To examine the availability, accessibility and utilization of health care services in a rural area – Ndwedwe.

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Declaration

I, Minenhle Mbuso Nene, declare that the work presented in this dissertation is original and the product is the result of my efforts through professional guidance of the supervisor.

Signature: 

Abstract

The study attempts to investigate the availability, accessibility and utilization of health care services in a rural area. The study has been conducted in one of the rural areas (Ndwedwe) in the Province of KwaZulu Natal (Durban) near the town called Verulam. The Ndwedwe area consists of a population of about 170 000 and the number of households is hard even to estimate because of the geographical setting of the area. The study has been conducted at the centre of the entire area called Ndwedwe central where the Ndwedwe municipality is located. Most of the people spend most of the time in this area because it has most of the services that are needed by the community.

The questionnaires administered and the interviews conducted were systematic because in all the sixteen areas, interviews were conducted (at least two interview encounters in one area consisting of the entire Ndwedwe area) and questionnaires were administered the same way.The findings show that the majority of people in the Ndwedwe area do not have enough health care service institutions and the very services are not equally and evenly distributed amongst areas that constitute the entire Ndwedwe area.

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Chapter 1

Introduction

1.1 Preamble

The study attempts to investigate the availability, accessibility and utilization of health care services in a rural area. The study has been conducted in one of the rural areas (Ndwedwe) in the Province of KwaZulu Natal (Durban) near the town called Verulam. The Ndwedwe area consists of a population of about 170 000 (source, Ndwedwe municipality, 2002) and the number of households is hard even to estimate because of the geographical setting of the area. The study has been conducted at the centre of the entire area called Ndwedwe central where the Ndwedwe municipality is located. Most of the people spend most of the time in this area because it has most of the services that are needed by the community. These services include:a police station; a clinic; Department of Agriculture; a circuit office and supermarkets.

1.2 Motivation for the study

The study seeks to examine the impacts associated with the availability, accessibility and utilization of health care services in a rural area - Ndwedwe. The study is significant in that it can help the department of health and other relevant stakeholders to learn more about what is happening in some rural areas with regard to health care services. One may find that there are no or inadequate health care services in a particular area. In some instances, there may be more than enough of these services in one particular location in an area whereas in some locations of the same area, the same services may not even exist.

In this regard, health care service may need to be equally distributed. Therefore, Geography helps the researcher to understand the distance between and / or

amongst health care services, in case they are available. In the case where these services are not available, the researcher may be able to anticipate in the form of his research findings how many health care services may be required by the area and what kind of services are needed. The intention of the South African 'Ministry of Health' (White Paper, 1997) will be to make health care services available, accessible and acceptable to all communities, and to ensure the equitable distribution of these services.

> *According to the White Paper on Health (1997, page 4) "The majority of the population of South Africa has inadequate access to basic services including health, clean water and basic sanitation. The task of improving the health of South Africa's population is not that of the health sector alone. The RDP sets the framework whereby the health of all South Africans must reflect the wealth of the country".*

It is the intention of this study to attempt to investigate some of the issues mentioned above. The World Health Organization (WHO), 1996 has attempted to achieve 'Health for All by the Year 2000'. However, this aim has been limited in its success and significant levels of poor health remain. The WHO (1996) concedes this and has revised their slogan: "Health for All in the Twenty-First Century". One of the central problems has been social and geographical inequity of development and, importantly, that health services are inaccessible to large segments of the population in many developing countries. In the light of the above, the following are the aims and objectives of this study.

1.3 Aim

To examine the availability, accessibility and utilization of health care services in a rural area of Kwa-Zulu Natal - Ndwedwe.

1.4 Objectives

1. To investigate the socio-economic characteristics of respondents.
2. To examine the relationship between socio-economic conditions and health care needs.
3. To examine the relationship between the physical environment and health care needs.
4. To examine the availability and accessibility of health care services with relation to the quality of health care provision.
5. To make suggestions and recommendations to improve health care needs of respondents.

The objectives of this study are informed by the drive for the local needs of people. This means that health care services need to be distributed evenly if they are to reflect local needs. Therefore the objectives of this study will be to find out if health services, if available, are able to contribute to the betterment of health care and the quality of life of people in a rural area.

1.5 Definition of terms

1. ***Availability*** can be defined as factors that make health care services capable of being used at one's disposal or obtainable within one's reach.
2. ***Accessibility*** can be defined as the factors intervening between the perception of need and the realization of utility (Joseph & Phillips, 1984). 'Effective accessibility' to medical services reflects an individual / family's 'ability, mobility and time to reach a service' once a need has been established by a potential health service user (Phillips, 1990:104), which can be distinguished from 'potential accessibility' which simply implies the existence of a service, regardless of whether it is 'effectively accessible'.

3. ***Utilization*** can be defined as making practical use of health care services and probably being used effectively.

1.6 Preview of the forthcoming chapters

The second chapter introduces itself by giving a brief overview of health services research. There is a reflection on South African rural areas and rural development. There is also a general background on rural and urban diversity in the KwaZulu Natal province. Principles of the environmental health as being advocated by the White Paper (1997) on the transformation of health in South Africa has been clearly outlined. It goes further to provide a background on the accessibility of health care service centres in the developing countries.

Focus is also on the accessibility of health care services in some other developing countries like the northeast Badia of Jordan. It also highlight previous studies conducted to measure health care needs by looking at the determinants of health care need and the determinants of accessibility. It goes on to reflect on rural health and the health of rural communities in Australia. There is also a discussion of the White Paper for the transformation of the health system in South Africa. The chapter concludes by looking at the primary health care and issues of community participation in the entire process of improving health and health care.

The third chapter opens by offering a preview of the study where the objectives of the study are clearly defined. The sampling technique and the research instruments used are also discussed in this chapter: These include interviews used and the way they were conducted; the observation schedule and questionnaires utilized. A data analysis plan whereby data has been analyzed quantitatively and qualitatively due to the nature and context of the study is also provided. The chapter concludes with a summary of the main issues discussed.

The main focus of the fourth chapter has been to analyze data for the purpose of providing reasonable answers to the research questions and objectives of this study. The objectives of this study are answered by a series of questions that were asked of the interviewees in the form of a questionnaire and interview schedule. The questions that were asked in the questionnaire are almost the same as those used.

The fifth chapter begins by offering introduction, followed by the evaluation of findings. The chapter concludes with the flagging of significant suggestions and recommendations to improve health and health care for the sampled population.

1.7 Conclusion

In this chapter, the aims and objectives of this study have been highlighted. Motivation for undertaking this study has also been highlighted. The terms that are commonly used in this study, "availability, accessibility and utilization" have been clearly defined. Lastly, this chapter concludes by providing a preview of the forthcoming chapters of this research project.

Chapter 2

Literature review

2.1 Introduction

The second chapter introduces itself by giving a brief overview on health services research. There is a reflection on South African rural areas and rural development. There is also a general background on rural and urban diversity in the KwaZulu Natal province. Principles of the environmental health as being advocated by the White Paper (1997) on the transformation of health in South Africa are also discussed.

The chapter also provides background information on the accessibility of health care service centres in developing countries. It goes further to provide case studies on accessibility of health care services in other developing countries such as the northeast Badia of Jordan. Discussion also revolves on previous studies conducted to measure health care needs by looking at the determinants of health care need and the determinants of accessibility. It goes on to reflect on rural health and the health of rural communities in Australia. There is also discussion of the White Paper for the transformation of the health system in South Africa. It concludes with a discussion of primary health care and issues involving community participation.

2.2 Definition of Health

Health is perceived in a variety of ways. For example, perceptions range from health as: the absence of disease (consistent with the medical model); a strength (e.g. feeling strong, getting on well: Herzlich 1973); being able to maintain role functioning (e.g. to carry out normal routines); being fit (e.g. exercise); being able to cope with crisis and stress (Calnan 1987). According to the WHO (1983),

health is a state of complete physical, mental and social well-being and merely the absence of disease and infirmity. Attainment of a high standard of health is the fundamental human right of every human being without distinguishing race, religion, political belief, economic or social conditions (Comlan, 1983).

2.3 Health services research

Health services research is concerned with the relationship between the provision, effectiveness and efficient use of health services and the health needs of the population. It is narrower than health research. More specifically, health services research aims to produce reliable and valid research data on which to base appropriate, effective, cost-effective, efficient and acceptable health services at the primary and secondary care levels (Bowling, 1997). Thus, the research knowledge acquired needs to be developed into action if the discipline is to be of value; hence the emphasis throughout industry and service organizations on 'research and development'. The focus is generally on:

- the relationships between the population's need and demand for health services, and the supply, use and acceptability of health services;
- the processes and structures, including the quality and efficiency, of health services;
- the appropriateness and effectiveness of health service interventions, in relation to effectiveness and cost-effectiveness, including patient's perceptions of outcome in relation to the effects of their health, health-related quality of life and their satisfaction with the outcome (Bowling, 1997).

Health services research has evaluation rather than monitoring as its aim. That is why this study only focuses on the availability, accessibility and utilization of health care services in a rural area. Health services research is also broader than traditional clinical research, which directly focuses on patients in relation to their treatment and care. Clinical research has traditionally focused on biochemical

indicators, and more recently, and in selected specialties only, on the measurement of the broader quality of life of the patients. Health services research investigates the outcome of medical interventions from social, psychological, physical and economic perspectives. It has also been cogently argued that health services research should be concerned with the evaluation of the health sector in the broadest sense, and not limited to health services alone (Bowling, 1997).

2.3.1 Medical Geography and Epidemiology

From purely disease mapping, to an ecological approach, to spatial analysis, medical geography continued to develop continually and methodologically. The scope of geographic contributions to health and disease is enormous, by the fact that research into epidemiological concerns spans volumes. Most geographers ask how geography differs from medical geography. Basically medical geography and professionals with a background in health differ in their approaches towards the discipline. Epidemiologists concern themselves mainly with the groups that suffer from particular diseases, whereas Medical Geographers concentrate on the region where people are seen in spatial or regional patterns (Akhter, 1991).

In the discipline of Medical Geography there are a number of internal categories. Some of the categories of Medical Geography include:

- Historical nature of the discipline.
- Biostatistics, Sampling and Surveying.
- The role of Nutrition.
- Infectious Diseases.
- Chronic Diseases.

Since geographers are constantly preoccupied with decisions relating to optimum location and optimization of location, no field of inquiry is more important than in the field of medical provision, where the cost of facilities, even when inadequate are high. Therefore, it follows that location is a very important aspect of health care provision and health care operations. Factors affecting the utilization or consumption of health care services are also important matters of study. These are not merely organizational or economic, but are often strongly cultural and perceptual in nature (Akhter, 1991)

2.3.2 Various approaches

2.3.2.1 Biomedical Model

In the West, the dominant model of disease is the biomedical model. This is based on the assumption that disease is generated by specific aetiological agents which lead to changes in the body's structure and function. The medical view of the body is based on the Cartesian philosophy of the body as a machine. Hence, if a part malfunctions it can be repaired or replaced: the disease is treated, but not the illness, which is the subjective experience of dysfunction. It sees the mind and body as functioning independently, and while disease may lead to psychological disturbances, it does not have psychological causes (Jones, 1994).

2.3.2.2 The Social Model of Health

Social scientists distinguish between the medical concept of *disease*, and subjective feelings and perceptions of *dis-ease*, often labellel as *illness or sickness* by lay people. Illness and sickness, unlike disease, are not necessarily detected by biochemical indicators. Research shows that some people can be diseased according to biochemical indicators, without actually feeling sick or ill (e.g. high blood pressure), and others can feel ill without any biochemical

evidence of being diseased (e.g. chronic back pain). Health and ill health are viewed by social scientists as a continuum along which individuals progress and regress (Ogden, 1996). The social model of health is best expressed with reference to the WHO's (1947, 1948) definition that health is not merely the absence of disease, but a state of complete physical, psychological and social well-being. This definition has frequently been criticized as utopian (Seedhouse, 1985) but it is useful as a broad working model.

