adequately, the person would be considered 'healthy', otherwise they would be considered to be 'ill'. Thus, nomadic Bedu attitudes emphasised a dichotomy between health (an individual being healthy) and illness (an individual being ill), where the former simply amounted to not being incapacitated. Indeed, the word for health, *assaha*, comes from the Arabic root *ssah*, which means 'correct'. An interviewee illustrated this, by suggesting (talking generally about the Bedu and particularly about older people, rather than specifically about himself) that if an individual felt tired, or less well than normal, although without specifically definable

symptoms, it might be viewed with some alarm. This might be interpreted as a specific, but unknown and possibly serious illness, and therefore cause concern. Conversely, there was only a limited awareness that the cause of these symptoms might be the lack of sleep, poor diet or stress. Rather, the assumption was that a specific disease was involved.

Obligation to the social group and a focus on the family, not the individual, feature strongly in Bedu tribal societies. Tribal networks, in which all members were inter-reliant on the activities and contribution of others, help to explain the functional and negative health discourses. This also reflects the non-materialist emphasis in Bedu society in the past. Indeed, in the 'generosity economy', social capital was of greater value than material capital. Tribal solidarity embraced the overall well being of the tribe or sub-tribe as a primary concern; so long as some families had access to resources such as water and grazing, other families would be supported (Lancaster and Lancaster, 1990). The emphasis was therefore on social resources, particularly knowledge and reputation within social groups, especially since these were considered to be more critical for survival than individual physical strength and health, both of which were considered to be of secondary importance.

The Bedu viewed most illnesses to be outside an individual's control. This can be explained by both a lack of understanding of diseases and their aetiologies, and the limited means available to prevent and treat illness. Bedu knowledge of bodily systems and anatomy was very limited in the past; for example, there was little comprehension of anatomy and of the function of the heart, lungs and other bodily organs. Although

relatively few specific illnesses were recognised, the explanations and rationalisations for different diseases were quite diverse (Table 7.1). These can be divided between those diseases which are perceived to have a corporeal aetiology and those which do not. The corporeal aetiologies that were recognised included the environment, hygiene and contagion, although, in most cases, the connection was tenuous, rather than there being a clear explanation of how these factors caused illness. If the condition was recognised, simple treatments were used, including specific herbs which experience had shown to be effective.

Other symptoms, particularly relating to more serious diseases, would be connected to non-corporeal aetiologies, and were usually poorly defined. A disease would simply 'happen' or be caused by *jin* (malevolent desert spirits). It was assumed that little could be done to avoid this. There is no clear discourse relating to why or how a *jin* would cause the disease. For example, tuberculosis was thought to be caused by a manifestation affecting the soul of the person, possibly brought on by a curse incited by someone through a *hijaab* (wizard). Seeking a *hijaab* would therefore be the rational course of action to cure the illness. Those illnesses of a more complex nature, especially mental conditions, were neither clearly rationalised nor differentiated from one another. If the symptoms were not recognised or badly understood, an Arabic practitioner, either a *fuqara* (shaman) or *hijaab*, may have been sought, or, frequently, the symptoms were not treated at all. Other more radical forms of treatments included *wasm* (fire branding), but this would probably only be considered if the disease was unknown, or as a last recourse after all other measures had failed.

Table 7.1 Diseases recognised in the past: causes and treatments

Condition	Arabic name	Cause	Treatment
Intestinal diseases <i>Amraadh butinia</i>			
Minor intestinal pains	<i>Mughhs</i>	Related to the individual having become cold or may be connected to eating rotten food	Drinking herbal infusions
Constipation	<i>Amsaak</i>	Associated with bad food or the cold	Drinking milk
Diarrhoea	<i>Assahhaal</i>	Associated with bad food or the cold	Drinking yoghurt and herbal infusions
Unrecognised or serious pains		Caused by desert spirits (<i>jin</i>) or Evil Eye (<i>Al-A'in</i>)	Fire branding (<i>wasm</i>) Wizard (<i>hijaab</i>)
Chest diseases <i>Amraadh sideria</i>			
Tuberculosis	<i>Sil</i>	Unknown or connected to <i>jin</i> . Symptoms not clearly distinguished from other chest diseases	<i>Hijaab</i> or shaman (<i>fuqara</i>)
Pneumonia	<i>Shwehheqa</i>	Related to the individual having become cold	A 'shot' of donkey milk; also for severe coughs
Influenza	<i>Khubta</i>	Related to the individual having become cold	Drinking herbal infusions; especially rare and valuable herbs not growing in the
Badia			
Common cold or fever	<i>Rushha</i>	Related to the individual having become cold	Drinking herbal infusions or keeping the patient warm and sweating treatment under blankets
Skin diseases <i>Amraadh jildia</i>			
Measles Smallpox	<i>Hasbahh</i> <i>Jeder</i>	Causes completely unknown. Although they were recognised as being contagious, it was not clear whether this was through physical contact or air-borne contagion. <i>Hasbahh</i> and <i>jeder</i> may not be distinguished from one another	Treated with considerable fear and caution, resulting in the isolation or abandonment of the victim
Minor skin rash	-	Unknown; connections were rarely made with poor hygiene	Herbs mixed with olive oil and applied to the skin
Serious skin rash (such as eczema)	-	Tenuously related to interference from <i>jin</i> , or may be connected to contact with animals	A <i>fuqara</i>

Table 7.1 Continued

Eye infections	<i>Amraath a'yoon</i>	Environmental causes such as getting dust or insects in the eyes	Herbal eye drops or tea compresses
Mental illness/ neurological illness	-	Related to interference from <i>jin</i> , or a <i>hijaab</i> casting a spell on the victim. Eating unknown plants are also thought of as a cause	A <i>fuqara</i> or <i>hijaab</i>

Source: author survey.

In the past it was believed that little could be done to prevent illness. This is reflected in the tendency to react to illness ('illness behaviour') rather than maintain health ('health behaviour'), just as the majority of Bedu medicines and practices have evolved to treat illness rather than to prevent it. Preventative measures were limited to simply avoiding specific hazards resulting from well understood causes, particularly accidents and injuries and the dangers of insects, snakes and wild animals. Simple strategies included laying out the camp to avoid snakes, spiders and scorpions (which were treated with extreme caution) and, in particular, covering food. Although eating decaying food was associated with intestinal pains, food was rarely covered for hygienic purposes. However, food was sometimes wrapped to avoid attracting animals and insects. Preventative practices were therefore not intended to improve levels of health and well being generally.

For the Bedu, water, which was generally obtained from rock-pools and wells, was always in short supply. Until recently, the concept of contaminated water was poorly understood by the Bedu. Thesiger (1959) found that the Bedu made every effort to improve the taste of water, which may have been mixed with milk, but there was only a

limited conception of water being considered unhealthy. For the Bedu of the Gulf, water from any available source was considered drinkable if the taste was bearable and the need great enough. Accessibility to water was a more significant issue than whether the water was of high or low quality, although some sources of water were recognised as better for human drinking, rather than just for animals, and habitually used for that purpose. The connection between poor drinking water and diseases was tenuous; contaminated water was rarely identified as a cause of illness. Infection was recognised in some cases, but poorly understood. Cuts would be cleaned with oil, salt or herbs, since it was clear that without doing so, the wound would deteriorate visibly. However, the concept of the infection of the blood and other internal systems of the body was simply unknown. Despite this, it was well understood that the venom from snake, spider and scorpion bites had to be removed from the victim's blood expediently in order to increase the chances of survival.

Fate (*nasseeb*) is a central tenet in Islam and a significant influence on Bedu views on health. Most aspects of an individual's life are perceived as being controlled by fate, including whether they have children, their education, wealth, illness and death. Health, which has been given by God, is seen as a resource. However, since it is considered to be given by God, an individual can do little to influence it. Therefore, if illness happens, it happens; it is 'written' (*maktoob*). Frequently 'God's help', or 'in God's hands' would be associated with the cure for a particular disease or ailment. However, belief in God as a power to cure illness does not preclude the seeking of medical help, both modern and traditional. For example, God may be asked to help through the hands of the practitioner, or through the treatment itself, to provide a cure. Indeed, Islam encourages

a proactive approach to health, and the view that an individual should attempt to avoid illness and treat it within their means and ability. Therefore, *maktoob* tends to be a device for explaining illness, or indeed, bad fortune generally, rather than reflecting apathy or lack of action. In this context, the Bedu would pragmatically deal with illnesses as best they could within the limits of their understanding of these illnesses, and the limited means to treat and prevent disease at their disposal.

7.2 Arabic medicines

Whilst Chinese, Indian and African systems of ‘traditional’ medicine are well documented, the literature has not reviewed the scope of Bedu treatments, much less those methods used by the Bedu of the Jordan Badia. The Bedu refer to traditional medicines as either *tib al-a’rabi* (Arabic medicine) or *tib as-sha’bi* (popular medicine). The term ‘Arabic medicine’ will therefore be applied when referring to the treatments and medicines used by the Bedu of Jordan. ‘Arabic practitioner’ will be used when referring to shamen, wizards and herbalist doctors.

Constantly re-evaluated reputation and experience have always been important Bedu social values. The efficacy of using a particular treatment or consulting a practitioner was far more important than understanding how a treatment worked; the fact that it worked was enough. Therefore, the use of Arabic medicines by the Bedu was not based on an unconditional faith in them. Experiences of illnesses and cures were disseminated within social networks, particularly tribal and family groups, and inter-generationally; parents disseminated experiences to their children. Thus, if the treatment received from a

practitioner was demonstratively efficacious, or otherwise, this experience would rapidly be communicated within the social network. The practitioner's reputation would be based on this.

Herbal medicines (*tib al-a'ashaab*) were the most commonly used Arabic medicines in the past. Herbs were generally gathered by nomadic families in the Badia *wadi*, dried and stored until used. Herbal medicines were most commonly taken in the form of infusions, or occasionally mixed, ground to a powder and eaten. A number of 'famous herbs', *a'ashaab shaheer*, were regularly used as medicines (Table 7.2), in particular for intestinal pains, the common cold and influenza. However, the majority of users had no cohesive knowledge of herbs as medicine. Their use varied amongst users, and when used medically, depended on the knowledge and experience of the family and other individuals within their social network. There was no definitive set of conditions and symptoms that corresponded to a particular herb, and the herbs would be used together or separately. Although the herbs were not used for the prevention of specific diseases, some were considered generally healthy, in particular *baboonage* and *za'tar*, which were often mixed together and made into a yellow tea. Moreover, since boiling water was needed for herbal infusions, they were considerably more hygienic than drinking water straight from a well.

Ahl Abu Hussein, a semi-nomadic family from Abul Farath village, indicated that herbs were taken in the form of tea, and that they are still widely used by the family more than any other form of Arabic medicine. They were considered most useful for the treatment of illnesses rather than for preventing them. However, herbal teas were

Table 7.2 Commonly used *a'ashaab shaheer*

Arabic name	Latin name	Medicinal use
<i>Baboonage</i>	<i>Mafricana Camomilla</i>	Cold, cough, intestinal problems with babies
<i>Ba'ytharaan</i>	*	Intestinal pains
<i>Ja'da</i>	*	Intestinal and kidney problems
<i>Maraamia</i>	<i>Salvia Officinalis</i>	Intestinal pains
<i>Na'na'</i>	<i>Mentha</i>	Menstrual pains
<i>Qaysoom</i>	<i>Haloxleyum Articulate</i>	Intestinal pains
<i>Sheeh</i>	<i>Artemisia Herbalba</i>	Intestinal pains
<i>Yansoon</i>	<i>Pimpinalla Anisum</i>	Diarrhoea, fatigue, sleep trouble, upset stomach. Also used for babies and given to post-natal women
<i>Yantoon</i>	*	Different infant illnesses, backache and cleaning cuts
<i>Za'tar</i>	<i>Thymus Serpylim</i>	Swollen glands, headache, intestinal problems

Source: author survey. Some translations and uses are provided by Brandenburg (1998a).

*These herbs have not been identifiable.

Note: No quantitative figures available; the 'famous herbs' *a'ashaab shaheer*, were repeatedly referred to during the field surveys.

habitually drunk for pleasure and not just as medicines. The herbs they used regularly were *qaysoom*, *ja'da*, *za'tar*, *sheeh* and *yansoon*. These famous and widely used herbs were considered 'very effective for the belly; it is confirmed that they are effective'. However, it was repeatedly asserted that people treated younger children with great care. Their bodies are considered to be different to those of adults, and the use of herbs was limited to those that were recognised as being suitable and particularly safe. In Ahl

Abu Hussein, children were always given fewer herbs and herbal infusions than the adults for two reasons. Firstly, it was stressed that it was difficult to establish exactly what a child's illness was. It was therefore difficult to use herbs as medicine for the children and consequently they were used only occasionally and if other options were not available. Secondly, the children 'often did not accept the herbs; they did not like them'.

Branding the skin with a hot iron, *wasm*, was only used for illnesses that could not be dealt with in other ways, for example, if back pains were not ameliorated by *yantoon*. It was also used to treat, for example, spots, by burning the skin around the affected area. Abu Hussein stated that *wasm* was an important treatment, consisting of a hot iron being briefly applied to the skin, with a cross or two parallel line patterns being made. However, they indicated that even in the past, it was only used if other treatments had failed. 'There is a saying from the Prophet: "The big needle [meaning a hot poker] is the last treatment"...'. Abu Abdallah from Al-Bishariya village acknowledged that *wasm* was only used occasionally, for illness such as intestinal pains and for gangrene in the limbs.

Reading and quoting from *Al-Quraan* was, and continues to be, a part of everyday life. It was also widely used in the event of illness. Certain people were believed to have the 'evil eye', *Al-A'yn* (literally, 'The Eye'), and these people were considered to be a threat to children. For example, if a child was acting in an unusual manner, such as staying awake all night or screaming, the condition may be accounted for as the result of *Al-A'yn*. If this were the case, an individual who was able to read *Al-Quraan* would be found and asked to read it in an attempt to ameliorate the problem. Ahl Abu Hussein

indicated that reading of *Al-Quraan* was practised to 'take out evil from the body... using religion' and, for example, 'putting *Al-Quraan* under the head of their daughter... but this is not really used much now'.

Accidents and injuries, particularly broken bones, cuts and bites, were common hazards in the past. Treatments tended to be practical and effective (Table 7.3). Bone setting was a particularly successful treatment amongst the Bedu (Kay, 1978). The techniques employed in the event of snake, spider or scorpion bites show that the Bedu did have some awareness of the concept of the circulatory system and blood poisoning.

Reputable Arabic practitioners were commonly sought in the past, and although a small number continue to exist in Jordan, the survey suggests that they are now rarely consulted. Arabic practitioners, particularly the *fuqeer* (shamen; singular, *fuqara*), have highly sophisticated cosmologies, which were drawn on in healing individuals. *Fuqeer* work on a spiritual rather than corporeal level, entering an 'altered', higher state of consciousness. A number of corporeal methods for inducing an altered state of mind may be employed, such as herbs, music or meditation, but central to the cure would be the shaman's activities and interactions within the spirit world. The *fuqeer* have the ability to communicate with the spirit inhabitants (*jin*), and if necessary to control them, thus effecting a cure (Sajdi, 1997). In addition to healing, a *fuqara* would have a socio-religious role within the tribe. A *fuqara* '...provides healing, advice, teaching or spiritual meaning through mediation sometimes in altered states of consciousness... not

Table 7.3 Methods of dealing with accidents and injuries

Injury	Treatment
Aches and pains	Eggs and flour applied for muscle aches. This method was also used for intestinal pains.
Broken bones and dislocated joints	Broken bones were set using a wooden splint bound with cloth, eggs and flour. Dislocated joints were repositioned and tightly bound with cloth until they re-set.
Cuts and wounds; animal bites	Salt, oil or herb were used for cleaning wounds.
Dental problems	Limited to tooth extraction. A thread would be tied to the offending tooth, and a rock tied to the end. This would be dropped to pull the tooth out. A special form of smoke may be used as a mild anaesthetic.
Snake, insect and spider bites and scorpion stings	The bite was cut and the poison sucked out. A tourniquet may be used, or charcoal applied to the wound to filter out the poison without excessive blood loss. Another method was for an experienced person to use the circulatory system of a chicken to remove the poison from the wound; the affected area is pushed onto a particular pulse point of the chicken which was supposed pump the poison out of the affected area.

Source: author survey.

only can they see things... far away, but also discover lost souls, stolen souls, stolen objects, hidden treasures, hidden remedies and other intelligence gathering' (Sajdi, 1997). The *fuqeer* were most likely to be used if it was believed that a *jin* had caused a person to become ill. An interviewee suggested that the Bedu used to have considerable faith in the *fuqeer*, and some people continue to believe in them and their ability to exert some control or power over the *jin*. The methods used also included readings from *Al-Quraan* for simple complaints such as eczema or rashes. Physical treatments were also employed. A small knife may be drawn without cutting around an affected area, such as a skin complaint, to stop the disease spreading, or the *fuqara* would beat the patient with an almond tree branch. Each tribe would contain a family of *fuqeer*; the position

was a hereditary one. As with tribal histories, shamanic traditions are not written, but passed orally from generation to generation. Recourse to a traditional practitioner would be very rare since the time and distance involved in finding help was usually considerable, and indeed the location of a practitioner often unpredictable. Moreover, it was generally expected that the some, if not all, members of a family would accompany a sick person to seek help from a *fuqeer* since they may be needed to participate in the process of treating a patient (Sajdi, 1996; Al-Krenawi *et al.* 1996). This would therefore exacerbate the problem of disrupting a family's economic activities whilst a member was sick.

Hijaabeen (singular, *hijaab*), or Arabic witches and wizards, were widely used in rural Jordan, and were often not of Bedu origin. Their use continues, although few would admit to this. It is therefore difficult to ascertain their continuing overall importance. *Hijaabeen*, who frequently ask the patient's family for gold items as part of the cure, are now beginning to become associated with charlatanism in Jordan and are therefore losing popularity. *Hijaabeen* were usually sought for mental illnesses or by married couples who had difficulty conceiving. *Hijaabeen* were generally considered to be effective if it was believed that a person was affected by a *jin*, or a curse had been placed on them by another *hijaab*. The techniques employed by *hijaabeen* have evolved more recently than those of the *fuqeer*, although there are also considerable connections with Islam. Spells, or *sura* (verses from *Al-Quraan*) are often written on a piece of paper, put into a small leather pouch and worn around the neck. This continues to be a common practice in a number of Islamic African countries such as The Gambia, Senegal, Mauritania and Egypt (personal observations).

Hukama (singular, *hakeem*), literally 'wise men', employed more corporeal means than *fuqeer* and *hijaabeen*. Bedu *hukama* generally inherited their vocation from relatives; their skills were also based on experience and experimentation. Both plant and animal ingredients were used for curing specific illnesses. A *hakeem* would generally be sought if the herbal treatments administered within a family, failed. Ahl Abu Hussein indicated that a *hakeem* was habitually used in the local society for treating illness in the past. This was generally an old man or woman, who was not formally qualified, but who had a good reputation.

7.3 Contemporary use of Arabic medicines

The Bedu have accepted government services with considerable alacrity, and modern medicine is generally used in preference to Arabic medicines. Despite this, Arabic medicines continue to be widely used by the Bedu, especially herbal infusions; 83% of all survey families stated that they gave their children herbal medicines (Table 7.4). It was also reported that *wasm* continues to be used for children, although by only 8% of respondent families. Other treatments are very rarely used now. Brandenburg (1998b) stated that clinicians frequently reprimand patients who had used Arabic medicines, and this had resulted in denial and secrecy amongst the people of the north east Badia. The families participating in the detailed semi-structured interviews were far more forthcoming regarding their use of Arabic medicines than respondents to the household questionnaires, which may reflect the researcher's acceptance by these families. It is

therefore likely that Table 7.4 under-represents the overall use of Arabic medicines in the area.

Table 7.4 Utilisation of Arabic medicines

Number of Families*	Percentage	Type of Arabic medicine/practitioner
167	83%	Arabic herbal medicine.
18	9%	Arabic medicines not used.
16	8%	<i>Wasm</i> .
2	1%	<i>Al-Quraan</i> reading.
2	1%	Bone setting.
2	1%	'Old wise women'; traditional doctors.
1	1%	Sweating treatment under blankets (for common colds and fever).

Source: author survey.

*All survey groups.

Ojanuga and Lefcowitz (1982) found a number of ways in which traditional medicines are used *vis à vis* modern medicine in Africa. This study also found that there was no single pattern to their use. Some families used Arabic medicine concurrently with modern medications, whilst others used herbal medicines initially for a short trial period before resorting to formal health services. However, only 3% of the questionnaire respondents (two families from the entire household survey) reported that they would use Arabic medicines before modern medicine, even for minor illnesses. Although modern medicine dominates overall, Arabic medicines are used to treat specific

symptoms, usually colds and intestinal pains, whilst modern medicine is generally sought in the first instance for other problems, particularly serious illnesses. Other families indicated that they had used Arabic medicines when modern medicine had not been effective. Moreover, many families did not acknowledge that herbal infusions actually had medicinal properties. Herbal infusions are also widely consumed for pleasure or on a habitual, rather than medical, basis.

Herbal medicine remains important for Ahl Abu Marson (Tall Ar-Rimah village); they sometimes try to deal with minor illnesses in the home, using Arabic medicines. 'If we have sick children and we have transport, we go to the clinic... if not, we use herbs first, if that is no good, we go to the clinic, if that is no good then we go to [Al-Mafraq] hospital...'. Ahl Abu Hussein indicated that the initial period of using Arabic medicines, particularly herbal infusions, may be up to two or three days whilst they are in the Badia. They generally do this for less serious symptoms such as a high temperatures, since the whole family is usually very busy, far more so than those staying in the permanent house. Thus, this period would be considerably shorter whilst they are located in the village. However, when an illness is believed to be serious, the patient is taken straight to a modern clinic regardless of whether they are mobile pastoralists or not. Whilst the family is in the Badia, health and illness continue to be influenced by the functional health discourse. These interviews suggest that the low level of reporting of the initial use of Arabic medicines in the questionnaire survey under-represents their use in this way.

Arabic medicines are now less widely used than in the past. Abu Hussein indicated that there had been significant changes in his family's use of herbal infusions. 'Before, there

was more reliance on herbs because the family was away from the village or cities, therefore herbs were all they had. When we were nomadic, we collected herbs in marabs and wadis of the Badia... anyone from the family was involved in the collection'. Now modern medicine is relied on, especially for their children, since the clinics are relatively close to those who are settled. In addition, herbs are used far less now due to '... the lack of herbs in the Badia. There were 150 types before, now there are only one, two or three types, especially this year'. The year of the interview was noted as a particularly dry year in that part of Jordan. Thus, for this family, Arabic medicine and specifically herbal medicines, have become relatively inaccessible. Another problem the family noted was '... the loss of Bedu knowledge, for example, [we do not know] where to find the herbs and the shops don't provide the correct herbs, although many common herbal teas are available at Safeway (Amman)'.

