TUBERCULOSIS: A SOCIAL WORK PERSPECTIVE

BY

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DECLARATION

I Tebogo Shima Kingsley MABE, declare that the dissertation for the degree of Doctor of Social Sciences in Social Work at the University of North West, hereby submitted, has not been previously submitted by me for a degree at this university or any other university. I also declare that this is my own work and execution and that all the material used and contained herein has been duly acknowledged.

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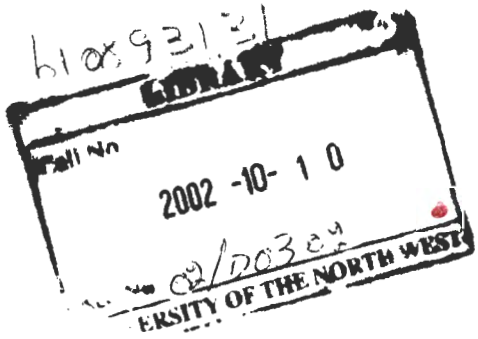

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SUMMARY

Tuberculosis is declared by the health authorities as a social disease, which needs speedy attention. As a social disease and its spread being precipitated by unfavourable social circumstances, especially poverty, this has become a concern to social work profession as it strives to alleviate and eradicate poverty. The social workers thus have little or limited knowledge and skills in assisting tuberculosis patients. This research is aimed at exploring how social workers feature in rendering social services with the view of combating the spread of tuberculosis.

An indepth theoretical study was undertaken to discuss tuberculosis broadly. The extent, nature, symptoms and treatment modalities of tuberculosis have been discussed. Poverty as a precipitator to tuberculosis has been explored. Unfavourable social circumstances that are related to tuberculosis have also been discussed.

The impact of tuberculosis unto the patient himself and his family has been looked at. Tuberculosis control measures and the roles and tasks of social workers in combating tuberculosis have been discussed.

The sample for this research consisted of 150 tuberculosis patients admitted in sampled hospitals of the North West Province and 20 community members of Motlhabeng village in Mafikeng. Data was obtained through questionnaires that were administered to the respondents. A case study was also selected to give an account of a tuberculosis patient's circumstances as well as the intervention performed by a social worker.

From the literature and empirical findings, it became apparent that tuberculosis is precipitated by poverty and that social workers need to be highly involved in combating the spread of tuberculosis.

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CHAPTER 1

GENERAL INTRODUCTION

1.1. INTRODUCTION

Tuberculosis is regarded as a social disease, as it has been associated to and precipitated by factors like poverty and HIV/AIDS. It is declared a priority by the World Health Organization, which needs speedy and appropriate attention. Since South Africa is a member of World Health Organization, tuberculosis is put number one in the agenda of the South African National Department of Health. According to Dr Kats of South African State Vaccine Institute in Cape Town, more people in South Africa die of tuberculosis than HIV and AIDS (Sowetan Newspaper, 2000:2).

With the emphasis on the socio-economic nature of the disease, tuberculosis affects people who are living under unfavourable social circumstances such as poor housing, overcrowding, malnutrition, unemployment and poor hygienic standards.

Since social workers are involved in improving the quality of people's lives, they need to be heavily involved in the combating of tuberculosis, which is considered to be a social disease.

It was discovered that that social workers have little or no knowledge with regard to tuberculosis, thus this research was sought.

1.2. PROBLEM STATEMENT

Tuberculosis is a major health problem worldwide. According to the World Health Organization, tuberculosis is one of the most prevalent infections of human beings and contributes considerably to deaths around the world. It is the infectious disease that causes the most deaths in the world today. One quarter of all preventable deaths in adults today are due to tuberculosis. Globally, it is estimated that approximately one third of the global population, nearly two billion, is infected with tuberculosis and that seven to eight million new cases of tuberculosis occur each year. Annual tuberculosis mortality is between two to three million people, making this disease the most common infectious cause of death in the world. Should the trend continue, there would be 10.2 million new cases of tuberculosis worldwide by 2005. Asia is the most affected continent in the world. Africa is expected to overtake Asia by 2005. In the United States, the annual incidence of tuberculosis is considerably lower than in developing countries. Nonetheless, tuberculosis remains an important problem in this world and the impact of tuberculosis has worsened in recent years (World Health Organization Report, 1998:98).

In South Africa, the National Department of Health joined forces in June 1996 with international experts to assess the tuberculosis situation in South Africa.

The team confirmed that South Africa has one of the worst tuberculosis epidemic situations in the world and it is estimated that its current pace is that one out of every twelve South Africans will become sick with the disease in the next ten years (Singer, 1997:1). It is also noted that the disease rate is more than double that observed in other developing countries and up to 60 times higher than those currently seen in the USA or Western Europe.

As tuberculosis is linked with poverty and related issues, social workers need to feature with the aim of improving the quality of people's lives. The social conditions

which people live in and that perpetuate the spread of tuberculosis need to be improved through the intervention of social workers.

Another hot issue related to tuberculosis incidence is HIV and AIDS. A number of conditions that are associated with altered host cellular immunity like HIV and AIDS increase the risk of developing tuberculosis.

The problem statement emphasises two important dimensions viz. firstly, that tuberculosis is on the increase. This implies that measures to combat the disease have either been insufficient or ineffective. Secondly, that socio-economic factors play a major role in the causation or relapse of the disease. This implies that the social work profession with its possible contribution to combat the disease has until now been ignored hence the increase of the disease.

1.3. SIGNIFICANCE OF THE STUDY

Since tuberculosis mostly affect the people living under unfavourable circumstances, social workers will benefit from this study as they would be equipped with knowledge and skills to combat and prevent the disease as well as assisting the tuberculosis patients more effectively and efficiently.

The state as the provider of basic needs will improve on the services and programmes that are being provided to the people. For example, providing more houses to overcrowded communities, providing health care services to marginalized rural communities, providing water supplies and providing jobs to the unemployed.

1.4. OBJECTIVES

The study is aimed at the following objectives: -

- To investigate the extent, nature, causes, symptoms and treatment of tuberculosis
- To determine the impact of tuberculosis on the patient and the family
- To identify tuberculosis preventative and control measures
- To determine social work intervention in assisting the patient and the family to cope with the impact of tuberculosis

1.5. HYPOTHESIS

The hypothesis for this study is "Unfavourable social circumstances facilitate the extent and spread of tuberculosis".

1.6. RESEARCH METHODOLOGY

The research methodology used is as follows: -

1.6.1. Research Design.

Tripodi in Grinnell (1981:198) declares that research design includes the entire process of research. He states, that, "the purpose of research design is to provide a set of systematic procedures for producing data pertaining to the development, modification or expansion of knowledge".

Schuer (1988:149) is of the following opinion with regard to research design, "the design specifies the unit of analysis, the sampling procedure, the variable on which information is to be obtained, the data collection and measurement procedures, the plan for the analysis of data".

The purpose of research design is therefore the provision for answering social questions. It can be seen as a scheme, the structure and strategy according to which investigation can be done, that is the indicator or the way in which the investigation can be undertaken.

Descriptive design is used in this study. Nottel (1990:25) view descriptive design as a way of finding out what the facts are in relation to a particular problem. Similarly Grinnell (1981:301) says the purpose of descriptive design is to obtain data about a problem.

The relationship between unfavourable social circumstances and tuberculosis was looked at.

1.6.2. Sampling.

Phillip (1991:113) view sampling as the selection of study subjects from the target population.

Similarly Uys and Bason (1990:85) and Pilot and Hungler (1990:207) define sampling as the process of selecting a portion of the population to represent the entire population.

The target populations for this study were the following:

- Tuberculosis patients
- Family members of the patients and
- The community members

All the provincial hospitals in the North West Province were sampled. By means of simple random sampling only ten (10) hospitals were drawn from the identified list.

From the ten (10) selected hospitals the list of tuberculosis patients was obtained at a given time. By means of systematic random sampling fifteen (15) patients were selected from each hospital. Thus the total number of patients interviewed was one hundred and fifty (150).

In an effort to determine the social background from which the patients originated, only one case study was undertaken. This case study also included interviews with the family of the selected patient. See annexure C for the case study.

The researcher used simple random sampling, for the community members, by targeting Motlhabeng Village near Mmabatho in the North West Province. The researcher got the map of Motlhabeng Village from Geographic Information Services in the North West. It was from that map that twenty (20) housing units were selected. Although twenty (20) community members are not representative, this was done to give the tendencies of knowledge of the community about tuberculosis.

1.6.3. Data collection methods.

The following methods were used to collect data, namely:

- Literature review
- Personally administered questionnaires
- Case study and records

1.6.3.1. Literature review

Uys and Bason (1990:15) state that a careful study of the available literature is an essential activity of scientific research projects. Thus literature review enabled the researcher to acquaint himself with what has already been done and what is currently being done on the problem. It also helped the researcher to obtain the most recent facts relevant to the problem and to delineate the problem more effectively. It also assisted the researcher to generate ideas useful for the design and for the processing of data.

Similarly Pilot and Hungler (1980:80) states that literature studies play several interrelated roles in the progress of science. The overall purpose of theory is to make scientific findings more meaningful and generalizable.

The researcher thus undertook an extensive and systematic examination of the literature relevant to the study.

1.6.3.2. Personally administered questionnaires.

Questionnaires were constructed to both the tuberculosis patients and the community members and the following main areas were included in the questionnaires: background knowledge of the patients and community members, personal particulars, knowledge with regard to the causes of the disease with emphasis on the social aspect of the disease, the effects of the disease on the patient himself and on the family and possible measures to prevent the disease.

1.6.3.3. Case studies and case records.

A family of a tuberculosis patient was selected and followed up. The family was treated as the source of information about tuberculosis rather than being the object of intensive analysis. See annexure C.

According to Pilot and Hungler (1990:299) excellent records are kept routinely and systematically within the hospitals. These records were used to gather information pertaining to the extent, nature, prognosis and relapse trends of tuberculosis patients

Statistical information was obtained from institutions like Human Science Research Council, Medical Research Council, South African Tuberculosis Association, National and Provincial Health Departments, Tuberculosis Research Institution and World Health Organization.

1.6.4. Data analysis and research findings.

One of the data analysis methods used for this study was aggregation, where a number of factors, responses and feelings are put together to come up with a general aggregate response (Uys and Bason, 1990:99). The descriptive statistics (frequencies and percentages) was also applied to analyse and interpret responses of respondents

as these statistics are used to describe and synthesize data obtained from empirical observation and measurements (Lekate, 1993:43). In addition, graphic presentations were also used.

The researcher used statistical methods for this study, as the data received and obtained were quantitative. According to Pilot and Hungler (1990:370) statistical methods are techniques for rendering quantitative information meaningful and intelligible. Without the aid of statistics, the quantitative data collected would be little more than a chaotic mass of numbers. Therefore the statistical procedures enabled the researcher to reduce, summarize, organize, evaluate, interpret and communicate numerical information.

1.7. DEFINITIONS OF CONCEPTS

For the context of this study, the following concepts will be defined, namely unfavourable social circumstances, tuberculosis, contact, communicable, health, disease, illness and sickness, family, patient, social work and social intervention.

1.7.1. Unfavourable social circumstances

According to Longman Dictionary (1984:40), unfavourable social circumstances are disadvantageous conditions under which people live.

The following are the definitions of unfavourable circumstances: -

- Inaccessibility to health services > The facilities are not within reach of the people geographically, financially and otherwise. Geographically people walk long distances to seek medical assistance while financially people are unable to pay for the assistance and services obtained (World Health Organisation, 1987:20).

- Malnutrition > This in its strictest sense is usually used to describe the state resulting from insufficient caloric intake (Whole and Wong, 1987:127). However malnutrition may result from a dietary intake that is quantitatively or qualitatively inadequate or both. Examples of malnutrition conditions are kwashiorkor and marasmus.

- Overcrowding is an excessive occupation of living space to such an extent that the accepted requirements for health and privacy of the individuals cannot be met (New Dictionary of Social Work, 1984:43).

- Poor ventilation > It is a lack of circulation of fresh air (Coolcan, 1994:249).

- Unemployment > It is a state of being without job opportunities, for those who would like to work (Treece, 1990:403).

1.7.2. Tuberculosis

According to Baber, Strokes and Billings (1997:818) tuberculosis is an infectious disease caused by acid-fat bacillus mycobacterium tuberculosis. It may cause disease in any part of the body but the lungs are the usual sites where the bacterium slowly destroys the tissues of the lungs.

1.7.3. Contact

A contact is an individual known to have been sufficiently near an infected person or have been exposed to the transfer of infectious material (Dorland's Pocket Medical Dictionary, 1993:165).

1.7.4. Health

Health is a complex phenomenon. It is defined as a state of complete physical, mental and social well-being and not merely the absence of a disease. Despite this broad definition, health is traditionally assessed by observing mortality (deaths) and morbidity (illness) rates over a period of time (Whole and Wong, 1987:3).

1.7.5. Disease

Dimond and Jones (1989:3) view disease as a state of non- health or a state in which the body is suffering from malfunctioning of more organs.

1.7.6. Illness and sickness

Illness denotes a personal event since it refers to the subjective perception of a symptom and the evaluation of that symptom. Illness becomes sickness when it becomes a social phenomenon, that is, when it becomes visible to others or is communicated to others (Whole and Wong,1987:4).

1.7.7. Family

According to Zastrow (1989:380) a family is a social institution with many functions. The family provides emotional support and nurturance needed by its members. The family also provides economic support to the children in particular and it has the responsibility of transmitting culture to the children.

There are two kinds of families namely: -nuclear and extended families. The former consist of a father, mother and children if any and the latter consist of the nuclear family plus grandparents, aunts, uncles, siblings and so forth.

For the context of this study both kinds of families will be used as they both reflect the tradition of black people in particular.

1.7.8. Patient

According to Dorland's Pocket Medical Dictionary (1993:523) a patient is a person who is ill or who is undergoing treatment for a disease.

1.7.9. Social work

Social work is a profession that is concerned and involved with the interaction between people and the institutions of society that affect the ability of the people to accomplish life tasks, realize aspirations and values and alleviate distress (Zastrow, 1989:8).

Similarly Baer and Frederico (1987:49) identified the following as the purposes of social work namely to enhance the problem solving, coping and developmental capacities of people, to promote the effective and human operation of the systems that provide people with resources and services and to link people with systems that provide them with resources, services and opportunities.

1.7.10. Social intervention

According to the New Social Work Dictionary (1984:61) social work intervention is a process whereby professional methods and specific techniques are used to prevent, alleviate or alleviate problems to promote social functioning of a client system.

1.8. LIMITATIONS OF THE STUDY

While every effort was made to achieve the objectives of the study as outlined in 1.4, difficulties arose in the course of planning and implementation, which limited the degree of success achieved.

- ❖ It became apparent that to construct a statistically valid and reliable sample survey in order to ascertain the views of the people was desirable but impracticable. The researcher thus used both non- probability and probability sampling, the findings of the study may not be representative of the phenomenon.

- ❖ The researcher has concentrated geographically on the North West Province, as covering the whole country would have been a mega study, and this will obviously not be representative of the whole country.

- ❖ All the respondents were Blacks and this might have affected the findings of the study not reflecting the entire scenario of all population groups in the country.

- ❖ Since the researcher himself administered all the questionnaires, the study was expensive and time consuming. Questionnaires had to be administered over weekends and after hours, which was very inconveniencing. Travelling had to be taken at own cost through out the study to make follow-ups.

It must lastly be remembered that all research studies have limitations usually for the reasons listed. Moreover, no author of a thesis is without shortcomings.

1.9. DIVISION OF THE THESIS.

This thesis consists of the following chapters excluding this chapter: -

Chapter 2: The extent, nature, causes, symptoms and treatment of tuberculosis.

Chapter 3: Poverty in relation to tuberculosis.

Chapter 4: The impact of tuberculosis on the patient and the family.

Chapter 5: Tuberculosis control

Chapter 6: Social work and its relevance to the combating of tuberculosis

Chapter 7: Empirical findings

Chapter 8: Summary, conclusions and recommendations

CHAPTER 2

THE EXTENT, NATURE, CAUSES, SYMPTOMS AND TREATMENT OF TUBERCULOSIS

Abstract

Each year there are still some 8 million cases and 2 million deaths from tuberculosis (TB), making it the commonest cause of death among women in the developing world, and, worldwide, it ranks seventh in the list of causes of loss of healthy life. And yet a cost-effective package for TB control, do not exist, based on case findings and treatment. Neglected for decades, research on tuberculosis (TB) is reviving. Research fundings in TB has increased from between $19 and $33 million per year during 1991-1993 to nearly $100 million in 1995, but this still does not match the size of the disease burden. Furthermore, recent analysis suggests that research into health policy, health systems and service delivery is being neglected, in spite of the probability that such research could produce significant short and medium term gains in TB control. The World Health Organisation (WHO) responded by establishing the Global Tuberculosis Research Initiative to provide a rational argument for increases in tuberculosis research, to ensure that recent increases in support of the development of new tools are maintained, and to rectify the neglect of health systems and services research. The Initiative is stimulating development of new diagnostic tests, and has analysed the reasons for comparative inaction in the pharmaceutical industry in research and development for new anti-TB agents. In response to the needs expressed by control programme managers research has begun into ways of costing TB control programmes, into the reasons for the high male/female ratio in reported cases, and the provision of care by the private sector, and by community based organisations (Global Tuberculosis Research Initiative, 2000:9).