2.3.3 Health needs

The assessment of health needs is a contentious area, and considerable confusion exists about the meaning of needs (Frankel 1991). This stems from the different imperatives that influence the relationship between 'needs' and the provision of health care. The *public health imperative* is concerned with total population needs and the development of strategies based on prevention and health promotion. The *economic imperative* is concerned with marginal met needs and the most efficient ways of meeting needs. The *political imperative* has been one of the reconciling a welfare system to the demands of free market ideology (Jones 1995).The relationship between needs and welfare provision has received considerable critical attention, with the debate focusing on absolute , normative and relative definitions of need (Soper 1981; Wiggins and Dermen 1987; Doyal and Gough 1991).

It is important to distinguish between the need for health and the need for health care. Health care is one way of satisfying the need for health. Arguments in the past have concentrated on the relationships between needs and the demand for, access to and use of services (Last, 1963; Titmuss, 1968; Hart, 1971). In this sense, need is not an absolute concept, but is relative and dependent on socio-economic and cultural factors as well as supply side factors (Bowling, 1997).

The need for health was perceived by Acheson (1987) as relief from the negative states of distress, discomfort, disability, handicap and the risk of mortality and morbidity. These concepts form the basis of, but do not wholly determine the need for, health services. This amounts to a bio-medical approach to health care needs that lends itself to the quantitative measurement of health status; the resulting health care needs reported fit conveniently with the biomedical focus on the incidence and prevalence of the disease (Bowling 1997).

Bradshaw (1972), on the other hand, constructed a paradigm of need in terms of: expressed need ('demand'), which is the expression in action of felt need; comparative need, which involves comparisons with the situation of others and considerations of equity; and normative need, such as expert's definitions, which change overtime in response to knowledge. The expressions of need using these definitions are not necessarily consistent in relation to any individual. For many conditions, perceived need for care depends on the beliefs and knowledge of the person affected, and hence on value judgements (Buchan *et al.* 1990In turn, these are influenced by psychological, socio-economic and cultural factors, not simply by the supply of services. Bradshaw (1994) later acknowledged the weaknesses of his original classification of need, but argued that it was never intended to form a hierarchy of needs. However, his paradigm forms a sociological approach that sets up a useful definitional matrix for needs (Bowling, 1997).

Economists have consistently argued against the concept of objective need (Culyer, 1995), seeing need as relative but at the same time recognizing its practical importance and proposing concepts such as marginal met needs or, in relation to health care, the capacity to benefit from treatment. For example, Buchan *et al.* (1990) defined needs as follows: 'people in need of a health service are defined as those for whom an intervention produces a benefit at reasonable risk and acceptable cost.' Culyer and Wagstaff (1991) considered the relationship between economic evaluation and need in detail, and proffered a precise

definition of need that relates specifically to health care: ' A need for medical care is then said to exist so long as the marginal product of care is positive, i.e. so long as the individual's capacity to benefit from medical care is positive.' Economists have also emphasized the importance of health service priorities, given the scarcity of societal resources (Williams 1992). The debate has prompted some to argue that health care needs cannot be discussed in isolation from other needs (Seedhouse 1994).

Doyal and Gough (1991) constructed a theory of human needs based on the notion of basic needs being health and autonomy, an optimum level of which is fundamental to allow participation in social life. Thus health care becomes a means of satisfying basic need. Soper (1993), sympathises with their argument but contests that their theory collapses when it is applied to specific needs. It is with this problematic specific level that health services researchers and planners have to deal. The orthodox response seems to be to follow the economic line and define needs in relation to supply. What is clear, however, is that if the meeting of needs is to be democratic then they have to be debated openly. This means d democratizing the process of needs assessment so that individuals and communities are able to participate fully in decision-making about services. Such participation should extend beyond opinion polls and surveys to involvement in research and needs assessment itself (Bowling, 1997).

2.3.4 Apartheid Health and Human Rights in South Africa

The Truth and Reconciliation Commission (TRC) in requested the Science and Human Rights Program of the American Association for the Advancement of Science, Physicians for Human Rights (AASPHR) and other U.S.-based organizations to examine human rights violations in the health sector under apartheid and to make recommendations to build a culture of human rights in the health professions and the health sector as a whole.

Apartheid was a system fundamentally based on deep racism that deprived black people of all human dignity. This racism was manifested in every aspect of health: rigid segregation of health facilities; grossly disproportionate spending on the health of whites as compared to blacks, resulting in world class medical care for whites while blacks were usually relegated to overcrowded and filthy facilities; public health policies that ignored diseases primarily affecting black people; and the denial of basic sanitation, clean water supply, and other components of public health to homelands and townships. Health services were deliberately fragmented to perpetuate discrimination. Race bias infected health research and even the keeping of health statistics (AASPHR report, 1998).

The health consequences of apartheid extended beyond the practices within the health sector itself. Under apartheid, few blacks could become health professionals. Those who were trained were subjected to schools with inadequate resources and, when admitted to white institutions, were demeaned by practices like prohibitions on black medical students learning anatomy on white cadavers or wearing white coats and stethoscopes in white hospitals. Black nurses were denied adequate training resources and the opportunity to use their skills in an appropriate manner (AASPHR report, 1998).

White health professionals were deeply implicated in human rights abuses under apartheid. A few acted with great courage to uphold medical ethics in the face of demands for silence and complicity, and some medical educators fought for desegregated professional schools. But the large majority of white health professionals benefited from a discriminatory system and either embraced the values and practices of apartheid or went along with them in silence. Some physicians working in detention facilities as district surgeons wrote false medical reports to cover up the existence of torture; others testified falsely in support of security forces; others failed to provide adequate health care to detainees. Hospital personnel discharged men, women and children wounded by gunshots in political demonstrations and in need of medical attention to the police. After the

end of apartheid some institutions of the health professions, including academic institutions and professional societies, have expressed regret at their past behavior and have pledged to work toward a society that respects human rights (AASPHR report, 1998).

The following recommendations were made by the AASPHR to help ameliorate that legacy and build a culture of human rights in the health sector in South Africa:

- Elimination of racial discrimination in the health sector.
- Adoption of human rights standards for health professionals.
- Reform societies of health professionals.
- Reform of professional regulation.
- Human rights education.
- Addressing the legacy of apartheid: the need for mental health care.
- Medical documentation of torture and ill-treatment.

2.4 Rural areas in South Africa

The rural areas of South Africa suffer from a legacy of inappropriate production and investment decisions by government and the rural population. For many rural people in the former homeland areas, economic and social decisions remain conditioned by their unequal and distorted access to markets, services and opportunities. In contrast, the non-homeland rural areas are characterised by an over-capitalised, over-mechanised, job-shedding commercial agriculture. Asset ownership and distribution patterns remain those formed by apartheid; in particular, landlessness, over-crowding and poor health care service provision persist in the former homeland areas. A huge backlog in rural infrastructure persists, and urbanisation runs the risk of simply relocating rural poverty into urban slums. The high cost of delivering services to rural communities with limited economic potential results in tension between goals of fiscal discipline

and those of decreasing poverty and inequality. The rural areas of South Africa have a population of about 16.9 million people, 45% of the country's total population. While poverty is not primarily a rural issue, the risk of becoming and remaining poor remains significantly higher in rural than in urban areas. Using income-based or calorie-based poverty lines, half of the households and two thirds of the people in rural areas can be classified as poor. Over 70% of rural African households live in conditions which are inadequate or intolerable in terms of their access to shelter, energy, water and sanitation, and rural women are a particularly vulnerable group (government report on Poverty and Inequality in South Africa, 1998).

2.4.1 Rural Development in South Africa

The Rural Development Framework (RDF, 1998) has a powerful focus on poverty, addressing the issues of how to involve rural people in decisions of local government that affect their lives; how to increase employment and economic growth; how to promote affordable infrastructure and improve services; how to ensure social sustainability; and how to enhance the capacity of rural local government to plan and implement. The RDF's vision (1998) for rural development has two key elements: a focus on governance and the provision of infrastructure and services; and a focus on an enabling framework for rural livelihoods to expand, mainly by restoring economic rights to marginalised areas. It is argued that without provision of infrastructure, economic activities cannot thrive, while without an expansion of economic activity people will be unable to pay for services and government will therefore be unable to provide for them. According to the RDF (1998), rural development requires a number of key elements:

- **Institutional development**: Local government has responsibility for service provision, but its capacity must be built up by national and provincial government.

- **Restoration of economic rights**: Jobs must be created through Local Economic Development, using the natural resource bases of localities and realising actual and potential trade links to stimulate production. This will offer basic economic rights to marginalised people.
- **Investment in rural infrastructure**: Sustained investment in infrastructure is crucial to realise government's equity and efficiency objectives, and must be undertaken in consultation with local government.
- **Building local capacity to plan and implement**: The RDF argues for decentralised planning and decision-making, possibly in the form of district-level planning units (gov.report on Poverty and Equality in S.A, 1998).

2.5 Environmental Health

2.5.1 Definitions of Environmental Health

World Health Organization (WHO) Scientific Group (1972 definition) Environmental health is concerned with the control of all physical, chemical, and biological processes, influences, and factors that exercise or may exercise, by direct or indirect means, a significant effect on the physical and mental health and social well being of man and his society.

WHO, Environmental Health Services (1989 definition)—Environmental health is comprised of those aspects of human health and disease that are determined by factors in the environment. It also refers to the theory and practice of assessing and controlling factors in the environment that can potentially affect health.

WHO (draft definition developed at a WHO consultation in Sofia, Bulgaria, 1993)—Environmental health comprises of those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social, and psychosocial factors in the environment. It also refers to the theory

and practice of assessing, correcting, controlling, and preventing those factors in the environment that can potentially affect adversely the health of present and future generations.

2.5.2 Local Agenda 21

At the Earth Summit held in Rio de Janeiro in 1992, the world's governments agreed a number of things designed to achieve "Sustainable Development". An important issue agreed at the Summit was a global action plan for the 21st century called Agenda 21. This is a guide to individuals, businesses, voluntary groups and governments to help create sustainable lifestyles. Chapter 28 of Agenda 21 asks all local authorities all over the world to help to produce a local plan by working with their communities and agreeing a Local Agenda 21: A plan aimed at bringing about sustainable development locally.

The International Council for Local Environmental Initiatives (ICLEI) is the international environmental agency for local governments. Its mission is to build and serve a worldwide movement of local governments to achieve tangible improvements in global environmental and sustainable development conditions through cumulative local actions. Building a worldwide movement requires that ICLEI functions as a democratic, international association of local governments. Serving a worldwide movement requires that ICLEI operates as an international environmental agency for local governments.

Many Local Agenda 21 (LA21) planning processes have included an "issue prioritization" component in the early stages of planning. Faced with overwhelming problems and expectations, as well as diminishing resources, LA21 planning efforts have had to be strategic in the selection of issues to be addressed for immediate action. LA21 initiatives have applied a variety of community-based approaches to issue analysis and prioritization. These approaches are to be distinguished from one-way, extractive information-

gathering in which peoples' opinions and views are simply gathered and there is no exchange or dialogue between the community and the "experts." An authentic participatory process is a learning process for all involved. There are a number of important reasons to ensure broad community participation in issue analysis and priority-setting:

- Experience has shown that without the early involvement of the local community in planning, support for the resulting action recommendations is weak.
- Participation helps local residents to learn about and contribute to the management of their own communities.
- Participation assists in the identification of indigenous solutions which may be the most immediate and effective way to address a problem.
- Experience has shown that problem-ranking is as strongly influenced by peoples' perceptions as by hard scientific data. Priority setting should factor both (LA 21, 1995).

2.5.3 Principles of Environmental Health

The Department of Health, in collaboration with other relevant sectors, has been responsible for the improvement of South Africa's environmental health status. It therefore endeavours to limit the health risks which arise from the physical and social environment, The broad aim of environmental health services is to address environmental health priorities. The White Paper on the transformation of health in South Africa (April 1997) has outlined at least 5 principles that guides environmental health.