The family indicated that they make use of *wasm* very infrequently; '... most people have used it in the past, but now people don't like it, it is now not used, or very occasionally for babies and children... *wasm* is an ancient way now... only one in ten thousand use this'. Ahl Abu Abdallah indicated that they are now considerably more cautious than in the past in using *wasm*, which would only be used if an individual (practitioner) can be found who is recognised as being experienced and skilled in performing *wasm*. It was used '... more before; we used to believe in it. Now not so much... [talking about Arabic medicine more generally] it can't solve very serious problems, for example cancer'. In the event of a serious illness, the family now always use modern medicine. The eldest son of the Ahl Abu Hassan from Al-Mafraq city said that '*Al-Quraan* reading is not used in this house, but generally only... special sheikhs use it. It is good, successful for certain

diseases... not for clinical diseases, but for disabilities... and crazy people... adults and children'. The eldest son told me about a woman who had a sick, weak boy who remained thin. She took him to the local clinic and Al-Mafraq hospital but 'this was no good, so she went to the *sheikh* [religious leader]... this led to a cure'.

Whilst traditional medicines are more commonly used by rural than urban groups, they have endured in most cities in developing countries (Phillips, 1990). There are only a limited number of active rural Arabic practitioners in the north east Badia, and those who do, do not widely publicise the fact, particularly to outsiders. During the survey, many respondents alluded to the existence of a number of active practitioners, but stated that they did not use them themselves. However, the fact that they continue to practice, shows that there is perhaps a greater demand for their services than the questionnaire survey suggests. Arabic medicines, similar to those employed by the rural *hukama* using herbal and animal ingredients, continue to thrive in towns and cities throughout in the Middle East and North Africa, suggesting that this form of medicine is still widely used regionally. Urban apothecaries (*a'taar*) are highly prevalent in Jordan and other Arabic countries, for example, Syria, Egypt, Morocco and Mauritania (personal experience). Evidence from the survey suggests that urban families continue to use Arabic medicines widely. Indeed, 96% of the Al-Mafraq respondent families indicated that they would use some herbal medicines for their children, which is a higher proportion than the rural groups. Ahl Abu Hassan from Al-Mafraq makes regular use of Arabic medicine, in particular the commonly used herbs. Arabic medicine is 'important for many illnesses, it is the only possibility for the following diseases:... ulcers, allergy, bronchial diseases and spots... for specific children's diseases, for example yellow disease [yellow jaundice] for

babies... we commonly use Arabic medicine for children'. They are recently sedentarised Bedu, and this is reflected in how they acquire their herbal medicines. It was indicated that the 'famous herbs' continue to be obtained from the *wadi* in the Badia, not from the *a'taar*. 'Only in a special case do we use the *a'taar* in Al-Mafraq'. Herbal medicines are '... sometimes more important than government services... they are very important'. One of the adult brothers had in the past an allergic reaction in the nose for which he first went to King Hussein City Hospital, then Al-Mafraq hospital '... it was no good, so I used a herbal medicine'. However, '... for children we are [now more] afraid to use herbs'. The family more commonly use Arabic medicine for adults than for children, since they are less confident about their efficacy, and are now more reliant on modern medicine than in the past.

'Traditional' methods of treatment within a 'modern' context were brought into focus by an interviewee who had visited a *hijaab* living in Al-Zarqa, an industrial suburb of Amman. The wizard, wearing modern clothes, had a 'workshop' filled with shelves of magical artefacts, jars of frogs' heads and various books. Incongruous with the general setting was a photocopier. This was used in conjunction with other methods to remove malevolent spirits from a patient's body. The part of the body affected by a particular condition would be photocopied; the evil spirit would be removed from the body and trapped on the photocopy paper. The *hijaab* spoke of a case in which he had banished a spirit from a patient and trapped it in a cave, locking it in with a magical force field across the entrance. Thus, the people who use the *hijaab* are convinced by the efficacy of his techniques, despite the fact that modern technology was employed within a traditional discourse.

There was no evidence of the active promotion of Arabic medicine, or the prescription of any 'non-modern' treatments in the clinics in the study area. The government's stance on traditional medicine resembles the WHO's 'toleration and non-intervention' category (Hyma and Ramesh, 1994). However, there is no clear or specific statement of intent to this end in either the national health policy, or any of the Economic and Social Development Plans. This is reflected in the considerable variation in individual clinicians' opinions, ranging from congenial acceptance of the 'better' forms of traditional medicine, particularly the herbal medicines, to less compromising views from other doctors. Some stressed that it is important to change people's attitudes, and connected the use of traditional medicines with 'ignorance'. A clinician based at the As-Safawi clinic asserted that traditional medicine is vanishing, and that modern medicine is now completely dominant. He explained that there are many 'bad' Arabic medicines. Employees of the health service try to encourage traditional medicines that are considered good; the health service '...encourages good things and combats bad things'. Good treatments include *maraamia* tea for colds, hot showers and massages for muscle pain and colds'. He suggested that *wasm* had pre-Islamic origins, and was acknowledged, but not encouraged in Islamic literature. 'The mechanism for its effectiveness is unknown, but it sometimes benefits some people; belief in it is important'.

A paediatrician working at the general hospital in Al-Mafraq was less accommodating towards popular medicines. He connected the idea of rurality with ignorance, and was scathing about the use of traditional medicines. 'Traditional medicine is used by ignorant,

poor people. People cut the roof of the mouth for many reasons and conditions; many babies are brought to hospital with septic conditions. Burning with fire [*wasm*] is still used, but is not good. Herbal treatments exist and are used widely... some are toxic and are used by ignorant people'. However, '... old people insist on their use and get the family to use them without advice from doctors'. 'we try to stop the use of Arabic medicine, including herbs, by means of education, the mass media... the government clinics try to educate people... it will take many years to do this'. In this sense, he saw the continuation of popular medicine as a barrier to the uptake of modern medicine, reinforced by ignorance and propagated through a strong sense of the patriarchal family.

The people of the study area are receiving very mixed messages about when and whether to use Arabic medicines from health care professionals. However, what is clear is that those Arabic medicines that continue to be used by the Bedu, are done so on the basis of their expected efficacy. Government education programmes, including those delivered through the mass media, have attempted to promote an awareness of serious childhood diseases in support of vaccination programmes, particularly polio and measles. However, there has been relatively little emphasis on 'minor' illnesses, such as colds and intestinal complaints. It is for these types of illness that herbal medicines are used, attesting to their efficacy in accordance with Bedu social values. In addition, mental and neurological illnesses are barely acknowledged in government health awareness campaigns. *Fuqeer* and *hukama* attempt to treat these types of illnesses, and are still sought. An informant suggested that older people continue to rate them highly since they had been efficacious in the past. However, other groups only occasionally use them, and the survey found that their use for children is probably very infrequent.

7.4 Conclusions

Health care in Jordan is highly pluralistic. Arabic medicines continue to be an important alternative to modern medicine for the population of the north east Badia. However, there has been no formal integration of the two forms of medicine. Hyma and Pradesh (1994), for example, highlighted the economic benefits of the acceptance and integration of traditional medicines within the modern medical sphere, in that greater overall coverage can be attained by combining the two forms of medicine than if modern medicine is relied on alone. Indeed, they suggested that the incorporation of traditional forms of medicine into modern medical delivery ‘... probably offers the best means of achieving the goals of health for the entire population by the year 2000’. In this sense, Arabic practices could potentially form part of primary health care delivery and may help in realising ‘health for all’, a concept that the Jordanian government has, despite budgetary constraints, enthusiastically endorsed. There would appear to be a need for the acceptance and promotion of some of the Arabic medicines within the Jordanian health system, both at planning level and individual clinician level.

Most clinicians who were interviewed indicated that ‘over-utilisation’ of health services may be occurring, and that they attempt to discourage the use of clinics for very minor and trivial complaints. Promotion of the ‘beneficial’ herbal medicines would therefore provide a solution, giving an appropriate alternative to the ‘unnecessary’ (as defined by health care professional) visits to clinics. However, this would require dialogue between

health care professionals and service users, with the aim of reducing the divide between professional and non-professional health and illness discourses.

Chapter 8

Utilisation and Acceptance of Modern Medical Services

8.1 Illness and health behaviour

The utilisation models of Aday *et al.* (1980), after Andersen (1968) and Gross (1972), distinguish factors 'predisposing' the use of health services, such as education, attitudes, knowledge and health beliefs, from 'enabling' factors, such as income and availability of transport, and 'accessibility' factors, which include physical, economic and social barriers to utilisation. This distinction is adopted in addressing the principal aims of the research. The factors predisposing changes in health and illness behaviour, and in particular, the acceptance of modern medical services, are identified in this chapter. The next chapter considers the main accessibility and enabling factors mediating utilisation of health services in the event of a specific need.

It is first necessary to outline the main features of contemporary illness and health behaviour. Patterns of health service utilisation are compared between the urban, rural settled, semi-settled, semi-nomadic survey groups. Health care utilisation behaviour can be expressed in two ways: 'illness behaviour' and 'health behaviour' (Mechanic, 1962, 1968). Illness behaviour is an activity undertaken to treat an illness. Illness behaviour is measured in this study as the seeking of medical services in the event of a specific illness; 'minor illness' is distinguished from 'serious illness'. Health behaviour refers to actions taken by a person to remain healthy or prevent illness, such as seeking preventative

medicine. Health behaviour is measured in this study as the receipt of children's vaccinations and the use of maternal and child health (MCH) services.

8.1.1 Illness behaviour

The majority (84%) of urban families use the local community government clinics initially in the event of minor children's illnesses. The Al-Mafraq general hospital is the most widely utilised service for more serious conditions by this group; 52% of families indicated that they approach it directly. They do this rather than using the community clinics initially, from where they would hope to be referred to higher order clinics if necessary. A number of families (16% of the total) also indicated that they would be prepared to utilise one of the government hospitals in Amman directly. Private hospitals are also widely used by the residents of Al-Mafraq; 20% of families stated that they use private health services for minor children's illnesses and 24% stated that they had, or would, use them for serious conditions. Arabic medicines administered in the home are commonly used for minor conditions, although they are never used exclusively; as Chapter Seven illustrated, they are used concurrently with modern medicine on a supplementary basis.

The rural government health clinics are widely used for minor children's illnesses by rural groups (Table 8.1). Overall, 98% of settled families indicated that they use some form of modern medicine, and the vast majority (96%), use government services if a child has a minor illness. A very low proportion of the respondents, 2% (only three families from a total of 126 settled families), reported that no action is taken in the event

of minor illness, or that they would simply use family administered Arabic treatments rather than using modern medicine, unless the illness became more serious. However, the majority of rural families (81%) do in fact give herbal infusions to their children, but this is generally on a supplementary basis.

Table 8.1 Illness behaviour for minor illness: settled families

	Number of families	Nearest clinic	Next clinic**	Other option***
Umm Al-Quttayn Comprehensive clinic	50	96%	0	4%
Dyr Al-Kahf Primary clinic	26	96%	0	4%
Abul Farath Peripheral clinic	25	96%	24%	12%
Midwar Al-Qin* No clinic	25	20%	84%	8%
All villages	126	81%	21%	5%

Source: author survey.

Note: percentages amount to more than 100% since many families stated that their actions might vary, therefore indicating more than one possible action may be taken.

*The Midwar Al-Qin village group includes Mathnat Rajil, Khisha Al-Qin, Ja'da and Mansura.

**The next government clinic in the referral hierarchy.

***Other options include other government clinics, Arabic medicine, private medicine and doing nothing.

Residents of the larger villages with comprehensive or primary clinics, such as Umm Al-Quttayn and Dyr Al-Kahf, use their local clinics almost exclusively in the first instance; 96% of families use them if they perceive their children to have a minor illness. Whilst the majority, 96%, of respondents living in Abul Farath also indicated that they would use the local peripheral (part-time) village clinic initially, 24% of the total sometimes

find it necessary to go directly to the comprehensive clinic in Umm Al-Quttayn, even for minor illnesses. The peripheral clinics have very local thresholds and ranges, in that they are usually only used if the potential user actually lives in that village. The families living in villages without a clinic usually seek a larger clinic initially, even if it is more distant than a peripheral clinic in a neighbouring village. For instance, only 20% of the families from the Midwar Al-Qin villages (which have no village clinics) use the peripheral government clinics in the neighbouring villages of Tall Ar-Rimah and Dyr Al-Qin. The larger primary clinic in Dyr Al-Kahf is more frequently used for minor illnesses; 84% of families stated that they would travel there directly.

When a serious illness is suspected, no families stated that they would initially approach the peripheral clinics, even those who live in the same village as one, such as the residents of Abul Farath (Table 8.2). However, some families do approach the primary and comprehensive clinics initially for serious illnesses. The Umm Al-Quttayn comprehensive clinic can deal with some emergencies, and is the best-equipped clinic in the study villages' area. It is approached directly by over a quarter of the residents of that village for serious illness, as well as those from nearby villages such as Abul Farath, suggesting reasonable levels of confidence in the facility. The health service hierarchical referral system is frequently bypassed. The urban hospitals are widely used by rural groups if they suspect a child is seriously ill, rather than them initially approaching a rural clinic. The government general hospital in Al-Mafraq is used by nearly two thirds of settled rural families (60%), and the hospitals in Amman are also used by some rural families (12% of the total). Comparatively few settled families (7%) stated that they would first use private services for serious illness, and even fewer would use them for

minor episodes. Moreover, no respondent indicated that they would not seek modern medicine in the event of a serious illness, such as using Arabic medicines or taking no action at all. Only 9% of those from the village groups reported that no serious illness had been suffered or suspected amongst any of their children, and therefore they had never had any need to seek medical attention of this sort.

Table 8.2 Illness behaviour for serious illness: settled families

	Number of families	Nearest clinic	Next clinic**	Al-Mafraq hospital	Amman hospital	Other option***
Umm Al-Quttayn Comprehensive clinic	50	30%	-	40%	22%	22%
Dyr Al-Kahf Primary clinic	26	15%	-	65%	4%	19%
Abul Farath Peripheral clinic	25	0%	24%	80%	4%	24%
Midwar Al-Qin* No clinic	25	0%	8%	72%	8%	32%
All villages	126	15%	6%	60%	12%	24%

Source: author survey.

Note: percentages amount to more than 100% since many families stated that their actions might vary, therefore indicating more than one possible action.

*Midwar Al-Qin village group includes Mathnat Rajil, Khisha Al-Qin, Ja'da and Mansura.

**The next government clinic in referral hierarchy.

***Other options include other government clinics and private medicine. In addition, those families who stated that services had never been needed since their children had never been seriously ill.

As Chapter Six highlights, the extent of a family's mobility, children's ages and school enrolment determines whether a child is resident in a village, and their location more generally. Whilst semi-settled and semi-nomadic families are resident in the villages, patterns of health care use are similar to those of settled families, in that the nearest

clinic is usually approached for minor illnesses. The semi-settled families, who are sedentarising in the Midwar Al-Qin villages, commonly use the Dyr Al-Kahf primary clinic during the times that they are located in those villages in the same way as their fully settled neighbours do. A comprehensive or primary clinic, or even Al-Mafraq general hospital, is widely used for serious illness. For most semi-settled and semi-nomadic families, the preference is to use formal government health centres initially, rather than Arabic medicines, even when they are away from the villages' area. As with the settled groups, Arabic medicines are widely used, although very few of the mobile families indicated that they play a significant role in curing children's illness, and the numbers stating that they would not do anything in the event of a minor illness were negligible (only two out of fifty mobile families).

During seasons that both the semi-settled and semi-nomadic groups are travelling, the larger government 'Badia clinics' at Al-Azraq, As-Safawi and Ar-Rawayshid are most frequently utilised for minor illness, depending on the location of the family at the time; few return to the clinics in their home villages (Table 8.3). The majority, 88%, of the respondent families in the semi-nomadic group use the Badia clinics; the Al-Azraq clinic is most frequently used (by 60% of these families). The semi-settled group more frequently use the As-Safawi clinic, which is often the closest health service to their grazing areas. As with the settled villagers, many semi-settled and semi-nomadic families indicated that they would approach Al-Mafraq general hospital directly in the event of a serious illness, bypassing the rural clinics, although the larger clinics are also important. Of the semi-nomadic group, 36% indicated that they would go directly to Al-Mafraq,

and 20% would go to Al-Azraq (for serious illness). For the semi-settled group, Al-Mafraq hospital is used initially by 64% of families with seriously ill children.

Table 8.3 Illness behaviour: mobile families whilst travelling

	Number of families	Badia clinics*	Al-Mafraq hospital	Other option**
Minor illness				
Semi-settled	25	100%	0%	0%
Semi-nomadic	25	88%	0%	16%
Serious illness				
Semi-settled	25	36%	64%	0%
Semi-nomadic	25	28%	36%	24%

Source: author survey.

Note: percentages amount to more than 100% since many families stated that their actions might vary, therefore indicating more than one possible action.

*Al-Azraq As-Safawi and Ar-Rawayshid clinics.

**Other options for minor illness: other major government clinic, 'home' village, no action, and Arabic medicines. For serious illness: Al-Zarqa hospital, and serious illness never faced.

8.1.2 Health behaviour

All of the respondents of the Al-Mafraq survey indicated that their children had been vaccinated. The majority, 84%, indicated that this was through the nearest community clinic. Other children had been vaccinated at Al-Mafraq hospital, the maternity centre or at a private clinic. The receipt of vaccinations through the schools is also high; all but one family interviewed indicated that the school vaccination programme had covered

their children. This reflects higher levels of school attendance amongst urban children than for rural, and particularly mobile groups.

The majority of rural children in the north east Badia are also being vaccinated through government programmes administered at the health clinics and the village schools. All but one of the rural settled and semi-settled families interviewed indicated that their children had received at least some government vaccinations, and 89% stated that their children had received vaccinations administered through school. For most rural families, vaccinations are received through their local health clinics, and most families living in the smaller Midwar Al-Qin villages, stated that they had taken their children to the primary clinic at Dyr Al-Kahf to be vaccinated, as well as through the local primary school. This accords with government figures for the coverage of the vaccination programmes. The complete course of DPT and polio was received by over 88% of children nationally, and 78% were immunised against measles in the early 1990s (UNICEF, 1993). The survey suggests that the national polio vaccination programme has been successful in the north east Badia. A higher proportion of children had been vaccinated against polio than other vaccinations generally. Very few families (2% of settled and semi-settled families) with children under the age of five stated that their children had not been vaccinated against polio through the national campaign.

The majority of semi-nomadic families also indicated that their children had been vaccinated at government clinics (92%). The Badia clinics are frequently used for the receipt of vaccinations, in particular Al-Azraq (by 60% of families). However, there are some important differences in patterns of use between the semi-settled and semi-

nomadic groups. Less than half of the semi-nomadic respondents indicated their children had received any school-administered vaccinations, which corresponds to lower levels of school attendance amongst semi-nomadic children. The survey also suggests that the coverage of the national polio vaccination is considerably lower for the semi-nomadic group; only 64% of this group indicated that their children had been vaccinated. This suggests that, although the vast majority of children had been vaccinated against at least one vaccination, many of these children had probably not been vaccinated against all the common diseases that are covered by the government vaccination programme.

The Al-Mafraq maternity centre is the main provider of MCH services for those living in the city, although two families indicated that they had also used private clinics. MCH services are also widely used by all rural groups; 91% of the respondent families stated that MCH services had been used, to some degree, during ante- and post-natal stages. Only the Umm Al-Quttayn comprehensive clinic and Dyr Al-Kahf primary clinics provide MCH services within the main concentration of villages, and this is where the majority of settled and semi-settled families had used MCH services. The Al-Mafraq hospital and MCH clinic are also used by these groups. However, these are used on an infrequent basis, as are the Al-Mafraq private MCH clinics by the settled and semi-settled groups (5% of respondent families). The semi-nomadic group use MCH services at a variety of locations, particularly the Al-Azraq clinic (60% of the total), as well as the As-Safawi and Ar-Rawayshid clinics and even the Al-Mafraq government hospital.

8.2 Family members involved in utilising health care

Mothers predominate in accompanying their children to use medical services (Table 8.4). However, there are considerable variations between the study groups. The Al-Mafraq families were equally divided as to whether the mother or father predominated, but also a high proportion stated 'either parent' (28%). Indeed, most fathers work within Al-Mafraq, and therefore spend more time in the home than many rural fathers; high numbers of male employees living in the villages travel to work, and are therefore not always available for child care. The proportion of families in which mothers accompany their children to the health clinic is higher in the villages with clinics (Table 8.4), in particular Umm Al-Quttayn, Abul Farath and Dyr Al-Kahf, where mothers are generally expected to perform domestic roles and child caring rather than paid employment, and are within walking distance of a health clinic. However, all respondents of the semi-nomadic group indicated that mothers do not generally take their children to the clinics, as did around two thirds of semi-settled families. Since these families migrate throughout the Badia for most of the year, it is essential for them to use private transportation in order to travel to use the health clinics. Women, however, are generally not permitted by their families to drive vehicles; hence, males tend to take children to the health services. For the same reason, fathers are more active in accompanying the children to the health centres amongst the families of the Midwar Al-Qin villages' group, which reflects the need to travel by private transport to use health services for residents of these villages.

Table 8.4 Main person accompanying children to use medical services

	Number of families	Person taking children to clinic			
		Mother	Father	Either parent	Other adult relative/sibling
Al-Mafraq	25	48%	48%	28%	8%
Settled villages					
Umm Al-Quttayn Comprehensive clinic	50	40%	18%	26%	10%
Dyr Al-Kahf Primary clinic	26	46%	8%	8%	19%
Abul Farath Peripheral clinic	25	76%	0%	16%	12%
Midwar Al-Qin* No clinic	25	12%	60%	0%	24%
Total settled	126	43%	21%	15%	15%
Semi-settled	25	32%	12%	16%	44%
Semi-nomadic	25	0%	24%	4%	80%
Total/average	201	37%	23%	15%	26%

Source: author survey.

Note: Groups with percentages less than 100 indicate that some children take themselves to clinics.

Groups with percentages greater than 100 indicates that the person taking children to use clinics varied.

*Midwar Al-Qin village group includes Mathnat Rajil, Khisha Al-Qin, Ja'da and Mansura.

8.3 The acceptance of modern medicine

Orthodox development asserts that in order for development to take place, 'traditional' attitudes and cultures must be replaced by those that characterise 'modern' societies in order to facilitate these interventions (for example, Preston, 1996; Leys, 1996). Thus, a key problem perceived, by health care planners, limiting the success of health service delivery in many developing countries, is '... that psychological, social and cultural barriers and obstacles were the cause why change was restricted and deformed' (Zaidi,

1994: 1387). A number of the health care utilisation studies also suggest that social/cultural 'barriers' inhibit change, and thus explain the lack of utilisation of modern medicine. For example, Dutton (1986) suggested that there may be cultural 'impediments' to utilisation in the developing world, and Stock (1987) proposed that particular utilisation behaviour in some developing countries could be accounted for by different social, economic and cultural values. Suchman (1964) asserted that 'local'/rural groups tend to have certain attitudes to, and knowledge of, health and illness, such that they are orientated towards traditional medicines, whereas cosmopolitan groups may be oriented towards modern medicine. Gesler (1984) accounted for continued practices of traditional medicine, and lack of utilisation of modern medicine in terms of 'social distance', and suggested that traditional medicines are used preferentially since it is socially closer for 'traditional' people, than modern medicine. Education is widely acknowledged as an important way in which potential health service users can be persuaded to accept and utilise modern health services effectively.