2.1. INTRODUCTION

Reference has repeatedly been made to the declaration by the World Health Organisation to the effect that tuberculosis must be regarded as an emergency. This is in itself an onymous statement, and unfortunately, in South Africa the disease is by no means under satisfactory control.

Over the past decade efforts to quantify the burden of ill health and premature mortality have brought TB out of the shadows and into the spotlight as a major, and largely unsuspected, contributor to the world's burden of diseases. Recently the WHO and its partners have carried out the first estimate of the total number of new cases and deaths based on the best available information in each country. In 1997 there were some 7.9 million new cases and around 1.86 million deaths. This makes TB the commonest cause of death in the developing world, and, worldwide, it ranks seventh in the list of causes of loss of healthy life.

In contrast to most communicable diseases these numbers are expected to grow in the next two decades with the risk that, unless extra steps are taken to control it, it is estimated that between 2000 and 2020, nearly one billion people will be newly infected, 200 million people will get sick, and 35 million will die. The main reasons for this are the expansion and aging of the world's population, particularly in regions of the world where high prevalences of TB pertain. The human immune-deficiency virus (HIV) and the emergence of multi-drug resistant tuberculosis (MDR TB) are additional causes.

Indepth discussion with regard to the extent, nature, symptoms and treatment of tuberculosis will be discussed in this chapter.

2.2. THE EXTENT OF TUBERCULOSIS

This section will explore the extent of tuberculosis. Africa as a continent and Southern Africa as a region will be looked at. Lastly the South African situation will also be looked at.

2.2.1. Africa and Southern Africa

According to the 1997 reports of the World Health Organisation (WHO) on the tuberculosis epidemic a bleak picture of the global spread of tuberculosis was painted. In the 216 reporting member countries of the WHO, representing a total population of 5,72 billion, there were an estimated 7,4 million new cases of tuberculosis in 1995. This represents a rate of 130 cases among every 100 000 persons.

Similarly Wilkinson (1992:424) states that tuberculosis has emerged in the last 25 years as the single most important bacteria pathogen threatening the global health control having been responsible for more than quarter of preventable adult deaths worldwide. He also says that an estimated number of 7,4 million people has developed tuberculosis in 1995, with 1,3 million of these residing in Africa and with South Africa particularly hard hit.

In Africa, tuberculosis case rate is 216 per 100 000. The 11 countries of the Southern Africa sub-region contribute approximately 275 000 cases every year to the total caseload in Africa. Almost half of these cases come from South Africa (Fourie, 1999:1).

In an analysis of tuberculosis trends and the impact of HIV infection on the situation in the sub-region, it is estimated that by 2001 the smear positive case rate would have increased from 198 per 100 000 population for the region as a whole, to 681 per

100 000 if tuberculosis control efforts are not optimised. To aggravate the situation, 69% of these cases would be directly attributable to HIV infection.

According to TB Times 2000, of the ten countries with the highest incidence rate of TB per capita, nine are in Africa. Four of the nine are in Southern Africa (South Africa, Democratic Republic of Congo, Tanzania and Zimbabwe). These four countries contributed 29% of the total African incidence.

An estimated 7 302000 persons are co-infected with tuberculosis and HIV in Africa. Of these TB and HIV persons, 31.5% (2 301 000) reside in the four high incidence TB countries mentioned above. These TB/HIV co-infected persons represent one-fifth (21.6%) of the global TB/HIV co-infected pool. Of the 22 highest tuberculosis incidence countries in the World, Zimbabwe has the highest rate of co-infection (4603 per 100 000) and Tanzania the sixth highest (1026 per 100 000).

Tuberculosis in Malawi has shot up massively from only 5 000 cases in 1995 to almost 30 000 in 2000. The Malawi National Tuberculosis Programme Manager, Dr Felix Salaniponi, says" tuberculosis currently kills 25 Malawians each day, and that were most likely linked to HIV/Aids". The twin epidemic of HIV and Tuberculosis is creating health, social and economic chaos in the country he warned.

The table below reflects the prevalence of tuberculosis in Southern Africa by country in 1996.

Tuberculosis in Southern Africa by country in 1996

Country	Population (x1000)	Proportion of total population in region	New TB cases	New TB rates per 100 000 population	New SM+(infectious) TB case rate per 100 000 population
Angola	11469	8.2%	14340	125	70
Botswana	1531	1.1%	6499	424	156
Lesotho	2105	1.5%	4133	196	85
Malawi	11373	8.1%	20599	181	63
Mozambique	16537	11.8%	12587	76	63
Namibia	1580	1.1%	6291	398	178
South Africa	42388	30.3%	89861	212	87
Swaziland	879	0.6%	3893	443	253
Tanzania	30536	21.9%	43049	141	70
Zambia	9715	7.0%	38863	400	124
Zimbabwe	11557	8.3%	35735	309	103
Total	139670	100.0%	275850	198	114

Source: ET Maganu, WHO Liaison Officer, South Africa

Estimates by the MRC National Tuberculosis Programme indicate that current trends in the epidemic will continue unless effective control is achieved, resulting in 3,5 million new cases of tuberculosis over the next decade and at least 90 000 patients dying. The financial implications are staggering. Given that more than US$3 billion would be required in the next 10 years if current increases in tuberculosis rates are allowed to continue unabated. A significant reduction in transmission of HIV infection together with effective tuberculosis control would mean a turn-around in the

tuberculosis epidemic by the year 2003. At least 1,7 million tuberculosis cases will be prevented and more than US$400 million would be saved.

On the positive side, however, tuberculosis was declared a top health priority by the South AfricanDepartment of Health in November 1996 and the former National Health Minister, Dr Zuma committed her Department to implementing a new control programme based on the DOTS strategy of the World Health Organisation. The pace and extent of implementation of the programme is, however, slow in most provinces. Since 1996, a system of case registration based on strict criteria for case definition was implemented in South Africa. These registrations, based on standardised criteria, are now beginning to present a clearer picture of disease rates in the country than what was available before.

Some progress is being made in certain provinces in South Africa. Mpumalanga (despite relatively high HIV rates) and the Western Cape are already showing dramatic improvements in cure rates, because of disciplined implementation of the DOTS strategy of the WHO in these provinces. Other provinces are at various stages of implementation of the process.

2.2.2. South Africa

According to the Medical Research Council-National Tuberculosis Research Programme, South Africa is burdened by one of the worst tuberculosis epidemics in the world, with the disease rate of more than double those observed in other developing countries and up to 60 times higher than those currently seen in the USA or Western Europe.

The Medical Research Council estimated that the country had 55% reported tuberculosis cases in 1997 or 419 per 100 000 of the total population. Of these cases, 32,8% was probably infected with HIV. Although South Africa has lagged behind

other African countries in terms of HIV incidence (probably because of geographical, social and political barriers), the HIV epidemic has increased rapidly and exponentially during the last 6 years.

The tuberculosis problem in South Africa is largely a result of historical neglect and poor management systems, compounded by the legacy of fragmented health services. Prior to the introduction of the Tuberculosis Register in 1995 cure rates were unknown, and consequently control efforts could not challenge poor performance. The implication of this failure is evident from the fact that in 1997 a cure rate of only 54% could be recorded, with the consequence of continued high rates of transmission in the country.

Klaudt (1997:32) says "South Africa has one of the highest recorded incidence rates of tuberculosis in the world". Despite its advanced economic base, South Africa, has declared tuberculosis as a health priority.

Tuberculosis is at present the leading infectious killer of youths and adults in South Africa and it is estimated that it kills almost 1000 people every month. It is estimated that about two thirds of the population in the country harbours the tuberculosis germ which is brought about by the daily contact with contagious persons.

According to Brink (1998:71) tuberculosis is one of the biggest health problems in South Africa if one takes account of the suffering and financial burden, which it causes the community. It is one of the five most important causes of death in people between 20 and 45 years amongst the coloureds and black population groups.

Van Rensburg (1987:145) also states that of all the notifiable diseases in South Africa, the highest notification rate is that the actual number of people who suffer from tuberculosis was given at 41 038 in 1996. Out of the 41 038 tuberculosis cases, 18%

interrupted their treatment and many of these, 15 520 patients, are still out in the community potentially spreading the disease (Matsha, 1998:1).

Similarly Klaudt (1997:32) states that at least one half of South Africa's 42 million people are believed to be infected with tuberculosis. Normally, only one in ten of these would be expected to develop active tuberculosis. But today the proportion is increasing as HIV, which weakens the immune system that can keep tuberculosis in check, is spreading rapidly throughout the country. Health authorities predict that the incidence of tuberculosis will rise by 10-20 percent every year because of the presence of HIV in the population.

On the same note Masinyana (1989:1) view tuberculosis as a common infectious disease in South Africa which accounts for 83% of all notifiable diseases. It is responsible for four new cases and one death each minute at a cost R112 million annually.

According to the statistics of Health Systems Research and Epidemiology Directorate of National Department of Health as at 11.May.98, the following are the notified and reported cases of tuberculosis in South Africa from 1990 till 1997 per province:

Province	1990	1991	1992	1993	1994	1995	1996	1997
Eastern Cape	17583	13207	14370	17886	15712	10799	12710	15236
Free State	11483	9722	9063	13000	14417	8916	8128	7573
Gauteng	10899	11124	11592	12998	11391	13045	12728	11893
KwaZulu-Natal	11003	11202	11563	9704	10354	9542	9440	13189
Mpumalanga	1752	2408	2642	2412	2550	2327	2874	3317
Northern Cape	2430	2611	2629	3130	3372	3041	3297	3462
Northern Province	2329	2065	2736	2663	2289	2502	3045	2496
North West	1416	2144	2886	3723	3778	5176	3843	7819
Western Cape	21320	23018	24832	24858	26458	19004	22039	15289

According to the above table Western Cape is the province that has the highest notified and reported cases of tuberculosis.

This is similar to what the South African Nobel Peace Receiver Archbishop Desmond Tutu has said at the commemoration of the World Tuberculosis Day in Cape Town that "The Uitsig community in the Western Cape has the highest incidence of tuberculosis in the world".

Similarly, the table below reflects the mortality rate. It is noted that in 1997 Eastern Cape had the highest mortality rate of 983 cases, while Mpumalanga had least mortality rate of 90 cases.

Province	1990	1991	1992	1993	1994	1995	1996	1997
Eastern Cape		499	527	535	481	571		983
Free State		168	245	301	267	305		116
Gauteng		205	247	232	262	353		288
KwaZulu-Natal		92	69	50	48	45		245
Mpumalanga		37	47	37	26	45		90
Northern Cape		148	142	165	184	234		153
Northern Province		229	247	281	363	270		277
North West		56	57	59	85	85		178
Western Cape		556	551	690	889	997		357

Given the above statistics, one is of the opinion that tuberculosis is increasing on an annual basis and it is a really infectious killer disease which need speedy attention.

2.3. ETIOLOGY

Tuberculosis is a bacteria infectious disease transmitted by mycobacterium tuberculosis. It usually involves the lungs, but it also occurs in the kidneys, bones, lymph nodes and meninges, and can be disseminated throughout the body (Sharon

and Collier, 1992:468; Crofton, Horne and Miller, 1992:7; Porter and McAdam, 1994 and Kersten, 1990:182).

According to Brewis, Gibson and Geddes (1990:987-988) mycobacterium tuberculosis is a rod shaped, usually about 5µm in length and 0.2-0.6m µm in width. It may be slightly curved and tend to occur in clusters. It often has a beaded appearance.

Strickland (1990:383) in agreement with Brewis et al. (1990:987-988) says, "mycobacterium is an obligate aerode, a no mobile, slender rod of 2 to 4 µm in length and 0.2 to 0.4 µm in width".

Ignatavicius and Marilyn (1991:2042) further states that mycobacterium tuberculosis is a no motile, non-sporulating and acid-fast rod that secrets niacin. Mycobacterium has a distinguishing stainable property of acid fastness (i.e. not decolonised by acid alcohol when stained with carbolfulchsin (Crofton et al., 1992:13).

Strickland (1009:383) is of the opinion that the waxy cell wall that is responsible for the acid fastness prevents penetration of other dyes. It fails to take up other stains. Similarly Porter and McAdam (1994:14) state that when clinical specimens containing the bacterium are examined under the microscope after staining with dyes, they retain the dye even after being wasted with acid alcohol.

Mycobacterium tuberculosis is usually spread via airborne droplet nuclei which are produced when an infected person cough, sneeze or speak. Only people who are sick with tuberculosis are infectious. Once the tuberculosis germ is released into a room, the organisms are dispersed and can be inhaled by a susceptible host. Brief exposure to a few tubercle bacilli rarely causes an infection. Rather, it is more commonly spreading to individuals who have had repeated close contact with an infected person (Sharon and Collier, 1992:468).

In agreement with Sharon and Collier (1992:468), Ames and Kneisl (1990:386) states that the organism is transmitted by inhaling invisible infective particles (droplet nuclei) produced when an infected person speaks, coughs, laughs or sneezes. Larger infected inhaled particles are removed by mucoliary action of the respiratory airways. Bacteria that land on furniture or other surfaces are not contagious, since they can no longer be inhaled and are usually killed by ultraviolet rays of sunlight. Transmission generally requires close, frequent or prolonged contact with the infected individual.

Similarly Porter and McAdam (1994:14) say, "mycobacterium tuberculosis is acquired via airborne transmission. Coughing produces tiny infectious droplet called droplet nuclei, which can remain suspended in the air for long periods of time unless they are removed by ventilation, filtration or ultraviolet irradication".

Having looked at various authors' opinions with regard to the etiology of tuberculosis, one could summarise by saying that tuberculosis is an infectious disease by the acid-fast bacillus called mycobacterium tuberculosis. The bacillus most often affects the lungs, although any part of the body may be affected. The bacillus is mostly found in unfavourable conditions like crowded places where there is lack of proper ventilation and ultra-violet rays. Infection is acquired by inhaling airborne droplet nuclei that is expelled when a person who has the disease sing, cough, sneeze, speak or laugh. It may also be acquired by direct contact with persons who have the disease.

2.4. PATHOPHYSIOLOGY

Strickland (1990:388) says, "tubercle bacilli can enter the body by several routes, e.g. pulmonary, gastrointestinal, or cutaneous or subcutaneous implantation". However, the most important route of entry is the pulmonary one.

According to literature of Ames and Kneisl (1990:386); Brewis et al (1990:24); Barber, Stokes and Billings (1987:819); Sharon and Collier (1992:468) and Strickland

(1990:388) when the bacilli are inhaled, they pass down the bronchial system and implant on the respiratory alveoli. The lower parts of the lungs are usually the site of initial bacterial implantation. After implantation, they multiply, with no initial resistance from the host. The organisms are engulfed by phagocytes (initially neutrophils and later macrophages) and may continue to multiply within the phagocyte.

While a cellular immune response is being activated, the bacilli can spread through the lymphatic channels to regional lymph nodes and via thoracic duct to the circulating blood. Thus, organisms may be spread throughout the body before sufficient activation of the cell-mediated immune response is available to bring the infection under control (Sharon and Collier, 1992:468). The organism finds favourable environments for growth primarily in the upper lobes of the lungs.

The acquired cellular immunity eventually limits further multiplication and spread of the infection (Sharon and Collier 1992:468). A characteristic tissue reaction called epithelioid cell granuloma results after the cellular immune system is activated. This granuloma (also called epithelioid cell tubercle) is due to fusion of the infiltrating macrophages. The granuloma is surrounded by lymphocytes. This reaction usually takes 10 to 20 days.

Leavell and Pork (1980:247) further states that the central portion of the lesion called a ghon tubercle undergoes necrosis characterised by cheesy appearance and hence is named caseous necrosis. The lesion may also undergo liquefactre necrosis, with the liquid sloughing into connecting bronchi and producing a cavity. Therefore, tubercular material may enter the tracheobronchial system, allowing airborne transmission of infectious particles.

Sharon and Collier (1002:468) are in agreement with Strickland (1990:388-369) as they view tuberculosis lesion as usually healing with resolution, fibrosis and

calcification. The granulation tissue surrounding the lesion may become more fibrous and form a collagenous scar around the tubercle.

When tuberculosis lesion regresses and heals, the infection enters a latent period in which it may persist without producing a clinical illness. The infection may remain dormant for life, or it may develop into a clinical disease if the persisting organisms begin to multiply rapidly.

If the immune response is not adequate or has failed, control of the organisms is not maintained, thus, the infection may overwhelm the patient, progress and produce clinical tuberculosis.

2.5. CLINICAL FEATURES

According to Ames and Kneisl (1990:386) tuberculosis of the lung most often develops as a chronic illness, and symptoms appear over weeks or months. Barber, Stokes and Billings (1980:818) similarly states that "the onset signs and symptoms of pulmonary tuberculosis in many clients may be insidious. Some may even be asymptomatic". On the same note Sharon and Collier (1992:469) say in the early stages of tuberculosis, the person is usually asymptomatic. Many cases are found incidentally when routine chest X-rays are done.

It is further argued that symptoms of pulmonary tuberculosis are influenced greatly by the activity of the disease and by its extent. The primary infection is asymptomatic in over 90% of the people and symptoms are trivial and non-specific in most of the remainder (Pully, 1987:71).