2.5.3.1 Every South African has the right to a living and working environment which is not detrimental to his / her health and well-being

2.5.3.1.1 Implementation strategies

The health sector will collaborate with other sectors to implement the following strategies:

(a) Human resource development for environmental health

This will be undertaken through the support of formal and informal training programmes which are sensitive to the country's needs. All environmental health practitioners should be technically competent to deal with the management of health risks in the physical and social human environments in order to promote a sustainable and healthy environment.

(b) Intersectoral collaboration

In view of the multidimensional and multidisciplinary nature of the interactive process between the environment and health, the Integrated Environment Health Management Strategy should interface with all sectors which play a role in environmental health risk reduction. Existing mechanisms for intersectoral collaborationsuch as the Interdepartmental Liaison Committee of the Departments of Health and Water Affairs and Forestry, and the National Sanitation Task Team (NSTT) will be utilised to promote intersectoral action.

(c) Distribution of environmental health services

Based on community needs and related risk assessments as they impinge upon the quality of physical and social environments, environmental health service interventions including the promotion of clean water, adequate sanitation provision and food safety will be aimed at addressing needs and reducing the associated risk on a prioritised basis.

(d) Environmental health: a "shared responsibility"

The environmental health sector will be responsible for the provision of accessible services and support communities in managing environmental health risks. Ultimately, however, each individual must take responsibility for the maintenance of a healthy environment.

(e) Environmental health legislation

A community development rather than a law enforced approach will be followed in creating environmental conditions conducive to good health. Environmental

health legislation will comply with the requirements contained in the Interim Constitution's Bill of Rights and will be based on integrated, appropriate and uniformly applicable legislation.

2.5.3.2 All persons should have access to knowledge on environmental health matters and the services available to them

2.5.3.2.1 Implementation strategies

a. Community empowerment is central to the principles of the RDP. The primary health care approach to the delivery of community-based services involves the active participation of these communities. This will be done through the dissemination of strategic and appropriate environmental health and hygiene information, education and communication (IEC) to develop the communities' capacity for participation.
b. Environmental health information will be included in health promotion and marketing activities at all levels. Environmental health information centres should be established.
c. Environmental health practitioners, in collaboration with other stakeholders, will ensure that communities are able to plan and implement effective environmental health strategies through an integrated IEC Programme aimed at improving social mobilisation.

2.5.3.3 Environmental health services should be accessible, acceptable, affordable and equitable. They must be implemented with the active participation of the communities

2.5.3.3.1 Implementation strategies

a. A comprehensive environmental health service, sensitive to and inclusive of the communities' needs, will be rendered.

b. Environmental health services should be representative of the diverse cultural composition of the South African population and be distributed according to the communities' real needs.

2.5.3.4 Environmental health services should contribute positively towards sustainable physical and socio- economic development

The health sector has an important role to play in promoting interaction between health, the environment and overall development.

2.5.3.4.1 Implementation strategies

(a) Ensuring health impact assessment

An integrated health and environmental approach should be included in the environmental impact assessment of all major development projects.

(b) Integrating health policy with overall developmental policies affecting the environment

The health sector should participate in developing policy co-ordinating mechanisms at all levels of government and within the private sector and NGO's to ensure the sustainability of a healthy environment.

(c) Establishment of a WHO regional centre for environmental health in South Africa

This should ensure liaison in the spheres of health, environment and development with member states within the region of the WHO.

(d) Supporting / promoting international conventions/ programmes aimed at ensuring sustainable development

The Department of Health should contribute to implementing the Agenda 21 principles within the health sector, as it relates to programmes such as Healthy Cities, the Montreal Protocol, etc.

2.5.3.5 The establishment of effective environmental health surveillance is essential to determine whether or not the services are functional and effective and have a positive health impact

2.5.3.5.1 Implementation strategies

a. Training will be undertaken to improve capacity for planning, implementation, monitoring and evaluation of environmental health issues at the provincial, district and community levels.
b. Indicators for monitoring and evaluating the impact of environmental health services will be improved.
c. The National Environmental Health Services Surveillance Programme (NEHSSP) will ensure linkages and networking with all stakeholders concerned with environmental health information (White Paper, 1997).

2.6 Accessibility of health care services in the developing countries

2.6.1 Background information on health systems in developing countries

Reflecting wider development practice, health systems in many developing countries are most frequently geographically centralized and technically sophisticated, with expenditure directed towards high-cost urban hospitals, and therefore the health care needs of the urban elite (Zaidi, 1994). Health services are generally not cost effective, and are neither accessible nor appropriate in the context of the developing world, thus failing to address the health problems affecting the majority of a population, resulting in limited health improvements in many developing countries (Phillips, 1990). Deficits in rural health provision, particularly in countries in which a significant proportion of the population live in rural areas, reflect rural 'underdevelopment' more generally, and have exacerbated the health gap between urban and rural populations. Groups with poor levels of health therefore have the greatest need for health care but,

frequently have little or no access to even the most basic of health services Phillips, 1990).

However, whilst spatial disparities in levels of health are often considerable, particularly between urban and rural areas, it is important to acknowledge that socioeconomic inequalities are becoming as significant as spatial inequalities; hence differences between the health of rich and poor groups in both urban and rural areas are increasingly pronounced (Harpham, 1994). Many health problems in developing countries could be effectively addressed with low-technology, relatively low-cost means, such as basic accessible services, public health measures and disease prevention through immunization and nutrition programmes (Phillips, 1990; World Bank, 1993; Phillips & Verhasselt, 1994).

A number of developing countries are notable in having achieved impressive improvements in health despite only modest economic growth, such as Sri Lanka, Costa Rica and Thailand. Caldwell (1993) suggested that a significant feature of development in these countries has been education, particularly female education, health care that is appropriate (simple, rather than technologically orientated, with preventative features, such as children's vaccination programmes) and accepted by the community, equality of geographical accessibility, and a service that is free or inexpensive to users. Accessible and appropriate health services, as part of a multi-sectoral package , have therefore been a critical precursor of health improvements in many developing countries.

In recognition of the scale of health problems prevailing in particularly low-income countries, the WHO (1970) established an ambitious resolution which became known as the 'Health for All by the year 2001'. This was intended to promote improvements in the quality of health care provision, the basis of which was the universal accessibility to health care (Mahler, 1974). Most countries have accepted the importance of the WHO resolution (1970), and many have

attempted to adopt the recommendations into health systems policy. Whilst this has led to some improvements, overall success has been limited and inaccessibility problems, especially for poor and/or rural groups, continue to prevail. Promoting universally accessible, acceptable and appropriate health care continued to be a key goal for achieving health improvements within the WHO's revised time frame, 'Health for All in the Twenty-First Century', and believing that the same slogan will prevail even in the Twenty-Second Century, reinforcing the need to identify groups with poor accessibility and suggest ways of improving it (Spicer, 1999).

2.6.2 The need for the availability and accessibility of health care services

The prime objective of primary health care provision is the maintenance or improvement of the population's health. The equitable distribution of resources is therefore paramount. This equitable allocation of resources to primary health care presents major challenges. Marked geographic variations in levels of health care need occur across the population, which means that health care services must be distributed evenly if they are to reflect local needs. The ability of the population to access these services also varies, due to differences in the awareness, mobility and affluence of those concerned. Moreover, health care resources are inevitably constrained. In planning and managing health care delivery, therefore, account needs to be taken of these spatial variations in health care need and accessibility in order to ensure that services are provided at the most effective locations (Spicer, 1999).

In addition to the existence and physical proximity of services, Andersen (1968) suggested factors 'predisposing' the utilization of health services, such as age, sex, social structure, occupation, education and ethnicity and health beliefs. These were distinguished from 'enabling' factors which encourage or inhibit utilization, such as the economic resources of a family. Gross (1972) also recognized predisposing and enabling factors, suggesting that perceived levels

of health, together with accessibility for the individual user of health services, are important in determining utilization. McKinley (1972) identified a number of groups of accessibility factors impeding the utilization of health services at individual / family level. In addition to geographical factors and factors related to the organization of health service delivery, economic and socio-cultural determinants of utilization were suggested.

The importance of the location of health care services in relation to recipient populations has been widely discussed. For example, Stock (1983, 1987) carried out a detailed study of the effects of distance on attendance rates at health clinics in Nigeria, finding, unsurprisingly, that utilization was negatively related to the distance between the user and the service, together with the time taken to reach it. However, there were a number of other factors influencing utilization, such as the availability of public and private transportation and the costs involved. Importantly, the seriousness of an illness episode also determines the distance an individual is prepared to travel to seek medical attention. Carlstein, Parkes & Thrift (1978, page 54) referred to 'coupled constraints' between health services and users of these services. They suggested that facility opening times / days relative to times when people are able to visit, as well as waiting times and queues for consultations, affect accessibility and therefore utilization. Time-related 'organizational' 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.

2.6.3 The accessibility of health care services in the northeast Badia of Jordan

Explaining variations in health service utilization has been a major topic of research in both medical / health geography and sociology. However, very few studies have considered the factors mediating the utilization of health services by

nomadic groups, much less attempted to systematically evaluate the extent of the various factors influencing health care seeking. This study, based on a mixed-method field-work survey, attempt to do this. The survey, consisting of 175 structured questionnaire interviews, together with five in-depth semi-structured interviews, was carried out amongst rural communities living within the Badia Research and Development Programme area in the northeast Jordanian Badia in 1996 (Spicer, 1999).

The aim is to appraise the relative importance of social, economic, geographical and time-related factors in explaining health service utilization patterns. Randomly selected settled families living in villages with varying levels of health care provision were interviewed, and their accessibility to health services compared to that of families practicing mobile livestock pastoralism. The semi-structured interviews provided in-depth insight into health care seeking. The interviewees were selected on the basis of their willingness to participate in extended interviews, and were chosen to represent families at progressive stages of sedentarization. Whilst the research identified considerable variations in the extent to which an individual family was mobile or had settled, in the interests of clarity, this paper distinguishes 'settled' families from those who are either 'semi-nomadic' or 'nomadic' (Spicer 1999, page 302).

The focus of the study was on individual / family accessibility to basic child health care as well as more specific health care such as vaccinations through the rural government clinics. Respondents (both males and female heads of households) were asked whether geographical and organizational, economic and social factors affected their ability to utilize government health centers when needed, and whether this affected the frequency with which they used the services. The survey respondents suggested that they did not find basic health services inaccessible in that they trusted the staff at the clinics and the treatments available. Additionally, 'modern' health services have become widely accepted as

the primary form of health care sought, 'traditional' Arabic medicines having become far less important (Spicer, 1999).

In terms of economic accessibility, user (prescription) costs in Jordan are heavily subsidized by the government, particularly for government employees and their families and families falling below an established income threshold. The survey found that for the majority of people the costs involved in using health services did not impede their seeking of those services. However, distance-time and organizational accessibility factors impeding the effective utilization of rural health services were found to be particularly significant amongst mobile families. This paper therefore considers the extent to which pastoral nomadism constrains accessibility, and its implications for the effective utilization of basic health services by mobile and sedentarizing communities of the northeast Badia of Jordan (Spicer, 1999).

2.5.3.1 Geographical decentralization of health services in Jordan

The Jordan Population and Family Health Survey (1992) found that the overall difference in infant and child mortality between urban and rural areas nationally was not substantial, which can be explained by the recent and significant expansion of rural infrastructure and services, as well as pockets of urban poverty. However, a number of rural regions, including the Badia, fell well below the national average for health. In the northeast Badia, indicators suggest that health levels were significantly worse than in most other parts of the country. Findlay and Maani (1998) reported that infant mortality had improved from a level 174 deaths per 1000 live births in 1976 to 86 deaths per 1000 live births in 1993 for both sexes, this does not compare favourably with a national average of 27 deaths per 1000 live births (cited in UNICEF, 1995).