This study carried out in the north east Jordan Badia has already shown that the vast majority of rural families use government health services for children's minor illnesses. Relatively few families (2% of the total) indicated that they do not, had not or were not prepared to use modern health services for their children. Indeed, modern medicine is now more widely used than all forms of Arabic medicine by all age groups. Patient record data from the comprehensive and primary clinics confirm that modern medicine utilisation is not restricted to the youngest generations; 16% of total patients were over 44 years of age in 1995, which is broadly proportional to numbers in this age group, which represented 12% of the total population in 1993 (Findlay and Maani, 1998). No

data are available for utilisation amongst elderly people. It is therefore not possible to confirm levels of utilisation by this group. However, this survey found that older respondents also widely take their children to use modern medicine. Thus, patterns of utilisation show that acceptance of modern medicine has been near to universal. Moreover, virtually no respondents indicated that they had received modern health care when they were children. This acceptance has therefore taken place over one generation, and coincides with the introduction of health services in Umm Al-Quttayn village in 1981 and the expansion of rural delivery throughout the 1980s and 1990s. This acceptance and utilisation of modern medicine can only partly be explained, however, by the availability of services in the Badia. It is also useful to examine whether Bedu social values have inhibited the acceptance of modern medicine, and whether parents' educational levels are associated with levels of acceptance.

This research has found that the Bedu social values of adaptability, reputation and experience, and close social networks, rather than inhibiting, have actually facilitated the rapid acceptance and universal utilisation of modern health services. The Bedu in Jordan and other Middle Eastern countries, such as Lebanon and Syria, have shown considerable flexibility and adaptability in adopting new methods of pastoral production. Motor vehicles are widely adopted as the principal form of transport, supplementary animal feeds are an important agricultural input, alternative migration patterns have been adopted, and diversification into pastoral marketing, business and non-pastoral occupations in order to maximise income, have taken place (Chatty, 1986; Lancaster and Lancaster, 1990). Thus, given the absence of resistance to the adoption of 'non-

traditional' methods and technologies, it is not surprising that modern medicine has been rapidly adopted by all groups of Bedu.

Experience and constant re-evaluation have always been the key determinants of the use of Arabic medicines within the tribal milieu, and the reputation of a treatment or a practitioner would depend on this. An interviewee stressed that this concept continues to be important within the present milieu, and that the Bedu would not persist in using modern medicine if they did not find it to be efficacious. Thus, modern medicine is perceived to be more effective than Arabic medicine alternatives for the majority of medical conditions. The health clinics and their staff have therefore rapidly gained a positive reputation. Few families complained that modern medicines in general are not effective, nor that the government clinical staff are not competent, although some families did complain about specific individual staff. The survey confirms that the experiences of the majority of families of modern medicine, in particular of the treatments provided at the government health clinics, and the care they had received from the staff, have been positive. Over half (55%) of the rural groups consider the government health clinics to be 'satisfactory' and a third (33%) rate them as 'good'. Only 12% are dissatisfied with the services.

Lay referral is an important part of health and illness decision-making in developing countries (Good, 1987; Phillips, 1990). The strength of lay referral systems, concerning the propagation of experiences and knowledge, has been noted amongst nomadic pastoralists in Somalia, who widely discuss the best course of action within their social networks, that is with their families and tribal groups. Moreover, the majority would

only approach a practitioner, whether traditional or modern, if that individual is a member of the same family or tribe. The result is a considerable constraint in using 'outsiders', and this has resulted in very low levels of acceptance and use of modern government clinics (Helander, 1990). Such lay referral systems, which were necessary for survival in the past, continue to be important amongst the settled Bedu in the study area, and reflect the endurance of close social/kinship networks and relative tribal homogeneity within settled communities. Ahl Abu Marson, which is settled in Tall Ar-Rimah village, explained that the 'village is all one family; we are close to each other. We discuss much together'. The men in the villages spend a considerable part of the day discussing issues with each other whilst drinking tea and coffee outside their houses, and likewise the women convene, but in less visible locations. An interviewee confirmed that '... women talking is one of the main ways of exchanging information in Jordan'. This system has helped to ensure the rapid acceptance of modern medical services, since as soon as individual families started to use the clinics, their efficacious experiences would be rapidly propagated within the community. Others would in turn seek those services. This has reinforced the reputation of the village clinics, and that of modern medicine overall, in the same way as happened to Arabic practitioners and medicines in the past.

In the past, senior members of an extended family group administered Arabic medicines, and Arabic practitioners would generally be sought from within the same tribe. The survey found that in the context of contemporary health care utilisation, a clinician with a social connection to the family, would be preferred since this may facilitate better care. However, unlike Somali nomads, there was no indication that the survey families are not prepared to use a doctor from outside their *fukhd* or tribe. Indeed, all the clinicians

interviewed originate from outside the study area villages, and some are non-Jordanian Arabs. This does not, however, represent a serious accessibility problem for health service users. Ahl Abu Hussein stated that clinicians are now well trusted to establish health problems and diagnose children's illness. They trust Arabic medicines and practitioners far less than they did in the past, and for most health needs, they rate modern medicine as considerably more effective.

Thus, with the establishment of government health services and their wide scale acceptance, the meanings of health and illness, and the means to treat and prevent illness, are now dominated by professional bio-medical definitions propagated through government education and health awareness programmes. This deference by the Bedu to the professional health discourse represents a further dimension to the loss of Bedu autonomy, in the same way as they have lost their political and economic autonomy within the nation state milieu, as discussed in Chapter Six.

Education and health campaigns have been a key part of the attempt to improve the awareness of populations of health and health care in developing countries. A number of studies support the assertion that education leads to changes in both health and illness behaviour and increased levels of health service use, and has contributed to improvements in people's health (for example, Caldwell, 1993; World Bank, 1993; Hobcraft, 1993; Price, 1994). Evidence from Jordan accords with these findings. Abbas and Walker's (1986) study showed that MCH services were used by a higher proportion of families in which the mother was educated, 69.8% in the case of those with secondary education, which is higher than in families where the mother had elementary education

(41.1% of families), or was illiterate or not formally educated (24.1%). However, it was recognised that a number of other determinants of service use were involved, including duration of marriage, age of marriage, distance and the cost involved in reaching the services.

However, no such association between utilisation and school education was found in this research. It was expected that the acceptance of modern medicine would be lower among the rural groups, particularly the semi-settled and semi-nomadic groups that are characterised by very low levels of parents' education, than among the urban groups. Indeed, relatively few parents, or indeed any adults in the mobile groups, have any education; 84% of household heads in the semi-settled group and 80% of household heads in the semi-nomadic group have never received any formal education. Likewise, mothers' education in these groups is very low; in total, 80% of the semi-settled families have no adult women who are educated, and no adult women at all from the semi-nomadic survey families are formally educated. However, the survey found that the acceptance and utilisation of health services for children among these groups is actually nearly universal. As suggested above, virtually all rural families, even families with uneducated parents (both mothers and fathers) utilise modern health services for minor and serious illnesses, as well as for MCH services and vaccinations. Equally, and not surprisingly, this was also found to be the case among the better educated groups, such as those residing in Al-Mafraq city. Thus, the acceptance of modern medicine for children by a family is not explained by the education of the parents.

The Jordanian government has pursued the concept of health education directly by administering far-reaching health awareness campaigns delivered through the mass media. At local level, these campaigns take the form of pictorial information posters and videos displayed in health clinics, and of doctors providing lectures to village communities. At the time of the survey, the staff of the Dyr Al-Kahf clinic was running a lecture programme, which gave information on contagious diseases, food poisoning, nutrition, vaccinations, and childhood diseases. Promoting the importance of children's vaccinations has been particularly emphasised in the health awareness programmes; indeed, this form of health behaviour is becoming nearly universal. The school syllabus has started to contribute more directly through basic biology and health awareness lessons. However, this is a recent development. It will therefore be some years before school children will become decision makers themselves. The advantage of the awareness campaigns is that they are intended to reach all groups immediately, whether they are educated or not. A further medium for the propagation of health education has been through military forces personnel, who receive regular health check-ups and health awareness training. This has been particularly important in the north east Badia, since a high proportion of families contain military forces employees.

In rural Jordan, 84.3% of households have a television and 81.4% have a radio. The ownership and watching of television are now extremely commonplace amongst the village communities in the north east Badia. Most mobile families living in tents were found to be in the possession of a radio, and many even had televisions powered by the electricity generated from a vehicle engine. In all, 26% of the families interviewed, stated that the mass media is an important source of health information. Therefore, government

health awareness programmes, are starting to reach their target audiences. Indeed, an interviewee stated that it is a widely held perception that television presenters are knowledgeable, virtuous people from the government, and that their message was beyond question. The people therefore believe that the material presented in television programmes is true, and hence it is frequently accepted, often unquestioningly, as being a correct and reputable source of information. This reflects Bedu social values, which connect reputation and knowledge. Thus, health awareness programmes are at least as important as school education in encouraging the utilisation of health clinics amongst both educated and uneducated groups.

8.4 Changes in health and illness discourses and behaviour

A functional health discourse was emphasised in the past by the Bedu, in that before the provision of schools in the Jordan Badia, children over the age of five years were active within the family pastoral economy. Their health was a means by which these obligations could be performed. Sedentarisation and socio-economic reorientation from the tribe and pastoral economies to the state has resulted in a shift from obligations to the wider social group, to an increased emphasis on the nuclear family and the individual. The vast majority of families, including most mobile families, now enrol their children at school rather than expecting them to participate in the family economy. Furthermore, children are now rarely involved in pastoralism after completing their education. Hence, professional shepherds are employed, the flock size is reduced or the entire flock sold, to compensate for this loss of labour. The result has been a shift away from functionally orientated health and illness discourses. Children's well-being is now the

primary motivation for illness behaviour, not their functional role within the family economy. This is reflected in high levels of health clinic utilisation, even for minor children's illnesses. However, the extended semi-structured interviews suggested that in many mobile families, during seasons of intensive pastoral activity, children continue to assist their parents. Children's illnesses are, therefore, more likely to be perceived in functional terms by these families than for settled families or mobile families with children enrolled in school.

Little could be done to avoid illnesses in the past, and Arabic medicines treated recognised diseases, rather than prevented them. Discourses emphasised illness behaviour and release, rather than control over health. More recently, lay health and illness discourses have evolved both in terms of improvements in the understanding of health and illness (as bio-medically defined), and the means by which more control can be exerted over health. Since the provision of modern services, health behaviour (in addition to illness behaviour) has become widespread. The acceptance and adoption of preventative medicine has been significant, particularly vaccinations, together with preventative practices within the home.

Children's vaccinations have been widely accepted in Jordan by urban, rural settled and mobile groups. All respondents felt that vaccinations are important and the majority of children have received at least some vaccinations. This accords with Brandenburg's (1998a) study in the north east Jordan Badia, which found that all people regarded vaccinations as essential and beneficial. In the past, an interviewee explained, the Bedu feared *hasbahh* (measles) and *jeder* (smallpox) since there were no known treatments

or cures for these diseases. Experience had shown that the death of adults and children was almost inevitable. However, an important aspect of Bedu health and illness beliefs in the past was the certainty that if there was a disease, including *hasbahh* and *jeder*, there had to be a cure, even if it was not available or known. This has been the necessary impetus for the vaccination programme to be accepted, and since vaccinations can protect an individual from fatal and feared diseases, they are highly valued.

Even so, the survey revealed that knowledge of specific vaccinations is limited in most families. Most had heard of the *hasbahh* vaccination, but few were able name any vaccinations against other diseases, even though the government programme includes five vaccination courses, and an individual child would be expected to receive a full course of them all in their first eight to ten years of life. When enquiring about respondents' children's receipt of the polio vaccination, the field translator frequently needed to describe polio as the disease that causes paralysis (which all respondents were aware of), rather than using the Arabic word for the disease. There was a general lack of clarity amongst the families in the study area. Many respondents thought that their children were being vaccinated against *jeder*, which is clearly no longer necessary. *Hasbahh* and *jeder* were closely with each other associated in the past and the symptoms were frequently confused at their early stages. They would be dealt with in similar ways, thus the two diseases were often referred to together and confused in the present by many respondents.

Within the context of a survey being carried out by a male foreign researcher, the topic of reproduction, including family planning, pregnancy and childbirth, and women's

health more generally, is a sensitive one. This restricted detailed questioning on the exact levels of use, and on which ante- and post-natal stages services may be sought. Conclusions drawn on the use of MCH services are therefore made tentatively. The survey found that overall acceptance of MCH services is widespread; 91% of the rural families stated that they had used MCH services to some degree during ante- and post-natal stages for some or all of their children. However, according to Al-Akour (1998), who carried out a survey of the health services in the study area villages on behalf of the Ministry of Health, attendance at the Umm Al-Quttayn clinic for MCH services is low, and he suggested that pregnant women actually visit the services less frequently than the clinical staff recommend. Explanations offered include the lack of qualified specialists, and more importantly, the limited number of midwives employed by the Ministry of Health in the area. Moreover, only the Umm Al-Quttayn comprehensive clinic and the Dyr Al-Kahf primary clinic provide MCH facilities for the entire population of the area.

During the extended semi-structured interviews, in which the sensitivity of the topic was less inhibiting, the utilisation of MCH services seemed more limited than the structured survey suggests. Ahl Abu Hussein had not routinely used MCH services, and would only be prepared to do so if senior members of the family perceived a pregnancy or birth to be problematic. Ahl Abu Abdallah stated that MCH services had never been used, and this was due to the length of time it would take to reach the centre for something that was not considered a serious need. As with Ahl Abu Hussein, they would only seek MCH services if they thought that the pregnancy or childbirth would have complications. Brandenburg (1998b) asserted that the use of MCH services, such as childbirth assisted by a professional midwife, is becoming more widespread. However,

Al-Akour's study (1998), together with the extended semi-structured interviews, suggest that MCH services are primarily used in the event of complications associated with pregnancy or childbirth, rather than for routine precautionary check-ups.

Many mobile mothers were, and continue to be, highly engaged in pastoralism related activities, as well as childcare, particularly after their children had actually started participating in the family economy themselves. However, the survey found that sedentarised mothers are primarily occupied with domestic and childcare activities; this was also found to be the case in the study area villages by Naya (1998). Hence, settled mothers have more time to monitor their children's well-being and employ practices in order to take control over their children's health.

It was evident from the interview survey, that the majority of households employed a variety of other preventative practices within the context of daily household activities (Table 8.5). In total, 79% of respondents suggested various measures they took to maintain their children's health and prevent illness. Very few families (4% of the total) indicated that they do nothing to prevent illness, that health and illness is in God's hands, or that nothing could be done at all. The remainder did not know of anything that could be done to improve children's health. Only 8% of the total families proposed 'children's vaccinations' in answer to this question, suggesting that their importance is

Table 8.5 Preventative practices and improving children's health

'What do you think are the best ways for you to improve your children's health?'				
Activity	Rural groups	Urban group	Total	Percentage of total
Number of families	176	25	201	100%
Hygiene/cleaning	63	15	78	39%
Nutrition	36	22	58	29%
Preventing illnesses	21	4	25	12%
Avoid extremes of temperature	18	1	19	9%
Children's vaccinations	12	4	16	8%
Isolate children from school disease	12	0	12	6%
Health education and information	10	1	11	5%
Boiling milk	6	1	7	3%
Rapid seeking of clinic/doctor	6	1	7	3%
Regular use of herbs/Arabic medicine	5	1	6	3%
Care for children/monitoring	6	0	6	3%
Clean water and clean food	3	2	5	2%
Regular check-up with clinic	1	4	5	2%
Avoid food grown with chemicals	4	0	4	2%
Other means	9	3	12	6%
As God wills/nothing/destiny	8	0	8	4%
Not known	35	0	35	17%

Source: author survey.

Note: figures show number of respondent families. Multiple answers were possible.

now generally taken for granted. A very high proportion of respondents closely associated health with practices relating to children's nutrition (such as boiling milk to avoid brucellosis, clean water and food, and avoiding foods grown with chemical

fertilisers), household cleanliness and personal hygiene. For Ahl Abu Abdallah, preventative and general health measures frequently employed include '... good food, washing the children, cleaning the house, vaccinations, and if they are sick... we quickly deal with the matter, we don't let it become serious...'.

Whilst the survey was not able to examine in detail the extent to which deeper understandings of health and illness were held by the respondents, such as knowledge of the concept of pathogens, other aetiologies and the human anatomy, it is evident that health and illness knowledges have improved; in the past the cause of a disease was most frequently 'unknown'. There is an increased awareness of the links between poor drinking water and illness, which were not fully appreciated in the past. Recently, the mass media have been used by the government to demonstrate that drinking water may cause disease. Piped water is now supplied to most villages, and demands made by community leaders to extend the piped water networks in the villages area confirms that overall awareness of the advantages of having access to fresh water has increased. Cancers and heart diseases were simply unknown by the Bedu in the past, primarily because they were difficult to detect and understand. Cancers are now widely known about. It is popularly recognised that the prevalence of these diseases is increasing, and a number of respondents made the connection between agro-chemicals and cancers. There is awareness of the significance of contagious diseases, and a feeling that school children are particularly susceptible, since they are in close contact with other children. Indeed, Ahl Abu Abdallah stated that '... we like the *bayt sha'r* [tent] better than the house... in the desert there are fewer people; this leads to better health, far from pollution and other people and their diseases'. Nevertheless, this family did, in fact, enrol their children at

school. A particularly topical issue being widely discussed in the study area at the time of the interviews included the 'Mad Cow' BSE/CJD crisis at its height in the UK in 1996. Many families were aware of this, and questioned whether the consumption of animals in the Middle East or imports from Britain would affect their health.

8.5 Health awareness and utilisation

Despite the widespread acceptance of modern services, increased consciousness of health issues, and therefore the acceptance of professionally defined medical knowledge by the population of the study area, the clinicians working in the rural clinics considered that most (potential) health service users had insufficient understanding of health and illness to use services appropriately. The majority were primarily concerned by over-utilisation rather than under-utilisation, and that this was due not only to the services being too accessible, but the inability of users to identify need correctly, and therefore make informed health and illness decisions. For example, the clinician working at the Umm Al-Quttayn clinic stated that he thought that most people's knowledge of health is poor, and that they approach health services more frequently than necessary, or with conditions that are not sufficiently serious to necessitate seeking medical attention. He complained that some patients visit the clinic at strange hours, for instance at night (since it is widely known that the clinic is open 24 hours a day), even though the medical condition could wait until the morning. He stressed that there are problems of over-utilisation of services for very minor complaints, but admitted that some people stay at home when they should seek medical attention. The clinician felt that to improve people's knowledge, health education is important, such as showing videos and

displaying posters in the clinics, and by educational visits to the villages by primary health advisers. MCH services were stressed as an area of particular concern for improving knowledge.

The clinician at As-Safawi summed up the tone of many of the others, explaining that the health service tries to educate the people, but the people of the Badia frequently visit the clinics for trivial reasons. Only a few would not visit the clinic, or delay if they felt that they had need. He indicated that he had worked at the clinic at As-Safawi for several months, and on only one occasion, had a person visited the clinic where a medical condition had deteriorated unnecessarily due to delay. At the clinic the staff '... try to educate people about what is an emergency, what is not, but people still come at inappropriate times [such as after 5pm]... and they come for trivial things, such as colds'. The doctor provides lectures in the village three or four times a month, '... but no one is interested in these... the people are uneducated compared to the doctors [at the clinic in As-Safawi]. Having two doctors [here in As-Safawi] with different styles [of administering the delivery of services] is a problem since I follow the rules and the other doctor is rather soft'. He stated that he tries to '... pull people up... ', so as to improve their ability to make appropriate health and illness decisions, while the other doctor is '... pulled down by the people for being too soft with them'. He admitted that this is understandable, as people visiting the clinic only consider the visit useful if they receive some pills, otherwise they complain that the doctor has not tried to help or is not interested in them. It is easier for him to give some simple drugs to make the people leave, than to try to educate them to use the service more appropriately.

The senior paediatrician at the Al-Mafraq general hospital also highlighted the problem of people's knowledge and education, and connected it to inappropriate or poorly-timed utilisation of health care. He indicated that people often did not seek medical attention at the right time; '... no, they never come at the right time, they usually come too late when they are desperate [this is due to]... ignorance, distance, cost of travel and [the people] being rural'. However, this is not surprising, since the household survey suggests that rural families are likely to take their children to rural clinics initially. The hospital is only likely to be used if the illness is, or becomes, serious. Other clinicians were more positive regarding people's readiness to use the clinics. The clinician at the Ar-Rifayat primary clinic stated that 'some people come unnecessarily due to lack of information. But there is no problem with people not coming if there is need [under-utilisation]. People recognise need well'. However, '... education is very important, especially about prevention [provided through] lectures and seminars... it is [also] very important to encourage hygiene'.

In contrast, the majority of respondent families were confident about their knowledge of children's health, and consequently their ability to act appropriately in the event of children's illness. In all, 77% of rural families were satisfied that they were supplied with sufficient information by medical staff relating to children's health and appropriate actions in the event of suspected illness. Ahl Abu Hussein from Abul Farath village indicated that they had sufficient information on which to base their health care decision-making. However, the eldest son stated that the family, as well as the wider community, could know a lot more about general health issues. Overall knowledge of maternal and child health issues, for example, was limited in his view. A particular problem that they

have is they lack a clear understanding of the facilities available at the local clinic, and indeed the other clinics in the area. It was explained that this problem is due to the doctors only answering specific questions, and not volunteering information about, for example, which facilities are appropriate for certain medical conditions. He accounted for this problem by stating that the doctors originate from the cities rather than from local villages, and are only interested in returning to the cities as soon as possible. They are not encouraged by the government to stay in the rural clinics, so they consequently minimise their time in the Badia. 'The government is not really in control of these rural clinics... there is irregular monitoring of the [Abul Farath] clinic, about three times per year only... from Al-Mafraq [governorate level of administration]'

The majority of families living in Abul Farath share this problem; 81% complained that information about the facilities at the local clinic was lacking. There is therefore a lack of clarity about what could be done at the village peripheral clinic, and this has led to confusion in the event of an illness. A particular concern of many of the residents of Abul Farath, is in distinguishing a minor illness which could be dealt with at the peripheral village clinic and might involve waiting until the clinic is open, from a serious illness, which made seeking immediate medical attention from a larger clinic necessary, such as the comprehensive clinic at Umm Al-Quttayn. It was found that residents of Al-Mafraq city were considerably more critical of government services generally than people living in rural areas. The range of alternatives available in the city, especially private medicine, which is rated more highly than government services, explains the lack of satisfaction with government services. Only half of the Al-Mafraq respondents

suggested that the staff of their local (community) clinic gave them sufficient information about what to do if their child was ill.

8.6 Conclusions

In summary, the most significant aspect of illness and health behaviour identified here is the extent to which modern health services are utilised by urban, settled rural and mobile groups. The vast majority of rural families reported that they would initially approach formal government clinics, rather than using Arabic medicines or, indeed taking no action.