2.5.1. Symptoms

Sharon & Collier (1992:469) says, "systemic manifestations of tuberculosis may consist of fatigue, malaise, anorexia, weight loss, low grade fevers and night sweat". These manifestations are related to the lymphokine production stimulated by the hypersensitivity immune response of the tubercle bacilli.
They further mention that cough which progresses to become frequent and production of mucoid or mucopurulent sputum is manifested. Chest pains characterised as dull or tight may also be present.

Similarly Barber et al. (1980:820) view the following as signs and symptoms of pulmonary tuberculosis: -

- A cough, which become dry and progressively more frequent and productive;
- Chest pain often described as aching or dull or tightness in the chest;
- Pleuritic pain and dyspnoea.

According to Ames and Kneisl (1990:386) a cough occurs which progressively becomes productive of mucoid or sometimes mucopurulent sputum. There may be chest pains or a feeling of tightness in the chest. Anorexia, weight loss, fatigue and low-grade fever usually occur. Caseous material may erode into the pleural space, causing a pleural effusion, which is painful. Haemoptysis occurs and is often the reason the client seeks health care.

Ignatavicus and Marilyn (1991:2041) says typically, the client with tuberculosis, experience progressive fatigue, lethargy, nausea, anorexia, weight loss, irregular menses and low grade fevers, which have been present for weeks or months. Fever may also be accompanied by night sweats. The client finally notices a cough and the production of mucoid and mucopurent sputum, which is occasionally streaked with blood, chest tightness and a dull, aching chest pain may accompany the cough.

On the same note, Strickland (1990:390) contributes by saying that "the disease often starts insidiously with few symptoms beyond a cough". With progression of the disease, symptoms become constitutional, with malaise, low-grade fever, and loss of weight. Anorexia and abdominal pain may dominate the clinical picture. General malaise depression, and fatigue usually occur at the end of the day. Night sweats due to defervescence at night or insensible fever may be quite troublesome. Cough may be productive or dry. When sputum is produced, it is usually green. It may be blood streaked owing to bronchial ulceration, but production of a large quantity of blood is not common.

It is further stated that chest pains may occur if there is pleural involvement. Shortness of breath is generally due to extensive destruction of the lungs. Amenorrhoea is common in young women with advanced disease. Anaemia may also develop in long-standing disease.

Having explored various authors opinions on the symptoms of tuberculosis, there are similar symptoms stated by the various authors which will be summarised as follows:

- Cough
- Sputum
- Blood spitting
- Chest wall pain
- Breathlessness
- Frequent colds
- Localised wheeze
- Loss of weight
- Fever and sweating
- Tiredness
- Loss of appetite

2.5.2. Diagnosis of tuberculosis

Making a diagnosis of tuberculosis involves a commitment to starting and completing treatment. Failure to diagnose and treat tuberculosis has adverse consequences for the patient, for close contacts and for the community at large.

2.5.2.1 Sputum testing

According to Crofton et al. (1992:96); Brunner, Suddarth, Bare, Boyer and Smeltzer (1990:1674); Ignatavicius and Marilyn (1991:2043) and Strickland (1990:396), the only confirmatory proof of tuberculosis is the isolation of mycobacterium tuberculosis from body secretions or tissue.

On the same note, Buller (1994:24) says that the most reliable way of making the diagnosis is to find tuberculosis in a direct staining method, or in well-equipped centres, by using modern fluoroscopy with ultraviolet light.

Crofton et al. (1992:96-97) further mention that in collecting sputum for examination, one should make sure about the following: -

- The containers should be rigid to avoid crushing when carried or sent. They should be wide-mouthed. They should have tight fitting screw tops to prevent drying out and leakage. The method of sterilisation after use depends on the material the container is made of.

- Examine two specimens if possible, a first spot specimen when the patient presents himself for the frst time and a second spot specimen when the patient returns with the early morning specimen.

- The patient should cough up the spot specimens under supervision. Examine the specimen to see that it is not just saliva. If the patient cannot produce sputum, and if you have electrical power and a nebuliser, you can often obtain a specimen by giving him an inhalation of 3 per cent (hypertonic) saline. Brunner et al. (1990:1674) are also of the opinion that, sputum can be coughed up directly or induced by inhaling aerosols, which irritate the trachea and produce coughing.

Since sputum can spread infection, health personnel must wear musks and gowns during the procedure, cover swabs the tables with disinfectant and wash hands after each procedure.

The specimens must be properly labelled with the patient's name. Strickland (1990:396) is of the opinion that a positive smear indicates the presence of organisms. The smear may be negative if the number of bacilli is small. Crofton et al. (1992:97) caution that people should be careful about making a diagnosis on a single positive smear. They say if a second smear is positive, then the diagnosis can be regarded as certain.

After the start of chemotherapy, according to Ignatavicius and Marilyn (1991:2043) sputum samples are obtained to determine the effectiveness of therapy. Most clients have negative cultures after 3 to 6 months.

2.5.2.2 Chest X-rays

According to Strickland (1990:395), the most valuable diagnostic investigation in assessing the presence and extent of tuberculosis is by taking X-rays of the chest. Where an old disease has been present, the early subtle changes indicative of activity can best be discerned by a comparison of the radiograph with ones taken months or years earlier. Evidence of pre-existing scars can be found in the previous films in

about 70% of persons with active tuberculosis. Hence, efforts to obtain old radiographs may allow recognition of an active process and initiation of therapy before further progression has occurred including the spread of infection to other parts of the lungs and to other persons.

Crofton et al. (1992:97) states that X-ray shadows, which strongly suggest tuberculosis, are: -

- Upper zone patchy or nodular shadows and
- Cavitations

It is further stated that other shadows, which may be due to tuberculosis, are: -

- Oval or round solitary shadow
- Hilar and mediastinal shadow due to enlarged llymphnodes and
- Diffuse small nodular shadows

Similarly Strickland (1990:395) is of the opinion that an abnormality of reticulomodular infiltrate in one or both upper lobes of the lungs is mostly seen in tuberculosis patients. The abnormality usually appears in the posterior segment of the upper lobe or in the apical segment of the lower lobe, although sometimes the upper lobe may be completely involved in the disease.

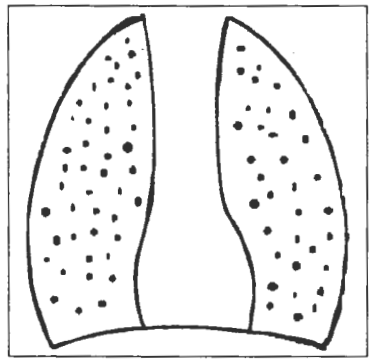
Bilateral distribution of multi infiltrates in the upper zones of the lungs is highly suggestive of tuberculosis. Extensive consolidation of the lung due to tuberculosis pneumonia can also be seen in acute development of the disease. Because the disease spreads to other parts of the lungs through the bronchi, soft alveolar filling infiltrates in the lower lung fields are common. Infiltrators limited to the lower lobes occurs in individuals with progressive primary tuberculosis and diabetics.
It is noted that reading of chest X-rays needs a lot of experience. It is suggested that if there is a suspect of tuberculosis and the sputum being negative, a non-tuberculosis

antibiotic (e.g. ampicillin) should be given for 7-10 days and the X-ray should be repeated.

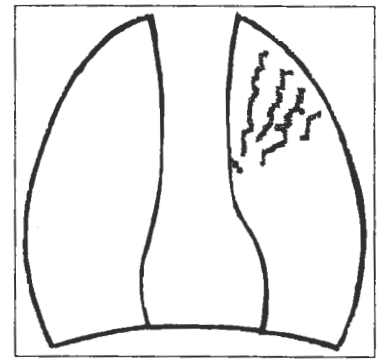
The following figure describes chest X-ray abnormalities in tuberculosis:

The abnormal appearances:

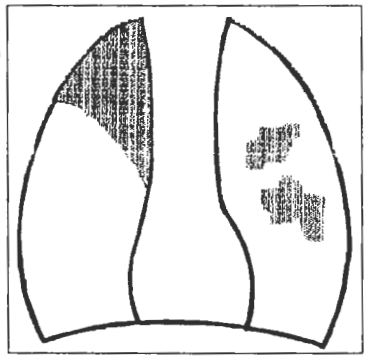
Are they **diffuse,** miliary or nodular (<5mm)?



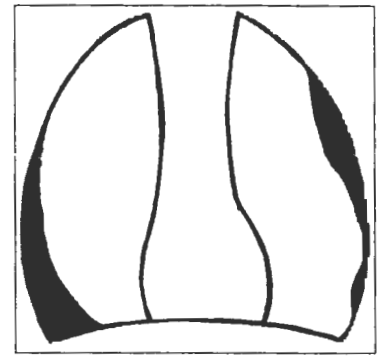
Is there **fibrosis** (well marked, scattered or clustered, streaks, lines or bands) which may include **calcification** (dense white patches, usually small)?



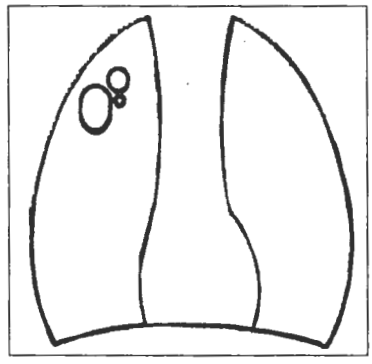
Is there **consolidation,** lobar or patchy (like pneumonia or broncho-pneumonia)?



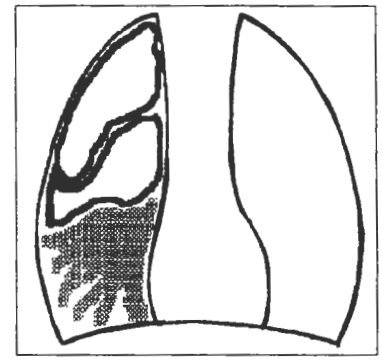
Are the shadows **pleural** (mainly spreading down the outside of the lung field, or in the costophrenic angle, or obscuring most of the lung field)?



Are there **cavities,** single or multiple?



Is there extensive **lung destruction** (little 'normal'-looking lung, but large cavities, maybe running together into large spaces) and fibrosis (thick bands in and around the rest)?



2.5.2.3 Tuberculin skin test

According to the literature of Strickland (1990:395-396), Crofton et al. (1992:99) and Sharon and Collier (1992:469-479), the body's immune response can be demonstrated by testing for hypersensitivity to a tuberculin skin test. A positive reaction develops 3 to 10 weeks after the initial infection, corresponding to the time needed to mount an immune response.

Purified protein derivative (PPD) of tuberculin is used primarily to detect the delayed hypersensitivity response. Once acquired the sensitivity to tuberculin tends to persist throughout life. A positive reaction indicates the presence of a tuberculosis infection, but does not show whether the infection is dormant or causing a clinical illness.

Strickland (1990:395) clearly explains how tuberculin skin test is performed. She says it is performed by injecting 0.1ml of diluent containing 5 Tu of PPD. It is prepared in liquid form with polysorbate. It is injected intradermally. The amount injected varies from 1 to 250 Tu, but 5 Tu (known as intermediate strength) is the standard dose. In 90% of persons with tuberculosis, an induration of 10mm or more in diameter is present 48 to 72 hours after injection of immediate strength of PPD.

It is further stated that this biological test, however, depends on the number of circulating sensitised T lymphxytes. Negative results may occur in 15% to 20% of patients with active tuberculosis if sensitised T cells are depleted or non-functional owing to old age, a debilitated state, an acute overwhelming infection, fever or large pleural effusion. The tuberculin test should be performed simultaneously with tests for other common antigens, e.g. mumps.

In patients with negative PPD reactions, repeat testing with second strength. This should reveal positive reactions. In the general population, a bimodal pattern of

reaction of PPD is observed. In healthy persons, reactions of less than 10mm of induration to 5 Tu of PPD-T are usually due to infection of some other mycobacterium.

The best method of reading the reaction is to approach the reaction from above and below with a felt tip or ball point pen and to measure between the points where the pen encounters the oedematous skin of the reaction.

Crofton et al. (1992:92) states two problems in using the tuberculin test, as follows: -
- Infection by other non pathogenic mycobacterium can result in a positive tuberculin test and
- Problems of improper storage, improper dilution etc. may make the test unreliable.

The above-mentioned results need to be considered when making a decision of a positive reaction case.

2.5.3 Treatment

The key to controlling the spread of TB in the community is to
start treating patients as soon as possible. For treatment to be effective it is crucial that correct drugs are given for the correct period of time.

Crofton et al. (1992:140) view the following as the aims of tuberculosis treatment, namely: -

- To cure patients with the least interference with their lives;
- To prevent death in seriously ill patients;
- To prevent extensive damage to the lungs with the consequent complications;
- To avoid relapse of the disease;
- To prevent the development of resistant tubercle bacilli;
- To protect the patient's family and the community from infection

Simarly Brunner et al. (1990:1674) view the following as the goals of tuberculosis treatment management namely: -

- To relieve pulmonary and systemic symptoms by eliminating all viable tubercle bacilli;
- To return the patient to health, work, and family life as quickly as possible; and
- To prevent transmission of the infection

On the same note Barber et al. (1980:820) states that "therapeutic intervention for clients with tuberculosis is planned to prevent infection, maintain nutrition and maintain a balance between rest and activity".

2.5.3.1 Chemotherapy

According to Ignatavicius and Marilyn (1991:2043) chemotherapy is the most effective method for managing tuberculosis and preventing transmission. Similarly Sharon and Collier (1992:470) view pharmacological treatment as the best for treating tuberculosis.

Sharon and Collier (1992:470), Ignatavicius and Marilyn (1991:2043) and Brunner et al. (1990:1674) says that active tuberculosis is usually treated with simultaneous administration of a combination of drugs to which the organisms are susceptible. Such therapy is carried out until the disease is brought under control. Multi drug regimes are used to destroy as many viable microbial organisms as quickly as possible and to minimize the emergence of organisms resistant to the various antituberculosis drugs. Such resistance results from genetic mutations of the organism. The use of a variety of drugs enables one agent to destroy those mutants that are resistant to the initial drug.

Similarly Strickland (1990:399) states that tuberculosis treatment usually consists of a combination of at least two drugs. The reason for combination therapy is to increase the therapeutic effectiveness and decrease the development of strains of mycobacterium tuberculosis. It has been shown that single drug therapy can result in rapid development of resistant strains.

It is recommended that the prescribed drugs be continued without interruptions until the course of therapy is over. Interruptions encourage the development of resistant bacilli. When resistance occurs the drugs become less effective and completely useless.

A problem with anti-tuberculosis therapy is the length of time medication must be taken (Sharon and Collier, 1992:470). In the past, 18 to 24 months were taken as the usual period of time required for individuals to adhere to the medical regimen.

According to the literature of Strickland (1990:397), Sharon and Collier (1992:471), Ignatavicius and Marilyn (1991:2044), Brummer et al. (1990:1675) and Barber et al. (1980:821), the following drugs are commonly used in the treatment of tuberculosis, namely: -

Primary Drugs

- Isoniazid (INU)
- Rifampin

Secondary Drugs

- Streptomycin
- Pyrazinamide
- Ethambutol
- Para-aminosalycylic Acid (PAS)

Tertiary Drugs

- Ethionamide
- Cycloserine
- Thiacetozore
- Kanamycin
- Capreamycin

The abovementioned drugs are classified into three categories namely primary, secondary and tertiary. The primary isoniazid and rifampin, are highly effective, especially if used together. The secondary drugs are not as effective and have more toxic side effects. They are ethambutol, para-aminosalicylic acid, streptomycin and pyrazinamide. The secondary drugs are usually in combination with one or both the primary drugs. Since the organism can develop resistance to any single drug, combining two or three drugs helps to maintain drug effectiveness. The tertiary drugs are not as effective as the primary or secondary drugs and have greater toxic side effects. They are capreomycin, cycloserine, ethianamide and kanamycin.

2.5.3.2 Surgical treatment

According to Brunner et al. (1990:1674) surgical treatment is rarely necessary for tuberculosis because of the advent of chemotherapy. Pulmonary resector may be performed when the possibility of cancer coexists. It may also be carried out for the purpose of eliminating lesions that have ceased to decrease in size after several months of therapy. Surgical procedures may also be done for thoracic drainage of emphysema, decompression of constrictive pericarditis or drainage of a paravertebral abscess.

2.6 TUBERCULOSIS AND HIV/AIDS

Tuberculosis and HIV/Aids are interrelated. Both conditions form a lethal combination, each speeding the other's progress. HIV weakens the immune system. According to the Department for International Development (1998) individuals infected with HIV virus are more likely to develop tuberculosis than others. It further states that the preventive drug treatment regimes in HIV positive patients with positive tuberculosis skin tests reduces the occurrence of tuberculosis and the onset of Aids within the period of follow up. The preventive treatment in this situation refers to giving anti-tuberculosis drugs to people without clinical evidence of disease who are at risk of developing the disease.

It is further stated that HIV increases a person's susceptibility to infection with mycobacterium tuberculosis. In a person infected with mycobacterium tuberculosis, HIV is a potent cause of progression of tuberculosis infection to disease.

Someone who is HIV positive and infected with tuberculosis is many times more likely to become sick with tuberculosis than someone infected with tuberculosis that is HIV negative.