UNICEF (1993) stressed that children in Jordan were particularly vulnerable and that children's health was threatened. Children living in poorer communities and

those lacking basic services are particularly at risk, thus reinforcing the need to investigate the issues of child health in Jordan. Economic and social development in Jordan has been concentrated in urban areas. Health services are concentrated in Amman and other urban centers (as in health service administration), which dominate in terms of public hospitals, clinics, maternal and child health services and private hospitals. Although health services are geographically centralized, the structure of health care delivery is more balanced than many developing countries since the population is comparatively urbanized, with 73% living in urban areas nationally. Nevertheless, until the mid-1980s, provision of health services in most rural areas was negligible, not least in the northeast Badia (Jordan Population and Family Health Survey, 1992).

One of the central threads of the WHO (1970) 'Health for all by the year 2000' campaign was ensuring the equity and equality of accessibility to health care and particularly encouraging the expansion of rural health services. The Jordanian Ministry of Health has attempted to incorporate the WHO resolution, maintaining that national health policy is based on 'the principle that all citizens have the right to health services' (Jordan Population and Family Health Survey, 1992: 3). More specifically, the emphasis has been to ensure 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'. The government's strategy has been to compensate rural areas for lack of economic and social development by widening rural service provision and thus attempting to rectify the problems of access to services.

Honey and Kharmeh (1989) evaluated the extent to which rural health services have been extended in Jordan, finding a substantial increase in the provision of rural health centers and that virtually all rural settlements with a population of a thousand or more residents (and many with fewer) had a government health clinic. They suggested that the government has been successful in making services available: 'rural Jordan is actually disproportionately served with

government health clinics, relative to the balance of population' (Honey & Kharmeh, 1989: 77). The first clinic was provided in the early1980s; since then, a network of 14 clinics has been provided, which serve 34 villages with a population of 15,318 (Jordan Badia Research and Development Programme, 1993). However, seven of these clinics only provide very basic facilities (such as first aid and a few basic drugs) and are open part time (one or two days per week).

Honey and Kharmeh (1989) suggested that in 1989 only 3% of Jordan's population lived more than 10 km from a health center. However, they did not consider the implications of mobile pastoralism, and particularly seasonal migration, on the geographical accessibility of health services. Nomadic pastoralism has significant consequences for the effective delivery of health services and their geographical accessibility. The little literature that exists on the delivery of health services and their accessibility for nomadic and sedentarizing populations suggests that mobile groups have significantly more problems than settled populations. For example, Helander (1990) noted the difficulties in extending government clinical services to a nomadic population dispersed over large areas of Somalia. The central problem with the effective delivery of rural health services, particularly in the Badia region, is that much of the population is dispersed, consisting of semi-nomadic pastoralists who spend much of the year in relatively remote areas away from points of health service delivery. Whilst these groups are decreasing in number, the majority having settled in villages clustered along the northern border with Syria. It is estimated that around 10% of the population of the region continue to be mobile (Jordan Badia Research and Development Programme, 1993).

2.7 Previous Studies conducted to measure health care needs.

Various indices have been devised to help define levels of need and have been used, in some instances, in health care policy (Morris and Carstairs, 1991).

Indices take three main forms: those based on service utilization, those based on mortality statistics, and those based on socioeconomic conditions or disadvantage. All three have been criticized (Carr-Hill and Sheldon, 1991; Davey-Smith, 1991; Senior, 1991). Indices based on the actual extent to which patients make use of available services (e.g. Andersen & Newman, 1973; Beland, 1988), for example, are founded on the assumption that the system is in equilibrium, and that levels of usage directly reflect levels of need. Since this is rarely true (in that accessibility to the available service and other factors affect level of utilization), these indices are liable not to detect – but instead to perpetuate – any inequalities in existing provision.

2.7.1 Determinants of health care need

2.7.1.1 Health Status

Health status is clearly an important determinant of the need for primary health care, and varied substantially across the population. Ideally, this could be measured on the basis of morbidity data such as prevalence or incidence of disease or standard morbidity ratios. In practice, such information is rarely available in a consistent form from routine sources. As a consequence, previous indices have often relied on mortality data (Field, 1999).

Data on the prevalence of limiting long-term illness clearly provide information only on one specific aspect of health status – chronic disability. They cannot be assumed to provide an indication of either acute illness, or other aspects of health status and health care need, such as pregnancy and maternal care. In the absence of other, more direct measures of these health needs, proxy measures are needed. Two of the most important and most widely used are age and gender. The patient survey showed that the young and elderly and females need to consult General Practitioners (GPs) more frequently, a tendency that has also been noted in previous studies (Joseph & Phillips, 1984; HMSO, 1992).

Indicators can thus be defined to reflect each of these factors. Three indicators were developed for this purpose: the *number of children aged 0-4* was selected as a measure of the demand for child care; the *number of people aged 65 or over* was chosen as measure of the need for care of the elderly, and the *number of females age 16-44* provides a measure of the increased need for health care experienced by females, mainly in relation to childcare (Field, 1999).

2.6.1.2 Socioeconomic status and health

Results from a patient survey also identified three factors reflecting socioeconomic conditions or status that were significantly associated with ill-health care need: single-parent household, unemployment and social class. Each of these has been noted as important determinants of ill-health (e.g. Morris & Carstairs, 1991; Jarman, 1983), and thus indicators were devised for each factor. The need for health care is to a large extent socially and economically determined. Many of the factors affecting health – such as diet, lifestyle, exposure to hazards in the occupational and domestic environment and hygiene – are related to social status, levels of affluence and income. For a wide range of illnesses, therefore, socioeconomic disadvantage is seen as an important risk factor, for instance, in lung cancer (Pukkala and Teppo, 1986) and coronary heart disease (Marmott, 1992). Syme (1989) go so far as to suggest that people classified in lower social classes have higher rates of virtually every disease and condition.

The *proportion of single-parent households* is a commonly used proxy for martenal disadvantage. In the study area it is of special note, for the maximum values at enumeration district (ED) level were, in some places, up to six times greater than the national average, clearly indicating localized concentrations of single-parent households. Unemployment (the *number of economically active people > age 16 who are also unemployed*) also has clear links with patterns of morbidity and mortality and strong associations with other health outcomes

(Smith, 1987; Eversen, 1989). The *proportion of people in manual classes* provides a proxy for wealth and income. Whilst a direct causal relationship with health cannot be attributed to this measure, those who are classified in lower social classes do tend to have higher morbidity and mortality rates (Townsend and Davidson, 1982), primarily because of associations with less healthy lifestyles (e.g. poor nutrition, smoking, etc.)

2.6.1.3 Environment and health

The conditions in which people live may affect overall levels of health. Links between the outdoor environment and health are, however, extremely complex and difficult to model at the aggregate level (Taubes, 1995). Whilst the outdoor environment certainly has a significant effect on health and thus need for health care (e.g. due to exposure to pollution), the indoor environment probably provides a stronger influence on health. In this study, no attempt was made to investigate specific sources of indoor exposure (to indoor air pollution or physical hazards, for example), largely because data on such exposure can rarely be obtained; nor were questions on the indoor environment included in the questionnaire survey, primarily because of concern that these might reduce responses rate.

Morris and Carstairs (1991), amongst others, have also demonstrated strong associations between level of overcrowding and health outcomes. In this study, *the number of households where there is an average of more than 1 person per room* was used as an indicator of overcrowding. Overcrowding results in poorer living conditions and may contribute to higher levels of ill-health, including respiratory disease, infectious disease and mental illness.

2.6.2 Determinants of accessibility

2.6.2.1 Transport availability

Transport availability is clearly an important determinant of access to health care services, and there is a strong relationships between perceived ease of access to the GP surgery and the availability of both a car and public transport. Greatest difficulties tend to be experienced where there is both poor public transport provision and lack of access to a car (Field, 1999).

2.6.2.2 Personal mobility

Personal mobility exerts an important influence on access to health care services and, as the patient survey showed, may significantly affect patterns of utilization (those with reduced levels of personal mobility, for example, tended to rely more heavily on home visits). The young and elderly are seen to be the most restricted in terms of their personal mobility. Those aged 0-15 are limited by their ineligibility to drive, as well as their reliance on parents for transport or accompaniment to the surgery. People aged 80 or over also suffer greater obstacles to accessibility due to the fact that they are less likely to be drivers themselves and they are increasingly reliant on assistance to get to a GP. Two indicators were thus defined as *the number of people aged less than 15* and *the number of people aged more than 80 years old* (Field, 1999).

Results from the patient survey also showed an association between social class and ease of access to health care services. In principle, it might be expected that those in lower social classes are likely to experience greater difficulties because of their limited financial resources, and higher rates of consultation have been indicated by lower social classes in previous studies (Townsend et al., 1992).

2.6.2.3 Service awareness

Attitudes to health, personal health values and knowledge about the availability of health care are all known to be important determinants of health care utilization (Green and Kreuter, 1980), and were seen in a patient survey to be associated with perceived access to health care. In this study, two proxies were established: the *number of ethnic minority people* and the *number of people without further or higher educational qualifications.*

Ethnic minorities may be identified as experiencing particular obstacles to accessibility due to linguistic or cultural impediments and associated lack of service awareness (Joseph and Phillips, 1984). Lower educational attainment may also be associated with lower levels of service awareness (Whitehead, 1992).

2.8 RURAL HEALTH AND THE HEALTH OF RURAL COMMUNITIES

This article was presented by John Humpherys in September 1998 as part of the 1998 Worner Research Lecture in Australia. He foregrounds one aspect that has attracted particular attention in recent years and that is rural health. He argues that even the professional medical organizations openly admit to the existence of a 'crisis' in health care in rural Australia, thereby admitting the validity of the long standing complaints of rural communities.

Rural health has become a topical point of discussion due to the pressure and interest from the media and an increasingly political dimension to the problem of how to provide adequate and appropriate health services in rural areas. Rural health stakeholders and rural communities continue to pressure governments to respond to problems of rural health with measures likely to result in improved delivery of services and health outcomes.

Humpherys regards rural health as distinctive because health is invariably something that is generally taken for granted. Health is defined by the (World Health Organization " 1972, page 171) as a state of physical, mental and social well-being, not just the absence of disease or infirmity". He focuses on three main scenarios in considering whether the pattern of health in rural areas is distinct from urban areas.

- There is no appreciable difference between the health of rural and metropolitan Australians;
- Rural areas suffer the same types of problems as urban areas, only the prevalence of them is different;
- Rural residents and communities may suffer from health problems, which are distinctive both in incidence and prevalence.

Humpherys goes on to say that the health of rural Australians is 'worse' than that of metropolitan dwellers and that rural health problems are a product of 'rurality'. Rurality and remoteness have been identified as independent determinants of health. Distance, harsh environments, specific occupation hazards, sparse infrastructure, inappropriate attitudes to health and illness and risk-taking behaviors, all of them particularly characteristic of rural Australia, can be shown to underpin the health status of communities.

The health status of rural Australians can be improved by better rural health services. Many rural communities lack the health care services they require. The notion of 'better' health services is different from simply providing more health services. Bearing in mind that resources are finite and relatively scarce, it is important to target funding to those services, which are likely to yield the greatest health gain. Improving the health status of rural Australians requires specific rural health workforce skills.

Research has demonstrated that the roles and needs of health professionals practicing in rural and remote communities differ from those in metropolitan areas. The health status of rural Australians is dependant on the health of rural communities. A distinction should be made between 'healthy communities' and the 'health of individuals within communities'. As his last point, Humphreys (1998) emphasizes that meeting the health needs of rural people requires a specific policy response.

As a way forward, Humphreys (1998) believes that any successful rural health strategy or program must be founded on sound knowledge of rural health status. The need for a specific rural health focus in government programs is abundantly clear. A different and more fundamental set of questions is needed if the future health of rural Australians is to be seriously improved.

- What sort of society do we want?
- The form of the national settlement system;
- The role of the state;
- Social costs of inequality;
- Inalienable rights.