The severity of a perceived illness corresponds closely with the type of service initially utilised by a family. The nearest clinic to a family is typically used initially, particularly if the illness is perceived to be minor. Larger clinics are often approached if the need is felt to be urgent; frequently the minor peripheral clinics are bypassed in favour of permanently staffed health centres, even for relatively minor cases. The mobile groups, particularly the semi-nomadic group, do not usually utilise the peripheral clinics, even if they are in a family's home village or geographically the closest to their grazing location, but instead go directly to a larger clinic, such as one of the comprehensive or primary 'Badia clinics' at Al-Azraq, As-Safawi and Ar-Rawayshid. The low levels of use of some of the peripheral clinics, suggest that these health care outlets are inaccessible to the majority of rural families, and this will be examined in the next chapter.

The general hospital at Al-Mafraq provides most tertiary care for residents of that city, as well as the settled and mobile groups living within the north east Badia generally. Indeed, the hospital is frequently the first place approached in the event of serious illnesses by those in all rural groups. Some rural families also use the private services that are provided in Al-Mafraq if their use of a government service has not been efficacious. Overall, however, private medicine is used by relatively few rural families, whereas it are used more frequently for both minor and serious children's illnesses by the residents of Al-Mafraq.

MCH services are widely used by all the survey groups, and the level of receipt of at least some government vaccinations through clinics and schools is high, even by the children of semi-nomadic families. However, the semi-nomadic group most frequently receive them on an *ad hoc* basis through the Badia clinics, and coverage of the national polio campaign for this group is considerably lower than for other groups. This suggests that whilst an individual child is generally vaccinated against one or some diseases, they are frequently not vaccinated against all diseases.

The prevailing assumption is that social and cultural factors constitute barriers to the acceptance and utilisation of health services. However, this chapter has illustrated that amongst the Bedu communities of the Jordan Badia, these factors have actually facilitated and expedited the acceptance of modern medicine. Bedu social values, in particular, adaptability, reputation, experience and strong social networks, help to explain changes in health and illness behaviour. Parents' education does not explain the acceptance of modern medicine. Government campaigns through the mass media and the

clinics themselves, have been more important, in that they directly propagate awareness to all groups, whether educated or not. Increasingly, rural families have access to the mass media, and this broadens the reach of these programmes considerably.

The introduction of modern medicine has resulted in important changes in illness and health behaviour and lay discourses. Parents now emphasise the well-being of a child, rather than the child's function within the family's economy. They also have both an increased understanding of health issues and the means to exert more control over their children's health. There is an overall consciousness of the importance of various domestic measures for maintaining and improving children's health, such as cleaning and nutrition. Children's vaccinations and the utilisation of health services generally, are widely recognised as being beneficial. Indeed, there is considerable confidence among the survey population as to the effectiveness of modern medicinal services; this reinforces their continued utilisation of these services.

In Jordan, the wide-scale acceptance and utilisation of modern medical services has been encouraged by the provision of the rural government clinics. In addition, the far-reaching government health awareness campaigns have actively promoted children's health and well-being, as well as encouraging the population to utilise the health services. This has created considerable demand for health care. Indeed, whereas in the past, minor illnesses were not considered important, and would generally be ignored, and illness only acknowledged if they resulted in an individual not being capable of fulfilling their obligations, this chapter has found that health services are now widely used for minor children's illnesses.

However, these utilisation patterns have resulted in tensions between (potential) health service users and the clinical staff. Users seek health services based on their perceptions of their children's needs. The majority of families are confident in their overall abilities to recognise children's health needs, and that they are generally well enough informed to seek medical services appropriately. There are some indicators that there is an overall consciousness of many health issues among the communities of the north east Badia, such as an awareness of domestic activities pertaining to maintaining and improving children's health. Other indicators suggest that health awareness may actually be quite limited, for instance, most survey respondents were unable to name more than one or two diseases that their children are vaccinated against, and many even believe that their children are being vaccinated against smallpox. Most clinicians believe that the rural communities lack health and illness awareness, and that need is poorly recognised, resulting in inappropriate, and particularly over-utilisation. Moreover, most maintained that rural health services are too accessible, and that this compounds the problem of users' lack of knowledge, and contributes to the over-utilisation of the services. Indeed, it is important to avoid over-utilisation of health care services within a financially constrained economy and thus ensure that resources are effectively used (Phillips, 1990), and this is particularly applicable given Jordan's present economic situation (as discussed in Chapter Five).

However, it is also important to ensure that the needs of the population of the Badia are met by health services. A consequence of clinicians rebuking patients for over-utilisation, could be to increase tensions between the two parties, resulting in the

likelihood that patients will do not utilise or delay consultation, thus compromising the accessibility of health services. Indeed, many groups of (potential) users find that accessibility to health services is problematic (the extent to which the study groups' have accessibility problems to health services is examined in the next chapter), thus for them, under-utilisation may be taking place. This chapter therefore illustrates that both under and over-utilisation can be taking place simultaneously, depending on the perspective of the (potential) patient or that of the clinician.

Chapter 9

Health Service Accessibility

9.1 Geographical factors of accessibility

The expansion of health service delivery in rural Jordan has improved the 'potential' accessibility to basic health care for rural groups overall. However, this research is concerned with the 'effective' accessibility of health services for children. To this end, the implications of sedentarisation and pastoral mobility for geographical accessibility at family level are examined. Utilisation rates are closely associated with the distance and travel time between a user and a service. In addition, the availability of transportation (that is an enabling factor) influences the relationship between distance and utilisation of a health service. Distance therefore has varying degrees of impact on different groups or individuals, who may have differing mobility levels and availability of transport. Perceptions of the severity of illness also affect the gradient of utility. Individuals with serious illnesses generally overcome greater accessibility problems, and therefore travel further than those with minor illnesses, and more sophisticated health services generally serve a larger potential population than basic services (Aday and Andersen, 1974; Stock, 1983, 1987; Joseph and Phillips, 1984; Phillips, 1990).

9.1.1 Settled communities and accessibility

Residents of Al-Mafraq city live within close proximity of both secondary and tertiary government health services, specialist clinical services such as paediatricians, private

clinics and hospitals and private pharmacists. Indeed, the majority of urban families interviewed live within a relatively easy walking distance of a community clinic or even the general hospital. An ambulance service is also available at the general hospital, and most houses are connected to the telephone service, allowing emergency cases to be dealt with expediently. No respondent families indicated that they had geographical accessibility problems.

The process of sedentarisation, together with the extended provision of basic health clinics in rural Jordan, have significantly contributed to alleviating problems of geographical accessibility for the majority of rural families living in the north east Badia. It is estimated that in 1993, around 78% (a total of 12,708 out of 16,267) of the families from the study area were fully settled in villages with health clinics. Another 12% lived in villages without clinics, but were still located within 10km of formal clinical services. When asked whether distance and time to reach the clinic was a problem, residents of the largest village, Umm Al-Quttayn, were surprised by the question; the centre was just a short walk away. A settled family, Ahl Umm Abdallah, who live in Naifa village, recognised that their use of health services is a lot simpler now than when the family was mobile. The geographical problems incurred whilst they were mobile in the past no longer exist, and they do not consider the fact that there is no peripheral level clinic in their village a problem. The primary clinic, in the neighbouring village of Al-Ashrifiya, which is within easy walking distance of their home, is used for almost every medical need. They travel to the Subha comprehensive clinic, 25km to the west of their village, using the family car, in the event of a serious illness. The three-year-old child receives vaccinations from the Al-Ashrifiya clinic, but the family has used no MCH services. The

family may also use the Al-Mafraq hospital or a private paediatrician if the government services do not solve the problem. They stated that it is not difficult to find transportation to these places.

However, there is considerable local variation in geographical accessibility amongst settled communities. Most families without a clinic in their village, or living beyond a reasonable walking distance of a clinic, have accessibility problems. The main health centre used by the settled residents of the Midwar Al-Qin group of villages, is the primary health centre in Dyr Al-Kahf, which is up to 18km away. Travel to this clinic is considered a problem for nearly a half (44%) of those families interviewed, therefore affecting their utilisation of that centre (Table 9.1).

Table 9.1 The effect of distance and time on rural health service utilisation

	Number of families	School Enrolment*	Children travel with family	Utilisation is affected
Fully settled (villages with clinic)	101	94%	0	0
Fully settled (villages without clinic)	25	100%	0	44%
Semi-settled	25	72%	68%	48%
Semi-nomadic	25	54%	96%	76%

Source: author survey.

*The proportions of families in which all school age children are enrolled.

A problem facing this settled group is that a relatively small proportion of families own a private vehicle. Around a half of the families living in the Midwar Al-Qin group of villages own a vehicle, and only a third of settled families overall own one. A further problem is that women are generally not permitted to drive motor vehicles by their families, even though women, in particular mothers in the settled villages groups, are most often responsible for accompanying their children to utilise medical services. Thus, those women living in villages without health clinics, find it necessary to rely heavily on the public transport system. However, this only consists of a very infrequent and unpredictable bus service between the smaller villages and the larger settlements.

Community support is, however, an important enabling factor which facilitates health care utilisation, especially amongst settled groups. Community support networks continue to be important in the north east Badia. Those who do not have available private transport frequently call on their neighbours to take them to health clinics when necessary. Therefore, it is not necessary for every family to own transportation for relatively easy travel to another village to use a clinic. During the survey, the roads connecting the villages were often busy with vehicles, and hitchhiking and informal lift giving were observed and participated in with relative ease. Whilst the settled part of Ahl Abu Hussein have a light pickup, the women of the family, who do not drive, have to rely on neighbours living in Abul Farath, or on public buses, to take their children to a clinic if an adult male is not available to drive. Those members of Ahl Abu Hussein, who are permanently resident in the village, rely heavily on community support in the event of a child's illness. It was explained that social support is an important Bedu value, and neighbours with vehicles are usually willing to help provide transportation.

9.1.2 Semi-settled and semi-nomadic accessibility

The government has successfully improved the proximity of health care for the majority of families in the north east Badia. However, despite the significant expansion of rural provision, families practising mobile pastoralism (around 10% of the north east Badia population) continue to experience significant geographical inaccessibility to health services. The majority of families interviewed who are undergoing sedentarisation indicated that a principal reason for house construction was to serve as a base for the education of their children. As a result, the initial stages of sedentarisation usually involve the geographical division of the family, which involves pre- or post-school children staying in the Badia for much of the year, whilst their siblings, who are enrolled in school, live in the villages with their mother or other adult relatives. Those children attending school live within close proximity of a clinic, and they also benefit from vaccinations administered through the school itself.

An important problem is that the level of school enrolment is lower for the semi-settled group than for the settled families (Table 9.1). The survey suggested that 28% had not enrolled some or all of their children of school age. By comparison, virtually all settled families indicated that all their male and female children (of school age) were enrolled. In all, over two-thirds of semi-settled families (68%) travelled for four to six months throughout the Badia region with their pre-school age and non-enrolled children. For many families in this group, accessibility problems can be acute during these periods. These mobile children are therefore at risk; 48% of semi-settled families stated that distance and travel time, whilst they are mobile, adversely affected their ability to use the

health clinics effectively. Abu Hussein's family confirmed that health care accessibility is considerably more problematic for the mobile part of the family than for those who are permanently settled. They stated that it is very difficult for those children who spend most of their time away from the villages to reach the clinics in the event of an illness. They tend to be given herbal infusions initially, unless the illness is considered to be serious, in which case they would endeavour to find a way to reach a health centre as expediently as possible. By comparison, the settled part of the family relies on the local village peripheral clinic, a short walking distance from the house. They indicated that the children in the village have very good geographical access to the local clinic, and use it extensively, especially when minor children's illnesses occur.

The situation of the semi-nomadic group is more extreme since they are generally mobile for nine or ten months of the year, and travel further from the village area. Their children are more likely to be away from the villages if below school age, during the school holidays, or are not enrolled at school at all. Nearly half, 46% of this group with school age children, did not send some or all of these children to school. In all, 96% of the semi-nomadic families travel with some or all of their children, whereas 68% of semi-settled families do so. Moreover, semi-nomadic families perceive distance and time as more problematic than the semi-settled families. The majority, 76%, of families are affected by distance and time, compared to 48% of the semi-settled group (Table 9.1). The most vulnerable group is therefore the children of the semi-nomadic families, particularly those who are of pre-school age as well as school age children who are not enrolled. Moreover, the receipt of vaccinations is also low for this group; for instance,

37% of families indicated that their children had not been vaccinated against polio (the main disease targeted in the government campaign during the year of the survey).

Ahl Abu Abdallah, a semi-nomadic family, stated that their use of modern health services depends on whether the children are located in their house in Al-Bishariya village, which tends to be during the school term, or away from the villages area with the rest of the family at other times of the year. The Al-Bishariya peripheral clinic is used for minor illness when, and only when, the children are there. During other times of the year, the children are not taken to a clinic for a minor illness at all. Two of the children are under school age, and are away from the village permanently, and hence they are never taken to a health clinic unless they are seriously ill. The family also suggested that these children have poor accessibility to the government vaccination programmes administered through the clinics to those under school age, such as the polio campaign. These children had therefore not been vaccinated against polio. The older, school enrolled children, who live in the village for most of the year, are taken to the local clinic in the event of a minor illness and also receive the school-administered vaccines. However, during the school holidays, they stay with the family in the tent and have poor geographical accessibility, which affects their health service utilisation, especially for minor illnesses. Nevertheless, if a serious illness is suspected, they would do their best to find the time and transport needed in order to visit a care care outlet. Indeed, all mobile families indicated that they always use clinics or hospitals, particularly the general hospital in Al-Mafraq, if a member of the family was seriously ill. In the event of a more serious illness, Ahl Abu Abdallah use their truck to reach the government comprehensive clinic in Subha, or the general hospital in Al-Mafraq. They do this instead of directly

approaching the smaller clinics such as the peripheral clinic in their home village, to be sure that the clinic is open when they arrive.

9.1.3 Pastoral mobility and problems of accessibility

Understanding the dynamics of pastoral management is important in order to appreciate more fully the problems of accessibility for mobile groups. A number of the complexities of geographical accessibility distinguish the semi-settled and semi-nomadic families from the settled communities. In particular, the factors identified in his study that have considerable implications for accessibility include variations in a family's location, livestock production activities and transport availability.

Distance-time accessibility is determined by the geographies of pastoral management. Pastoral mobility is highly dynamic geographically, involving frequent migrations, often over significant distances. Migrations within the north east Badia are based primarily on the maximisation of the commercial profitability of sheep pastoralism. Artificial pastoral inputs are minimised, hence natural grazing is sought when possible. Supplementary feed, which is collected at distribution centres within the villages' area of the north east Badia, is more important in dry years. There is, therefore, considerable interdependence and interaction with settlements, involving regular return visits to villages to visit family, market animals and collect materials, water and animal feeds. However, in years of high rainfall, grazing is sought extensively throughout the north east Badia. This may involve travelling distances of up to 150km to reach the nearest settlement or clinic. Seasonal pastoral activities, particularly the need to seek animal grazing, affect the position of the

family, since changes in rainfall patterns determine where grazing is favourable from year to year. Thus, their location varies not only on a regular seasonal pattern, but this pattern can vary from year to year, depending on variations in rainfall and therefore the supply of natural grazing.

Accessibility to health services varies significantly, depending on these economic activities. Ahl Abu Hussein explained how years of poor grazing affected their migrations, and recounted the effect this had had on children's health care utilisation. The extended semi-settled family is divided between those who are permanently settled, and the eldest brother and his immediate family, who are extensively mobile. They own a truck, which is used to transport sheep, grazing them mostly within the north east Badia, up to 100km from a clinic. The poor rains in 1996 compelled them to move their sheep to graze in the hills of north west Jordan, close to Irbid, a major city, in an area which is well provided with health services. As a result, the semi-settled children were vaccinated for the first time. The semi-nomadic Ahl Abu Abdallah admitted that during the seasons in which they are mobile with their children, distance and time travel times '... completely stop our use of the clinics'. The family finds it easier whilst in the western part of the north east Badia, since most of the clinics are relatively close by. For instance, when they are located in the Shbaker area, they only have to travel approximately 25km to the As-Safawi clinic, but if '... we are in Wishaad or Hashad [in the south east part of the study area] it is really necessary to try to deal with the matter ourselves', such as using Arabic herbal medicines. In such circumstances, health services are generally only used if there is another reason for visiting a village, such as to collect water, animal feed or other supplies.

Livestock management not only determines the position of the family, but also the time available to seek health services. Disruption of pastoral production was highlighted as a significant problem by some families, particularly during critical periods when lambing, shearing and milking takes up all their time. Family members visiting the clinic are temporarily unproductive, making it very difficult to take a child to a distant medical facility. Thus, children's health takes a lower priority during the busy times of the year. Ahl Abu Hussein stressed that during times when they are travelling within the Badia, they are far busier, the distances to the health centres are problematic, and their means of transportation is in constant use. Whilst the children's mother is working with the livestock, she has little time for the children. The mobile children, '... do not tell their parents they are sick since everyone is so busy, and may leave it for a long time. Only after they are thin, fevered and don't eat, they are noticed'. Hence, they tend to delay travelling to health centres or use Arabic medicines initially, unless the illness is serious.

The availability and costs of transportation (such as fuel costs, purchasing and maintaining a vehicle) influence health care utilisation rates (Phillips, 1990). It is therefore difficult to disaggregate geographical accessibility problems from economic problems. Visits to health clinics made by mobile pastoralists in the study area tend to be combined with visits to the villages for other purposes; the actual costs of transportation involved in travelling for health service seeking are therefore of limited importance for these groups. Indeed, relatively few (20%) semi-nomadic families indicated that the actual cost of travelling to the villages impeded their utilisation of a health clinic.

Vehicle ownership, particularly of trucks, is a relatively recent development, conferring much greater levels of mobility than previously for the majority of pastoralists. The purchase of vehicles is subsidised by the government, which has encouraged the vast majority of pastoralists to obtain them. All of the semi-nomadic users of Bi'r Al-Qittafi own a private vehicle, and all but one (92%) of the semi-settled families own a vehicle, usually a truck. Both groups tend to have heavy trucks, rather than light 'pick-up' cars. Some families also have 'tanker' trucks for transporting water, whilst some have open pallet trucks for transporting animals, feed and water containers. Thus the main purpose of the vehicles purchased by the Bedu is to improve levels of pastoral production. Indeed, transportation has become a central element of the recent commercialisation of livestock production in Jordan. Not only are trucks needed for the transportation of flocks, but they also provide the means and stimulus to increase flock sizes. In addition, vehicle ownership has facilitated the transportation of feed and water to the flocks, and allows livestock owners to transport and market their own animals.

Whilst distances can be considerable, even when driving off road, a settlement/clinic is generally no more than a few hours drive from the position of the migrating family. Thus, transport has improved the accessibility of health services for mobile pastoralists. The vast majority of semi-settled and semi-nomadic families use the larger Badia clinics, in particular those at Al-Azraq, As-Safawi and Ar-Rawayshid, rather than the clinics within the main concentration of villages, since these clinics tend to be closer to the locations that they camp and position their flocks, especially the semi-settled families who tend to use areas in the vicinity of As-Safawi. Thus, these clinics are more

geographically accessible to them whilst they are travelling in the Badia than the clinics located in the main concentration of study area villages.

Despite the improved mobility that vehicles provide, they are heavily relied on for pastoral production; indeed, most pastoralists' livelihoods depend completely on vehicles. Thus, they have limited potential for personal use, such as for travelling to health clinics. Indeed, this is reflected in attitudes to accessibility. The majority of those in the semi-nomadic group (76% of the total) stated that distance and time was a problem for them, despite them having the highest transport ownership rates. Ahl Abu Abdallah owns a truck which is intensively used for the transportation of the sheep, water and animal feeds, and is therefore rarely available for other purposes. However, they suggested that the intensity of vehicle use fluctuates, and is affected by mechanical break down, a common phenomenon when off-road driving. A further problem that they have is the lack of community support. Unlike the settled part of Ahl Abu Abdallah, there are fewer opportunities for neighbourly assistance for those located in the Badia. In an emergency, they must find a way of getting to a main road, and wait for a vehicle to pass. This may delay their utilisation of health services considerably.

9.2 Organisational factors of accessibility

'Coupling constraints', such as facility opening times/days relative to times when potential users are able to visit, as well as waiting times and queues for consultations, influence the accessibility, and therefore levels of utilisation of a service (Carlstein *et al.*, 1978; Phillips, 1990). Time-related 'organisational' factors may therefore create

inconvenience and economic cost to users, and render the delivery of services ineffective in terms of the abilities of target populations to use them within their time-budgets.

9.2.1 Clinic opening hours

The larger rural clinics in the north east Badia are permanently staffed with qualified doctors. The comprehensive clinic at Umm Al-Quttayn usually has more than one doctor resident, while each of the primary clinics has a doctor available 24 hours a day. The vast majority of families interviewed living in villages with the '24 hour' clinics (Umm Al-Quttayn and Dyr Al-Kahf) recognise this, indicating that opening hours did not inhibit their use of these services (Table 9.2). This suggests that those who stated that opening hours are a problem for them were not aware that these clinics were permanently staffed.

The peripheral clinics are not permanently staffed. A nurse is available for much of the time, but a doctor only visits one or two days per week, often for incomplete days. The peripheral clinics at Tall Ar-Rimah and Dyr Al-Qin are not widely used by the residents of neighbouring villages. Relatively few of the Midwar Al-Qin survey group, 20%, indicated that they may use these in the event of minor illness, whereas 84% anticipated travelling further to use the Dyr Al-Kahf primary clinic. However, the clinic that is used varies depending on the availability of transport and perceived illness

Table 9.2 Clinic opening hours: effect on utilisation of services

	Number of families	Utilisation is affected
Urban families	25	4%
Settled families		
Umm Al-Quttayn Comprehensive clinic	50	10%
Dyr Al-Kahf Primary clinic	26	12%
Abul Farath Peripheral clinic	25	88%
Midwar Al-Qin* No clinic	25	20%
Semi-settled families	25	36%
Semi-nomadic families**	25	56%

Source: author survey.

*Midwar Al-Qin village group includes Mathnat Rajil, Khisha Al-Qin, Ja'da and Mansura. The majority of families usually travel to the primary clinic in Dyr Al-Kahf.

**The families from this group mainly use the 'Badia' clinics at Al-Azraq, As-Safawi and Ar-Rawayshid, which are permanently open.

urgency (this explains percentages totalling more than 100%). When asked about the very low levels of utilisation of the peripheral clinics, 64% stated that the main reason for not using them was their part-time opening. The limitations of the facilities provided, and the quality of services compared to other health centres, were also widely recognised. Moreover, a number of respondents from Midwar Al-Qin, did not actually know that some of the smaller clinics, for example the Dyr Al-Qin peripheral centre, actually existed, since the larger Dyr Al-Kahf clinic which was established before the peripheral clinics had always been used.

Time-coupling between users and transport services also has implications for the effective utilisation of services. Only about a third of settled families own a vehicle; hence public transport is heavily relied upon. The public transport system incorporates infrequent bus routes, running at unpredictable times, and for some users, the buses run at the wrong time of day, or on inappropriate routes for accessibility to services. This frequently results in long journey times to travel a relatively short distance. This is particularly problematic for connecting the smaller villages, such as the Midwar Al-Qin group of villages as well as Abul Farath, with the larger villages.