The table below shows the effect of HIV infection on the risk of developing tuberculosis. It is noted that HIV positive people have 50% chance of developing tuberculosis, as compared to HIV negative people who are between 5% and 10% chances of developing tuberculosis.

HIV Status	**Risk of developing TB**
negative	5-10%
Positive	50%

Similarly, Harries (1996:30) states that "HIV is the most powerful factor known to increase the risk of tuberculosis. Compared to an individual who is not infected with HIV, an individual infected with HIV has 10 times increased risk of developing tuberculosis. In 1995, according to World Health Organisation, about one third of the 17 million HIV-infected people worldwide were also co-infected with mycobacterium tuberculosis. 70% of these co-infected people live in sub-Saharan Africa, with South Africa included, 20% in Asia and 8% in Latin America and the Caribbean.

Both HIV and tuberculosis patients share some of the disease's symptoms for example weight loss, prolonged fever and persistent cough. These symptoms from the laymen's view make the diseases to be similar despite other distinctive features.

2.7. SUMMARY

The chapter has tried to look at tuberculosis disease broadly, to give better understanding. The extent and the statistics of tuberculosis in Africa as a continent and Southern Africa as a region are highlighted and lastly the South African situation was looked at.

The nature and pathophysiology of tuberculosis is explored. The germ that causes tuberculosis was briefly discussed. The clinical features of tuberculosis with special reference to symptoms that distinctly differentiate tuberculosis from other diseases were discussed.

Diagnostic procedures for example sputum testing, chest x- rays and tuberculin skin test have been discussed. Treatment modalities for example chemotherapy and surgical treatment were also touched on.

Lastly, the relationship between HIV/Aids was looked at, as both are social diseases. Tuberculosis is a leading cause of death among people who are HIV positive. It accounts for about 15% of AIDS deaths worldwide. In Africa, HIV is the single most important factor determining the increased incidence of tuberculosis.

CHAPTER 3

POVERTY IN RELATION TO TUBERCULOSIS

Abstracts

More than one fifth of the world's people live in extreme poverty. United Nation Development Programme sees poverty as a complex and multi-dimensional phenomenon involving people's lack of empowerment as well as lack of income and basic services (United Nations Report, 1998).

Poverty is like illness .It manifests itself in different ways and it has diverse causes. Treatment thus generally requires careful diagnosis (Wilson and Ramphele, 1998:6).

Poverty is a global, economic, political and social issue which is the talked about problem nowadays by various governments. Governments and private sectors throughout the world have tried to reduce or eliminate poverty. However, it is not easy to come up with a concrete and workable solution.

According to the office of South African President, eradicating poverty and combating HIV-Aids are integrally linked, especially in rural areas, and both are the priority of the integrated sustainable rural development and HIV-Aids programmes. Both are the presidential programmes and top priorities of the government.

The Durban International Aids Conference held last year emphasised social factors like social equality and poverty as contributing to the infectious diseases like HIV infection and tuberculosis. It is further noted that HIV/AIDS has already started to have immense impact on the economies of hard-hit countries, hurting not only individuals, families and firms, but also significantly slowing economic growth and worsening poverty. Lower economic growth and increased poverty threaten to form a vicious cycle in which HIV/AIDS drives many families into deepening poverty, and at the same time poverty accelerates the spread of HIV.

"It is official now if anyone had any doubt South Africans are becoming poorer". The South African Reserve Bank governor Tito Mboweni gave this warning while delivering the bank's annual report. The bank says the country's production rate has not kept abreast with the population growth rate because business was reluctant to invest in the economy (The Star: August, 30:2000).

3.1. INTRODUCTION

Since tuberculosis is seen as a social disease by most of the researchers, its extent and prevalence is being perpetuated by the extent and nature of unfavourable social circumstances. Amongst these unfavourable social circumstances, poverty is the main factor.

According to the World Health Organization (28,10:1999) infectious diseases like tuberculosis are also a powerful force in pushing self-sufficient families into destitution and dependency. It is further stated that one tuberculosis case alone can lead to 20-30% loss of household income in developing countries. The world will not be able to achieve the poverty reduction targets set if it does not make a renewed effort to tackle tuberculosis.

Poverty and health are intrinsically linked. Not only are the poor more likely to suffer ill health and premature death, but also poor health and disability are themselves recognised to be causes of poverty (Blackbum, 1996:7). Ill health is both a cause and consequence of poverty. Poverty also breeds ill health. As we will see from this chapter, illness can reduce household savings, lower learning ability, reduce productivity and lead to a diminished quality of life, thus creating and perpetuating poverty. Investing in health is a well-documented strategy for lifting a population out of poverty.

Tuberculosis is much more than only a health concern. It is a complex socio-economic problem that impedes human development and traps the world's poorest and most marginalized in a vicious circle of disease and poverty. Tuberculosis exerts its greatest toll on the poor. 98% of the deaths due to tuberculosis and 95% of the 8 million new cases every year are in developing countries like South Africa, making the poor poorer.

This chapter will explore the concept of poverty in relation to tuberculosis. Unfavourable social circumstances and their relationship to tuberculosis will also be highlighted.

3.2. DEFINING POVERTY

Before any assessment of the extent and dimensions of poverty can be made, it is important to clarify what we mean by the term "poverty". A number of different meanings have been given to the term and there has been considerable controversy about which is the most acceptable way to define it (Blackbum, 1996:8).

The concept "poverty" means different things to different people. It is viewed according to one's experience of life and the standard of living. It involves a judgement of basic human needs and is measured in terms of the resources required to maintain health and physical efficiency. It is also linked to many factors like race, gender, language and place of residence.

According to Shireefs (1982:14), poverty is a set of circumstances that prevent a person to provide him with the necessities of life and a lifestyle subjected to limited resources such that hopes and aspirations are destroyed.

Similarly, poverty is defined as a lack of enough income and resources to live adequately by community standards (World Book Encyclopaedia, 1989:365).

According to Blackbum (1996:9), below are some of the key definitions of poverty:

- Families are in poverty when their incomes are insufficient to obtain the minimum necessities for the maintenance of physical efficiency.

- Individuals, families and groups can be said to be in poverty when they lack the resources to obtain the types of diet, participate in the activities and have the living conditions and amenities which are customary, or at least widely encouraged or approved in the societies to which they belong.

- Persons are beset by poverty when resources are so small as to exclude them from the minimum acceptable way of life.

- A family is in poverty if it cannot afford to eat.

The South African White Paper On Social Welfare (1997:96) view poverty with reference to poverty datum line (i.e. if a household earns an income lower than a set amount, that household and its members are deemed to be living in poverty). It further states that poverty lines vary according to the size of the household and its composition.

At the beginning of 1994 the poverty datum line of an urban household with two adults and two children was approximately R840 per month and R740 per month for a rural household (Sowetan, 2000: 16).

Below are some of the comments of people who are experiencing poverty:

- " I do not know where my next meal is going to come from, and always wondering when the council is going to put out my furniture and always praying that my husband must not lose his job" (Mrs.Witbooi of Philipstown –Wilson and Ramphele, 1989:14).

- " I am so behind with my rent, I can not sleep at night (Woman interviewed by Black Sash- SAPPA, 1997:75).

- ❖ "My child broke his leg and had to go to hospital. I sold my three cows to pay for transport and treatment. Now I have nothing" (Man interviewed by Operation Hunger-SAPPA, 1997:75)

Despite the obviously large number of people living in poverty, the definition of poverty has been the subject of some debate amongst researchers and policy analysts. However, the emerging consensus see poverty as generally being characterised by the inability of individuals, households or entire communities to command sufficient resources to satisfy a socially acceptable minimum standard of living.

The following is a typical case of a family living in poverty in Marulaneng village, near Jane Furse in Northern Province:

> "Sitting in a dark room just behind a shabby door, Ms X ponders a life of lost opportunities, poverty and humiliation. She gazes into the distance, praying for a miracle to improve her miserable existence. Although it is warming up after a particularly cold winter, the sunset still brings hardship and despair for her children. She cannot even afford a 40-cent candle to light up the room. But even worse, she cannot afford to put food on the table, let alone sending children to school. The darkness in the room reflects the reality of poverty that has become a hallmark of her family life. She believes that she has reached a dead end and has all the odds staked against her with no immediate solution to her problems". On probing Ms X stated that "I have not eaten a thing since this morning. We used to go door to door asking for food but have since stopped. This is because people started complaining about how we perpetually depend on them and how much they also offer. It is humiliating and degrading. People have tried to help but have since run out of patience. I hope that things will improve for me. I have also lost hope that I will ever earn a living. My children have dropped out of school because I have no money. Other needs, such as education and health come second, the import thing is food for survival" (Sowetan, August: 16, 200).

The South African Minister of Welfare and Population Development, Dr Zola Skweyiya, expressed his impression of his Provincial Road Shows in 2000, as being "indescribable " and "painful" to witness. During his visit to Northern Cape, he met people who make a living from sheep shearing which brings in a paltry R5 a day. Skweyiya said, "nobody can live on this amount let alone care for children with it". He further stated that the destitution that is facing people in rural areas was pathetic and embarrassing. He said what he knew as poverty in urban areas, particularly townships, was nothing in comparison to what rural communities were going through.

According to the South African Participatory Poverty Assessment (1997:65), poverty is seen as including the following:

- Alienation from the community.
- Food insecurity
- Crowded homes
- Lack of basic form of energy
- Lack of adequate paid and secured jobs and
- Fragmentation of the family

3.3. TYPES OF POVERTY

According to literature poverty can either be absolute or relative (Blackbum, 1996:9).

3.3.1. Absolute poverty

This is the kind of poverty that is not shown by comparing variables. The income is used as the indicator or a yardstick, where for example, an individual or household with an annual income below a certain amount (e.g. R5000) is regarded as absolute poor. According to the World Bank (1995:19) absolute poverty can be defined by income levels below which even minimum standards of nutrition, shelter and personal amenities cannot be maintained.

Burkey (1993:4) defines absolute poverty as the inability of an individual, the community or a nation to satisfactorily meet its basic needs.

Absolute poverty is also defined by Rogers (1984:4) as earning insufficient to obtain the minimum necessities for the maintenance of merely physical efficiency. Similarly Spicker (1998:5) states that absolute poverty is the subsistence levels based on essentials for survival and is defined in terms of some absolute levels of minimum needs below which people are regarded as poor for purposes of concern.

Having looked at various definitions of absolute poverty, one can sum up by viewing absolute poverty as a subsistence poverty, which implies a lack of basic resources needed to maintain health and effective bodily functioning. The concept emphasises that people are in poverty if they do not have the resources to physically maintain human life.

3.3.2. Relative poverty

Comparing two unequal variables usually shows this type of poverty. According to Haralombos (1990:199) relative poverty involves assessing the gaps between the living conditions of some groups and those enjoyed by the majority of the population. Unlike absolute poverty, it does not imply lack of necessities but rather expectations of modern life.

The World Bank defines relative poverty as the reflection of extreme differences in levels of living between the top and bottom strata of society. Burkey (1993:40) on the other hand view relative poverty as a condition where targets of human needs or wants are met but where there is no equal opportunity or accessibility to resources.

Similarly Blackbum (1996:10) view people experiencing poverty as " lacking the resources to obtain the type of diet, participate in the activities and have the living conditions and amenities which are customary, or at least widely encouraged or approved in the society they belong." This implies that poverty is about being poor in comparison to the standard of living of others and about being unable to do things that are generally accepted as part of life.

3.4. UNFAVOURABLE SOCIAL CIRCUMSTANCES

Since poverty is the sole cause of unfavourable social circumstances leading to the spread of tuberculosis, some of these circumstances in relation to tuberculosis will be discussed below.

3.4.1. Unemployment

Unemployment could narrowly be defined as the number of people who are not working and who are actively looking for work (Statistics South Africa, 1998:23).

Lack of employment is a significant contributor to poverty. Since most of the people are solely depending on employment for income and living, it becomes a problem when one is unemployed and there is no other source of income.

The rate of unemployment in South Africa nowadays is getting worse. According to October Household Survey of 1999 the unemployment rate is standing at 23.3% with 3.1 million people being unemployed (Sowetan,30 Aug 2000:5).

The figure below shows the number of unemployed people in South Africa, between 1995 and 1997 (Statistics South Africa,1998:24).

1995	5019000	4746000	5185000	46.1%	44.4%	47.7%
1996	6212000	5801000	6633000	56.6%	53.3%	59.9%
1997	6789000	6575000	7005000	60.5%	58.9%	62.2%

Unemployment is one of the indicators of poverty, and has a link with poor health status. Because unemployed people do not have money for basic necessities like shelter, they tend to live in squatter camps and crowded areas, as they cannot afford proper houses. It is thus in these conditions that tuberculosis germ spread easily and rapidly.

Unemployed people also experience lack of proper food only because they do not have money. Their bodies then become vulnerable to diseases as they lack resistance due to their weak nutritional status.

Since the poor people mostly experience unemployment, one could deduce that unemployment has a bearing in the escalation of social diseases like HIV/Aids and tuberculosis because in most cases people are living under unfavourable social circumstances.

3.4.2 Malnutrition

According to the World Health Organisation (1998:20) nutrition is a fundamental pillar of human life, health and development across the entire life span. From the earliest stages of fetal development, at birth, through infancy, childhood, adolescence, and on into adulthood and old age, proper food and good nutrition are essential for survival, physical growth, mental development, performance and productivity, health and well-being. It is an essential foundation of human and national development.

Achieving "Health For All", whereby people everywhere throughout their lives, have the opportunity to reach and maintain the highest attainable level of health, is impossible in the presence of hunger, starvation and malnutrition.

Hunger and malnutrition according to World Health Organization (1998:20) remain amongst the most devastating problems facing the majority of the world's poor and needy, and continue to dominate the health of the world's poorest nations.

It is imperative to link tuberculosis with poverty and malnutrition as all of them are social phenomenon. Poverty and malnutrition are intimately linked. In fact, they can form a cycle where one leads to the other in an ever-worsening spiral of misery. A poor family is unable to feed itself adequately. Without enough food, the breadwinners in the family become tired and lose their energy, meaning that they cannot work as hard as they need to in order to feed their family.

It is quite evident that the money that the breadwinners bring to their families becomes less due to the poverty status being experienced like job losses, thus people would be forced to eat even less and to eat foods which have a low nutritional value because they are cheaper. The family would then become malnourished. Where there is lack of food, people tend to be ill because their body defence mechanisms are not there to protect them against diseases. Malnutrition leads to decreased resistance of tissues (especially the lining of the gut and respiratory tract) to infection, and a less efficient immune system.

Food plays a particularly important role in health throughout the life course. Good health is dependent not only on having enough to eat, but also on eating a balanced amount of nutrients.

Nutrition is no longer simply equated with food, or regarded as a medical problem (May, 1998:116). Rather, it is understood as the outcome of complex inter-related social, economic, political and other processes. Nutrition is also a scientific discipline, concerned with the access and utilization of food and nutrients for life, health, growth, development and well being. Given the focus on poverty, here the emphasis is on under-nutrition.
According to UNICEF (1993) causes of malnutrition could be categorized into three levels (i.e. immediate, underlying and basic).

- Immediate causes of malnutrition include inadequate dietary intakes.

- Underlying causes are those necessary to ensure adequate dietary intake and health (e.g. household food security, adequate maternal and child care and adequate access to basic health services and a healthy environment).

- ❖ The basic causes relate to the availability, access and control of human, economic and organisational resources. Poverty is thus a basic cause of malnutrition.

Available information suggests that malnutrition in South Africa is related much to poor people's living conditions and the social consequences of poverty. Under nourishment is due to the lack of money to buy food.

Blackbum (1996:51) states, "poor families generally have unhealthier diets than their better-off counterparts". Similarly a number of surveys have shown that families on low incomes are less likely to eat a healthy diet than families with high incomes (Black, 1995:507).

Medical Research Council (1996:20) similarly also found that in all population groups, whether developed or developing, the well circumstanced enjoy better health than the poor, and this dichotomy is increasing. In South Africa, in all population groups but more especially in the Black population, impoverishment hinders efforts to combat the diseases of nutritional deficiency and of imbalance, and also those due to infections.

Availability of food need to be considered when one is tackling nutritional issues, because for people to eat in line with dietary advice, healthy foods need to be readily available.

Since tuberculosis mostly attack poor people, it is noted that poor nutritional status adversely affects the body's ability to cope with infections. Richard (1996:74) states that most of the tuberculosis patients he has encountered suffered from malnutrition. Thus one could attribute malnutrition as a contributory factor in the development of tuberculosis. Whilst the poor health status of low-income families is due to the effects of multiple disadvantages, it is clear that the quality and quantity of the food they eat have an adverse effect on their health. Although all low-income families are likely to

find it difficult to consume a healthy diet, certain groups appear to experience particular hardships and have an increased risk of nutritional deprivation due to low income.

In contrary Buster (1997:90) states that nutritional intake has little direct bearing on respiratory disorders, but overall health related nutrition does affect susceptibility to infection .He further states that individuals who are poorly nourished have a higher incidence of respiratory infections, moreover, they have less capacity to withstand diseases.

Having looked into the link between nutritional status and infection, one is able to see how malnourished people can be exposed to various diseases. The links between good health and food are well documented. Food affects peoples' health through physiological processes, determining the body's ability to grow and develop and to resist disease through the life cycles. Prevention of infection and management of infectious diseases like tuberculosis, so as to minimize their incidence, duration and severity, are essential for optimising nutrition. Access by all to adequate health care services is needed to ensure priority actions such as immunization, early diagnosis and management of infectious diseases especially tuberculosis.