There is a need to adopt agreed principles as the basis for determining the allocation and distribution of resources and consequently the structure of the health care system. All citizens, regardless of where they live, should have access to health care services that are responsive to the specific needs of all population subgroups.

2.9 Reflection on the White Paper for the transformation of the health system in South Africa.

2.9.1 Objectives to consider

Some of the objectives of the White Paper 1997, entail promoting equity, accessibility and utilization of health services by:

- Increasing access to integrated health care services for all South Africans, focusing on the rural, peri-urban and urban poor and the aged, with an emphasis on vulnerable groups;
- Establishing health care financing policies to promote greater equity between people living in rural and urban areas, and between people served by the public and private health sectors; and
- Distributing health personnel throughout the country in the equitable manner.

The other important objective is to extend the availability and ensure the appropriateness of health services by:

- Establishing a district health system in which all communities are covered by a basic health unit which offers an essential package of care;
- Ensuring a functioning referral system at the primary, secondary and tertiary levels;
- Improving access to comprehensive health services;
- Ensuring the universal availability of high quality, low cost essential drugs; and
- Ensuring that every South African develops his or her potential fully, with the support of community-based nutrition promotion activities.

The last objective that is highlighted is the fostering of community participation across the health sector by:

- Involving communities in various aspects of the planning and provision of health services;
- Establishing mechanisms to improve public accountability and promote dialogue and feedback between the public and health providers; and

- Encouraging communities to take greater responsibility for their own health promotion and care (White Paper, 1997).

2.9.2 Community Participation

2.9.2.1 Definition of Community Participation

Community participation is a process of forming interactive partnerships with the Community in the spirit of mutual growth and development, by the sharing of resources, skills and knowledge. (The term "participation" is preferred to service since it refers to an equal relationship wherein all participants stand to learn from each other, (UNISA, 2001) .

2.9.2.2 Involving the Community

All South Africans should be equipped with the information and the means for identifying behavioural change conducive to improvement in their health. People should be afforded the opportunity to participate actively in various aspects of the planning and provision of health services. The Department of Health (DoH) should provide the public with regular updates on progress, results and emerging issues related to its work, and should ensure that people participate in the development of national policy. Much of the progress made in improving the health status of individuals depends on the existence of healthy environments and lifestyles. It is crucial to involve individuals, families and communities in this process.

Some implementation strategies may involve the following:

- The national health service should take advantage of all the available opportunities to provide individuals, communities and the public at large with relevant information on healthy behavior;

- The DoH should work in close collaboration with all social groups, especially women's and youth groups, to support the acceptance of and response to messages related to healthy behavior;
- The DoH should promote and support legislation and policies for creating an environment that is conducive for healthy behavior;
- The DoH should seek to establish close collaboration with the media to facilitate the wide dissemination of health-related information and positive role models;
- The Ministry of Health should work in close collaboration with the Ministry of Education and other social ministries, to provide them with the technical support required to develop their potential in health promotion fully;
- Clinic, health center, hospital and community health committees should be provided with the required technical support and motivation to become advocates of positive behavioral change in the communities they represent;
- The Minister of Health should mobilize political leaders at all levels to lend their support to health promotion efforts (White Paper, 1997).

People should be afforded the opportunity of participating actively in various aspects of the planning and provision of health services. Some implementation strategies may include the following:

- Clinic, health center and hospital and community health committees should be established to permit service users to participate in the planning and provision of services in health facilities;
- The communities should elect the individuals elect the individuals who will represent them with regard to health matters;
- The roles and powers of elected representatives should be clarified;
- Simple community-based information systems should be established by communities with the support of the health staff, to provide the information needed for the identification of priorities, the monitoring of progress made towards locally-established objectives and decisions on actions to be taken;

- Representatives of the communities should play a pivotal role in identifying underserved groups, and establish strategies to reach them in partnership with the primary health team;
- Women should be enabled and supported in playing a major role in local health committees (White Paper, 1997).

2.9.3 Primary Health Care (PHC)

2.9.3.1 Definition of PHC

Primary care is that care provided by physicians / doctors specifically trained for and skilled in comprehensive first contact and continuing care for persons with any undiagnosed sign, symptom, or health concern (the "undifferentiated" patient) not limited by problem origin (biological, behavioral, or social), organ system, gender, or diagnosis. Primary care includes health promotion, disease prevention, health maintenance, counseling, patient education, diagnosis and treatment of acute and chronic illnesses in a variety of health care settings (e.g., office, inpatient, critical care, long-term care, home care, day care, etc.). Primary care is performed and managed by a personal physician, utilizing other health professionals, consultation and/or referral as appropriate. Primary care provides patient advocacy in the health care system to accomplish cost-effective care by coordination of health care services. Primary care promotes effective doctor-patient communication and encourages the role of the patient as a partner in health care (American Academy of Family Physicians, 2001).

The new South African health system adopts the PHC approach because it is the most effective and cost effective means of improving the population's health. The approach involves a health system led by PHC services, which are at the base of an integrated district health system. The PHC package will comprise the services listed below. The provision of these services will be promoted and evaluated by district health teams and relevant support personnel. The actual scope of the

package will be determined by the available resources and will be implemented on a sustained and incremental basis over a 10-year period.

The following services are to be provided through the district health system:

- Health education
- Nutrition/Dietetic services
- Family planning
- Immunization
- Screening for common diseases

This means that in any health system the primary health care and the communities should never be under-estimated because they may form the central and key role in the effective health care system in South Africa, as it being one of the developing countries.

2.10 Conclusion

This chapter has provided a brief overview on health services research. Apartheid health and human rights in South Africa has been highlighted. There has been a reflection on South African rural areas and rural development. There has also been a general background on rural and urban diversity in the KwaZulu Natal province. Principles of the environmental health as being advocated by the White Paper on the transformation of health in South Africa has been outlined, hence, a brief discussion on Local Agenda 21 is provided. It proceeded by giving a brief background on health systems in the developing countries and then discussed the need for the availability and accessibility of health care services in any society. It went further to discuss the accessibility of these services in one of the developing countries like the northeast Badia of Jordan. It has also highlighted previous studies conducted to measure health care needs by looking at the determinants of health care need and the determinants of accessibility. It went on to highlight rural health and the health of rural communities in Australia.

There has also been a review on the White Paper for the transformation of the health system in South Africa. It concludes by looking at issues around community participation and primary health care.

Chapter 3

Research methodology

3.1 Introduction

This chapter highlights the aim and the objectives of the study. The sampling technique and the research instruments used are also discussed in this chapter. Discussion also focuses on the interviews used and the way they were conducted using an observation schedule and questionnaires. Moreover, a data analysis plan is provided on the technique used to analyse data, namely, qualitative and quantitative data. Finally, a summary of this chapter is provided.

The main aim of this study is to examine the availability, accessibility and utilization of health care services in a rural area - Ndwedwe. The objectives of this study are informed by the drive to satisfy local needs. This means that health care services need to be distributed unevenly if they are to reflect local needs. Therefore the objectives of this study will be to find out if health services, if any, are able to contribute in the betterment of health care in a sampled rural area.

3.2 The study area

3.2.1 The KwaZulu Natal Province

KwaZulu-Natal occupies about 92 000 square kilometres, or one-tenth, of South Africa's land surface. It is the country's third smallest province. KwaZulu-Natal has the largest population of approximately 9.3 million. This is about 20% of the total population of the country. About 43 % of KwaZulu-Natal's population live in urban centres, while the rest live in non-urban areas. The rural communities are strongly influenced by traditional authority structures and the communal administration of land and resources is common.

The majority of the population is Zulu-speaking, followed by English and Afrikaans speakers. The province is home to the Zulu monarchy, the only monarchy in South Africa, whose traditional capital is Ulundi. The port city of Durban, hosting the busiest harbour in Africa, the Richards Bay/Empangeni industrial hub and the joint capitals of Pietermaritzburg and Ulundi are the province's main centres of urban growth (Independent Projects Trust, 2001).

Geographically, KwaZulu-Natal has significant diversity. The subtropical coastline has protected indigenous coastal forests at Dukuduku and Kosi Bay. The St Lucia Estuary, which was declared a World Heritage Site in December 1999, is found in this area. Another World Heritage Site, the Drakensberg mountain range, runs 200 kilometres along the western boundary of the province, separating KwaZulu-Natal from Lesotho and the Eastern Cape. Game and nature reserves prosper, particularly in the northern parts of the province.

The labour force in KwaZulu-Natal is relatively poorly skilled. According to Statistics South Africa (1996), 957 000 people aged 20 years and above have had no schooling. About 1.3 million people in the same category received some secondary schooling, while 665 000 completed Grade 12, the final year of schooling offered in South Africa.

KwaZulu-Natal employs less than half of the potential labour force in the formal economy. More than one million people are without jobs while 1.57 million people between 15 and 65 years are employed, according to Statistics South Africa. However, many consider the unemployment figure to be significantly higher.

The gap between the per capita income of people living in urban and rural areas is huge. A large percentage of the people living in KwaZulu-Natal, particularly in rural areas, rely on income from family members who are recruited to mining and industries in other provinces, such as Gauteng where

Johannesburg is situated. The output of KwaZulu-Natal includes sugar, dairy products, metal goods, leather products and footwear, automotive components, textiles and clothing, aluminium products, wood and wood commodities, paper and paper products, chemicals, coal and fruit.

The KwaZulu-Natal legislature consists of 80 members from seven political parties. The Inkatha Freedom Party (IFP) has 34 members, the African National Congress (ANC) 32 members, the Democratic Party (DP) seven, the New National Party (NNP) three, the Minority Front (MF) two, and the African Christian Democratic Party (ACDP) and the United Democratic Movement (UDM) one each.

There are 11 members of the Executive Council, or Cabinet, which is chaired by the Premier, Lionel Mtshali. These Cabinet members each head a provincial department. Members of the legislature sit on portfolio committees which debate legislation and monitor the activities and budgets of provincial departments.

In order for one to understand the area and the context in which the study was undertaken, I would like to give a brief background of the geographical setting of the area itself, where the study is being conducted. This will help in order to understand the extent to which health care services are available and accessible. The study has been conducted in one of the rural areas (Ndwedwe) in the Province of KwaZulu Natal (Durban) near the town called Verulam, see KZN map and the study area indicated overleaf. The study has been conducted at the centre of the entire area called Ndwedwe central where the Ndwedwe municipality is located.

Plate 1: Kwa-Zulu Natal Map **Source: Far and Wild Safaris, KZN**

?? Wrong Ndwedwe isn't after PMB.

+ = Ndwedwe

The Ndwedwe area consists of a population of about 170 000 and the number of households is hard even to estimate because of the geographical setting of the area where households are far apart from each other, i.e. at least 1 to 5 km's apart from each other, see plate 2 below. There is one main gravel road just 5 kilometers away from Verulam Town that go straight to Ndwedwe central where most of the people spend most of their time because of the need for services by the community. These services include: a police station; a clinic; the Department of Agriculture; a circuit office and supermarkets.