The household and clinician surveys suggest that the administration and delivery of rural health services is characterised by flexibility, inconsistency and uncertainty. This has led to considerable confusion amongst users. In practice, the opening hours of the health clinics, especially the peripheral clinics, vary considerably, and this adds an additional dimension to the problems of effectively utilising basic health services. It was therefore not surprising that, for more serious or urgent needs, these clinics would generally be bypassed. Many families are not clear about facility opening times. In fact, the opening times varied considerably at the time of the survey. Moreover, potential patients are often discouraged from using the larger health clinics outside daytime hours since, whilst the staff are *in situ*, they consider themselves to be off-duty.

The majority of the settled residents of Abul Farath village (88%) stated that the limited opening hours of the peripheral village clinic affected its use, and most (80% of the total) complained that the effect was considerable. A further problem is that many

families are not sure which days of the week the local clinic is open. Indeed, this was not surprising since clinician timetables at the Abul Farath clinic are flexible. Ahl Abu Hussein highlighted a number of inadequacies of the Abul Farath clinic; overall, the family is 'not satisfied' with the facilities provided. They were insufficient, in that the range of cases that could be dealt with is limited, and there is only one doctor working for only one or two days a week. This was the main accessibility problem for the settled part of the family, which 'affects the use [of the local clinic] a lot'. The problem was compounded in that the opening days of the clinic vary. They therefore do not know on which days to approach the clinic. Another concern was that the nurse staffs the clinic on an irregular basis, generally for only two or three days per week. Additionally, they consider that she is not sufficiently well qualified to administer an injection or to perform many other simple tasks. This has resulted in a lack of trust in the nurse. The Umm Al-Quttayn comprehensive clinic is deemed the best overall clinic in the area for both minor and serious illness, since it is permanently staffed, and the staff are better qualified. The family complained that, although specialists, especially paediatricians and dentists, are available at Umm Al-Quttayn clinic, they usually spend only one day per week there at most. The same specialists are also available at Subha clinic on other days of the week, but the timing varies. Hence, the family is not sure which clinic to visit at which time. This reduces accessibility of the clinics, something which is exacerbated further by the unreliability of the public transport service in the area. Although the residents of Abul Farath emphasised the organisational problems of using the local clinic, low levels of vehicle ownership (28% of families), combined with infrequent and inappropriately delivered public transport, results in the majority having to use the local clinic for minor

children's illnesses (93% of the total do this), despite their dissatisfaction with the quality of service on offer.

Pastoral mobility aggravates the organisational factors of accessibility. Time-coupling influences which services are most accessible. As with the settled groups, the mobile groups complained that they could not predict when the peripheral, part-time clinics would be open. To avoid time-wasting, all the mobile families stated that they would avoid these clinics, especially since they were conscious of the limitations in terms of medical facilities. These groups are also more likely to delay acting in the event of a minor illness, and for more serious conditions, they prefer to travel a longer distance to use the full-time comprehensive and primary clinics, which they can guarantee are open and are able to attend to their medical condition when they arrive. It was also suggested by a number of migrating families that they found it difficult to visit clinics for children's vaccinations, since the government vaccination programmes were often administered at a time of year that coincided with intensive pastoral activity. Ahl Abu Hussein found that organisational problems are greater for the mobile part of the family than those who are settled; the specific clinic used depends on the location of the people at the time, and will tend to be the larger clinics, which they can guarantee will be open so as to not waste a long journey. If a major illness occurs, they usually try to go straight to a higher order clinic, depending on their location at the time. The As-Safawi clinic is frequently used by the mobile part of the family. The adult brother, his wife and their sons who herd the sheep, rarely use modern health services for minor complaints. They admitted that illnesses might become more serious by the time a journey is made to a clinic.

The semi-nomadic households interviewed at Bi'r Al-Qittafi use the larger, permanently staffed health centres at Al-Azraq, As-Safawi and Ar-Rawayshid, as well as directly approaching the general hospital in Al-Mafraq in the event of serious illness. However, over half (56%), stated that clinic opening times are a problem, suggesting that these families are not actually aware that the comprehensive/primary clinics are approachable 24 hours a day. The semi-nomadic Ahl Abu Abdallah complained that opening hours/days at the peripheral clinics exacerbate the problem of geographical inaccessibility, particularly when they are mobile. As with most other semi-nomadic families, they indicated that there is little point in travelling a substantial distance to find the clinic closed. Hence, they make very little use of the peripheral clinics. Instead, they use the full-time clinics, even if this means travelling a greater distance to use them. When asked about the government's polio campaign, the response was 'they don't offer much of this in the Badia region. At As-Safawi, [vaccinations are available] for three days only, but we do not go to As-Safawi on these days'. Opening days, times and consequent waiting and queuing to see the clinician at Al-Bishariya clinic, is a 'massive problem', resulting in substantial inaccessibility, even for those staying in the village. The Al-Bishariya clinic is '... only open one day per week, the doctor sometimes arrives at ten or eleven a.m. and leaves at two p.m.'. Subha is much easier in this respect, and is open at night, '... but transport [from Al-Bishariya] is more difficult, for example a taxi at night is double the cost of one during the day ...'.

9.2.2 Service delivery factors

There is no appointment system in operation at any of the rural clinics; patients arrive at a clinic and are seen when the clinician is ready. The length of time waiting for a consultation is therefore unpredictable, varying throughout the day, the week or even seasonally, according to the numbers of patients arriving at a clinic. During the numerous visits the researcher made to the various health centres, it is clear that they are frequently very busy during normal daytime hours, particularly the comprehensive Umm Al-Quttayn clinic. The doctor explained that in the month preceding the interview, around 2,000 outpatients had attended the clinic, and that the staff had had difficulty dealing with this volume of users. Reflecting this, around a third of those living in Umm Al-Quttayn indicated that waiting times influence whether they utilise health care (Table 9.3).

Waiting times exacerbate the problems of opening hours in the peripheral clinics. Around half of the respondents of the Abul Farath survey complained that even when the local clinic is open, waiting times are a problem as the village residents are all obliged to use the clinic on the same day(s). Ahl Abu Hussein stated that the clinic became very crowded and the fact that there is no appointment system adds to the problem of waiting for a consultation. They suggested that, whilst the clinic became very busy when the doctor was there, this problem is nonetheless less serious than the problem of the clinic being closed most of the time.

For the semi-nomadic groups during mobile seasons, waiting times are perceived as problematic for over half those interviewed (56%). Having to wait for the clinician is aggravated by distance, in that the total visit to the clinic is even longer. In contrast, although the community health centres in Al-Mafraq were busy and chaotic on the occasions that the researcher visited them, waiting to be seen by the doctor was not a serious concern for most users. Few indicated that this would affect whether they would seek medical care (20%).

Table 9.3 Clinic waiting times: effect on utilisation of services

	Number of families	Utilisation is affected
Urban families	25	20%
Settled families		
Umm Al-Quttayn Comprehensive clinic	50	32%
Dyr Al-Kahf Primary clinic	26	23%
Abul Farath Peripheral clinic	25	56%
Midwar Al-Qin* No clinic	25	16%
Semi-settled families	25	36%
Semi-nomadic families**	25	56%

Source: author survey.

*Midwar Al-Qin village group includes Mathnat Rajil, Khisha Al-Qin, Ja'da and Mansura. The majority of families usually travel to the primary clinic in Dyr Al-Kahf.

**The families from this group mainly use the 'Badia' clinics at Al-Azraq, As-Safawi and Ar-Rawayshid.

Referral systems in developing countries are frequently poorly organised, and hence rural groups may find it difficult to gain access to higher order services (Phillips, 1990). This is also the case in Jordan, where the referral system seeks to encourage the effective utilisation of appropriate services. Consequently, the smaller clinics act as gatekeepers to higher order facilities, which are only utilised if necessary. However, the referral system is inconsistently applied, and this is an added accessibility problem for some families. If a family is familiar with a particular doctor, it can bypass smaller clinics in preference to the one they know, even if it was not the nearest or most appropriate service. Thus, for them, the referral system is not adhered to. Conversely, a number of families complained that, in practice, the referral system caused them considerable problems. For example, when they had bypassed a local peripheral clinic to use a primary or comprehensive clinic, they had been instructed to return to their local clinic since the staff considered the illness to be too minor to deal with. Thus, parents suspecting a serious case may be hesitant in going straight to a higher order clinic for fear of being sent back to the local clinic and humiliated by doing so.

Ahl Abu Hussein, for example, indicated that referral from lower order clinics to higher order ones is strongly encouraged by the providers of the health services, but the result is that they are hesitant about using the comprehensive clinic directly. They find that they often have to bypass the local village clinic if the doctor is absent, but when they approach a larger clinic, in particular the comprehensive clinic at Umm Al-Quttayn without initial referral from their local clinic, they would generally be sent back. However, they acknowledged that in the event of a serious or urgent case, the staff at the larger clinic would not refuse them treatment. Thus, whilst the system works, in that

people are deterred from using higher order clinics, the uncertainty created is, in itself, an accessibility problem for families living in villages with peripheral or no services.

9.3 Economic factors of accessibility

Structural adjustment programmes have considerable implications for health care expenditure. Whilst health and education sectors are better protected than most other sectors, state expenditure has generally been reduced in many developing countries. Thus, the quality and extent of government health services are threatened. Implications for the health sector include the shortage of (imported) medicines and supplies, problems with paying medical personnel and the imposition of cost recovery programmes (Stewart, 1992; Woodward, 1992; Asthana, 1994a; Gilson *et al.* 1995). Despite the economic crisis in Jordan throughout the late 1980s and 1990s, the government has not instigated a full-scale structural adjustment programme on the health sector (Anani, 1987; Saba, 1987). Indeed the proportion of total state expenditure increased throughout the 1980s and early 1990s, and public funds have been used to provide an extensive network of rural services over this period. There are, however, limitations in terms of the scope and quality of rural health services in the north east Badia. The Jordanian Ministry of Health highlighted some of the shortcomings of the health services in the study area, particularly the lack of MCH services, and the shortage of nurses, midwives and specialist clinicians (Al-Akour, 1998). In addition, many families criticised rural government health clinics, especially the peripheral clinics, for the shortage of medical supplies, and they are therefore obliged to buy medication from private pharmacies at greater expense in Al-Mafraq. However, the most direct

implication of structural adjustment programmes within the Jordanian health sector has been the implementation of a comprehensive cost recovery programme.

9.3.1 The cost recovery programme

The Jordanian government health system provides subsidised medical care for all users. However, since the late 1980s, the state has attempted to recover part of the cost by charging patients prescription fees. User fees are not payable for a consultation; outpatients only pay for medicines, and inpatients, especially those in the urban hospitals, pay for medicines and care on a *pro rata* daily basis. A user fee concession ('insurance') system operates in Jordan. Thus, costs depend on whether an individual or family is covered by a concession card. A number of types of card are issued, linked to military and civilian government employment, which reduce the cost of treatment/medication significantly, or even exempt payment. Table 9.4 shows the costs to different groups for a typical course of basic medicine. Most families without individuals employed in the public sector, including the majority of mobile families, do not qualify. A poverty card, issued by the Ministry of Social Affairs, does exist for those families below a certain income, but the cut-off level is very low, around 100JD per month for a family.

DeJong (1995) reported that the national rate of health insurance coverage was 75% in Jordan. Overall, 70% of families from the village survey indicated that they possessed a health concession card, which is therefore comparable with the national average.

Table 9.4 Examples of user costs for government prescribed medications

Category	Cost to the patient
Full price for medication (usually for non-Jordanians)	2JD*
Jordanian nationals	1JD
Government employees	Free for most treatments/medicines or 0.10–0.25JD for some treatments
Military employees	Free for most treatments/medicines or 0.10–0.25JD for some treatments
'Poverty card' for those recognised as earning below a poverty threshold	Free for most treatments/medicines or 0.10–0.25JD for some treatments

Source: author survey.

*1JD (Jordanian Dinar) \approx UK£1 in 1996.

However, considerable variations exist between the groups surveyed, reflecting the patterns of government and military employment. The military forces are a particularly important source of livelihoods in the villages in terms of secure employment and a guaranteed pension. Moreover, retired military status does not curtail health concession card ownership. A military or government concession card held by an employee, generally covers their immediate family. The three larger villages, Umm Al-Quttayn, Dyr Al-Kahf and Abul Farath, have high levels of military as well as government employment (46%), and a very high level of card possession (79%), and most agricultural families are covered by the cards of their relatives (Table 9.5). However,

Table 9.5 Occupation and possession of health concession card: rural groups

Main source of income	Number of families	Percentage	Percentage with concession card
Villages			
Retired military	39	27%	100%
Retired government	2	1%	100%
Military	12	8%	92%
Government	7	5%	86%
Other*	15	10%	60%
None**	24	16%	58%
Settled pastoralist	25	17%	48%
Semi-settled pastoralist	22	15%	41%
Total/average	146	100%	70%
Bi'r Al-Qittafi			
Semi-nomadic pastoralist	25	100%	40%

Source: author survey.

*Includes employee, shop owner, trader and other occupations.

**No definite source of income.

lower levels of card possession, 46%, were reported by families in the Midwar Al-Qin group of villages, in which nearly two thirds (59%) are pastoralists. Even fewer semi-nomadic families, 40%, are covered by concession cards. However, those who are covered, contain members employed in the government or military, conferring coverage on most members of the household (Table 9.5). Conversely, all but three families interviewed in Al-Mafraq city (88% of the total) are covered by at least one card, and many reported that their family is covered by both government and military-issued health cards, reflecting the high proportion of families containing members in government and military occupations. Thus, the availability of a health concession card, and therefore the cost of treatments, is not commensurate with a family's income, and therefore their ability to pay.

The survey suggests that the concession card system is inconsistently applied, both in terms of who is eligible, who actually had a card and how charges are levied in practice. These factors exacerbate the lack of fairness of the system. DeJong (1995) suggested that loop-holes in the Jordanian system are exploited, such as families who obtain concession cards that they are not eligible for, and retaining cards even after the death of an eligible individual. The survey found that the system of qualification for concession cards is highly erratic, and may depend on personal contacts rather than the need of a family. Unsurprisingly, no families suggested that they had a card but were not eligible, although many families complained that they thought that they should qualify for the 'poverty' card, but had not received one; they did not understand why this was the case. Moreover, a number of respondents stated that they expected to be entitled to a card, but the complex and confusing bureaucratic system was stopping or delaying its receipt. Whilst a card held by an individual covers his or her immediate family, in practice even this is highly inconsistent. Occasionally, military or government employees are not issued with a concession card, and the entire family may be unevenly covered by the scheme. Ahl Abu Hussein, for example, was frustrated by the unfairness of the system for issuing of health concession cards. One of the adult sons works for the government, but does not qualify for a health card, although his brother, who is employed in the army, has a military health card which covers both the (grand) parents of the family and the children. This son, his wife and daughter therefore have higher treatment costs than the rest of the family, as well as having a more modest salary.

There is also a great deal of inconsistency in applying user charges, which reflects the inconsistent and confusing nature of the bureaucratic system. Whether doctors charge patients for medications is highly discretionary in practice, regardless of card possession. The lack of presentation of a concession card at the clinic may not result in the full cost of medication having to be paid. The As-Safawi doctor suggested that many of his colleagues administered free medication, particularly orally administered medicines for simple infections and colds, if put under pressure by users to do so, but, he argued, it was wasteful and not strictly necessary to dispense these medications. A number of respondent families felt that fees for medicines are often levied on an arbitrary basis and indeed, the researcher's experience of using the health clinics confirmed that this is happening. This confusion, coupled with the high turnover of staff in the smaller peripheral clinics, together with the frequently limited availability of medicines in the village clinics, makes the costs of health service utilisation highly unpredictable.

9.3.2 User fees and accessibility

Critics of user fees suggest that fees generally reduce utilisation rates, and consequently the equality of health care accessibility may be compromised, since the poor are particularly likely to be affected (Creese, 1991; Gilson *et al.*, 1995). This is confirmed by personal observation in The Gambia, Senegal and Zimbabwe, which showed that individuals visiting clinics are far more likely to make use of health services when the medications are supplied for free than if a charge is made. Ensuring the equality of accessibility of health services for the whole population, within the context of economic austerity programmes, is therefore problematic.

User fees are also reducing utilisation rates in the north east Badia of Jordan. The majority (63%) of families living within the villages without health concession cards stated that they perceived the cost of treatments as a factor influencing their use of health centres (Table 9.6). The group that does not have health concession cards who found problems related to cost, are almost exclusively occupied in agriculture (the semi-nomadic, semi-settled and settled farmers shown in Table 9.6), or have no definite occupation or have an ill-defined source of income. Of the settled families, the highest proportion of those without health cards, were concentrated in the smallest Midwar Al-Qin group of villages, and consequently more residents of these villages are affected by economic inaccessibility than those of the larger survey villages. The low numbers of families without cards within the military and government and 'other' categories make it difficult to draw any conclusions about households of that type.

Economic problems can be acute for the semi-nomadic families. Ahl Abu Abdallah is not in the possession of any form of government health concession card. They complained that this affects their use of the health services considerably. Private medicine was rated more highly than government services in terms of quality, but since it is more expensive, it is even more inaccessible. 'Private services are used only if extremely necessary; the problem is cost, the private hospital, care is very good,

Table 9.6 The effect of user costs on utilisation: families with no concession cards

Occupation	Number of families	Utilisation is affected
Semi-nomadic farmer	25	72%
Semi-settled farmer	12	92%
Settled farmer	14	50%
Military/government*	2	-
Other/none**	15	47%
Total/average	68	63%

Source: author survey.

*Includes retired military and government employees.

**Ill-defined occupation or no definite occupation.

especially at Al-Mafraq, but very expensive'. Another problem is that '... sometimes medicines are not available [at the government clinics], therefore we must go to the private pharmacist in Al-Mafraq [and buy them ourselves]. Particularly for the more expensive drugs, we must go to a private pharmacist'. These observations were echoed by Ahl Abu Hussein, who also found that medicines are too expensive, although the cost of treatment would not generally affect their utilisation. They also found that medicines are often not available in the pharmacy at the local clinic. As a result, they have been obliged to buy medicines at private pharmacists in Al-Mafraq. The family has also, on occasions, used a private doctor in Al-Mafraq. However, this is unusual, and only done if the family thinks the government health services may not be effective. 'A private hospital is more that 100JD for a two or three night stay... including medicines'. Private doctors are generally more expensive for the user than state services, around three times the price, but are 'much better, for example [the private doctor] has a lab and [provides] more care. A blood test for brucellosis at a government hospital is less that 2JD. At the

private lab, the cost is 5 or 6JD'. For the private doctor, they are obliged to pay for the consultation as well as the medicines. However, the private doctor in Al-Mafraq is perceived to be better qualified, and especially so in comparison to doctor in the Abul Farath clinic. The family indicated that the private doctor would only be used after the state services have been tried and have not resulted in a satisfactory outcome.

One of the adult sons recounted when his wife was ill. She had had a serious cough and high temperature, and was taken to the centre at Umm Al-Quttayn since the doctor was not at Abul Farath clinic. The doctor at Umm Al-Quttayn prescribed some medicine, which was supplied by the pharmacy at the centre. She was not cured after three days, so she was taken directly to a private doctor in Al-Mafraq, which cost 6 or 7JD for lab tests for pregnancy and brucellosis. After five days they returned to the private clinic, but the tests did not provide definitive results. Another test was carried out for typhoid, but again the test results were inconclusive. Finally, they went to the American charity health centre in Al-Mafraq, and were prescribed some pills which seemed to help her. The final cost of the whole episode was over 40JD. What this case highlights, it was stressed, is that the family has less faith in state hospitals and clinics than private ones, and that if a family who is poorer than them does not have 40JD, they do not get what they need. Not having a government health concession card exacerbates the problem for this family.

Overall, residents of Al-Mafraq are better able to pay for health care. This is reflected in relatively high levels of private health care use. Private medicine is more widely used by families living in Al-Mafraq than the rural families; 20% of the urban survey respondents

indicated that they would consider initially using private medicine, in the event of minor illness. In the event of serious children's illnesses, 24% of families consider using private services. By comparison, only 7% of rural settled families use private health services for serious illnesses. The urban group also has a higher level of card possession than the rural groups. Thus, this group is largely unaffected by economic inaccessibility; 12% were not covered by the card scheme, but only 8% of the total (two families) stated that they considered the cost of treatments to be a factor affecting use.

Advocates of user fees assert that they can improve the effectiveness and efficiency of clinical services by discouraging their over-utilisation. However, their imposition has varying effects, and has been shown to be highly sensitive to local and national conditions, and to users' attitudes to payment for goods and services (Van der Geest, 1992; Gilson, *et al.* 1995). There is a delicate balance in setting fee levels, between curtailing over-utilisation of services for trivial need and making services inaccessible to those with genuine need. The clinicians did not accept that user fees were a problem affecting the accessibility of health services. The Umm Al-Quttayn clinician admitted that the people may perceive costs as problematic, but he asserted that treatments are actually very cheap, at around a ¼JD for two or three individual courses of medicine. He therefore suggested that most people complain unnecessarily about the cost. The As-Safawi clinician indicated that those people who are considered poor, receive a poverty card, conferring a 'nominal' fee. However, in his opinion, even those without a card only have to pay what he considered nominal fees, and these fees were within the capacity of the poor. He was critical of the users of the health clinics in the Badia, suggesting that patients only consider their visit to the clinic to be successful if they receive some form

of medication, and that they complain, sometimes in writing, to the governorate level Ministry of Health, if they do not receive what they consider to be appropriate treatments. He advocated the continued payment of 'nominal' fees for treatments, even for the poor, '... since this avoids misuse and inappropriate and overuse of medicines and too many demands for medicines'.

This contradicts the perceptions of most (potential) health services users. Whilst it is difficult to gauge the real implications of health care utilisation on household budgets since the study did not record the incomes of respondent families, the data from the interviews suggest that costs are perceived as accessibility problem for many groups of users. This influences the effective utilisation of clinical services of these groups. The problem is likely to be intensified in the case of more serious or persistent medical conditions requiring substantial therapy, and the consequence may be the discontinuation of treatment if the efficacy of a particular regime was not rapidly apparent. Moreover, the system of concession card allocation is not based on need, and the administration of poverty cards, according to many users, is slow and bureaucratic. The income threshold for qualifying of a poverty card is also very low, which makes the children of poor families who do not qualify for concession cards (such as those with an income which is just above the 'poverty' threshold), a particularly vulnerable group.

9.4 Social factors of accessibility

Both patients' and health care staff's attitudes may influence the utilisation of health services significantly (Joseph and Phillips, 1984). A hostile or unsympathetic clinician is

likely to inhibit the seeking of medical services, and this may be particularly evident in tertiary systems in which staff are technologically oriented, and may be inclined to de-personalise and under-inform patients. Indeed, this has been a major criticism of health systems based on the top-down, bio-medical approach. Puentes-Markides (1992) highlighted that health professionals' behaviour affects the utilisation of health services; attitudes to poor patients, linguistic and ethnic distance from patients, and their position with regards to gender roles and reproductive issues all influence the accessibility of services.