3.4.3. Housing

The quality of the home environment has an important bearing on the quality of life. Most people spend at least half of their waking hours at home. Some groups such as mothers and young children, carers, unemployed, sick and disabled people spend substantially longer periods at home each day. The home environment not only has an important effect on the quality of life, it has also a pervasive effect on people's health and their relationships with other people (Blackbum: 1996:78).

Housing is, therefore, a major health resource. Alternatively it can increase vulnerability to diseases, depending on the standard, location and type of accommodation people live in. Like food, poor housing affects health directly through physiological processes and indirectly through behavioural and psychological processes.

Housing, according to Haddon (1989:74) is related to health. Poor housing is viewed as a contributory factor to the high incidence of certain infectious diseases (Murrie, 1993:64). Similarly, Mavis (1996:914) states "studies repeatedly have linked poor housing conditions with poor health ". She further says, infections and gastrointestinal disorders are more common in people who are living in slum areas, than people living under better conditions.

Poor housing is greatly associated with overcrowding. According to the Medical Research Council (1996:60) illnesses found to be related to overcrowding include whooping cough, polio, diarrhoea, malaria, tuberculosis, influenza, hepatitis A, hepatitis B, stunting, chronic diseases and stress. Further more overcrowding increases the risk of multiple infections and disease transmissions.

Overcrowding is recognised as a health hazard (Blackburn, 1996:92). Research indicates that overcrowding is associated with a number of physical and mental health problems, amongst others respiratory and digestive tract infections, depression, stress and psychological distress. Living in overcrowded housing conditions makes it difficult for individuals to control the amount of social contacts they have with other members of the family. Lack of privacy, lack of space to store personal belongings and constant contact with other people is also likely to increase stress and domestic violence.

Tuberculosis as a communicable disease has a connection with overcrowding. Studies by Peter (1990:467) reveal that crowding has an impact on the high

prevalence of tuberculosis. He measured crowding in terms of persons per square miles and persons per dwelling unit or persons per room.

According to Nivel (1994:924) excessive crowding or overcrowding, within a dwelling obviously promotes person-to-person spread of various communicable diseases like tuberculosis by airborne route.

Since South Africa is experiencing poverty, especially the Black communities, there is a problem of overcrowding in most of the dwellings. In cities like Johannesburg and Cape Town where migration pull forces have taken place, attracting people, a serious shortage of houses is experienced. People are over sharing the dwellings and the environment becomes detrimental to their health.

The structure of the houses also has an impact on one's health. Poor ventilation accelerates the incidence of tuberculosis. Alexander (1990:46) view adequate ventilation as the provision of cool dry moving air in the dwelling in sufficiently large amounts to keep the inhabitants healthy.

Badly ventilated overcrowded dwellings are unhealthy because of the following reasons:

- ❖ They lower the standard of health and resistance of inmates; and

- ❖ They spread infection rapidly

Dark, damp and badly ventilated houses have a direct bearing on the spread of tuberculosis. Since myco-bacterium tuberculosis multiplies itself more rapidly in a dark, damp and badly ventilated environment, it is suggested by the researcher that air in-lets must correctly be placed on the opposite walls. Diagonal ventilation is

undesirable. Air is replaced in one section of the room and left to stagnate in other portions.

Schorr (1994:6) states that "inadequate and overcrowded sleeping arrangements, multiple use of facilities and inadequate light and ventilation contribute to acute respiratory infectious diseases like tuberculosis.

Brennah (1993:174) also indicates an increase in pneumonia and tuberculosis deaths associated with overcrowding.

Since shortage of space is reflected in the number of rooms shared especially the bedrooms, there is also a likelihood that beds are also shared which may also contribute to the cross infection of tuberculosis.

3.4.4. Informal settlements

The South African's previous policies to counteract urbanisation were ineffective. In addition, the granting of temporary sojourn resulted in people leaving their original residence and finding accommodation elsewhere, usually in areas where there are possible job opportunities.

Squatter communities, often euphemistically referred to as informal settlements, have become a permanent fixture of South African's cities for the foreseeable future. They are the result of a conglomeration of factors, amongst them, increased urbanisation, industrialization, rapid population growth, a critical housing shortage, political changes and poor economic conditions.

Squatter areas primarily comprise of poor families looking for better living conditions. Poverty is an important motive and the primary need of these people is to earn an income.

Informal settlements according to Helga (1990:24) refers to " a residential area where a group of housing units have been constructed on a land to which the occupants have no legal claim or which they occupy illegally, unplanned settlement and areas where housing is not in compliance with the planning and building regulations ".

Squatters, in the true sense of the word, usually occupy land illegally. They put up a temporary shelter wherever a piece vacant land is found, largely ignoring accepted urban standards of housing, hygiene and sanitation.

Informal settlements varies in origin and nature. They range from backyard shanties or garages rented from the moody landlord exploiting the vulnerable backyard dwellers to the temporary structures, legally erected in an area allocated by appropriate authorities, to the shack put up by the community member who is encouraged to do so by politically motivated leaders in an effort to make the point that he is exercising the basic human right to a shelter.

According to the researcher, the reasons for the rise of informal settlements and squatting in South Africa are many and varied. They relate to inadequate housing after a lengthy moratorium on expanding Black residential areas, partly for ideological, partly for financial reasons; they involve rapid population growth currently experienced; they result from the phenomenon of unemployment or the inadequate and expensive transport needed to reach the place of employment; and from the migration of people from rural to urban areas. Reasons also relate to the exploitation of the poor by the landlords and to the corruption resulting from the allocation of land to developers, thereby favouring the higher income group.

Illegal dwellers generally live in an unsafe and precarious environment, where there is lack of basic services, where people suffer from the absence of tenure security and have no legal claim in case of eviction. Also, numerous illegal settlements are established on a land, which is predisposed to natural disasters, like floods and fire.

The informal settlements have higher population density and living conditions constitute a threat to humans' health.

Overcrowding, lack of sanitation and disregard for hygiene, frequently lead to illnesses and diseases in squatter communities, while juvenile delinquency, waning moral standards, sexual infidelity, broken marriages, child neglect and child abuse, alcoholism, prostitution, venereal diseases, and HIV and AIDS, are typical signs of the moral and physical breakdown of squatting living patterns.

Communicable diseases like tuberculosis usually spread easily in informal settlements because of overcrowding and the absence of basic health facilities. People use primus stoves and coal for cooking and warming up as most of them do not have electricity and these facilities do have an effect on their lives because of the inhalation of carbon monoxide that is being produced by coal and primus stoves.

3.4.5. Unhealthy lifestyle

Lifestyle is associated with health. Thus healthy lifestyle is associated with good health. In this context unhealthy lifestyle of smoking is linked to tuberculosis.

More than 340 000 Americans die prematurely each year from disorders related to smoking. Millions of others lead restricted lives because of pulmonary damage (Ames and Kneils, 1990:300). It is further estimated that smoking attributable deaths will rise to 8.4 million in 2020 and reach 10 million annual deaths in about 2030. Similarly Robert (1993:493) states that cigarette smoking is the largest avoidable cause of death and disability in the United States of America. Smokers are at an increased risk of developing respiratory disorders. Several studies have shown that the risk of a smoker dying from respiratory diseases is as high as 14 times that of a non smoker (Aynes, 1993:42).

Most health consequences of smoking are not manifested until three to four decades after the onset of persistent smoking. The chemical agents in tobacco smoke reduce and eventually destroy cilliary movement in the bronchial mucus, making the lungs more susceptible to infection. The hot smoke dries out and flames the delicate tissues of the mouth, larynx, trachea, and the lungs (Ames and Kneisl, 1990:331).

To quantify cigarette-smoking history, one should ask the patient at what age he began smoking, whether he still smokes and at what age he stopped smoking.

Having looked at the detriment smoking could do to the human body, it is evident that smoking aggravate the tuberculosis condition,as it affects the lungs.

3.4.6. Working environment

Working environment could be linked to tuberculosis as in most cases the tuberculosis patients would have worked in dusty environments like the mines. Other than the home environment, the workplace is the setting in which many people spend the largest proportion of their time.

In favourable circumstances, work contributes to good health and economic achievements. However, the work environment exposes many workers to health hazards that contribute to injuries, respiratory diseases, cancer, eye damage and hearing loss as well as communicable diseases.

Workplace health hazards generally differ from those found in the general environment. Furthermore, because workers are often exposed in confined spaces, exposure levels to workplace hazards are often much higher than exposures to hazards in the general environment. According to Gardner and Taylor (1985:65) occupational disease is a disease, which arises out of or in the course of a person's employment

Occupation is a significant factor in the development of some respiratory disorders (Hood, 1988:492)." Black lung disease", which affects coal miners, is a well publicised example and asbestosis is another example. Solvent in paints and varnishes has also been implicated in respiratory disorders.

Many arguments have been held, as according to Joshua (1992:65) with regard to recognizing an occupational disease. It is stated that when the time interval between the cause and effect is short there is usually little or no difficulty in recognising the causal relationship between event(s) and diseases. However, many occupational diseases like tuberculosis take time to develop and when a person with a disease is seen by a doctor who asks himself the question "could this disease relate to the person's occupation?" the answer may be anything but simple. The relationship of the disease to occupation may be either that of the cause or that of association. Duration of exposure to substances must also be borne in mind when identifying and recognising the disease. For example, an individual who is in his twenty fifth year, working as a mine worker, being exposed to a dust environment, would not have showed evidence of any occupational disease after his first four years of employment. If he were asked whether he felt anything wrong with him after his four years of employment, his reply would probably have been negative. Similarly his supervisor might have believed that the dust was harmless or replied that there was so little of it that no harm could result.

Airborne allergens can cause or aggravate respiratory diseases. The most common respiratory disease associated with allergens is tuberculosis. (Ames and Kneils 1990:303). Pollution of air by industrial and agricultural chemicals can increase the severity of respiratory conditions including long-term obstructive disorders. Individuals who have conditions such as asthma, chronic bronchitis and tuberculosis may have to change their residence or their working environment.

Bamfort (1995:25) is of the opinion that the result of the exposure, substances may gain entry to the worker's body by any of the following routes, namely:

- Inhalation (i.e. breathing in vapour, gas, spray, fumes or dust)
- Ingestion (i.e. swallowing through eating or smoking without first washing the hands); and
- Through the intact skin.

The effects of exposure of substances unto the body may be irritation of the respiratory tract especially the lungs.

In South Africa, working environments that are associated with an increased risk of pulmonary tuberculosis are industries, factories and mines. This is because of the inhalation of substances like dust and asbestos that ultimately causes occupational lung diseases like tuberculosis.

The following is the typical case of a person who developed lung disease after being exposed to poisonous fumes and dust at a mine near Pretoria.

> Mr X said the poison destroyed his lungs and he is now unable to walk unaided. In addition, he is completely deaf as a result of he noise at the mine. He was employed at a mine near Pretoria and was fired in February 2000, after becoming sick. He is dying a slow and painful death. "Mr X, is not the only miner suffering from lung disease. Others are affected and some have even died after being exposed to chemicals" (The Star: August, 20:2000). One of the victims, who was given early pension in March this year because of his lung problem has been sick for six months. Although no official figures are available, the death toll is rising as more miners die from lung diseases. A doctor near the mine said he had seen many miners experiencing lung and chest pains since

he opened his surgery in 1997. These problems developed into chronic obstoactia (lung disease) then into pneumoconiosis and tuberculosis.

The South African Deputy Minister of Environmental Affairs and Tourism, Rejoice Mabudafhasi in August 2000, witnessed the damage that the working environments could do to the human body. She visited the surrounding villages of the controversial Thor Chemical Company in Kwa-Zulu-Natal, and found people who contracted a disease connected to mercury poisoning. She said no other employer would take you, no matter how fresh you look, as long as you tell him or her you had worked at that factory. People who worked there are sick because of the chemical poisoning they were exposed to.

It is suggested by the researcher that personal protective devises must be used especially in dusty environments. Dust masks must be worn to prevent the inhalation of dust particles. The other method that could also be used to suppress dust is to wet the place. A fine spray of water can be used to minimise dust. Powders, which give rise to dust when dry, will rise to little or no dust if wetted.

3.4.7. Water supply

Lack of adequate water and sanitation services has been described as one of the greatest threats to human health in the developing countries, with at least 220 million people lacking an adequate source of water near their homes. These enormous and daunting figures to some extent obscure the day to day hardship and have impact on the health of the people, particularly women and children, who do not have easy access to water for drinking, washing and other household activities (Health Systems Trust, 1997:420).

Basic sanitation and sanitation represent the primary indicators useful for assessing sustainable development, especially human's health. Accessibility to adequate excreta

disposal facilities is fundamental to decrease the faecal risk and frequency of associated diseases. Its association with socio-economic characteristics and its contribution to the general hygiene and quality of life also make a good universal indicator of human development.

It is estimated by the Department of Water Affairs and Forestry that 12 million South Africans do not have access to clean water especially in rural areas. In areas where there is water supply, the question of reasonable access should be considered. This is usually determined by the distance travelled to fetch water. People usually travel 15 minutes walking distance to fetch water. Convenient distance and access are distinct in a sense that there may be access to water but it is not necessarily convenient to fetch it due to distance. Thus the water should be within a reasonable distance from home.

The absence of palatable water, irrigation water and sanitation services directly impacts upon the health of the people and on the other hand their ability to generate livelihoods (May, 1998:139).

Research undertaken by Medical Research Council (1996:42) found that only 21% of households have access to piped water, and only 28% have access to sanitation facilities. In rural areas more than 80% of poor households have no access to piped water or to sanitation.

A large number of South Africans do not have access to adequate water and sanitation. Population growth and urbanisation have placed increased pressure on the need for sanitation and safe water supplies, but due to financial and human resource constraints it is unlikely that high-grade facilities will be provided in the immediate future (Water Research Commission, 1996).

Little information relating to the quality of water used or consumed and its impact on health is available (Catherine 1996:74). Assumptions are often made, not based on scientific data, that the supply of clean water will have a positive impact on the health status of the population. Since tuberculosis is mostly experienced in unfavourable social circumstances, lack of basic facilities such as water and sanitation are key contributory factors to the spread of diseases. Proper hygienic standards cannot be maintained in the absence of a basic necessity like water. Households should be kept clean to be germ or bacteria free, but if there is no water to clean the area, then the place would be hazardous towards people's lives.

3.4.8. Health Care

The availability of health care facilities is dependant on the poverty level of the people. Poor people lack proper health care facilities as compared to their well to do counterparts, and this contributes to the health status of the poor people. If facilities were available equitably most of health problems would be minimized.

Preventative measures like health promotion and early diagnosis are usually the functions of health care facilities, but if the latter is absent most of the diseases will develop without being noticed.

Health and sustainable development are intimately interconnected. Both insufficient and inappropriate development can lead to severe health problems. Addressing primary health care is integral to the achievement of sustainable development. Particularly relevant is the provision of preventative programmes aimed at controlling communicable diseases and protecting vulnerable groups. Good management of immunization programmes essentially to the reduction of morbidity and mortality from childhood infection is a basic measure to preventative health services.

Health care is merely one of the determinants of health. A range of other factors including housing, access to safe drinking water, sanitation, and so on, impact on health status. Sanitation and water, in particular, are arguably more important determinants of health, particularly if the country is keen to emphasise prevention rather than cure (May, 1998:104).

Similarly Roger (1998:49) states that access to basic services like health care impact directly on the quality of life. Access to clean water and sanitation has the obvious and direct consumption benefits in reducing mortality and poor health and increases the productive capacity of the poor.

Available statistics of the Department of Health (1997) suggest that tuberculosis is a serious public health problem with a strong association with poverty. Those who are poor and live or work in overcrowded and unhealthy conditions are more likely to become ill with tuberculosis, conversely, Victor (1996:349) view tuberculosis as contributing to poverty by making people less able to work other daily tasks.

Here below are some of the health problems related to poverty (May 1998:35):

- Tuberculosis
- Diarrhoea
- Fever
- Physical disability
- Mental disability

3. 4.9. HIV/AIDS

"There is still insufficient understanding of the close links between tuberculosis and HIV," said Peter Piot, Executive Director of United Nations Programme on HIV/AIDS. "The two epidemics work hand in hand. In some parts of Africa, their deadly synergy has quadrupled the number of tuberculosis cases over the past ten years." Dr Piot was speaking on the eve of the World Tuberculosis Day on the 24th March 2000 in Amsterdam.

According to Stop Tuberculosis Initiative 2000, almost 30% of people with HIV are also infected with tuberculosis. Tuberculosis is the common opportunistic infection among people with HIV and is the largest killer of HIV positive people. In more and more countries a dual epidemic of TB and HIV is emerging fuelled by each other. The TB and HIV co-epidemic impacts on the economic development and posses new challenges to health and social systems which increasingly have to address issues such as integrating HIV and TB services, facilitating access to treatment and caring for infected people.

According to Piot (2000) about a third of the world's population, or around 2 billion people carry tuberculosis bacteria but most of them never develop the active disease. "Usually, no more than 10% of people infected with tuberculosis develop tuberculosis disease". That is changing as a result of HIV infections. HIV severely weakens the human immune system, making people highly vulnerable to diseases such as tuberculosis.