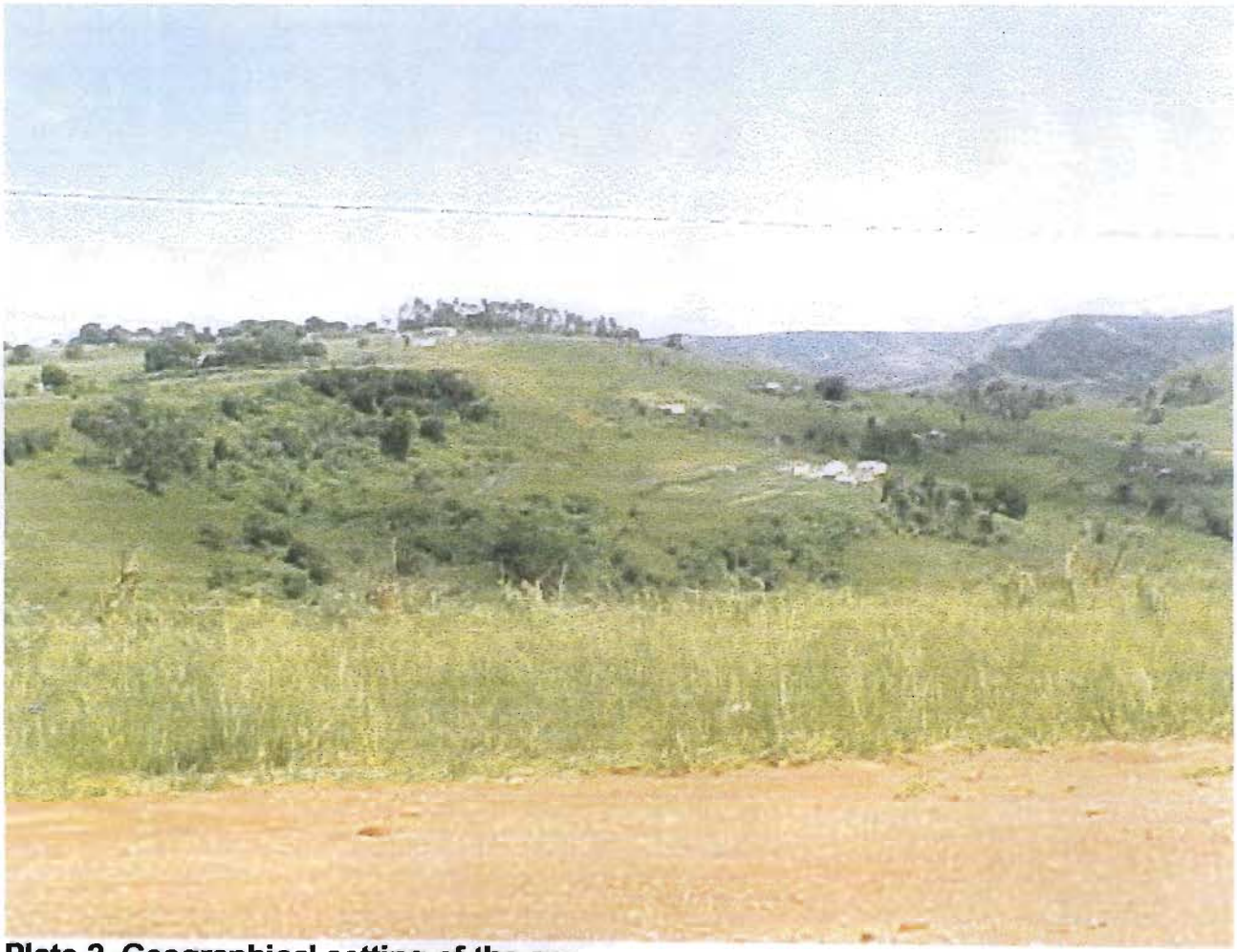

Plate 2, Geographical setting of the area

3.2.2 Sampling Technique

The sampling technique used was systematic because semi-structured interviews were conducted in every tenth households in all the sixteen areas. The same technique was used for the household questionnaire. The total number of questionnaires administered and the semi structured interview encounters were 45. I also engaged 10 community leaders using the same techniques. However, a statistically valid sample of a total of 55 was obtained.

3.3 THE RESEACH INSTRUMENTS (Sources of data collection)

3.3.1 Interviews used and the way they were conducted.

The method of selecting my interviewees was a bit difficult because I could not manage to get as much subjects as I would have loved to since the households are far apart from each other. Moreover, some people were simply not eager to participate due to their own complications and reasons not given. Responses were recorded in writing and answers based on socio-economic characteristics were recorded in the survey form.

3.3.2 Observation schedule

I have observed the environment that those people live in for one week. The geographical setting of the area has been captured through the use of a digital camera. In this regard, the researcher becomes a participant observer, using a semi-structured schedule to record observations.

3.3.3 Questionnaires

Questionnaires were distributed amongst a variety of people in the community, i.e. household breadwinners and community leaders. The questionnaire is

designed for the purpose of getting some ideas regarding socio-economic characteristics of the respondents. Secondly, information regarding availability, accessibility and utilization of health care services was also fundamental. The first part of the questionnaire is designed to get some understanding of the family member characteristics like age, sex, marital status, income, employment status, education and relation to household head. The second part of the questionnaire focused on availability of health services in the area; place of residence; transport to health facilities; distance to health facilities; other health assistance received; cost of transport and health assistance; influence of distance on the use of health care facilities; influence of cost on the use of medical facilities; unavailability of transport and the use of health facilities; availability of emergency services and rating of quality health care.

3.4 Data analysis plan

Data will be analyzed quantitatively and qualitatively. The responses obtained from personal interviews and questionnaires will be transcribed for the purposes of this analysis. My analysis will explore the common and varying feelings that are shared by the Ndwedwe community with regard to the availability, accessibility and utilization of health care services in the area. The objectives that the study seek to give responses to are answered by the analysis of questions as appearing in the questionnaire and the personal interview encounters. The three objectives being:

- To investigate the socio-economic characteristics of respondents.
- To examine the relationship between socio-economic conditions and health care needs.
- To examine the relationship between the physical environment and health care needs.
- To examine the availability and accessibility of health care services with relation to the quality of health care provision.

- To make suggestions and recommendations to improve health care needs of respondents.

3.5 Limitations of the study

The study has been conducted with a minimum number of subjects since I could not get as much subjects as I would have liked to because their households are far apart from each other. Moreover, some people were simply not eager to participate due to their own complications and reasons that could not be articulated to me. As a consequence of this, almost half of the questionnaires administered were not returned.

Most of the health care service centers could not be captured through the digital camera because it was difficult to reach them. Almost all of the areas the researcher wanted to go to required the use a 4X4 vehicle to reach them. One of the main limitations is that most of the subjects didn't understand the language in which the study is being conducted on, as a result, the researcher had to convert some of the questionnaires to Isizulu and transcribe them back into English for data analysis. It was not easy to record data in English whilst it was being uttered in Isizulu.

Related to the above point, the level of literacy has been very poor, hence, the study didn't make sense to most of the subjects and they saw it as being provocative. The study site has not been 100% safe for one to conduct a study on. The researcher sometimes had to leave early due to some threatening comments that passers by could abruptly make.

3.6. Conclusion

In this chapter, the methodology used in this study is described. The preview of this study is provided by foregrounding the objectives that the study seeks to

pursue. The research instruments that was used in collecting data have been highlighted. I the context where the study took place is outlined by explaining the number of interview meetings that were successful. The data analysis plan is developed to examine the questions as they appear in the questionnaire and the interview schedule. The analysis of these questions is the basis for pursuing and answering the objectives and questions that the entire study seeks to answer. Finally, the limitations of the study was provided.

Chapter 4

Data analysis and communication of findings

4.1. Introduction

The main focus of this chapter is to analyse data for the purpose of providing reasonable answers to the research questions of this study. The objectives of this study are answered by a series of questions that respondents were asked using a questionnaire. The data is analyzed according to the various themes as set out in the questionnaire and interview schedule.

4.2. Findings of the study

4.2.1. Socio-economic characteristics

4.2.1.1 Family Member Characteristics

This information has been captured through the use of a survey interview schedule. About 80% of the households have a simple structure that consists of Fathers were found to be aged between 55-74. They are currently married and they don't have formal education and they have no constant income because they are either self-employed, unemployed or work as labourers, earning between <300-1699. Some are taxi owners who normally get around R300-R499 a taxi, depending on a number of taxis one owner may have. Normally these people are employed around Ndwedwe central and a nearby town called Verulam.

Mothers were found to be aged between 45-74. Most have some secondary education and they went to college to either study for teaching or nursing but are now retired. A minimum number of them have been housewives since then.

Those who are still working earn between R1500-R3099 per month. They have at least from 2 to 5 unmarried children, (aged between 5-34). Most of the children are at secondary and tertiary level institutions or unemployed. They also have 1 to 3 married children (aged between 15-34), most being occupied in a variety of professional and decent jobs and almost all of them are working and staying out of the province. The majority are based in Johannesburg, earning decent and market related salaries. Widowed and single parents head only about 20% of households.

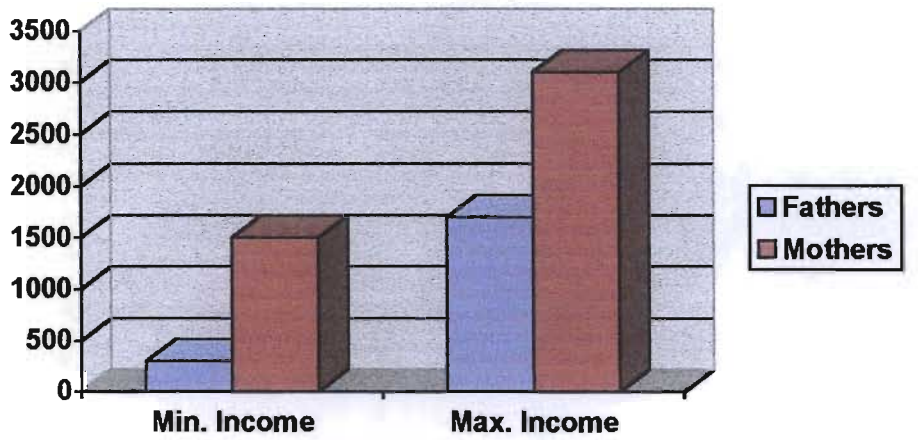

FIGURE 1: The difference in monthly income between fathers and mothers

4.2.2 Availability, accessibility and utilization of health care services

4.2.2.1 Availability of health care services in the area

All respondents stated that they had health care services in their area, though the health care institutions they are talking about may be far apart from each other. According to the information I have gathered from the subjects, there are at least **eight** health care service institutions around the Ndwedwe area, namely:

a) Isidumbini clinic
b) KwaNyuswa clinic
c) Montobello clinic — Hospital rather.
d) Ndwedwe community clinic **(see plate below)**
e) Wosiyana clinic
f) Tafamazi clinic
g) Osindisweni hospital — it's in Verulem not NdN
h) Dr. Zondi's surgery — where is this???

Plate 3, Ndwedwe Community Clinic

4.2.2.2 Place of Residence

The following places have been identified as areas where most of the subjects reside:

a) Magwaza
b) Luthuli
c) Mlamula
d) Gcwensa
e) Nyuswa
f) Qadi/Hlope
g) Nondwengu
h) Ndwedwe central
i) Ngongoma
j) Vumazonke
k) New Village
l) Wosiyane
m) Langa
n) Cibane
o) Shangase
p) Ngcolosi

There are about **sixteen** areas identified by the subjects, hence, one may confidently say that these areas constitute the entire Ndwedwe area. I interviewed a handful number of subjects in at least 45 households in these areas mentioned above. The eight health care centers mentioned in 4.2.2.1 are scattered around all the sixteen areas.