9.4.1 Trust and staff/user relationships

Whilst there were some tensions and misgivings with the staff at the health clinics, the majority of families asserted that this would not directly affect their willingness to use health services (Table 9.7). Very few rural families do not trust specific medical staff, treatments and medicines, or had a sufficiently poor relationship with the staff that this would affect their utilisation. Whilst most clinicians originate from outside the Badia regions of the country, unlike many developing countries, a single language, Arabic, dominates (and is spoken by all groups), therefore there is no problem of linguistic distance. Moreover, unlike the Somali nomads (Helander, 1990), there was no indication that tribal affiliation, or a non-Bedu (but Arab) clinician, would be significantly problematic in the north east Jordan Badia. Indeed, it was found that a number of clinicians working in the area are non-Jordanian Arabs.

Although ethnicity and language are not problematic, a number of the semi-settled and semi-nomadic families in the survey indicated that the clinical staff, who originate from an urban/educated background, are often derisive to them, and give them poor service. Thus, there is a greater consciousness of socio-economic and rural-urban divisions than problems arising from the tribal or ethnic origins of a clinician. However, no interviewee, indicated that this would actually prevent them seeking health services.

Table 9.7 Trust and staff/user relationships: effect on utilisation of services

	Rural groups*		Urban group	
	No effect	Affected	No effect	Affected
Relationship with staff	92%	8%	41%	59%
Trust of staff and medicine	92%	8%	50%	50%

Source: author survey.

*Includes settled, semi-settled and semi-nomadic groups.

Ahl Abu Hussein considered the relationship between the family and the doctors working at the village clinic to be reasonable. The family trusted them overall, but the fact that the doctors were rarely at the clinic had served to diminish this. Moreover, the doctors are predominantly from the cities of Irbid, Al-Zarqa and Amman; they are seen to have little interest in the local area and little empathy with the people of the Badia. They perceive that the doctors consider them backward since they are nomadic. A problem that they have is that the doctor literally distances himself from a patient. He positions himself behind a desk and simply asks questions; he prefers not to get too close

to a patient. Despite these misgivings, they stressed that social factors do not actually affect their utilisation of the health clinics; geographical, organisational and economic problems are far more important.

The family suggested that the doctors rarely perform even a limited examination, and they rarely use a stethoscope. Instead they usually just asked a few questions. 'The doctor doesn't really care, he just writes a prescription and that's it'. The family complained that drugs are overused and inefficiently used. The doctors sometimes gave the parents of sick children the wrong prescriptions because they were not sufficiently motivated or caring to examine them properly. The Abul Farath clinic lacks specialists, and the general practitioner is perceived as inferior to those found at Umm Al-Quttayn clinic. They stressed that the rural doctors are generally seen as a problem, in that they are usually under-qualified, or just recent graduates. They are therefore very inexperienced, and had been sent to a rural clinic to gain experience. Ahl Abu Abdallah also highlighted that they have had problems with the staff working at the peripheral clinics. In particular, their confidence in the peripheral clinic at Al-Bishariya is generally very low. 'Some [doctors] care, some don't. Some just listen to a few questions, and then just write a prescription without really thinking. Al-Bishariya is a useless centre; we don't trust them there'. They consider the staff at the hospital in Al-Mafraq to be much better in this regard.

Many of the families living in Al-Mafraq are critical of the staff of the urban community level health centres; 59% indicated that their relationship with the doctor and other staff is poor, and that this influences their willingness to use the services. Overall, trust is also

lacking with the staff and treatments amongst residents of Al-Mafraq; 50% of the residents complained that this would affect their use of the services, although 84% affirmed that they would still consider using the secondary level community clinics. Ahl Abu Hassan who live in Al-Mafraq trust the doctor and staff at the local community health centre overall, although it is 'sometimes difficult to get close' to the staff, and this 'affects use a little'. The proximity of extensive private health services, which are widely perceived to be of better quality than state services, and the high levels of their use, helps to explain the relatively low levels of confidence in the staff of the government health facilities.

9.4.2 Social networks and support mechanisms

The residents of poor refugee settlements in Amman had a number of 'coping mechanisms', which were employed in seeking health services during economic crises and structural adjustment programmes (DeJong, 1995). These include Islamic support mechanisms, especially *al-zakaat*, mandatory contributions of money or goods from the rich to the poor. *Al-zakaat* is one of the principle tenets of Islam, but is not legally enforced or formally administered in Jordan. DeJong (1995) also suggested that *al-wasta* (nepotism or 'connections') may be used to avoid or reduce payments for government medicine if the family know employees of the health service. Whilst a number of the survey respondents revealed that *al-wasta* is used to gain entry to higher levels of health service and faster service, it was not suggested that it would be used to get things for free or at a reduced price. However, it is realised that this is a sensitive topic, and respondents may be reticent in revealing information of this nature. In general,

most people were opposed to *al-wasta* as a principle, but if these opportunities could be used to their advantage, they would exploit them.

A number of families did suggest that they had used their social connections, *al-wasta*, to expedite the seeking of treatment or help gain faster access to higher order facilities. Indeed, familiarity with a clinician could lead to better care, such as more attention from the clinician or the prescription of better medications. For Ahl Abu Hassan from Al-Mafraq, *al-wasta* can facilitate their utilisation of health services. The father, Abu Hassan, a senior officer in the army, has contacts in the health service who have facilitated the family's expedient use of the King Hussein City Hospital, Amman. This hospital is widely perceived to be one of the best hospitals in Jordan. 'We can go directly to King Hussein City, therefore there is no problem... another family must go to Al-Mafraq hospital if there is an emergency'. For example, his ten-year-old son had swollen glands in the neck and was sent directly to King Hussein City Hospital in a business car, while '... normally, people must wait two or three months to go'.

Those families without the benefits of social connections complained that they may have to wait longer for a consultation, or that the doctor would be less conscientious with them. The semi-settled Ahl Abu Hussein claimed that those patients who are known or liked by the doctor, are given priority, particularly in terms of the dispensing of medicines. 'The doctor sometimes chooses not to give medicines to some people...' if they are not known to him. Ahl Abu Abdallah also felt that those families who are well known at the health centres often receive better care than those who visited infrequently or used a variety of outlets, such as the semi-settled, semi-nomadic and nomadic

families. 'They don't really care so much at the health centre, if we know the doctor working there, it is better'. It was felt that the family often received a far more perfunctory service than they would have hoped for, and it was believed that '... if a [mobile] Bedu goes, they don't care, but if they are, for example from, Al-Mafraq, or better dressed they get better treatment'.

Traditional Bedu economies emphasised security through close social interactions within the tribal milieu. However, recent development have seen the fragmentation of tribal hegemonies and more particularly the transition from close economic interactions within the *fukhd*, to independent extended and increasingly nucleated family groups operating as autonomous units of economic production. Although resources appear to be exchanged within the extended family and with other close relatives, there is little of the previous sense of resource sharing within the wider community, or evidence of the Bedu 'generosity economy', other than perfunctory rituals (such as serving tea and coffee) for receiving guests. Some social support mechanisms continue to exist within in the north east Badia, in particular, tribal support networks, which were not found in DeJong's (1995) urban study. For rural communities, these systems are focused within the village milieu, especially since villages are generally tribally homogenous. Villagers support each other in practical ways, for example by driving other families to a clinic, lay referral systems and contacts with key actors for demanding resources from the government. Conversely, the respondents in the Al-Mafraq survey suggested that close community networks are more limited in the cities, which is exacerbated by the relative tribal heterogeneity within urban communities.

9.4.3 Gender differentiated accessibility and utilisation

In many developing countries, women's accessibility to health services is more limited than that of men (for example, Sathar, 1988; Obermeyer, 1992; Ojanuga and Gilbert, 1992). Ojanuga and Gilbert's (1992) study of accessibility amongst women, stressed that cultural barriers are of greater significance than service-based barriers, and that this is a particular problem in Jordan. Indeed, the subordination of women's health has been institutionalised at the international level. Davis-Lewis and Kieffer (1994) considered the implications of the recent focus on MCH services (supported by the WHO and UNICEF), and that this had become a proxy for women's health. As a result, non-reproductive aspects of women's health have tended to be overlooked.

There are no female clinicians working in the study area clinics, although nurses and midwives are women, as are some administrators. Brandenburg (1998b) stressed that the health services in the north east Badia are socially alienating to women, and that the physical medical examination of a woman by a male clinician would not be acceptable. However, examination of patient attendance records from the six main (comprehensive and primary level) clinics in the study area suggests that accessibility by male and female (adult) users may be more balanced than Brandenburg suggests. Indeed, female attendance rates were higher than that for males (17% higher for all ages and 33% higher than male attendance for those aged 15-44 years), although in the over 45 year age group, the difference is very marginal, with male users slightly out-numbering female patients. This may be explained by the migrant outflow of males in the 20-49 years age group; sex ratios as low as 79.3 males to 100 females have been found in the study area

villages Maani *et al.* (1998). However, whilst women utilise basic health services more frequently than males, males domiciled in the study area villages are considerably more mobile than females, including those from fully settled families. This is because military and civil service employment, which occupies a significant proportion of the adult male population, tends to be located outside the villages' area, especially in Al-Mafraq city. Whilst this contributes to male absence from the villages, many work in Al-Mafraq, or in military bases, which generally have considerably more extensive health facilities than the basic clinics in the villages. Thus, the clinic attendance rates represent only a partial picture of overall health care utilisation.

A number of studies attest to unequal accessibility and health differentials between male and female adults and children. For example, greater social value is endowed on male children, which accounts for a considerable difference in attendance rates between male and female children in India (Gupta, 1987). This was a difficult question to ask in the study area. Most individuals were disconcerted and perplexed by it. The unanimous response was that both male and female children were treated the same in terms of health care use. Even the extended semi-structured and the unstructured interviews did not provide any more insight into this topic. However, patient attendance records reveal that more male children (under fifteen years of age) were taken to clinics than females of a similar age in every one of the survey clinics. Overall 14% more male children attended than female children. Findlay and Maani's (1998) study of the demographic evidence in the study area suggests that there are 11% more males than females in the same group, but accounts for this difference as a consequence of systematic under-reporting of female children (and females more generally). The data therefore suggest that, despite

responses to the questionnaire, male children may be more frequently taken to health clinics than female children.

9.5 Conclusions

This chapter has illustrated that the effective utilisation of health services is mediated by a complex and interconnected set of distance-time related factors. This makes it difficult to deliver health services based on equality of accessibility to both mobile pastoralists and a settled majority. Unlike settled populations, the location of mobile families is a function of the economics of pastoral management, thus the accessibility of health services for mobile groups varies considerably over time. Medical complaints may be dealt with more rapidly at different times, and vaccinations are received inconsistently. Moreover, there are considerable economic implications of pastoral mobility and health care seeking. Thus, in addition to the distance between a family and the health service outlets, family time-budgets and the disruption of economic activities are of key importance in determining the accessibility of these services, especially for sedentarising populations. This has considerable implications for optimising the effective delivery of health services.

The geographical decentralisation of government health service provision, involving the provision of basic clinics in the majority of villages, has successfully resulted in the improved accessibility to basic health care for the majority of the population of the north east Badia, especially the majority of families who have settled. However, reducing spatial inequalities in health care provision in this way does not necessarily guarantee

maximising the equality of accessibility. Indeed, the spatial organisation of health services is arguably overly decentralised, in that the peripheral clinics, which have very limited accessibility, particularly for mobile families, are frequently bypassed in favour of the larger full-time clinics by both mobile and settled users. Each of these clinics has a very limited range and threshold. Generally, only those families living within the same village as a peripheral clinic use it, and even those people indicated that they would often have to seek health services outside the village. Conversely, the larger, full-time clinics actually provide a relatively effective system of health service delivery within the context of a sedentarising and settled population. They are more widely accessible for the families living villages without health services, and importantly they are considerably more accessible for the mobile groups.

Economic problems are considerable for some groups. Although the mobile groups have capital in the form of animal flocks, their economic situation is far more precarious than for those in paid employment, particularly those employed in the relative security of public sector employment. It is therefore those families with lower incomes and lack of economic stability who are more likely to find they cannot use, are less likely to use as frequently, or may delay seeking medical care. This group tends to include mobile pastoralists and other families without secure livelihoods. Ironically, it is these groups, with the hardships of nomadic life, and therefore greater potential need for curative medicine, who incur higher costs in the seeking of medical care, both in terms of reaching a health centre and in paying higher treatment fees. The result of the imposition of user fees in the north east Badia is that, despite the views of the clinicians interviewed, the equality of accessibility to basic health services in the region has been

compromised in that user fees have exacerbated the problems of health care utilisation for some groups, whilst others are relatively unpenalised.

The survey found that the vast majority of families perceive social accessibility problems to be less acute than geographical, organisational and economic problems. Indeed, for many families, social relations with staff, rather than inhibiting their utilisation of services, actually improved their accessibility to better levels of care. However, a number of key gender related problems have been identified. The lack of female clinical staff in the study area has implications for the quality of care adult women receive and therefore represents a critical weakness of the health system. Additionally, patient attendance records suggest that male children are taken to the clinics more frequently than female children. One possible explanation, which accords with studies conducted in other developing countries, is that male children continue to be endowed with greater social value than female children. Whilst this is one of the most sensitive and potentially misleading topics of this research, the unanimous response from the family interviews was that female children are not treated with prejudice, making it difficult to draw definitive conclusions on this issue.

Chapter 10

Conclusions

10.1 Achievements of the study

In examining the effective delivery of health care to mobile, sedentarising and settled communities, this research has identified the key issues influencing changes in health and illness behaviour and particularly the health care utilisation of these groups. Few other studies reported in the literature have considered these issues for mobile groups and no other studies have examined and compared mobile, sedentarising and settled rural communities.

A broad and innovative approach was taken to understanding health and illness behaviour/health care utilisation, which is articulated in the two principal aims of the research (outlined in Chapter One). In addressing the first aim (acceptance), this study has related historical Bedu socio-economic structures and values to Arabic forms of medicine, how they were used and the health and illness discourses widely held in the past. Building on this historical context, the study identified a number of key changes in health and illness discourses related to health and illness behaviour since the introduction of modern medical services. This has helped to explain patterns of the acceptance of modern medical services and other key changes such as the widescale use of preventative medicines and the adoption of domestic practices intended to protect against children's disease. Focusing on changes such as these within transitional

communities is a useful area of research, since most previous studies are static representations of lay discourses, health and illness behaviour/health care utilisation.

In addressing the second aim (accessibility), the research has identified accessibility and enabling factors mediating health and illness behaviour/health care utilisation for specific children's needs. The results show that, despite the provision of an extensive network of basic health services in the study area, families engaged in mobile pastoralism tend to have extensive geographical, organisational, economic and social accessibility problems. By comparison, settled rural communities and particularly urban families suffer from very few of these accessibility problems. Thus the research shows the difficulties inherent in delivering health care to mobile/sedentarising groups and therefore the limits to which equitable accessibility is possible for a population consisting mobile, sedentarising and settled communities.

The specific findings of this study are reviewed in more detail in Sections 10.2 to 10.8 below, which relate to the research objectives set down in Chapter One. Based on the two principal aims which are addressed in this research, Section 10.9 suggests a framework of individual/family level health and illness behaviour for sedentarising and other transitional groups.

It was expected for this research to help inform improvements in the effectiveness of health service delivery in the north east Badia and other parts of Jordan. Many of the results could also be applied to health care delivery in other dispersed and transitional rural communities, especially for mobile groups and those that are undergoing the

process of sedentarisation. To this end, Section 10.10 outlines the policy recommendations emerging from the study.

10.2 Historical health and illness discourses, health and illness behaviour and Arabic medicines

In accordance with previous lay health and illness discourse studies, this study has found that socio-economic milieux influence health and illness discourses and behaviour. The study found that many of the key aspects of Bedu health and illness discourses in the past (notably the 'functionality' of health, 'release' versus 'control' and health as the absence of disease) accord closely with poorer socio-economic groups in many of the lay discourse studies (for example, Blaxter and Patterson, 1982; Donovan, 1986; Calnan, 1987). Health and illness discourses of the groups from these studies, together with those of the Bedu in the past, were strongly influenced by material constraints, social obligations and relative lack of control over their situation, resulting in low expectations of health. Health and illness behaviour reflected this.

In the past, survival within a difficult physical environment made social and productive obligations primary concerns. Indeed, as with many other 'pre-modern' societies, children over the age of five were generally thought of in terms of being resources, and were therefore expected to participate actively in the household economy. Hence, health and illness tended to be considered in relation to the social and economic function of an individual adult or child, and their obligations to the family and group. The needs of the family and group were emphasised over and above the needs of individuals in order to

survive (Lancaster and Lancaster, 1990; Lancaster, 1995), regardless of individual physical discomfort and illness. Thus, illness was rarely 'recognised', and only if it disrupted these obligations. Action would therefore only be taken if the individual was incapacitated (and therefore ill). This reinforced a dichotomous association between an individual either being healthy (active) or being ill (inactive). In the past, it was generally accepted that health and illness were outside an individual's control, and this was a function of their limited understanding of the nature and aetiology of illnesses and the means to treat them. Contagion was recognised, in that being in the proximity to an individual suffering from serious diseases, such as measles and smallpox, would risk contracting these diseases and the sufferer would accordingly be isolated from the rest of the group. However, the concepts of pathogens and disease vectors were not recognised and anatomical understanding was very limited. Thus, Arabic medicines tended to be used for the treatment, rather than the prevention of illness, since it was believed that little could be done to prevent illness.

This research has catalogued the main Arabic medicines used by the Bedu of the study area in the past. Whilst not exhaustive, it is believed that this research represents one of the most comprehensive reviews of Arabic/Bedu medicines in English to date. Arabic treatments used by the Bedu varied. Some were administered within a family group or *fukhd*, particularly herbal infusions used for less serious illnesses such as colds and intestinal pains, which were believed to be caused by cold weather or contaminated food. More serious diseases, such as chronic pains, tuberculosis and mental illnesses, were generally associated with non-corporeal aetiologies, such as the interference of a *jin*. For these illnesses, treatments such as *wasm* would be used, which would often be

conducted by a family member or tribe member who had a reputation for the successful use of this method. Alternatively, *fuqeer*, *hijaabeen* and *hukama* would be sought to administer more complex treatments. Indeed, health/illness behaviour was based on a positive experience or reputation of a medicine or Arabic practitioner, rather than unconditional faith in them, reflecting the key Bedu social values of experience and reputation.

10.3 Changing health and illness discourses and behaviour

The most significant change in health and illness behaviour is the near universal acceptance and widescale utilisation of modern medical services by both settled and mobile Bedu communities of the north east Badia. This has taken place over one generation, and such services are now used in preference to Arabic forms of medicine for both minor and serious illness. The availability and relative accessibility of the network of basic rural clinics in the study area has created a significant demand for services. Indeed, modern medicine has become more accessible for both settled and semi-settled/semi-nomadic families than Arabic medicines.

This study also suggests that, in addition to considerable improvements made in the accessibility of basic services, employment in the formal sector, particularly the military forces, together with health awareness programmes and school education, are important in explaining changes in health and illness discourses and behaviour. The military, a significant source of employment for the Bedu in Jordan, offers regular medical check-ups and the use of military hospitals, thus it has directly introduced modern medicine to

personnel. The survey respondents frequently referred to the mass media as an important source of health awareness information, and television and radio are widely accessible to the people of the study area, including many families when they are mobile. There was also clear evidence that the government was actively promoting the use of services, as well as health awareness generally, through visual displays in the health clinics and the frequent delivery of government seminars in the villages. Overall, the majority of respondents stated that staff gave them sufficient information about children's health and appropriate action in the event of illness. It is important to distinguish between (school) education and health awareness programmes. An interesting finding of this research is that the lack of parents' school education has not inhibited the wide scale acceptance of modern medical services. The survey data show that there are no significant differences in patterns of utilisation and preventative practices between educated and non-educated parents.

The survey suggests that there now exists an improved consciousness and understanding of the health issues among the communities of the north east Badia. This is reflected in a number of health issues that were being widely discussed at the time of the survey, such as the dangers inherent in the heavy use of agro-chemicals, the risk of cancer, and awareness of connections between dairy products and diseases such as brucellosis and the need to boil milk to avoid this. The majority of the respondents are conscious of the strengths and weaknesses of the various health care options, and that different health services were appropriate for different illnesses.

A significant change in health and illness discourses and behaviour is the extent to which the families of the north east Badia now have both an increased awareness of, and the improved means to control their health than was the case in the past. Whilst in the past, the emphasis was on treatment rather than prevention of illness, the results of this survey suggest that most families are now aware of the importance of preventing illness, and of promoting good health. Preventative medical care is widely accepted and its benefits are recognised, in particular children's vaccinations, as is the wide scale practice of domestic activities such as nutrition and domestic hygiene intended to prevent illness for children. Moreover, it is easier to achieve a higher degree of domestic hygiene whilst living in a permanent dwelling than in a tent and in close proximity to animals. Mobile women are engaged in both pastoral activities and childcare, whereas sedentarised women are primarily occupied with child rearing and domestic work, making it easier to monitor children's health. Overall, the vast majority of survey respondents listed a number of practices that could improve children's health or prevent illness. Relatively few (around a fifth the families from the survey) indicated that nothing at all could be done to prevent illness, or that they did not know of anything that could be done.

Another important change in parent's attitudes to children's health reflects changes in the roles that children have within a family. In the past, children were expected to participate within the family economy, whereas the survey found that the vast majority of children are now enrolled in school. Thus, rather than children's health/illness being considered in relation to their productive functions (that is, a functional discourse of health and illness), their welfare and education is now emphasised, and this change in

emphasis is reflected in the wide scale utilisation of health services, even for what the families consider to be minor illnesses.

Most lay-discourse studies are static representations of health and illness discourses and behaviour in developed countries. This research identifies changes in health and illness discourses and behaviour in a developing country, finding these changes to be infused within socio-economic transitions, notably sedentarisation, changes in economic activities and the availability and relative accessibility of modern medical services, education and health awareness. Whilst health and illness discourses amongst the Bedu in the past emphasised 'functionality' and 'release', contemporary discourses and behaviour accord more closely with the more wealthy socio-economic groups of the lay discourse studies, who have greater expectations of health, and the awareness and means to exert some control over health and illness, resulting in the prominence of 'experiential' rather than 'functional' attitudes.

10.4 Social values, attitudes and the acceptance and utilisation of modern health services

Most utilisation studies assume that 'traditional' social and cultural practices and values in developing countries inhibit the acceptance and utilisation of health services, and reinforce the continuation of the use of traditional medicines (for example, the utilisation models proposed by Suchman, 1964; Gesler, 1984; Dutton, 1986; Stock, 1987). However, this research has demonstrated the rapidity by which modern medicine has been accepted within a society which had little previous contact with clinical services.

Bedu social values, in particular adaptability, experience and reputation, and social support networks, rather than inhibiting changes in lay health and illness discourses and behaviour, have been important contributory factors facilitating these changes.

Studies of change in Bedu societies have found adaptability to be an important Bedu value, which has in the past, sustained the ideology of autonomy (Chatty, 1986; Lancaster and Lancaster, 1990; Lancaster, 1995). Rather than being resistant to change, in recent decades pastoralists have pragmatically adapted to evolving social, economic and political conditions in Middle Eastern countries. They have adopted motor vehicles, new methods of pastoral management, new migratory patterns and non-pastoral occupations. These changes are consistent with the rapidity with which modern medicine has been accepted, and concomitantly Arabic medicines are declining in their importance for the population of the north east Badia. Moreover, the study suggests that acceptance of modern medicine is not confined to younger generations; all age groups accept and utilise government health clinics.