More than 33 million people worldwide are infected with HIV, and 95% are in developing countries, where the highest rates of tuberculosis infection are found. Today about 11 million people are dually infected with tuberculosis and HIV (Medical Research Council: 2000).

Globally, HIV is responsible for 15% of all new tuberculosis cases, and is the major cause for the rise in southern and south-eastern Africa. The dual tuberculosis-HIV epidemic is also causing concern in Asia, where 70% of all tuberculosis cases are concentrated. In Cambodia, an estimated 20% of tuberculosis patients are HIV positive while in India, 60% of AIDS patients are estimated to have tuberculosis. In Thailand, tuberculosis has become the most opportunistic infection amongst AIDS patients (May, 1998:112).

Medical Research Council (2000) reports that spiralling HIV figures will add an extra 42% to the tuberculosis caseload this year and South Africa is faced with devastating impact of the dual threat to public health. It is also stated that South Africa should expect 273 365 new cases of tuberculosis this year, 113 945 of which will be infectious. An estimated 46.7% of the patients will be HIV positive. Given these figures, tuberculosis and HIV are the most infectious-disease problems facing South Africa, internationally ranking the country second after Zimbabwe in terms of the combined burden of these overlapping epidemics. In Uganda half of all tuberculosis patients are infected with HIV. In Zambia, one in five adults is infected with HIV, and new tuberculosis cases have increased from 7000 a year in 1984 to 40,000 in 1995, with an estimated 30,000 of the new cases due to HIV.

HIV/Aids as a health priority is also linked to poverty much as tuberculosis. According to May (1998:111) the combination of poverty, natural disasters, violence, social chaos and the disempowered status of most rural people form a fertile environment for the transmission of HIV infections. Mobile individuals such as migrant workers are also at increased risk. Poverty increases the risk of HIV infection. Conversely, the illness increases the risks of a household or individual becoming impoverished. Beyond the individual and household, HIV/Aids lowers the general level of health in communities in which it is prevalent because of its close relationship with other communicable and poverty related diseases such as tuberculosis.

3.5. SUMMARY

The chapter has looked into the concept of poverty as the cause of unfavourable social circumstances, which contributes to the spread of tuberculosis. Poverty definitions, various kinds of poverty, the nature and extend of poverty in relation to tuberculosis have been explored.

Unfavourable social circumstances such as malnutrition, unemployment, housing, informal settlement, sanitation and water supply, unfavourable working environment, lack of health facilities and HIV and AIDS that have a bearing in the spread of tuberculosis have also been highlighted.

Having looked into the chapter one is in a better position to see how poverty as the cause of unfavourable social circumstances can escalate the spread of tuberculosis.

CHAPTER 4

THE IMPACT OF TUBERCULOSIS ON THE PATIENT AND THE FAMILY

4.1 INTRODUCTION

Basic to the understanding of a patient with tuberculosis is an understanding of the family context within which the patient lives. Because the family is the individual's most important social unit, it constitutes the most important social context within which illness occurs and is resolved. It thus serves as a primary unit in health and illness (Litman, 1994:93). The family is involved in promoting everyday health behaviours, defining when a family member is sick and thus violating the sick role, and initiating medical care for the ill person.

This chapter gives an overview of the impact of tuberculosis on the patient and his family.

4.2 THE IMPACT ON THE PATIENT

According to Turner (1989:7) during enactment and incorporation of the illness component of tuberculosis, individuals often demonstrate a variety of coping behaviours. These behaviours according to him serve the important function of relieving stress, protecting self-esteem and assisting the individual in dealing with problems connected with the stress of tuberculosis. The manner and degree of which these behaviours are exercised may vary among individuals. Some individuals need few psychological mechanisms in dealing with the impact of tuberculosis, others require a host of mechanisms, and there are some who, even with the use of all their adaptive mechanisms, never come to accept the illness component of tuberculosis.

Similarly, Cohen and Lazarus (1993:49) states that "what actually will be disturbing to anyone during illness and how she or he will react are highly individual matters". There are, however, some causes of psychological stress that occur frequently enough and should therefore be considered when each patient's needs are assessed. Engel (1989:941) classifies the causes of psychological stress as (1) the loss of something that is of value to the person, (2) injury or threat to the body, and (3) the frustration of drives. These obviously are inter-related. Contained within Engel's list of causes are other elements such as the altered concept of failure of intellect to resolve the illness, threats to economic security, confusion in the definition of the sick role and fears that needs will not be adequately met.

4.2.1. Psychological responses that might be seen in individuals who are attempting to cope with tuberculosis

The individuals with tuberculosis commonly experience a variety of emotional responses due to the presence of increased weakness, dysprea, cough and sputum production. These responses may include anger, fear, apathy, and depression (Winston, 1987:994). Anger could be caused by the inability to carry out daily activities as others do, fear could be caused by the feeling of approaching death due to impaired respiration, anxiety about what the future will hold as a result of the illness, apathy toward therapies which may seem at times doing little and depression as the individual moves between exacerbation and remission of the disease process.

4.2.1.1 Threats to self concept

Self-concept includes all the ideas conscious and unconscious feelings, beliefs, and attitudes that persons have about themselves and their possessions (Simon, 1990:494). In their concept of themselves they attempt to answer the questions "where am I?" "what am I?", "who am I?". Among many things that persons may or may not value about themselves are their body image or picture of themselves, their feeling of being intact or whole, their role and status in their family, community and job, their adequacy and acceptability as a marriage partner, their success and their sense of fulfilment and their hope that tomorrow will be better than today.

Shadrack (1990:42) further states that other values that may be threatened during illness include the way in which tuberculosis patients regard financial, physical or emotional dependence and independence, how they feel about relinquishing control over events that relate to their welfare as well as the way in which they ordinarily relate to other people.

4.2.1.2 Failure of the intellect to resolve illness

Failure of the intellect to resolve illness and all its consequences is also a source of psychological stress for many patients (Billy and Hudson, 1990:494).

In illness, each individual reacts closely to the way he or she does in other crises in life. Reactions are often complex, involving both intellect and emotions. Through the use of their intelligence, human beings are often able to foresee the consequences of their actions and to plan to avert injury or correct the damage that has been done. In as much as they are able to acquire knowledge and to grasp and identify the significant factors in their situations and to use their capacity to reason and think, to modify their behaviour, intelligence is useful to humans.

However, what if intelligence fails? What if illness imposes such overwhelming changes on the physical functioning of the person that intelligence fails in everyway except to tell the person that this time reason cannot get him or her out of this mess? Anxiety increases and various defensive maneuvers are called into action to protect the individual from experiencing the full impact of what has happened.

4.2.1.3 Anxiety

According to Mischel (1981:42) and Meleis (1990:252) the most commonly occurring human response to illness and diagnosis is anxiety. Anxiety can be described as the uneasiness, apprehension or dread that is associated with an unrecognisable source of anticipated danger. It differs from fear in that with fear an identifiable source of danger can be designated (Freeman, Kaplan and Sadock 1992:24). One can be afraid of dogs, crowds, elevators or lightning, however one may not be aware of why he fears illness. Anxiety is essentially a human experience that is ever present and has always been a part of our human existence. It is the result of conflicts and frustrations in our daily lives and it is a lifelong partner that one can either use constructively or succumb to its destructive forces.

It is further stated that when assuming the state of illness, individuals are not always capable of determining the source of danger in their lives, consequently anxiety occur. Illness is both physically and mentally taxing and its unknown are ever present. Questions that come to mind of the ill individual may include "why do I feel this way?" "what is wrong with me?", "how do ill people act?", and "should I seek medical attention?".

The degree and duration of anxiety demonstrated by each individual vary and they must be noted. Mild and moderate degrees of anxiety are an asset to successful adaptation in life. When one is moderately anxious one is more aware of environmental surroundings and is more receptive to learning. Such an aroused state

can be conducive to patient learning (Mischel 1981:44). As the level of anxiety increases, however, one loses the capability to function efficiently. As anxiety increases, one's perceptual field is reduced. The overly anxious individual loses track of time, space and meaning of environmental events. Situations become distorted and simple happenings may be blown out of proportion.

4.2.1.4 Denial

According to Luckmann (1990:54) one of the ways in which an individual copes with a stress situation like illness, is to deny the existence of the threat. The tendency of the individual to deny the existence or the seriousness of an illness is one example frequently seen by health care providers.

Denial is a coping behaviour that indicates the failure to acknowledge either the existence of a known fact or its significance. Denial lessens the impact and allows time to adjust to the dreadful illness (McCown, 1989:412). It is temporary and gives way to a gradual awareness of reality. Facts and information given to their patient during this stage are often not heard.

Similarly Parny (1990:21) says that "statements from patients and families which suggest that they do not believe the doctor are reflected in the information until they can regroup and begin the process of seeking medical information."

According to Nadel (1994:34) various steps are involved in the denying behaviour. First, a reality situation exists and the individual either perceives or anticipates some component of the situation as a threat. Second, anxiety transpires in response to the perceived threat. Next, the individual either completely or partially disclaims the facts or their significance in the threat-producing situation. In the last step of the denying behaviour, the individual ignores or rejects data connected with the threatening situation in an attempt to regain and maintain psychological equilibrium.

As one examines the response of denial, it can be seen that it merely minimizes the anxiety-producing component of reality that comprise the threat. The use of denial may act as a temporary protector of the ego by preventing the individual from becoming totally overcome by anxiety (Kiening, 1990:429). However, an adult's frank denial of obvious reality over a long period of time may indicate a more serious mental health disturbance.

In order to therapeutically intervene when denial occurs, the social worker must first be capable of recognising manifestations of this coping behaviour. After identifying the patient's usage of denial, the social worker needs to determine the degree to which the denial hinders the patient's progress toward wellness. Is denial preventing the patient from much needed health assistance or is it allowing the patient to regain his or her composure in dealing with the shocking emotional experience? It is essential for the social worker to be aware that total realisation and acceptance of an emotionally charged experience are never accomplished at once.

After the degree of denial is determined, the social worker should attempt to understand the need that this coping behaviour serves for the specific patient (i.e. why is this patient using denial?). Possibly the existence of the state of illness is threatening the feeling of security or the presence of illness may carry with it the anxiety of possible loss.

4.2.1.5 Questioning

When illness occurs, patients often review their lives in an attempt to find answers to the reason or purpose for the illness. "Why me?" "What did I do to deserve this?" "Why am I so sick and you are so well?" Some patients fail to find answers to these questions, while others find a variety of explanations. The patient may view the illness as a punishment for a sin, the result of unhealthy living, or simply as part of life. Regardless of whether or not the individual finds answers to his or her questions, the

occurrence of illness evokes anxiety. Since the individual has temporarily lost control of life, feelings of uneasiness and apprehension develop. Respected questioning often manifests these anxious feelings.

The social worker's responsibility is to supply reliable data to the patient about the illness and to provide support during periods of anxiety. Support can be furnished by allowing and encouraging the patient to do as much as possible. This demonstrates to the patient that he or she still has some control over life.

Although the social worker may be unable to supply answers to all questions, the fact that the patient is allowed to ask questions and seek answers allays some of the apprehension about the unknown.

4.2.1.6 Ambivalence

Another coping behaviour that occurs during the course of illness is ambivalence. According to Spector (1989:42) ambivalence can be described as the co-existence of opposing emotions, attitudes and desires toward the same object or situation. The patient often has opposing emotions and desires about whether seeking medical attention. Once health care assistance is sought, the individual may be ambivalent about whether medical advice should be followed.

With the expression of such feelings, the patient may need to be informed that the existence of ambivalent feelings about illness is not unusual. Verbalising opposing feelings often enables the individual to identify more realistic approaches to problems.

4.2.1.7 Suspicion

Some individuals look upon their illness with suspicion and do not completely accept the possibility that their diagnosis may be true. Such individuals may be suspicious if their diagnosis is serious or if their diagnosis does not appear to be serious. Suspicion is imagining the existence of guilt, fault or defect on the part of another with little or no evidence. Individuals demonstrating suspicion attempt to find possible reasons for mistrusting their diagnosis and question the motives of others.

The suspicious individual thinks that the health team members are incorrect or defective in their judgements about illness. The social worker can detect the suspicious individual by such statements as: "What are you trying to tell me?" "You are lying to me". Some doubt concerning illness is reasonable, but suspicion can be blown out of proportion so that the individual mistrust everything. When carried to extremes, suspicious behaviour can develop into a neurotic or psychotic disorder (Arieti, 1980:24).

An individual who is suspicious is frightened and often feels the need to be constantly on guard or feels that he or she may be taken advantage of. Such an individual lacks a sense of trust in others. When interacting with the suspicious individual, the social worker must be consistent in his or her approach, and must respond to questions in an open and truthful manner, since any demonstration of inconsistent behaviour or false information increases the degree of suspicion.

4.2.1.8 Hostility

Perhaps one of the most difficult barriers for the social worker to deal with when working with clients is hostility. All humans experience hostility at some time or another. This coping mechanism or behaviour may be but one way a patient reacts to the threatening and frustrating situation of illness. Hostility can be delineated as the

feeling of antagonism accompanied by desire to harm others. These desires subsequently may produce feelings of inadequacy and self-rejection on the part of the individual and lead to the loss of self-esteem (Keining, 1990:84).

According to Ramsdem (1984:452) the manifestations of hostility can range from extreme polite behaviour to external forms of rage or homicide or internal forms of depression or suicide. The terms that may be used to describe the behaviour of hostile individuals are picky, argumentative, irritable, sarcastic, demanding, critical and uncooperative.

A patient who demonstrates hostility represents a barrier to the social worker's goal of assisting. The partner poses a threat to the social worker's self image as an authority figure. Even though the patient's hostile behaviour may be directed towards the social worker, such behaviour ought not be taken as a personal threat.

When dealing with hostile patients, the therapeutic tasks of the social worker include the following: validating the existence of the behaviour, allowing verbalisation of feelings, providing firm but supportive directions, supplying alternate means of hostile expression and above all assisting the patient in regaining and maintaining self esteem (Ujhely, 1990:242).

4.2.1.9 Regression

It is anticipated that during illness individuals may regress and demonstrate behaviour that is not so mature as that which they assume during times of wellness. Regression can be defined as a protective reaction involving a retreat to the use of behavioural patterns that were appropriate during earlier stages of development (Sadock, 1987:180). During stressful situations, such as illness, behaviour from earlier developmental stages may be reassuring.

Regression is seen in a variety of forms such as helplessness, nail biting, inability to wash or feed oneself, crying, withdrawal from responsibility, preoccupation with self, total dependence and giddiness (Jack, 1992:42).

When it is not extreme, regression during illness is a natural reaction and can facilitate recovery because it permits the patient to be more dependant than usual. For example, dependence in the form of bed rest can restore strength and hence assist in progress toward wellness.

Forms of regression and dependency that are encouraged by health personnel to facilitate the achievement of wellness are deemed legitimate.

4.2.1.10 Loneliness and rejection

The presence of illness brings with it the feeling of loneliness and rejection. Patients often feel entrapped by the illness and feel isolated in dealing with the problem. Individuals who have a communicable disease like tuberculosis are usually isolated and rejected by others because of the nature of the disease.

If asked to describe inward feelings, the lonely and rejected individual may allude to a sensation of being cut off from others, a feeling that no one understands or cares, a feeling of being unloved, a feeling of being forgotten with no one to turn to or perception of being deserted by friends and relatives.

Accepting the patient as he is becomes necessary if the medical personnel wish to avoid display of rejection. Facial expression, voice intonations and body language are means of conveying these feelings toward another individual.

Social distance between the patients and others is interpreted as non-acceptance and rejection. Thus personalised human contact on the part of friends, relatives and medical personnel can minimize loneliness and rejection.

4.2.1.11 Depression and withdrawal

One commonly occurring human response to illness is depression; a feeling of sadness and self-depreciation accompanied by difficulty in thinking, reduced vitality and lowered functional activity. In depression there can be failure in the ability to carry out household tasks and job responsibilities. The individual's general mood is one of sorrow and crying spells may occur without warning physically, the entire body appears to be slowed down or working improperly. Appetite is poor, sleep disturbance, libido decreases and personal appearance fails to be maintained (Hendin, 1992:242).

During depression the usual reaction of most patients is the preoccupation with their body malfunctioning. In order to cope with depression, some individuals resort to withdrawal. Manifestations of withdrawal might include sleeping a great deal, avoiding people, sitting alone and daydreaming.

4.2.2. Physiological impact of tuberculosis on the patient

The individual with tuberculosis is well aware of the changes that have occurred in his appearance and may be self-conscious about these changes. Common bodily changes may include noisy respirations, excessive sputum production, weight loss etc. Excessive sputum production may hinder the individual from engaging in social contacts if he feels that frequent coughing and expectorating are not conducive to social conversation (Duddly, 1981:425). The patient may feel that members of the society find the frequent expectations as distasteful and hence avoid him. Skin colour change is a difficult manifestation to hide. Each time the individual looks in the mirror,

the pallor or the bluish tint to the skin may be noted. As a result, the individual may not wish to look in the mirror or be seen by others.

Noisy respiration and a sitting position of leaning forward with the arms supported may create difficulties for tuberculosis patients. He may avoid social contacts due to the feeling that noisy respirations might be distracting to others and that the unusual sitting position could be interpreted as disinterest in social conversation.