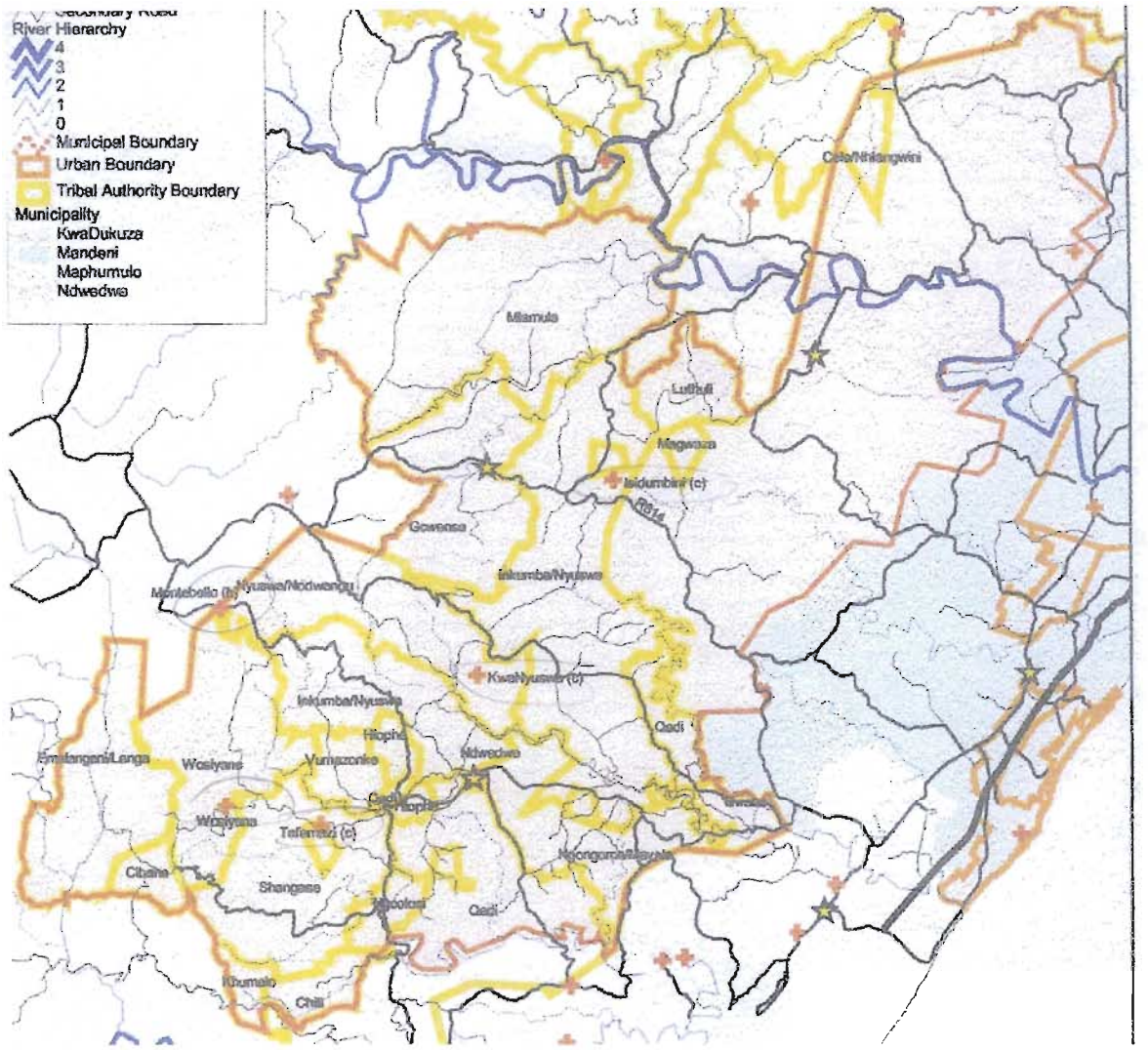

Plate 4, Map of the Ndwedwe area (Ndwedwe Municipality)

Adapted from the Surveyor General, HSRC, Dept. of Transport, Education Foundation, DWAF, DTLGA.

NB: Red crosses = clinics

4.2.2.3 Transport to Health Facilities and Type of Transport

Mode of Transport	Percentage
1. Buses	40
2. Taxis	30
3. Vans	15
4. Private Transport	5
5. Foot	10

TABLE 1: Mode of transport used by the respondents

At least 90% of the subjects try and manage to get transport to and from their health care service stations, and only 10% of the subjects go on feet due to varying reasons. Some of these people simple preferred walking to the health stations because they are not very far from their homes whereas some argued that they could not afford to pay for transport.

4.2.2.4 Distance to Health Care Facilities

The distance that the subjects could travel varies from 1 kilometre (km) to 20 kilometers. Note that those who can walk on foot could travel up to 6 kilometers, which is too far for a person who is seeking for medical attention to travel. From 7 km to 20 km, they only use transport as demonstrated in the table above. Also note that the majority use buses, which are very erratic, to go to health facilities. Sometimes the sick respondents had to wait a long time to get to the health

facility. That had caused serious harm to respondents' health because some of them could not even reach the facility after they had collapsed.

4.2.2.5 Other Health Assistance Received

About half of the subjects resort to traditional medicine for an alternative. This means that the majority of people require more health care service institutions in their areas. There are a few traditional healers that were mentioned by the subjects that heal at least 50% of the population, see table below. There are 5 Samgomas and 8 Inyangas they were mentioned by the respondents.

Sangoma	Inyanga
1. Mrs Goba	1. Mr. Mlambo
2. Mrs Mdima	2. Mr. Sosibo
3. Mamzimela	3. Mr. Mkhize
4. MaZondi	4. Mr. Khanyile
5. MaMfeka	5. Mr. Nkosi
	6. Mr. Xulu
	7. Mr. Mkhabela
	8. Mr. Zondi

TABLE 2: The number of Sangomas and Inyangas.

4.2.2.6 Cost of Transport and Health Assistance

Transport costs varies from R2 to R10 and health assistance costs varies from R5 up to R100, see the Table overleaf. This excludes the costs that are incurred from the traditional healers because they charge as they please and what they charge is not a standard fee as the other health care service stations may do. As a result of this, it becomes difficult to estimate what they exactly charge their

patients. One should also note that some of the people go to the surgery, hence, the cost may even reach R100 as shown above.

Transport Costs in Rands		Health Assistance Costs in Rands	
Minimum	Maximum	Minimum	Maximum
2	10	5	100
Average Cost for Transport		Average Cost for Health Assistance	
5		20	

TABLE 3: Cost of transport and health assistance

4.2.2.7 Influence of Distance on the use of Health Care Facilities

At least 65% of the subjects agree that distance does have influence on health care facility. The only main reason that kept on emanating from the responses is that the nearest health care service institutions that they could go to, are remote enough from their households to make them decide otherwise. This means that the main eight health care service centers that were identified are too limited for most of the people to access, hence, some of the people could not get medical assistance. The findings show that the majority of people in the Ndwedwe area do not have enough health care service institutions.

About 35% of the subjects have argued that they don't regard distance as a deterrent when they need health facility. They do everything in their power to make sure that they reach the nearest health care service stations. Some of the people say that the health care service centers are not that remote to their respective homes, hence, some of them could just walk to those centers.

4.2.1.8 Influence of Cost on the use of Medical Facilities

At least 70% of the subjects stated that cost did not deter them from using the facility. They normally don't find it difficult to get money when they need medical assistance. They even go to the extent of borrowing it form their neighbors, if the need arise. The main problem they are faced with in most of the instances is the distance they travel while being weak because of the illnesses they might be faced with at the time. However, they do cope because they are normally accompanied by other family members that would provide them with some basic necessities such as pain killers, umbrellas (in case of heat or rain) and general support that a sick person may need.

Only 30% of the subjects stated that cost deterred them from using health facility. They argued that sometimes when they got sick and did not have money they did not seek medical attention. They emphasized the fact that sickness did not announce when it approached, hence, it sometimes come when they did not have money. Some of the respondents stated that some of the health care service institutions charged exorbitant prices that they could not afford to pay and they therefore did not care to go for treatment.

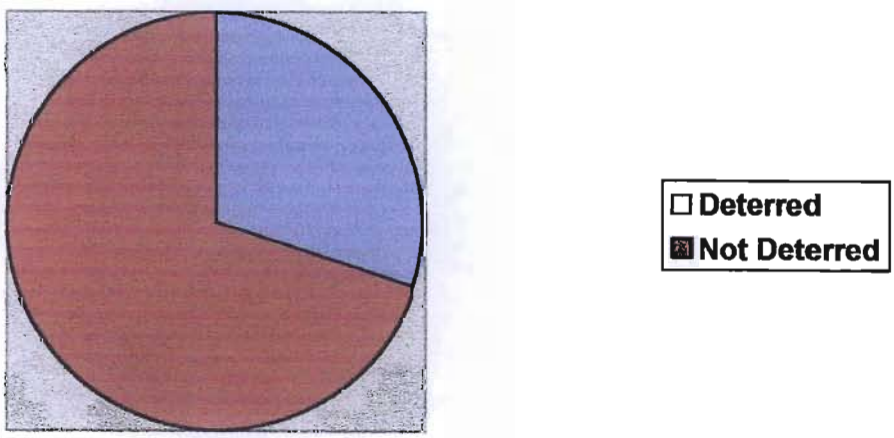

FIGURE 2: Influence of Cost on the use of medical facility.

4.2.2.9 Unavailability of Transport and the use of Health Facilities

Transport availability is clearly an important determinant to access to health care services, and the informal survey showed a strong relationships between perceived ease of access to a clinic and the availability of both a car and a public transport.

Greatest difficulties tend to be experienced where there is both poor public transport provision and lack of access to a car. In this regard, though people might have difficulties in securing transport as early as possible, they try by all necessary means to get it, hence, at least half of the subjects argued that they normally reach the health care center with some delay.

Others simply wait for public transport to pass by before they could attend a clinic and that also may cause some delays with regard to accessing medical attention. If the situation for a sick person is worse, for instance, people normally beg their neighbours who have cars to transport them to health care centers.

4.2.1.10 Availability of Emergency Services in the Area

Responses showed that there are of-course ambulance services in the entire area. In areas that are too far from town or from the Ndwedwe central there is normally a delay when they need an emergency service. They normally call the ambulance from a neighbouring town called Verulam, which is about 20 km away from Ndwedwe. The ambulance usually takes at least an hour to arrive. They sometimes turn to their neighbors for assistance with small cars in case of emergencies.

4.2.2.11 Rating of Quality of Health Care Provision

Rating	Percentage
Poor	60
Fair	30
Good	10

TABLE 4: Quality Rating of Health Care Provision

Table 4 shows that most of the people are not happy with the health care provision in their area mainly because they could hardly access the health care service institutions. Some of the people even go to surgeries in the nearest town called Verulam, refer Plate 5 overleaf, because they are dissatisfied with health care provision in their area. Verulam is quite a small town situated North of Durban, see Plate 1, page 45.