Experience, an important Bedu value, determined the reputation of Arabic treatments and practitioners. An individual would attempt to use the practitioner or treatment, which was considered most efficacious in treating a particular set of symptoms. Thus, since the introduction of health services, the relative efficacy of modern medicines, *vis à vis* Arabic medicines, has reinforced the wide-scale acceptance and utilisation of the health clinics. Only those forms of Arabic medicine, which continue to be recognised as effective for particular illnesses, particularly herbal infusions for the common cold and intestinal pains, are now widely used. Close social networks were critical to survival in

the past (Lancaster and Lancaster, 1990; Lancaster, 1995). Lay referral was a critical medium within the nomadic tribal milieu, and continues to be so within the settled villages, as well as urban communities, for the exchange and propagation of information. Lay referral has contributed to the propagation of health and illness knowledge and the reputation of modern medical services, thus has expedited changes in health and illness practices in Jordan.

10.5 Factors mediating health service accessibility

Whilst tertiary and secondary level health services, MCH services, pharmacies, specialists and private health care are most accessible to urban groups, the process of sedentarisation, together with the extended provision of basic health clinics in rural areas, have both contributed to improving the geographical accessibility for rural groups, especially the majority who have settled in the villages in the north east Badia. Geographical accessibility to basic health services has been relatively comprehensive. Around 90% of the population of the region have settled permanently in the villages, and thus live within 10km of a health clinic. Indeed, some 78% of the total population live in those villages that have health clinics. In addition, the majority of mobile (semi-settled and semi-nomadic) pastoralists have built permanent residences and maintain strong interests in the villages, not least employment in the state sector. Most children are now enrolled in school, thus they are settled even if part of the family is mobile throughout the region managing livestock. This, together with increased levels in vehicle ownership, has dramatically improved accessibility to basic clinical services for the rural communities of the study area.

A significant factor impeding the goal of equitable accessibility, however, has been the dispersed and mobile population in the region. Those families occupied in nomadic pastoralism frequently delay seeking health services, or may be less inclined to use the clinics, especially for minor illnesses, and may also delay action when they are uncertain whether an illness is serious or not. Importantly, receipt of preventative medicine is more limited. In particular, the children of mobile families tend not to be fully vaccinated or vaccination courses are not completed, and MCH services are only being used in the event of pregnancy/childbirth complications, rather than for routine check-ups. Unlike settled populations, the accessibility of health services for mobile groups varies considerably throughout a particular year since the location of a family is highly variable. As a result, medical episodes are dealt with more rapidly at different times of the year, and children's vaccinations may be received on an *ad hoc* basis. However, considerable distances are travelled in seeking health services in the event of serious illnesses. The comprehensive and primary clinics, which are open full time and offer reasonably extensive facilities, are used most readily. This is consistent with Stock's (1987) study in Nigeria, where the distances people were prepared to travel were frequently considerably greater for serious than for more minor illnesses, and hence the catchment areas of health clinics with facilities for serious illness are greater than those providing for only minor illnesses.

Distance influences the accessibility of a health clinic, and many mobile Bedu acknowledged that during periods of grazing animals in the more remote areas of the Badia, travel to health clinics would be particularly difficult. However, this research has

illustrated that geographical, organisational, time-related and economic factors influencing accessibility amongst families practising pastoral migration are both complex and closely inter-linked. In addition to the implications of health service user fees for utilisation (discussed in Section 10.7), the costs of transportation, such as fuel costs, vehicle purchase and maintenance, as well as fares for public transport, potentially influence health care utilisation rates (Phillips, 1990). Despite this, very few nomadic families interviewed indicated that the actual cost of travelling to the villages would impede the utilisation of a health clinic. A more significant consideration is that most vehicles owned by pastoralists are used intensively for economic activities, such as the transportation of livestock, water and animal feed, thus limiting their availability for other purposes such as transporting sick children to health clinics. Time-budgets are particularly important to pastoralists. Utilisation of health services potentially disrupts pastoral activities, and thus may have considerable economic implications for some families, particularly at critical times of the year such as during lambing, milking and shearing activities.

Organisational time-coupling factors were found to be important determinants of health service accessibility. This study illustrates that there can be considerable local variations in the accessibility of an individual clinic. Each peripheral clinic has a limited range and threshold in that it only serves those living within the same village. Those living in adjacent villages most frequently sought larger clinics, even if they were more distant. The mobile groups particularly, complained that they could not predict when the part-time peripheral clinics would be open, and to avoid a wasted journey, all mobile families interviewed stated that they would bypass these clinics, especially since they were also

conscious of the limited medical facilities available. Poor government publicity of the opening times and indeed, considerable inconsistency of open times exacerbate these problems. They are less likely to seek rapid medical attention for minor illnesses, and for more serious conditions, prefer to travel a greater distance to use the larger clinics which they know are permanently open and have more substantial facilities. Most settled families, especially those living in villages without clinics, also indicated that they would travel a longer distance to a larger health centre in order to avoid the limitations of the peripheral clinics. A number of mobile families also suggested that they found it difficult to visit clinics for children's vaccinations, since government vaccination programmes were often administered at a time of year that coincided with intensive pastoral activity.

The study examined the importance of social accessibility to health utilisation, in particular the effects of the relationship and trust of staff and medicines available through the clinics. It was found that there were fewer implications for the effective utilisation of basic health services for children than geographical, organisational and economic factors. The social milieu does however, influence health and illness behaviour, and this study has highlighted a number of significant social factors that do influence health care utilisation. The survey revealed the importance of the lay referral system in exchanging information on health, illness and health care. A family frequently draws on the previous experiences of the extended family, and the community at large in the event of a particular illness episode. These social structures may often also provide practical help, for example a neighbour or relative providing transportation for a mother with a sick child. The survey suggested that this was an important part of health care seeking for those living in the villages, but far less so for mobile groups who had few, if

any, immediate neighbours. Many families also highlighted the importance of social contacts within the health system. Contacts may be asked for help to gain more expedient consultation or treatment, or to bypass the formal health service referral system, and thus gain more direct accessibility to higher order services.

Previous studies, such as that by Ojanuga and Gilbert (1992), have suggested that women in a number of developing countries, including Jordan, have considerable cultural barriers to using health care. Indeed, the lack of any female clinical staff has been raised as a critical weakness of health service delivery in the study area, and it has been suggested that this restricts the ability of women to seek health care for themselves (Brandenburg, 1998a and b). Moreover, the clinic records suggest that male children may have better accessibility than female children. It was, however, not possible to confirm that this is the case within the interview surveys.

10.6 Spatial decentralisation of health services and accessibility

Health service delivery in most developing countries has been characterised by spatial centralisation, making them geographically inaccessible for rural populations. Until recently, health services in Jordan were almost exclusively concentrated in the urban centres. Reflecting this, the majority of respondents indicated that the previous generation did not use medical services at all, relying entirely on Arabic medicines. The need for more territorial justice in service provision forms a central part of the Jordanian government's rural development programmes. The establishment of the network of basic

rural health clinics has been critical in the improvement of accessibility for the majority of families living in the north east Badia.

However, this research, in assessing the accessibility and scope of the peripheral clinics in the study area, suggests that decentralising the spatial organisation of health care provision, is not necessarily the optimum approach to achieving equitable accessibility in the context of sedentarising societies. Family time-budgets and time-coupling, rather than simply proximity, are of key importance in determining the accessibility of services, especially for mobile populations. Hence, both settled, and particularly mobile families usually bypass the peripheral clinics since their scope is insufficient for all but the most basic of needs. Moreover, they tend to be inaccessible due to considerable time-coupling problems involved in the utilisation of these services. The organisation of health services is therefore over-decentralised spatially. Using resources to build and run overly basic, under-staffed clinics in most villages is compromising the equality of accessibility in the north east Badia.

10.7 Economic crisis, structural adjustment and health service accessibility

There is no doubt that structural adjustment programmes threaten public spending on services. Whilst the health and education sectors have been protected by the Jordanian government (unlike many countries in Africa, for example, Woodward, 1992; Asthana, 1994a), the consequences of potential effects on health delivery, such as potential cut backs in staffing, facilities, equipment and basic drugs, and the increase in user fees, are likely to have considerable implications for accessibility and utilisation in the future.

Jordanian government economic and social plans have indicated the need to 'encourage' increased participation of the private sector in providing services. The government, as with most other governments of developing countries, faces a dilemma. The expansion of rural health services is needed to improve accessibility for the whole population, but it is under pressure from international lending institutions to reduce public spending and transfer the burden to the private sector. However, private funding for health is notoriously poor at improving the accessibility of health care for those who need it most.

This study has suggested that, despite the effects of economic crisis and structural adjustment in Jordan, the expansion of government rural health clinics in the study area has been comprehensive. However, a significant implication of structural adjustment programmes for accessibility has been the imposition of a cost recovery programme, which charges fees for users. Cost recovery packages have received considerable criticism, and many studies have found the result to be a reduction in utilisation rates, and that exemptions frequently provide ineffective protection for the poor. This research has illustrated that potential users of health services are sensitive to prescription costs, suggesting that this has affected their ability to utilise services effectively. The qualification needed for exemptions or a reduction in the fees charged is unfair, in that concession card possession is not related to income, but to employment within the public sector, which also confers other forms of security such as pensions, and for military personnel, access to military health facilities.

In addition, a number of families highlighted the problems associated with obtaining a 'poverty' card for those with a low income, since the system is bureaucratic, slow and

confusing, whilst at the same time other families have more than one card (if more than one member of that family was a government employee). The possession of concession cards amongst pastoral/mobile families is considerably lower than for settled families (although some pastoralists have immediate relatives employed by the government, most do not). Moreover, these families also contend with more severe geographical accessibility problems in using health clinics and related economic implications, such the cost of disruption to their economic activities, further limiting equality of accessibility. UNICEF (1993; 1995) emphasised the threat to children's health in the context of economic austerity and structural adjustment programmes. The results of this survey suggest that the children of mobile families are a particularly vulnerable group. If fees were not required to be paid for the treatment of children of mobile families, or of pre-school children, these problems of accessibility would be ameliorated.

One means to address this inequality is to refine the ways in which exemptions/concessions are targeted. Gilson *et al.* (1995) suggested that case by case determination of income and need offers a more equitable alternative to targeting exemptions, although in practice the costs of the administration of targeted exemptions is high (World Bank, 1993). Moreover, the economy of the Jordan Badia illustrates the difficulties in determining the need for user fees concession or exemption on the basis of family income, since many families derive income from more than one source. For instance, many pastoral families contain individuals who have formal employment, and many families with members who are mostly employed in the formal sector also keep animals in order to supplement their incomes. It is also more difficult to assess the income derived from pastoralism and other agricultural activities compared to formal

employment. This is because pastoral profits and losses often take the form of increases or decreases in the size of a flock, and the sale of animals usually takes place on an *ad hoc* basis rather than the family having a regular cash income.

A potential problem facing the population of the north east Badia, is limited economic development, which is likely to threaten the livelihoods of many families. The sustainability and security of household livelihoods have implications for health, in that the utilisation of health care generally involves some costs to the user. In addition, the maintenance of a livelihood is necessary to support children's nutritional requirements. Pastoralism is becoming decreasingly important, in that far fewer families now rely on livestock production as their main source of income. The removal of government subsidised animal feeds is likely to threaten the livelihoods of pastoralist families further. Moreover, structural adjustment is likely to limit the capacity of public sector to provide employment. These two sectors form the basis of the economy of the north east Badia and therefore provide livelihoods for almost the entire population at present.

10.8 Effective health care delivery for sedentarising populations

This research has raised a number of important issues influencing the effective delivery of health care to sedentarising communities. The study has challenged the prevailing assumption that 'traditional' attitudes inhibit the acceptance and utilisation of modern medicine services. Moreover, amongst the Bedu of the study area, social values have facilitated the wide scale acceptance of the recently introduced network of rural health services in the north east Badia. Additionally, the lack of parents' education has not

limited their acceptance of modern medical services. Indeed, the majority of clinicians in the study considered there to be an over-demand for services.

This study has highlighted a number of difficulties in achieving equitable accessibility to basic health services. In the context of rural populations of the Jordan Badia, which comprise mobile, sedentarising and settled groups, the delivery of equitably accessible health care has not been possible. Simply providing a comprehensive network of basic rural health services does not ensure their equitable accessibility. For instance, the settled families in this study encounter different daily challenges to those encountered by mobile groups, and, in the case of seeking health services, they must contend with a different set of time and distance, time-coupling and economic and social issues. This makes it problematic to deliver health services for a population composed of nomadic, semi-nomadic and semi-settled families, together with a permanently settled majority. Moreover, it was found that there can be significant local variation in geographical and organisational accessibility of settled rural groups between those living in settlements with services and those without, even if the distances between these villages is not great. Whilst the Jordanian government has been successful in delivering accessible basic health services to the majority of the population, this study has demonstrated the difficulties inherent in addressing the health needs of the entire population (with the ultimate aim of achieving the World Health Organisation's 'Health for All' resolution), with such a considerable diversity of occupations and geographic circumstances.

In planning appropriate and effective health service delivery, and attempting to achieve universal accessibility, the needs of the most vulnerable groups must be identified and

addressed. UNICEF (1993) suggested that the health of children was threatened in Jordan, particularly in poorer communities and those with limited health service delivery. Levels of health (measured in terms of infant mortality and life expectancy) in the north east Badia are worse than in most other parts of Jordan, and this study has shown that children of both semi-settled and semi-nomadic families are a particularly vulnerable group, in that they have relatively poor accessibility to basic health services. The study has also suggested that semi-nomadic and semi-settled households in particular, have multiple accessibility problems. They travel greater distances and have more difficulty time-coupling with services than settled families, their economy is more precarious, they pay more for treatments, and the problems of travelling to clinics are combined with the costs of travelling and disruption to their economic activities. The children of these groups are therefore vulnerable, particularly infants and pre-school children (as well as their mothers), most of whom travel with their families until school age, at which time a significant proportion are enrolled in school. Older mobile children who are not enrolled at school are also at risk. The mobile groups in the study are especially vulnerable to economic structural adjustment programmes, such as cuts in government subsidies for pastoralism, and particularly the introduction of health service user charges.

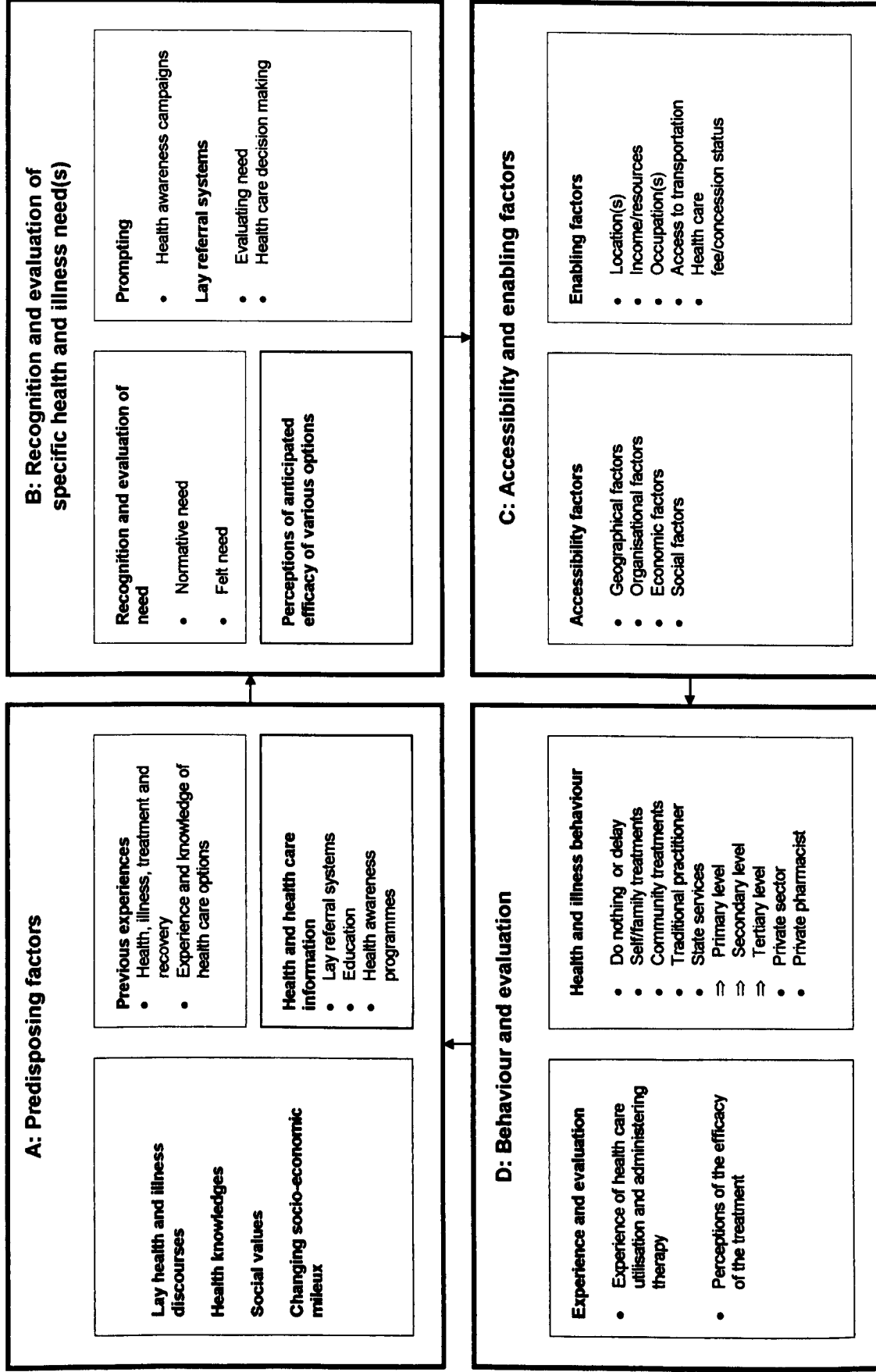
A key criticism the health systems of developing countries is that they tend to be spatially concentrated to the detriment of rural populations, and that the expansion of rural services is needed to compensate for this disparity. However, in the case of sedentarising populations, even within the context of spatially decentralised health care, there are limitations as to the extent to which equality of accessibility can be achieved. The accessibility of health services to most settled families is conspicuously better than

to most mobile families. Indeed, this study argues that whilst the services are (spatially) decentralised to the advantage of the settled majority, the needs of certain groups, notably the mobile groups, are not addressed. The interests of actors at international, national, regional and local levels determine the organisation of health systems in developing countries. Within the Jordan Badia, settled communities represent concentrations of tribal power at the local level. In response to local demands, central government has provided services to specific villages, thus gaining the support of key tribal actors, and therefore the tribes themselves. However, this has marginalised the interests of those communities living in villages without services, and more acutely those of mobile groups. This research, therefore, illustrates that, even where local demands for services are important determinants of the organisation of health services, their universal accessibility is not necessarily assured. Whilst this study is critical of the uncontrolled demands of significant local actors, the problems inherent in a top-down approach to decision making and planning are also acknowledged, not least that the equality of accessibility to health care services is rarely achieved.

10.9 Transitional/sedentarising communities: a model of family health and illness behaviour

This research has identified a number of key factors which influence transitional/sedentarising groups' health and illness behaviour/health care utilisation. Based on these observations, the principal groups of factors influencing sedentarising individual/family health and illness behaviour and the proposed relationships between the factors are represented in Figure 10.1 (Boxes A-D). It is suggested that Figure 10.1

Figure 10.1 A framework of individual/family health and illness behaviour/health care utilisation



Source: based on author survey

could be used as a framework for examining individual/family level health care decision making and changes in health and illness behaviour/health care utilisation amongst rural populations in developing countries.

Figure 10.1 (Box A) highlights the factors predisposing health and illness behaviour/health care utilisation. These interconnected factors encompass social values and socio-economic milieu, the previous experiences of an individual/family of health, illness and treatment and their lay health and illness discourses and knowledges. Important aspects of lay health and illness discourses include the connections between an individual's function and health and illness behaviour/health care utilisation. In addition, the extent to which an individual/family perceives that control can be exerted over health may influence how readily health and illness behaviour is undertaken if a need arises. External sources of health information, including health awareness programmes and school education, are also significant and lay referral continues to be important amongst sedentary and settled rural communities. These factors influence the forms of health care that are accepted (such as traditional or modern medicine), as well as the recognition and evaluation of need.

Predisposing factors are distinguished from the groups of factors influencing health and illness behaviour/health care utilisation for a *specific* need, which are shown in Boxes B and C. Precursors of behaviour/utilisation include whether an individual has a need (normative need) and that the need is recognised (Box B). Behaviour/utilisation for a specific need may also be prompted through health awareness campaigns or by advice through lay referral systems. Box C highlights the enabling and accessibility factors

mediating health and illness behaviour/health care utilisation. Box D shows a number of the health and illness behaviour/health care utilisation options that may be open to an individual/family.

An important pattern identified in the survey, is the extent to which health care decision-making amongst the survey communities accords closely with the 'economic' account of health and behaviour proposed by Lindbladh *et al.* (1996) and the Health Belief Model (Sheeran and Abraham, 1998), which emphasises the evaluation of the outcome of an action of various courses of action against the barriers to executing that behaviour. This behaviour also parallels many of the accounts of the more wealthy socio-economic groups in the lay discourse studies reviewed in Chapter Two. Chapters Eight and Nine show that the health care decisions made by the study groups are done so by evaluating the severity of the need, the benefits of health care seeking (the anticipated efficacy of specific health care options in addressing that need) and the accessibility problems in seeking that care. Thus, the most accessible clinics are utilised for minor illnesses and health needs. Higher order care, such as an urban hospital, is sought for more serious needs. The accessibility difficulties of utilising higher order services (for rural families) are offset by the expectation that these services will be more appropriate for a serious need. Private services are generally considered to offer better care than government services, but are rarely used by most rural families since they are considered to be inaccessible by being relatively distant and expensive. If the need is great enough, however, utilising private health services may warrant overcoming these accessibility problems.

A key aspect which distinguishes Figure 10.1 from the models presented in previous studies, is that it incorporates changing patterns of health and illness behaviour/health care utilisation, making it particularly applicable to sedentarising and other transitional groups. Box D acknowledges that individuals/families evaluate their experience of utilising health care and the treatment itself and their perceptions of its efficacy for a specific utilisation episode. This adds to the body of past experiences and discourses held by an individual/family (Box A). Thus, Box D is directly connected to Box A in Figure 10.1. This is particularly applicable for the study groups since an important aspect of Bedu health and illness discourses (both in the past and the present) is the continual (re)evaluation of the efficacy of the various forms of medicine based on experiences of treatment/cure. Thus, comparatively satisfactory experiences of modern medicine (reproduced through family experience and propagated within lay referral systems) has contributed to their acceptance and use.