The medical personnel can assist the patients with these physiological problems by pointing out to them that these are expected occurrences in the disease process. Encouraging the patients to carry out pulmonary hygiene routine can aid in reducing noisy respiration and excessive sputum accumulation. The individuals need encouragement to carry out pulmonary hygiene in private, thus avoiding the concern and embarrassment of wondering how others will react to his appearance at that time (Erickson, 1989:52).

Sexual impact is also highlighted by Robert (1992:82). He states that the sex act involves an increase in energy expenditure, an elevated ventilatory rate and an increase in oxygen consumption. Since the individual with tuberculosis has an inefficient respiratory system, he may encounter difficulties supplying the air exchange needed to meet the metabolic demands of the increased energy expenditure created by the sex act.

This does not mean that an individual with tuberculosis cannot take part in sexual expression, but alterations in the manner of expression may be necessary.

Rosteer (1979:42) says individuals with chronic obstructive pulmonary disease may demonstrate a progressive decrease in the frequency of sexual encounters. Such a decrease may not be readily evident to the individuals since it has occurred over the years. However, if openly approached about the frequency of coitus, the individuals

usually will identify that his sexual activity has diminished with the progression of the disease process. The diminution of sexual activity may cause the male to feel that he is "less than a man" and the female to believe that she has " lost the power of femininity."

Unless sexual function of the respiratory patient is openly dealt with, it can create difficulties in a sexual relationship. The sex partner may become frustrated because of the respiratory patient's decreased ability to take part in the sex act.

4.2.3. Occupational impact of tuberculosis on the patients

One of the greatest impacts of tuberculosis disease is the change it imposes upon the individual's work role (Taskin, 1982:213). Since the physiological consequences of tuberculosis produce a decrease in energy level, the individual affected often is required to make alterations in occupational pursuits. These alterations may be minor or major and may cause a change in the individual's standard of living.

Minor alterations can occur in any job setting and generally involve minimal change in the work environment. A minor alteration may be removing the individual from an environment that contains irritating airborne pollutants or sudden temperature changes and placing the individual in a setting that does not contain substances or temperature settings, which are irritating to the respiratory tract. For example, having the individual with tuberculosis working in an environment full of dust particles. This individual should be moved to an environment that does not have dust particles. The farmer with an air-conditioned tractor cab and wearing a scarp or mask of the type over the mouth and nose when going out for harvesting. Each of these alterations are minor in that the individual still is able to carry out basically the same occupational tasks.

Major alterations in occupational pursuits may include changing one's job or being forced to early retirement (Glase, 1980:214). If the severity of tuberculosis disease process causes frequent lost working days, the individual with tuberculosis may find his or her job in jeopardy, unless the loss of work time can be resolved. The chance of obtaining another job may be minimal since letters of recommendation sent from one employer to another often allude to missed workdays. As a result, the potential employer might consider the individual with tuberculosis disease an economic risk and refuse to hire him or her.

The primary role of the social worker in dealing with the occupational impact of tuberculosis is to assist the individual in identifying necessary alterations in the work pattern and in developing means of maintaining adequate respiratory function. Assisting the individual and the family in recognising potential situations and problems in one's work that may contribute to the respiratory difficulties is essential. Since each individual is different and occupations are diverse, problems related to occupational respiratory hazards will vary. Encouraging both the patient and the family to describe the occupational environment and to identify situations that they feel potentiate respiratory difficulties is a helpful beginning. Once situations, which incite respiratory difficulties, are identified, appropriate interventions to deal with these situations can be carried out. In addition, approaching the employer, the industrial nurse, or the company doctor about alterations in the respiratory patient's work situation can prove beneficial since these individuals can be directly involved in initiating necessary changes.

4.2.4. Social impact of tuberculosis on the patient

According to Silverberg (1990:245) reduction in social and recreational activities often are the first noticeable changes in the lifestyle of the individual afflicted with tuberculosis. The individual with tuberculosis finds that he or she does not have the energy to become involved with others emotionally or in activities requiring physical

expenditures. Not only is it difficult to take part in physical activities, but also even talking may prove exhausting. As a result, the individual withdraws from others and may become an isolate.

Since the progressive nature of tuberculosis occurs over a period of years, the individual afflicted may not be aware of the progressive changes occurring in his or her social activities. As the withdrawal from social contacts and involvement progresses, the individual also may become increasingly depressed as the result of the ensuing loneliness and boredom (Jorgenson and Logan, 1980:245).

In order to prevent progressive withdrawal and subsequent depression, the individual with tuberculosis must be encouraged to take part in social activities.

In addition to dealing with tuberculosis, the individual needs to be sensitive to the deleterious effect smoking have upon his or her respiratory tract. Since smoking is a habit often cultivated during social interaction, the individual with tuberculosis may find it difficult not to smoke if everyone else is smoking. If the individual has been smoking for a number of years, it may prove difficult to alter his or her smoking habit. The patient with tuberculosis who is attempting to stop smoking may require a replacement such as chewing gum for the oral gratification obtained from smoking.

4.2.5. Other sources of stress to the individual

According to Beland and Passion (1990:268) there are many ways in which patient care can be a source of psychological stress and unnecessary anxiety. They further state that, because medical personnel at times fails to take the psychological needs of the patient into account, the following omissions in care often occur: -

- Failure to prepare the patient for what to expect.
- Failure to provide consistency in care.

- Lack of skill in handling the patient or the equipment – including awkwardness, roughness, uncertainty about how to proceed and failure to give necessary emotional and physical support.
- Lack of needed supplies.
- Changing the performance of a procedure without explanation.
- Failure to observe the patient's modesty patterns by omitting such things as adequate covering and screening while performing procedures.
- Making thoughtless or careless remarks in the presence of the patient that suggest dangers that may or may not exist.

Diagnostic and therapeutic procedures that are performed by as many strangers are sources of anxiety to patients. There is always the possibility that the patient knows or believes that a procedure may be harmful or painful as well as helpful. No list of situations in which the performance of a procedure may add to the patient's anxiety will ever be complete. However, awareness of some common ways in which anxiety is prevented or provoked should be helpful when planning patient care.

4.3. THE IMPACT ON THE FAMILY

Martinson (1989:5) says the illness of a family member has been reported to influence the family or other individuals within the family. As a responsive context reacting to illness of a family member, many researchers have studied the family. Kruger (1980:42) has noted changes in spouse behaviour following the diagnosis of tuberculosis. Davids (1983:942) similarly documented changes in family functioning. The family as a unit does not function properly when one of its members is ill.

Leaney and Wright (1980:200) highlight the following assumptions as being experienced by the family facing the illness of its members:

- Families vary in their tolerance for the patient's physical condition.
- Families under stress tend to hold on to previously proven patterns of behaviour.
- Families usually go through a grief-loss process following the diagnosis of an illness.
- Families play a significant role in the encouragement or discouragement of the family member to participate in particular therapies.
- Many families have difficulty adjusting to illness because they either have incorrect or inadequate disease related information.
- Where there is chronic illness, families must adjust to changes in expectations for each other.

Barnhill (1994:494) identified the following as dimensions of family reactions to illness:

(i) role changes (family members alter their normal conventional roles to accommodate the ill member)

(ii) information processing (the process of analysing and interpreting the diagnosis usually becomes a blow to the family)

Clear versus unclear communication, flexibility versus rigidity in responses to change and role reciprocity versus rigidity or role conflict are mostly observed.

On the same note, Hill and Hansen (1970:339) identify four factors that influence the family's ability to cope with an illness. These include characteristics of the event (nature of illness or disability, prognosis and perception of the illness); perceived

threat to the family (relationship, status and roles); available resources and past experience.

4.3.1. Immediate impact of the diagnosis

Grief is the response of the family to loss. Family members grieve the loss of their member's health. Grieving can be intense and lengthy experience, marked by periods of denial, anger, bargaining, depression and acceptance (Moses, 1990:424).

The reaction of family members to diagnosis includes shock, disbelief, denial, anger, guilt, worry sadness and acceptance (Sabbeth, 1984:192). The first few hours and days after the diagnosis are a time of crisis, filled with anxiety, fear and emotional upset.

4.3.2. Ongoing impact of the diagnosis

Families need to make long-term adaptations for their ill members. They need to cope with the illness of their family members. The following are said to be factors that makes adaptation to be easy.

4.3.2.1. Support system

McCubbin and Patterson (1989:243) states that personal resources (financial, educational, physical, emotional and psychological), family resources (degree of cohesion and adaptability) and social support help to buffer the impact of the diagnosis. Social support offered by the extended family members, friends and neighbours is especially important to the family's ability to adjust to a chronic illness.

Families who are part of supportive networks are fortunate. Families who are isolated from kin and neighbours are more vulnerable to the disruption of chronic illness.

4.3.2.2. Perception of the diagnosis

McCubbin and Patterson (1989:243) found that the family's perception of the diagnosis influences the family's adjustment. The meaning the family members give to the illness and their attempts to clarify the issues and integrate the experience into their lives affect their ability to cope. Families who are able to define the illness as a challenge or as an opportunity for growth can more easily adapt to diagnosis.

4.3.2.3. Changes in family routine

Once a diagnosis is made the family must face major changes in daily family routine. Bran (1992:24) states that sudden illness within the family can disrupt established roles and force other members to reintegrate positions in order to regain equilibrium. Doherty (1987:42) is also of the opinion that changes in the family division of labour are experienced. It is further stated that role and status realignment involve role restructuring. An example of the necessity for role restructuring can be observed in a nuclear family where the mother who has tuberculosis need to be hospitalised. In this situation the spouse must take care of the children and the household. There may be extra demands such as relatives coming to stay with the family.

4.3.5.4. Stigma

According to Goffman (1979:337) stigma involves adjustment to a new and painful identity. The social stigma associated with tuberculosis can be devastating to both the patient and the family. Time is needed to cope with public disclosure in the face of potential social stigma. The family may not know what to tell friends, neighbours or relatives. They may try to hide the illness or attempt to prevent the diagnosis from being known.

4.3.2.5. Hospitalisation

According to Hunsberger (1992:929) hospitalisation is a threatening experience for everyone. New caretakers, different routines and separation from familiar people are experiences counter to the hospitalised individual.

Adam's (1972:22) studies revealed that most individuals and their families have only vague, general and usually distorted ideas about why they are being hospitalised and what will happen to them while they are in the hospital. This lack of knowledge is responsible for increasing the typical fears and anxieties. Family members also worry about the impending separation and the effects on their sick individual.

Payment of hospital bills also cause anxiety to the family especially if there is no stable source of income or if the family is experiencing some financial problems.

4.4. SUMMARY

It is hoped by everyone that one will grow and develop free of physical and emotional problems. When one acquires a disease this expectation is highly challenged. Responses to the diagnosis and course of tuberculosis vary from intense emotional upset to a positive integration of the experience. Most families experience some disequilibrium in the initial phases of the member's disease. Diagnosis of tuberculosis means that the family must make certain practical changes in their daily lives. It also requires that they somehow learn to live with the stress imposed by the disease.

This chapter has tried to look at the impact of tuberculosis on the patient and his family. Psychological responses like denial, depression, anxiety, anger, hostility and rejection, that might be seen and experienced in individuals who are being told that they have tuberculosis, have been looked at.

Physiological impacts of tuberculosis like noisy respiration, weight loss and loss of appetite are noted. Occupational impact due to the disease has also been highlighted. Alterations in job setting as the result of tuberculosis were also mentioned.

Lastly, the impact of tuberculosis unto the family like hospitalisation, stigmatisation, changes in the family roles and support systems were looked at.

CHAPTER 5

TUBERCULOSIS PREVENTATIVE AND CONTROL MEASURES

5.1. INTRODUCTION.

Tuberculosis has been neglected as a public health issue for many years by countries (WHO Report, 1998). Tuberculosis remains the major cause of deaths from a single infectious agent amongst adults in developing countries. There has been a resurgence of tuberculosis in the industrialised world. Several factors, most notably the lack of resources and government commitment, have prevented adequate implementation of control measures.

The key in controlling tuberculosis is rapid detection and cure. In 1991, the World Health Assembly recommended that each country's National Tuberculosis Control Programme should work towards two objectives by the year 2000: 1) to treat successfully 85% of detected smear positive cases and 2) to detect 70% of all such cases by the introduction of an effective framework for tuberculosis control.

Tuberculosis can be prevented. The health personnel should be instrumental in prevention by teaching facts about tuberculosis. Individuals should be encouraged to avoid factors that predispose them to tuberculosis. Nutrition should be adequate. Individuals should be helped to understand the importance of an annual physical examination. The value of early diagnosis should also be stressed.

This chapter discusses the preventative and control measures, which can be taken to combat tuberculosis, and also highlights the roles of social workers in implementing control measures like Direct Observed Treatment Short course strategy.

5.2. PRIMARY PREVENTION.

According to Hoff (1993:24) primary prevention is designed to reduce the occurrence of a social problem in a community. Health education in relation to tuberculosis as a strategy of health promotion will be discussed.

5.2.1. Health Education.

According to Health Promotion Bulletin (1990:3) health education forms an important integral part of a comprehensive health service at all levels. In its broadest interpretation, health education is concerned with all the experiences of an individual, group or community that influence the attitudes, beliefs and behaviour in respect of health, as well as the processes and efforts of producing change when this is necessary for optimum change. In relation to tuberculosis, health education is concerned with the belief systems that the people have with regard to the causes of tuberculosis. Some traditional and superstitious health beliefs such as witchcraft are often held regarding the cause of tuberculosis. In this context, the importance of health education is highly emphasized to change the mindsets of the people.

Health education recognises that many experiences whether positive or negative have an impact on what an individual, a group or the community think, feel and do about health.

It is the right of the individuals to be informed about health and health related matters such as tuberculosis, HIV and AIDS. In principle, however, health educators must be reminded of the conventional wisdom that is so easily overlooked in some communities. Therefore matters such as respect for the rights of the people both as individuals and collectively; to think and to act constructively to identify their own health needs and problems and to emphasize full partnership in health education, should be acknowledged at all levels.

The following categories are outlined by Brink (1987:593) as the main functions of health education:

- Promotion of health: Health promotion supports personal and social development through information, education and building life skills. Health promotion develops and equips people with the information and skills needed to promote and prevent health problems. For example, in South Africa everyone needs to know about priority health issues like HIV/AIDS and tuberculosis, and people need to learn how to prevent these diseases.

- Maintenance of health: Through health education people turn to maintain their healthy lifestyles by abstaining from habits that are detrimental to their health. In the context of tuberculosis, health education assist people to abstain from smoking as this causes further damage to the lungs.

- Coping with illness: Health education equips people with information on how to deal and cope with the illness. Information with regard to steps to be taken when ill is provided through health education. If a family member is diagnosed with tuberculosis, health education information does equip the person and the family with what action should be taken. For example requesting the whole family to be tested and treated.

- Restoration of lost aspects of life: If during the course of the illness the person losses an aspect of his life such as a damaged lung, the information received from health education could reassure the person that he can live with only one functional lung.

Having looked at these functions, one would agree with Brink (1987), that these functions are applicable in tuberculosis context. The social workers could perform these functions in trying to assist the tuberculosis patients

With regard to health education, one may pose the question as to "where does health education take place?" The answer is, "people may be educated where they are". The implication is that health education takes place wherever the person who needs to know something about health comes into contact with a person who knows much about health. This can literally be anywhere.

The promotion of health, in a positive sense through nutrition, personal hygiene, suitable working environment and healthful living habits, has a definite relationship to the prevention of many communicable diseases (Leavell, 1985:147). By inculcating the suitable principles of healthful living, one promotes health and helps to prevent infectious agents or their products from gaining access to the human host. Adequate nutrition is an important factor in increasing resistance to diseases.

The influence of overcrowding on the transmission of infection is well documented and known. It bears a direct relationship to air borne and other communicable diseases. The prevention of overcrowding decreases the probability of effective contact with infectious agents whereas the promotion of health, through the application of principles of good housing, reduces infection and disease. Good personal hygiene further minimizes the risks of infection and transmission. The simple hygiene act of washing hands, for example, can make person to person transfer of pathogens virtually impossible.

Health education also embraces emotional health and attitudes which can influence the onset and course of communicable diseases like tuberculosis. The attitude of the tuberculosis patient towards his infection as well as that of the patient toward his acute illness not only influence the outcome of the individual's infection but has an important bearing on disease transmission.

Health information, instruction and education are significant in communicable disease control. Knowledge of the fundamental facts of disease (i.e. its causes, transmission

and prevention) is an individual and community asset. Health education therefore is an important principle in the control of tuberculosis.

Social workers could provide health education as a primary prevention, in this context in trying to combat tuberculosis by equipping people with information with regard to tuberculosis.