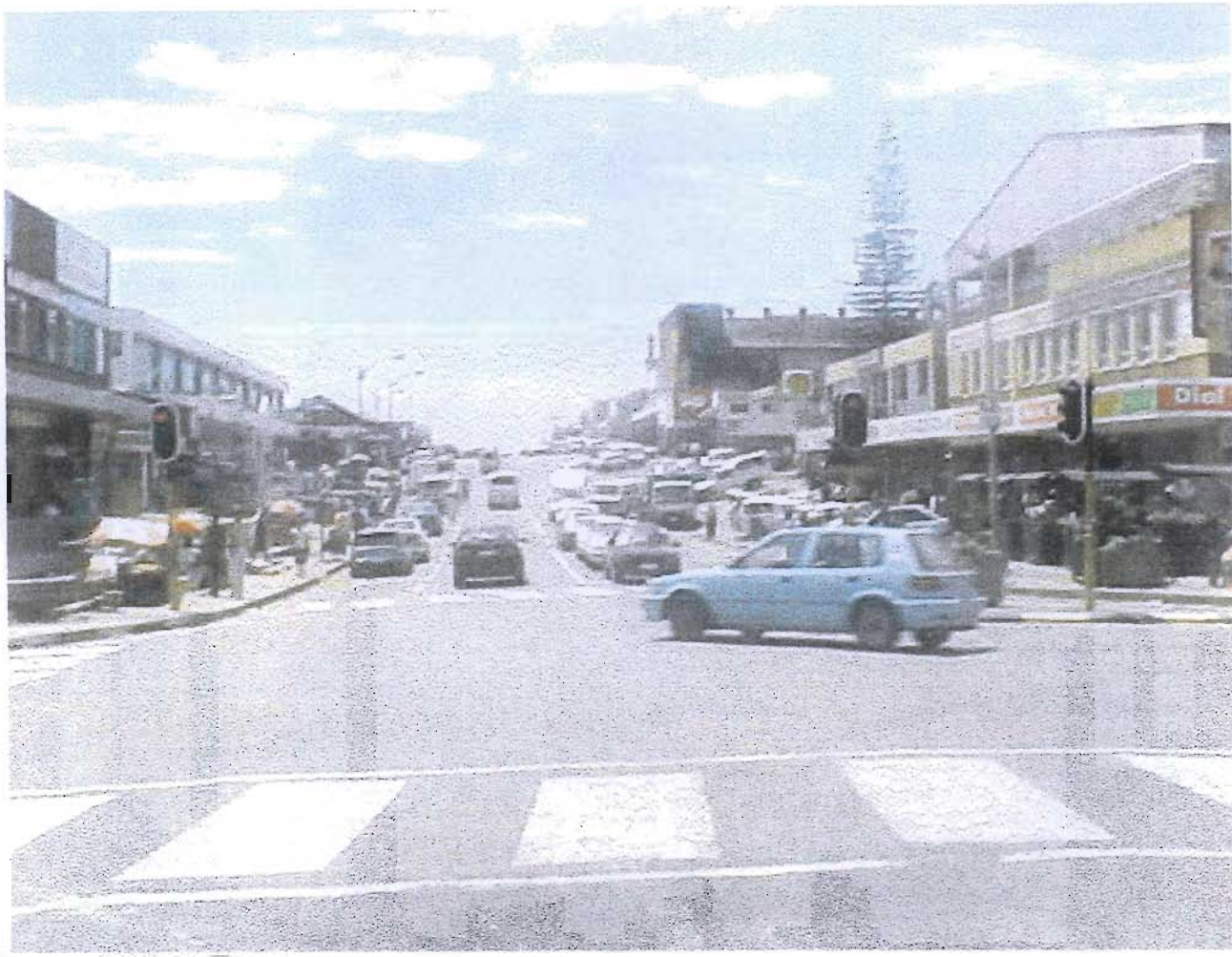

Plate 5, Verulam Town

4.2.2.12 Other Concerns of Respondents

Most of the subjects didn't want to provide any information on this aspect. However, some of them argued that there was nothing that they could do about the improvement of their health care service system. They felt that they just had to accept their situation.

4.2.2.13 Health status and the environment

Health status and the environment could be one of the determinants of health care need. It is however very important to note that obtaining data about health

status of the people could not be a practical thing to do but one could actually get some basic understanding on the impact that health status have in determining health care need. Most of the people who reside in the Ndwedwe area are elders who want to remain in rural areas until they die, hence, they are more susceptible to both minor and major illnesses due to their elderly situation.

Related to this factor, is the aspect of the environment where conditions in which people live may affect their health. According to my observation, people living in the area are more prone to indoor exposure to pollution because most of the families still use ground floor fires for their daily cooking. This normally causes infections like lung cancer and bronchitis, and these could only be treated in hospitals and clinics. Even small babies are affected by these indoor exposures and this has many financial implications.

4.3 Conclusion

The main focus of this chapter had been to analyze data for the purpose of providing reasonable answers to the research questions of this study. The objectives of this study were answered by a series of questions that respondents were asked using a questionnaire. The data was analyzed according to the various themes as set out in the questionnaire and interview schedule. The main findings of this study regarding socio-economic characteristics show that most of the people staying at Ndwedwe are elders who are retired, self-employed and unemployed. These people no longer have major sources of income, mainly because their children who are working stay remote to them and they send them money once in a while. In this regard, these people could hardly pay for their health care assistance.

The findings of the study show that even though there are some health care service institutions in the Ndwedwe area, there are simply not adequate. These institutions are far away from each other and from most of the people's

households, which makes it difficult for the people to access them. People living in those areas are more prone to indoor exposure (pollution) because most of those families still use ground floor fires for their daily cooking. This has serious health and financial implications especially for poor rural households. People should be educated and given health information on the effects of pollution in their households to prevent illnesses.

Chapter 5

Evaluation, Conclusion and Recommendations.

5.1. Introduction

The study seeks to examine the impacts associated with the availability, accessibility and utilization of health care services in a rural area - Ndwedwe. The study is significant in that it can help in understanding and learning more about what is happening in some rural areas with regard to health care provision. This study also examines the socio-economic characteristics of the sampled group. This chapter is going to evaluate the entire study and then suggest some possible recommendations thereafter.

5.2. Evaluation

According to the findings of the study, socio-economic characteristics show that most of the people staying at Ndwedwe are elders who are retired, self-employed and unemployed. These people no longer have major sources of income, mainly because their children who are working stay remote to them and they send them money once in a while. In this regard, these people could hardly pay for their health care assistance. They cannot even explore any means of making money because most of them are not that literate. The only practical solution may be to dispense more clinical services in all the 16 areas.

The findings of the study show that even though there are some health care service institutions in the Ndwedwe area, there are simply not adequate. These institutions are far away from each other and from most of the people's households, which makes it difficult for the people to access them. In the entire area, there are at least eight health care service centres that have been identified by the subjects although there are 16 areas in which the respondents reside.

This makes it even more difficult for people to easily get transport to the health care service stations especially for those who do not have a health facility in their area. People also have a transport problem as the bus service is irregular and there are delays in reaching health facilities. Taxis have proven to be a bit expensive when compared with buses, though they may be much faster than buses. The distance that they travel also make the bus and taxi prices even more higher. Most people chose to walk, some for a distance of about six kilometers. This is tiring and exhaustive especially when they are seriously ill.

The findings show that the majority of people in the Ndwedwe area do not have enough health care service institutions and the very services are not equally and evenly distributed amongst areas that constitute the entire Ndwedwe area. Another interesting finding is that most of the people from Ndwedwe do not regard money as one of the hindrances that may prevent them from going to the health care service stations. They borrow money to go to the health service stations. However, there are those who still feel that these institutions are charging more than they could afford.

The findings also show that most of the people who reside in the Ndwedwe area are elders who want to remain in rural areas until they die, hence, they are more susceptible to both minor and major illnesses due to their elderly situation. It then goes without saying that they require health service stations that are not remote from their households.

According to findings with relation to the environment, people living in those areas are more prone to indoor exposure (pollution) because most of those families still use ground floor fires for their daily cooking. This normally causes infections like lung cancer and bronchitis, and these could only be treated in hospitals and clinics. Even small babies are affected by these indoor exposures. This has serious health and financial implications especially for poor rural

households. People should be educated and given health information on the effects of pollution in their households to prevent illnesses.

5.3. Recommendations

From the findings of the study, a number of recommendations are suggested:

- First and foremost, it becomes clear that more health care centers are needed in the Ndwedwe area. A feasibility study, if possible, can be conducted with regard to getting more ideas about the people's needs in relation to health care service provision in most of the rural areas.

- If health care service centers are to be set up, they should be equally and evenly distributed in all 16 districts of Ndwedwe.

- This study should, if possible, go beyond its statement of purpose to look vehemently at the utilization of these services, such that it becomes easy for one to get some insight on the effectiveness of these health care service institutions.

- The department of health and other relevant stakeholders should be more proactive in identifying the most needy areas that do not have these services, especially in the underdeveloped rural areas. There are many rural areas one can mention that don't have even a single health care service center in the entire area.

- The department of health should also revisit and review the White Paper on health. The White Paper has been romanticized in such an extent that what it foregrounds becomes a contrast to what is really happening. It argues that its focus is on the disadvantaged and underdeveloped communities which is a contrast to the real situation whereby well developed communities are prioritized.

- Health education should be provided in rural areas to teach people about the dangers of indoor pollution.

- A reliable bus service should be provided.

- There is a need for emergency services to be located in Ndwedwe.

- Since most of the adults in the area are old, provision should be made for special services for the aged.

- To improve the socio-economic status of people, small scale development projects should be undertaken. People will be employed and earn incomes to have a proper diet and prevent illnesses. If they do get ill, they could afford transport to health care facilities.

5.4 Conclusion

This study examined the socio-economic characteristics of the sampled group. This chapter also examined the availability, accessibility and utilization of health care facilities in the Ndwedwe area by looking at different factors such as cost and quality of health service provision. This chapter evaluated the entire study and suggested some possible recommendations thereafter.

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APPENDIX 1 QUESTIONNAIRE

This questionnaire is designed for the purpose of getting some ideas regarding socio-economic characteristics of your family and the availability, accessibility and utilization of health care services in your area.

1. Family Member Characteristics

Area:	

Family members	**Relation to household head** 1	**Age** 2	**Sex** 3	**M/Status** 4	**Income** 5	**Employ status** 6	**Educ.** 7	**Place of employ** 8
Person 1								
Person 2								
Person 3								
Person 4								
Person 5								
Person 6								

Codes:

1. Relation to head

1. Head
2. Spouse of Head
3. Married child
4. Spouse of married child
5. Unmarried child
6. Grandchild
7. Father
8. Mother
9. Father-In-Law
10. Mother-In-Law
11. Sister-In-Law
12. Brother-In-Law
13. Other relative

2. Age

1. 5-14
2. 15-24
3. 25-34
4. 35-44
5. 45-54
6. 55-64
7. 65-74
8. 75-84
9. 84+

3. Sex

1. Male
2. Female

4. Marital Status

1. Currently married
2. Singe (never married)
3. Widowed
4. Divorced
5. Separated
6. Abandoned
7. Single Parent

5. Income

1. <300
2. 300-499
3. 500-699
4. 700-899
5. 900-1099
6. 1100-1299
7. 1300-1499
8. 1500-1699
9. 1700-1899
10. 1900-2099
11. Other (Specify)

6. Employment Status

1. Professional
2. Technical
3. Managerial
4. Clerical
5. Sales
6. Craftsman
7. Labourer
8. Retired/Pensioner
9. Housewife
10. Unemployed
11. Selfemployed
12. Other (Specify)

7. Highest Education

1. No formal educ.
2. Nursery
3. Pre-school
4. Primary
5. Secondary
6. Tertiary

2. Do you have any health care service institutions in your area? Yes or No, Circle the correct choice.

If Yes, how many and what kind are they eg. hospital/clinic/surgery etc. If the institution you are referring to has a name, please provide it.

_____
_____
_____
_____
_____

If you've answered No, where do you get health related assistance? NB: Even if you may get this kind of assistance outside your area, you can specify.

_____
_____
_____
_____
_____

3. Where do you exactly stay around Ndwedwe? Please specify the area.

_____

4. Do you have transport to get to those health service stations and what kind of transport do you use?

_____
_____
_____

5. What is your estimation of the distance you travel to get there?

_____

6. Apart from these services referred to above, is there any kind of health assistance you get from the members of your society? Specify, for example, traditional medicine.

_____

7. Please estimate how much do you normally pay for the expenses incurred both for transport and health assistance?

_____

8. Does distance you travel to seek medical attention influence your decision to go to the health care service institution? **Yes** or **No,** Circle the correct choice.

How?

9. Does lack of enough financial means (money) at the time you need medical attention prevent you from going to the health care institution? **Yes** or **No,** Circle the correct choice.

If **Yes**, How and What do you then do? If **No**, where do you get financial assistance?

10. Does the unavailability of transport at a time you need medical attention prevent you from going to the health care institution? **Yes** or **No,** Circle the correct choice.

If **Yes**, How and What do you then do? If **No**, How and Where do you get transport?

11. Do you get emergency services in your area? Ambulance etc. **Yes** or **No**
If **Yes**, what kind of emergency services do you get? If **No**, what do you then do in cases of emergencies?

12. How would you rate the overall quality of health care provision in your area? **POOR / FAIR / GOOD / EXCELLENT** Circle the correct choice.

Why?

13. Do you have any other information you want to provide concerning health care services in your area? **Yes** or **No.** Circle the correct choice.

Please provide details

Interview Schedule

14. Does physical environment has any effect on your health? Yes/No. Explain how.

15. How would you rate your health status? Why?
SATISFACTORY / UNSATISFACTORY