10.10 Policy recommendations

A number of policy recommendations emerge from this study, which will form the basis of a document that will be submitted to the Jordanian Ministry of Health. The recommendations are intended to guide policy intended to achieve a greater degree of equality in health service accessibility and particularly to address the health service needs of the mobile, sedentarising and settled rural communities of the north east Badia. These recommendations are also applicable for improving service delivery for similar communities in other parts of rural Jordan, in particular the south Badia region. It is also

suggested that these recommendations could be adapted in order to apply them in other rural contexts in countries with mobile, sedentarising and other transitional groups.

1 The introduction of health care services: socio-cultural contexts to acceptance

(a) Follow-up lay health and illness discourse research

This research has stressed the importance of understanding the historical and socio-economic context into which health care is delivered in order to better understand lay health and illness discourses and changes in health and illness behaviour. However, the study has only started to appreciate the complexity of these discourses amongst Jordanian communities and their connections with traditional forms of medicine.

It is proposed that the Jordanian government commission a programme of follow-up in-depth qualitative research into lay health and illness discourses in a number of both rural and urban communities in Jordan in order to better understand, and indeed predict, changes in health and illness behaviour and particularly changes in the utilisation of modern medical services. This would help to make future health policy more sensitive to local conditions and needs.

(b) Broadening clinician training

It was widely perceived by the survey families that clinicians have limited interest in and understanding of the Badia people. Interviews with the clinicians also suggested that

they do not empathise with, or indeed fully understand, the Badia communities. A recommendation of this research is to widen the medical training programme to give clinicians a better understanding of the socio-economic and historical context of the communities that they are working in and an appreciation of their attitudes and beliefs, lay health and illness discourses and Arabic medicines (see Recommendation 2 below). A more effective but longer term recommendation, would be to actively recruit local people as health service staff (see Recommendation 6 below).

2 Legitimising Arabic medicines

(a) Promoting Arabic medicines

There is no Jordanian government policy statement regarding the promotion or discouragement of Arabic medicines. This is reflected in the diversity of views among clinicians to Arabic medicines, which range from tolerance to hostility. The consequence of these conflicting messages is confusion, and often secrecy, amongst many Arabic medicine users.

A positive way forward would be to formalise the government's stance on Arabic medicines by articulating a clear set of guidelines for clinicians. Consistency is needed: those treatments, especially the herbal infusions that are considered to be beneficial by the health service, should be clearly identified and promoted as such. Others which are perceived to have little or no medical efficacy by the health service, and particularly those that may be harmful to the user, need to be discouraged. This would give people

the opportunity to follow consistent rather than conflicting advice from the health service.

(b) Enhancing Health for All through promoting Arabic medicines

The WHO's Health for All resolution promotes the incorporation of the useful elements of traditional medicines within national health systems. Indeed, Hyma and Pradesh (1994) suggested that traditional medicine offers the best possibility of achieving HFA, since the coverage and scope of modern medicine is not matching increases in demand.

The prevailing perception amongst the clinical staff participating in the survey was that parents take their children to the clinics for trivial reasons, such as for colds or other very minor complaints. However, it is these minor complaints that the most widely used herbal infusions treat. Government health care policy needs to incorporate the promotion of self treatment using effective herbs for specific minor medical conditions to complement the utilisation of modern medical services. This may contribute to reducing heavy utilisation of clinical facilities in cases where herbal medicines would ameliorate the symptoms.

(c) Cataloguing Arabic Medicines

Closely linked to the above proposal, is the continuing need to research and catalogue Arabic medicines. In order to incorporate many of the Arabic medicines into the formal health system, scientific research is needed to differentiate treatments which can be

efficacious from those which are not, and to identify treatments which are potentially harmful.

It is also very important to understand Arabic medicines from those who administer them. Arabic medicine knowledges, which have always been propagated orally, are rapidly being lost as modern medicine becomes increasingly dominant. Indeed, Bedu oral histories and their heritage in general are also being lost, and publishing Bedu tribal histories is only a very recent development in Jordan. It is recommended that further research programmes need to be incorporated into wider government health improvement strategies, in which it will be necessary to carry out extensive interviews with Arabic medicine practitioners and other individuals who have experience of administering some forms of Arabic medicine. This research is urgently required in order to fully catalogue and therefore help preserve Arabic medicine knowledges before they are lost.

3 Health awareness programmes

(a) Widening health awareness programmes

This research has suggested that health awareness programmes delivered through a number of media contribution to encouraging people to accept and utilise health services. It is therefore recommended that the government further pursue these methods of disseminating health related information and indeed to attempt to widen the coverage by targeting groups who may have poor access to these media.

Whilst pictorial and textual health information posters are exhibited in all the health clinics, the bulk of them are displayed within the reception and waiting areas. Little or no information was displayed outside the clinics, and in the case of the peripheral clinics which are not always open, this particularly limits access to the material. This information is particularly inaccessible to families who make little use of the services and mobile families who do not live in the villages, or do so for only part of the year.

It is therefore recommended for health information to be more widely exhibited outside the clinics as well as other public spaces within the villages. Displaying information at places frequented by pastoral families, such as the centres for obtaining animal feeds and water wells, would also help to inform the families who visit the clinics/villages less frequently.

(b) Monitoring improvements in health and illness knowledge

There is contradictory evidence relating to health service users' abilities to appropriately utilise health services. Whilst this study has found there to be a considerable consciousness of health issues amongst the communities of the north east Badia, according to the respondent clinicians, patients' knowledge and recognition of many diseases may actually be more limited.

It is recommended for further research to be undertaken, which would require the participation of a clinically trained researcher, in order to evaluate in detail health

knowledge of (potential) health care users and the extent to which their identification and interpretation of need accords with professionally defined need. Thus, the extent to which health awareness programmes are effective and whether further health education is required could be assessed.

4 Proposals for improving geographical and organisational accessibility

(a) Enhancing the accessibility of peripheral clinics

Despite the extent to which the spatial decentralisation of health services in Jordan has improved rural communities' accessibility, it is argued that the organisation of outlets in the study area is not the optimum model for a population consisting of mobile, sedentarising and settled groups. Organisational accessibility to the peripheral clinics is limited, which is reflected in very limited ranges and thresholds. The provision of the permanently staffed rural clinics with considerably more medical scope, and overall greater accessibility than the peripheral clinics, is therefore a more appropriate model for delivering more equitable basic health services within the context of sedentarising communities.

In policy terms, it is suggested that expenditure in the larger primary/comprehensive clinics should be maintained, and the bulk of further investment set aside for rural health services should also be channelled into improving the scope, quality and coverage of services at these clinics. However, it is not proposed that the existing peripheral clinics should be closed down, indeed, it is believed that their accessibility and therefore

effectiveness could be enhanced through increased consistency of service and improved publicity. A minimum level of improvement would be to ensure that the clinics are actually staffed by clinicians at consistent times of the week. In addition, opening times need to be publicised more effectively by posting the information outside the clinics and in other public spaces in each village. It would also be beneficial to display this information in the neighbouring villages without clinics, helping to increase the awareness of residents of those villages of days the clinics are staffed, and indeed, to remind them that the peripheral clinics exist.

(b) Patient/service time-coupling

The survey highlighted considerable health service time-coupling problems amongst mobile groups. Moreover, over half of the semi-nomads are not aware that the larger health clinics are permanently open, a cause of accessibility problems. It is in this key area that the government could effectively implement simple measures to ameliorate the time-coupling problems of accessibility perceived by these families. One way to limit the coupling-constraints between providers and users would be to better publicise clinic opening times and the extent to which the different categories of clinic can treat particular medical cases. This information could be displayed in public spaces in the villages and in places which are extensively used by pastoralists such as well heads and animal feed centres.

Another recommendation is to couple medical delivery more closely with pastoral mobility. Seasonal migrations generally follow predictable patterns, and at certain times

of the year, semi-nomadic pastoralists are more likely to be resident in the villages' area, particularly in the summer and autumn seasons when natural grazing is not generally available. It is therefore recommended that vaccination programmes, which would need to be widely publicised, would be more effectively administered during periods when mobile groups are settled, thus helping to ensure that children under school age, or those who are not enrolled, are vaccinated more comprehensively.

5 Targeting cost recovery exemptions: protecting vulnerable groups

This study has highlighted a number of health and health care implications stemming from structural adjustment policies. Notably, health care accessibility is compromised by the introduction of health service cost recovery programmes. It is hoped that this evidence, added to a significant corroborative body of literature, may be used to persuade the governments of developing countries, together with Western governments and lending institutions, against the further pursuit of cost recovery programmes.

It is recognised that discontinuing cost recovery altogether is not a realistic policy goal for the Jordanian government within the context of prevailing neo-liberal development discourses. There is, however, considerable need to review the present user fee exemption/concession system which penalises families without state employment. This research found that the poverty card system that exists for non-state employees in Jordan is ineffective and inconsistent in that it excludes many families who are undergoing hardship.

It is therefore suggested that there is an urgent need for future health policy to address this problem through introducing far more effective mechanisms for targeting of user fee exemptions for identifiably vulnerable groups. In the context of the Jordan Badia, it is particularly difficult in practice to measure the income of a family engaged in multiple occupations and/or pastoral production. It is therefore suggested that accessibility should be an important criterion for determining exemption. It is proposed that the groups identified within this research with greatest accessibility problems, and particularly those with multiple accessibility problems, have the most need for prescription payment exemption as follows.

- The most vulnerable group is mobile children, particularly those not enrolled at school.
- The children of settled families, particularly those living in villages with no health clinics.
- Children with special needs.
- Other members of mobile families.

6 Proposals for improving social accessibility

(a) Recruiting local staff

Overall, social accessibility problems are perceived to be less severe than geographical, organisational and economic problems by the survey respondents. However, many respondent families were conscious that most clinical staff originate from outside the

Badia and the clinicians interviewed clearly had limited understanding of, and empathy with the rural Badia communities.

A solution would be to train and recruit local people, and importantly, to encourage them to remain in the area working as clinical or nursing staff. It is suggested that recruiting local people as clinicians could enhance the overall quality of service provided, since local staff may better empathise with communities and should be better able understand their attitudes and needs.

(b) Recruiting female clinical staff

An important problem in terms of the quality of adult rural women's health care is that it is unacceptable for a male clinician to undertake a medical examination of a woman and the only female clinicians working the study area do so in Al-Mafraq city. It is socially very problematic for a single woman to be employed as a resident clinician at a health centre in rural Jordan since it is expected for women to be accompanied by their husbands. The female nurses and midwives working at the health centres do, however, live locally, allowing them to reconcile family and professional commitments.

In order to overcome this problem in the short term, it is recommended that foreign women doctors are recruited who would be more socially accepted than Arab women in rural Jordan. A far more satisfactory and longer term proposal is to ensure that local women are trained as clinicians as well as nurses and to encourage them to work in the area.

(c) Improving patients' confidence in nursing staff

At the time of the survey, the peripheral clinics were staffed by nurses more days of the week than by clinicians. The communities' lack of confidence in their abilities, resulted in an overall unwillingness to consult them. Thus, services that are staffed by doctors, rather than only by nurses, are frequently preferred.

It is suggested that the government needs to publicise the scope of nurses' medical skills in order to improve the confidence that the community has in their abilities. This should also enhance their legitimacy as gatekeepers to higher order services in the perceptions of users. This would improve the effectiveness of the peripheral clinics during times that they are not staffed by clinicians.

7 Local level representation in health care decision making

In the north east Jordan Badia, community leaders' exploitation of political connections in order to demand services, has been important in shaping the local organisation of health care delivery. However, a conclusion of this research is that the needs of particular village communities are being addressed over and above the needs of those living in villages without services and mobile families.

Wider community participation in local health care decision making may help to address this problem. Effective mechanisms need to be established for conducting meaningful

dialogue between central/regional government and local groups which represent the community at large. The government will have to take a leading role in creating these mechanisms since existing community decision making structures, the *majalis balady*, continue to reinforce local hegemonies, which are male dominated and centred around settled rather than mobile communities.

It is therefore suggested that the government attempts to form focal discussion groups consisting of health care decision makers and local people, especially the presently under-represented groups. In the case of the north east Jordan Badia, these groups include women, poorer families and most of the mobile groups. This would help to ensure that local demands more closely represent the real needs of entire communities rather than those of vocal elites.

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Appendix 1 Questionnaire Interviews

1.1 Household questionnaire interviews

HOUSEHOLD INTERVIEW
PART 1: BASIC INFORMATION

Village	
Name	
Job	
Pay for treatments?	
Reference	

1 Who normally lives in this household, what is their age, sex and education?

Person	Age	Name	Male/ female	Formal education received (years)	In current education?	Which school?
1 (Head)						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

2 If not in current education, why?.....

3 What private transport is available to the family?

Type of vehicle	Own it?	Borrow it?
Truck		
Car / pickup		
Other (specify)		

4 Do you have a Bayt Sha'r?.....

5 Does the family graze animals away from the village seasonally?..... If no, go to 10

6 How far from the village do they go?.....

7 I would like to know how long each person is away from the village each year

Person	Time away from village	Visits back to village	Tranport used	Reason away from village	
				Grazing	Other (say)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

8 Is it difficult for those away grazing animals to return to the village?

9 Why is it difficult?.....

PART 2: PERCEPTIONS OF HEALTH CARE

10 I would like to know which type of health service gives the best quality treatment for your children

Type of medicine/ facility	Rank 1-6 (if possible)				
	Minor illness	Serious illness	Prevention	Maternity/ child birth	Overall
Nearest government clinic					
Other government clinic or hospital (Which one?)					
Private doctor or clinic - modern (Which one and where?)					
Traditional doctor (Which one and where?)					
Pharmacist (Which one and where?)					
Home / family medicines and treatments					
Treatment received at school, for example injections					

11 What type of facility / treatment for children do you first seek for the following?

Type of facility / treatment	Minor illness	Serious illness	Prevention of illness	Maternity/ child birth	Overall
Nearest government clinic					
Other government clinic (Which one?)					
Private doctor or clinic - modern (Which one and where?)					
Traditional doctor (Which one and where?)					
Pharmacist (Which one and where?)					
Home / family medicines and treatments					
Treatment received at school, for example injections					

12 If questions 10 and 11 different, why?.....

.....

13 If the first facility/ treatment you go to does not work, what do you do next?.....

.....

.....

14 Can you tell me if you think there are any problems with government health centres.

If yes, what improvements would you would like?

15 How satisfied are you overall with government health centres?

Satisfied	
Reasonable	
Not satisfied	

16 What do you think are the best ways for you to improve your children's health?

17 Do the doctor or nurse give enough information about what facilities are provided at the nearest health centre?.....

18 Do the doctor or nurse give enough information about children's health and what to do if they are ill?

19 Can you get information about health and health services from anywhere else? Where?.....

20 Do you feel that enough information is given about future plans of the government for providing health services in this area?.....

21 Do you feel you should take part in deciding about planning of health services?.....

PART 3: ACCESSIBILITY TO HEALTH SERVICES

22 Can you always use the following types of health facility/treatment for your children when needed?

Type	Can always use	Sometimes cannot use	Often cannot use	Can never use	Why?
Nearest government clinic					
Other gov't clinic/ hospital					
Private modern doctor					
Traditional medicine					
Pharmacist					

23 Overall, which is the most difficult to use?.....

24 Why?.....

25 I would like to know the reasons for the family sometimes not being able to use the NEAREST GOVERNMENT CLINIC or using it less often than they would like (prevention AND curing illness)

.....

.....

Problems	No effect on use	Affects use a little	Affects use a lot	Stops use of service
a Distance/ time to reach services				
Distance to centre				
b Time taken to reach the centre				
Time taken to reach the centre				
c * When child is away from the village grazing animals for a season				
Availability of private transport				
d Availability of public transport				
Availability of public transport				
f Costs of using health services				
g Cost of treatment				
Cost of treatment				
h Cost of travel				
Cost of travel				
i Loss of earnings when you are visiting clinic				
Loss of earnings when you are visiting clinic				
Organisational				
j Opening hours / days of clinic				
Opening hours / days of clinic				
k Waiting to be seen by doctor				
Waiting to be seen by doctor				
Attitudes				
l You need more information about the facilities provided at the centre				
You need more information about the facilities provided at the centre				
m Trust of medical staff and treatments provided				
Trust of medical staff and treatments provided				
n Your relationship with the doctor and his attitude to you				
Your relationship with the doctor and his attitude to you				
o Your relationship with the nurse/ midwife and her attitude to you				
Your relationship with the nurse/ midwife and her attitude to you				
Other services are better (specify)				
Other services are better (specify)				

26 Do girls or boys have more problems getting health care ?.....
Why?.....

*27 Do the children who are away grazing animals have more problems getting to use health services than those who stay in the village?.....

.....

PART4: USING HEALTH CARE

28 I would like to know about what you did the last time each child was ill

Child	Type of health service used. Including traditional and home medicines	Illness	Transport used

29 Have your children been vaccinated at school? If not, why?.....

.....

30 What have they been vaccinated against?.....

.....

31 How important do you think the vaccinations are?.....

.....

32 Did all your children younger than 5 years receive a polio injection last year from the government National Immunisation Campaign?.....

33 Who normally takes the children to use health services?.....

.....

34 What transport is normally used?.....

.....

35 Who in the family decides what to do when a child is ill?.....

.....

36 Who decides about children's use of services if the normal decision maker is away?.....

.....

37 Is the type of facility / treatment you use for you children different from what you received..... when you were a child.....

38 What are the most important traditional medicines for your children and where do you get them from?.....

.....

Appendix 1.2 Extended semi-structured household interviews

Part One: Standard questionnaire interview (see Appendix 1.1)

Part Two: Extended semi-structured interview: contextual information

1. What structures exist in the community for decision making (for example council and tribal representatives) and who is involved? What is discussed/done at the community level? Do these community groups act/represent the people when approaching the government. How does the community help itself? How do these structures act in terms of demanding and complaining about health services?
2. What roles do individuals play in the family, for example earning cash income, farm and domestic work, care of children, and whether this work involves any travel?
3. Family decision making and responsibilities: which members decide about what? In particular, who is responsible for children's health, health care and health seeking activities and decisions.
4. Recent family history: details of changes in economic activities; changes in mobility patterns; how, when and why has the family sedentarised?
5. Mobile families: more detail of pastoral migrations; flock numbers; how and where livestock are fed; and how the flock is being managed in the year of the survey.

Part Three: Extended semi-structured interview: health and illness behaviour

1. More specific examples of what the family does when a child is sick or to prevent sickness. Have there been changes in health/illness behaviour over time? What accessibility problems are most significant? What are the implications of pastoral mobility for health service accessibility and utilisation?

2. Are there differences between male and female accessibility (especially among children)? Has there been a change over the years?

3. Which Arabic medicines (and practitioners) are used by the family and on what occasions? How this has changed use now and in the past. Are Arabic medicines used for prevention/used routinely or treating illness only?

Appendix 1.3 Clinician interviews

Part One: Structure and delivery of services

1. What staff/facilities are available at the centre, especially those relating to MCH health care?
2. What are the opening hours/days of the centre?
3. Which year was the health centre opened?
4. What villages does the health centre cover? From where do the majority of patients come from (other than the village in which the centre is situated)?
5. Do the staff from this centre cover any other clinics (especially those which are not permanently staffed)?
6. Where are patients referred in more serious cases than the centre is equipped to deal with?
7. Who qualifies for concession card? (asked only at the comprehensive clinic at Umm Al-Quttayn since this does not vary within the programs area).
8. What information / advise is provided for potential users of the clinic?
9. What other facilities exist within the area, e.g. private, traditional medicine?
10. The clinic vaccination programme: which diseases are vaccinated against, when and where? How is the school vaccination programme delivered? The children of which schools are vaccinated?

Part Two: Accessibility

1. Perceptions relating to accessibility problems: are there accessibility problems, do people use the services appropriately, and if not, what are the most important problems in using the services? For example:
 - geographical/distance/transport
 - economic/costs
 - organisational, opening, waiting times
 - attitudinal, knowledge, relationship with the doctor, trust of staff, medicines
2. Which groups are most affected by accessibility problems (if any)?
3. Clinicians' perceptions relating to users' knowledge of and attitudes to health issues and facilities.
4. Does the clinician think that the people have sufficient information on which to base their health care seeking behaviour, that is, do people know when to come and when not to come? Do people come too often without need; not enough with unrecognised need; have other reasons for not coming?
5. Clinicians' perceptions relating to how best to improve health standards for children in the area, that is, the health priorities of the area.
6. To what extent does the clinic contribute to the potential improvements, and what improvements can be made to the clinic?
7. Clinicians' views of the values of traditional medicines.

Appendix 2 Abbreviations and Glossary

2.1 Abbreviations

CDR	Crude death rate
CMR	Child mortality rate
GDP	Gross domestic product
GNP	Gross national product
IMR	Infant mortality rate
JBRDP	Jordan Badia Research and Development Programme
MCH	Maternal and child health (services)
PHC	Primary health services
SPHC	Selective primary health care
UNICEF	United Nations Children's Fund
WHO	(United Nations) World Health Organisation

2.2 Glossary of Arabic words and expressions

Arabic word/expression	English translation
<i>A'ashaab</i>	Herbs
<i>A'ashaab shaheer</i>	'Famous' herbs
<i>Abu</i>	Father of
<i>Ahl</i>	Family
<i>Akhowa</i>	'Brotherhood' - the protective contract between Bedu and settled community
<i>Al- (As-, Ash-, Ar)</i>	Definite article, usually for proper nouns
<i>Al-Quraan</i>	The Koran
<i>Al-wasta</i>	Nepotism or social connections
<i>Al-zakaat</i>	Alms for the poor, an Islamic tenet
<i>A'ilia</i>	Family
<i>Badia</i>	Semi-arid desert inhabited by the Bedu
<i>Bayt Sha'r</i>	Winter tent, literally hair-tent
<i>Bedu</i>	Nomadic pastoralist; singular <i>Bedui</i> . Frequently referred to as 'Bedouin' in Anglicised literature.
<i>Bint</i>	Girl; Daughter
<i>Bint a'm</i>	Female cousin or marriage to a female cousin
<i>Bi'r</i>	Well
<i>Dirah</i>	Tribal space
<i>Dhyfa</i>	Hospitality
<i>Fuqara</i>	Shaman, plural <i>fuqeer</i>
<i>Fellaheen</i>	Settled agriculturist living in a village or oasis; singular fellah
<i>Fukhd</i>	'Thigh'; branch of a tribe, a close group of families
<i>Ghazu</i>	Inter-tribal raiding
<i>Ibn</i>	Son (of)

<i>Ibn a'm</i>	Male cousin or marriage to a male cousin
<i>Jin</i>	Spirit; singular Jin
<i>Hakeem</i>	Arabic doctor; herbalist, plural <i>hukama</i>
<i>Hijaab</i>	Wizard, plural <i>hijabeen</i>
<i>Karam</i>	Generosity
<i>Majalis balady</i>	Village council
<i>Maktoob</i>	Written; pre-destined
<i>Marab</i>	Water catchment basin, often vegetated
<i>Naseeb</i>	Fate
<i>Sheikh</i>	Tribal leader. Also can refer to a religious leader
<i>Suma'</i>	Reputation, literally to listen
<i>Tib Al-Arabi</i>	Arabic medicine; also Tib Ash-Shabi, popular medicine
<i>Umm</i>	Mother (of)
<i>Wadi</i>	River valley, dry for most of the year
<i>Wasm</i>	Burning treatment; grilling