5.2.2. Immunization.

At childhood there are six major preventable diseases that must be combated through immunization, namely:

- Measles
- Poliomyelitis
- Diphtheria
- Whooping cough
- Tetanus and
- Tuberculosis

These communicable diseases are prevented by means of timely immunization determined by the EPI list. According to the Expanded Programme on Immunization of South Africa, E.P.I. List (1995:1-3), the revised immunization schedule is as follows:

Age	Vaccine
Birth	TOP V (0), BCG
6 weeks	TOP V (1), DPT (1), HBV (1)
10 weeks	TOP V (2), DPT (2) HBV (2)
14 weeks	TOP V (3), DPT (3), HBV (3)
9 months	Measles (1)
18 months	TOP V (4), DPT (4), Measles (2)
Age	Vaccine
5 years	TOP V (5), DT

Foote note: Repeat BCG at next visit if no scar is visible

TOPV – Trivalent Oral Polio Vaccine

DTP – Diphtheria Pertussis and Tetanus Vaccine

DT – Diphtheria and Tetanus Vaccine

HBV- Hepatitis B Vaccine

BCG – bacillus CalmEte Guerin (Tuberculosis Vaccine)

Gurney (1992:421) states that immunization against communicable diseases especially tuberculosis, has proved to be the most simplest and most efficient technique of primary prevention. In contrary to Gurney (1992) Luelmo (1987:210) say that BCG vaccination does not prevent tuberculosis infection rather it reduces the risk of other diseases. He further says that BCG vaccines are doing little to reduce the number of infectious tuberculosis cases thus it is less important than good case finding and treatment programmes.

On the same note Brokes (1992:472) is of the opinion that BCG is administered to people who have negative tuberculin skin tests but who are repeatedly exposed to pulmonary tuberculosis. He also states that the vaccine does not reduce the chance of natural infection but decreases the seriousness of tuberculosis when it occurs.

Similarly Aids Action (1996:3) states that "BCG vaccine protects children against severe and life threatening forms of tuberculosis disease in childhood. BCG does not reduce the risk of being infected with tuberculosis and its impact of preventing pulmonary tuberculosis is limited". Thus BCG has a very restricted role in tuberculosis control because it does not prevent transmission of infection.

According to Davies (1987:156) and Geddes (1990:1023), BCG must be administered to the following high-risk groups:

- Hospital workers especially doctors, nurses and laboratory personnel and people living or working in circumstances where there is a higher risk of infection.
- Travellers to areas of high prevalence.
- Close contacts
- Immigrants and
- School children

The social worker could take part in relation to immunization. He could educate the expectant mothers during pre-natal sessions on the importance of immunization. Even after the delivery of the children, the social worker could also motivate and encourage the mothers to bring their children for immunization.

5.2.3. Chemoprophylaxis.

According to Gurney (1992:423) chemoprophylaxis is the administration of a specific therapeutic agent before the occurrence of the disease for primary prevention. Similarly Geddes (1990:1021) states that chemoprophylaxis is the use of anti-tuberculosis drugs in uninfected tuberculin negative individuals in order to prevent infection. It is highly valuable in infants who are being breast-fed by mothers with infectious pulmonary tuberculosis.

Aids Action (1996:3) also view chemoprophylaxis as a way of giving anti-tuberculosis drugs to an individual to prevent the progression to active disease. In developing countries, preventive therapy is only recommended for young infants whose mothers have active pulmonary tuberculosis and children under five who are living with a person with infectious tuberculosis.

Since some people carry dormant tuberculosis infections that may develop into active disease in some situations, the most generally used prophylactic chemotherapy is isoniozid. It is effective and inexpensive and can be administered orally.

Chemoprophylaxis is also beneficial for individuals with HIV to prevent them from developing active tuberculosis disease.

5.3. SECONDARY PREVENTION.

5.3.1. Early Diagnosis.

The development of effective treatment for diseases when diagnosed early has contributed significantly to preventing further progress of communicable diseases. When primary preventive measures have not been utilized, chemotherapy is used to

minimize the infectious process and prevents disability, as well as to shorten the infectious period and may also prevent death.

Advances in the prevention of communicable diseases by modern therapy, places added responsibility upon the doctor for making an accurate diagnosis. The laboratory is of great importance for the detection of most infectious agents and their products. Too often, however, important communicable diseases remain undiagnosed because of failure to utilize the laboratory properly (Gurney, 1992:425). Failure to detect diseases means failure to apply specific preventive measures on behalf of the patient, family and community. Progress in the development of new laboratory procedures has contributed significantly to early detection and diagnosis.

5.3.2. Case finding.

Case finding according to Martin (1994:240) is passive in that it depends on patients with symptoms reporting to the clinics. Motivation could mostly be promoted by social workers through educational campaigns about symptoms, which should prompt people to seek medical attention. The curability of the disease should be stressed. Diagnosis is most simple and effective by means of direct smear examination of the sputum.

Similarly, Strickland (1984:58) states that, in developing countries, case finding and chemotherapy are of paramount importance for the control of tuberculosis. Case finding and treatment must be developed together to break the chain of transmission. The importance of case finding is to discover those individuals with positive sputum by direct microscopy of sputum samples in any patient with a cough. This detection of sputum helps to prevent the waste of scarce anti-tuberculosis drugs on patients suffering from respiratory symptoms rather than tuberculosis.

5.3.3. Contacts.

A contact is any person known to have been in association with an infected person. The contact has the likelihood of acquiring the infection (Brayton, 1992:524). Control of contacts includes the application of preventive measures which comprise mainly health education, immunization, chemoprophylaxis, surveillance or observation and quarantine for the maximum incubation period

The infectious individual is usually isolated from the entire community for two purposes namely: 1) to prevent transmission to susceptible hosts and 2) to protect the patient from exposure to secondary infection by contact with other people during his acute illness (Michael, 1998:240).

Isolation is defined by Levis (1982:42) as the separation for the period of communicability of an infected person from uninfected persons to prevent the direct or indirect conveyance of the infectious agent. Thus tuberculosis patients will be isolated for some time to prevent conveyance of the germ to other people.

5.4. TERTIARY PREVENTION.

Tertiary prevention entails measures that need to be taken once the problem has occurred. In this context, steps to be taken when the person has been identified as having tuberculosis for example the implementation of Direct Observed Treatment Short course (DOTS) are discussed.

5.4.1. DOTS

According to the National Department of Health, South Africa has begun the process of implementing DOTS course countrywide. DOTS is an internationally recognised health care management system, which can be integrated effectively into

comprehensive primary health services. Having seen that tuberculosis control efforts have been ineffective, South Africa joined its internationally counterparts by adopting DOTS to fight the spread of tuberculosis. DOTS is the approach forming the basis of the South African tuberculosis control programme.

Before one could explore DOTS, there are several questions that need to be answered with regard to compliance to treatment for example "When was the last time you took a course of antibiotics? Did you manage to complete the full course?" Quite possibly not. Few people on their own can be relied upon to take all their medicine properly and for the correct period of time. It is thus evident that DOTS should be implemented.

With DOTS, once patients with infectious tuberculosis (bacilli visible in a sputum smear) have been identified using microscopy services, health and community workers and trained volunteers observe and record patients swallowing the full course of the correct dosage of anti-TB medicines (treatment lasts six to eight months).

DOTS strategy provides a way of helping patients take their treatment properly and provides means for health workers to know the patient is becoming non-infectious and in the end is cured.

DOTS also identifies infectious patients through the use of microscopes, provides effective and standardised drug treatment and monitors the patient's progress towards cure (Cameron, 1997:14).

Health personnel face a formidable task of ensuring that their patients complete treatment. This is no mean feat. Patients face numerous hurdles in finishing their six months course of treatment. Some challenges include long distances between the patient's homes and the nearest health centre where the medicines are being dispensed, inconvenient clinic hours, lack of funds for transport, time consuming

family and work responsibilities and forgetfulness and despair. This is where DOTS strategy comes in. DOTS seek to improve the health system's ability to cure the patients by making treatment more accessible and making sure that patients are ultimately cured.

To protect the public, DOTS stops tuberculosis spreading by focusing on patients who pass on the disease to others in the community (World Health Organisation Report, 1992:43).

DOTS has proven to be a powerful solution to many tuberculosis epidemics in a variety of countries. It is more than a curative strategy. It is also a preventive strategy because it concentrates on curing infectious patients so as to stop tuberculosis in its tracks.

In China for example a study of 112 842 patients with smear positive tuberculosis, documented that 85% were cured with DOTS (The Lance Volume 347,1996:358-362).

According to WHO Report (1997:3) DOTS strategy provides extraordinary benefits. No other tuberculosis strategy comes close to being as effective and as affordable as DOTS. Because of its advantages, it is easy to see why so many countries are beginning to use DOTS.

5.4.1.1 Reasons for using DOTS.

The following are the reasons for using DOTS, as according to WHO Report (1997:4-8):

- Increased cure rate.

No other tuberculosis control strategy has consistently demonstrated such a high cure rate. DOTS produces cure rates as high as 95%, even in the poorest countries. Tuberculosis not using DOTS often cures only 40% of their patients.

- Prevention of new infection.

DOTS stops the source of tuberculosis bacteria by curing the infectious patient. When an infectious tuberculosis patient is cured, that person can no longer pass the germ on to others. When a patient is not cured, he will infect, on average 10 to 15 friends, family members and co-workers a year.

- Absence of multi-drug resistance.

The treatment provided through DOTS makes it virtually impossible for a person to develop incurable and ultimately fatal forms of tuberculosis. Other treatment strategies can actually cause multi-drug resistant tuberculosis, and may be doing more harm than good. Multi-drug resistant tuberculosis refers to drug resistance to at least two key tuberculosis drugs. Multi-drug resistance can develop when a patient does not take treatment correctly for the required period because they may start to feel better without completing the treatment course.

The bacilli in the lungs may develop resistance to anti-tuberculosis drugs. Later the person may become sick and need treatment again. Because multi-drug resistant

tuberculosis is difficult to treat, preventing the bad treatment practices that cause it, best controls the epidemic.

At this stage some of the tuberculosis bacteria may have developed resistance to the tuberculosis drugs they had taken before.

Multi-drug resistant tuberculosis is treated with drugs that are not as effective as first choice tuberculosis drugs. These drugs are expensive and need to be taken for up to eighteen months. This makes multi-drug resistant tuberculosis difficult and expensive to treat.

The cost of treating one multi-drug resistant tuberculosis patient is R60 000 compared to R3 000 for a regular tuberculosis patient.

Patients who do not complete their treatment does not only cause multi-drug resistant tuberculosis, it is also caused by not giving the correct drugs, improper prescription and shortage of drugs. It is usually a sign of ineffective tuberculosis control.

Supporting and providing close supervision of patients using DOTS has ensured that patients take their medicine consistently for the full course of treatment and do not stop when they no longer experience tuberculosis symptoms.

- Cost effectiveness.

  The World Bank has ranked DOTS strategy as one of the most cost effective of all health interventions (Benny, 1993:494).

- Community based.

DOTS do not require hospitalisation, a massive infusion of technology or resources, nor creation of new health care structures. Rather, the existing health system can use DOTS and rely on health workers and trained volunteers to implement this task. It is possible to use DOTS strategy in existing primary health care systems. Through the utilization of social workers as members of the medical team, volunteers could be recruited and given proper training with regard to DOTS.

- Extension of Aids patients' lives.

Compared to the currently available protease inhibitors, DOTS has been demonstrated to add as many years of life to HIV positive people with tuberculosis in developing countries

- Protection of workforce.

Since most of infected patients are in their most economically productive years of their lives, DOTS strategy protects the workforce through its nature of preventing transmission.

- Stimulation of economy.

DOTS strategy offers relatively quick pay offs to the economies of developing countries. Studies in India and Thailand have shown that a small investment in the DOTS strategy can save their economies billions of US dollars.

❖ Effectiveness

DOTS strategies have been successfully implemented in a wide variety of countries and have achieved good results.

5.4.1.2. Elements of DOTS strategy.

The DOTS strategy depends on five elements for its success. If any of these elements are missing the ability to consistently cure tuberculosis patient's slips. According to the World Health Organisation's Report (1997:9-10) the following are the elements of the DOTS strategy:

❖ Identification of resources.

The first priority of every tuberculosis programme must be to direct resources towards identifying the sick and infectious tuberculosis cases so that they can be cured.

The resources should be directed towards identifying sputum smear positive cases for treatment, as these people are the source of infection.

❖ Observation of patients.

A health worker or a trained volunteer must observe the patients swallowing each dose of their medicines. This is especially critical during the first two months of treatment when the patient may be seriously ill, at the risk of acquiring drug resistance and become an infectious threat to others. Patients who fail to make their appropriate appointments with the health workers must be immediately contacted and helped to resume treatment. The social workers in these situations could be highly utilized to follow up cases and find out why patients are not coming for their treatment. Home visits could be arranged to contact the patients at their homes

The observer must be trained and accountable to the health services and be accessible to the patients. The health service must help the observer by examining and recording the patient's progress from an infectious state to proven cure stage.

- Provision of complete treatment

Tuberculosis patients must be provided with treatment and be monitored to ensure that they are being cured.

There are two means of ensuring successful treatment. First, in the case of a contagious patient, sputum must be examined under a microscope after two months and again at the end of treatment to ensure that a patient is free of the tuberculosis bacilli. Second, a recording and reporting system is needed to rigorously monitor and evaluate the progress made in treating and curing each tuberculosis patient.

- Administration of short course chemotherapy

The correct combination and dosage of anti-tuberculosis medicines known as short course chemotherapy must be used for the right length of time.

These drugs provide a knockout punch to kill the tuberculosis bacilli. The medicines are typically administered for a period of 6 to 8 months in accordance with WHO Tuberculosis Guidelines.

- Government commitment.

Government must support DOTS strategy emphatically and make tuberculosis control a high political priority. The government and NGOs must be financially committed to tuberculosis control by ensuring that all tuberculosis patients have free access to treatment.

5.5. SUMMARY.

This chapter has looked at the tuberculosis control measures that need to be cautiously taken to combat the disease. Primary, secondary and tertiary measures have been explored. The internationally recognized DOTS strategy was emphasized which proved to be most effective. Since tuberculosis is regarded as a social disease, social workers have not played their expected role in tuberculosis control.

CHAPTER 6

SOCIAL WORK AND ITS RELEVANCE TO THE COMBATING OF TUBERCULOSIS

6.1. INTRODUCTION.

As tuberculosis is a social disease, it is assumed that social workers should become more involved in preventing and combating the disease. In this chapter social work as a profession will be discussed. The main methods used in social work will also be looked at. Developmental Social Welfare as the paradigm shift adopted by the Department of Welfare will be explored.

Social work interventions mostly utilized when assisting the patients of tuberculosis and their families, to cope with the disease will also be looked at. Reconstruction and Development Programme and Primary Health Care in relation to the combating of tuberculosis epidemic will also be attended to.

6.2. SOCIAL WELFARE AND SOCIAL WORK.

The terms social welfare and social work tend to be used interchangeably and often in confusing ways. Although there are different meanings attached to each of these terms, their differences will be explored (Ferguson, 1989:12).

6.2.1. Social welfare.

According to Kahn (1987:65) social welfare is " a provision of services to promote individuals and groups well being and to aid those in difficulty". Broadly social welfare encompasses health, education, housing, water supply and sanitation.

Friedlander in Skidmore, Thackeray and Farley (1991:3) define social welfare as the organised system of social services and institutions, designed to aid individuals and groups to attain satisfying standards of life and health, personal and social relationships that permit them to develop their full capacities and to promote their well being in harmony with the needs of their families and the communities. It is further stated that social welfare includes the well-being and interests of a large number of people including their physical, mental, emotional, spiritual and economic needs. It also includes basic institutions and processes related to facing and solving social problems (i.e. problems that affect people and that require some kind of concerted group effort to resolve).

6.2.2. Social work.

According to Ferguson (1989:15) there are many definitions of social work as there are many people to define it and each definition is likely to reflect the particular concern of its writer.

Social work is a profession that is concerned and involved with the interactions between people and the institutions of society that affect the ability of people to accomplish life tasks, realize aspirations and values and alleviate distress (Zastrow, 1989:8).

According to Arthur (1980:7) social work is an art and science of providing services designed to enhance the interpersonal competence and social functioning of people.

Skidmore et al. (1991:4) view social work as the process of helping people with the aid of appropriate social services to cope more effectively with problems of social adjustment.

Similarly Stroup (1990:10) define social work, as an art of bringing various resources to bear on individuals, groups and community needs by the application of scientific methods of helping people to help themselves.

Having explored the various definitions of social work, one would sum up by viewing social work as the profession that is aimed in assisting people who are in difficult circumstances. It is concerned with the elimination and alleviation of social problems. Finally, it is also aimed at improving the social functioning of the people.

6.2.2.1. Purposes and functions of social work.

In the context of this study, purposes and functions of social work are hereby related to tuberculosis. The connection will become clear when discussed. Boehm and Federico (1987:49) identified the following as the purposes of social work namely:

- To enhance the problem solving, coping and developmental capacities of people. Tuberculosis patients need to have problem solving, coping and developmental capacities, thus social work enhances those capacities for effective social functioning.

- To promote the effective and human operation of the systems that provides people with resources and services. Health facilities need to be available to cater for health needs of tuberculosis patients. Social work in this regard promotes and facilitates health service rendering.

- To link people with systems that provide them with resources, services and opportunities. Since some people especially in rural areas do not have knowledge and insight about the services that are being rendered to them, social work then feature by linking and referring people to appropriate services.

Similarly Skidmore et al. (1991:7) view the following as the functions of social work namely:

- By being curative: Factors that have caused the problem must be eliminated (e.g. social circumstances that precipitate the high spread of tuberculosis could be eliminated or improved). While being rehabilitative, people must be assisted to cope with illness and to recover from that.

- Provision of resources. The resources both tangible and non tangible could either be provided educationally by acquainting the community with specific conditions of eligibility or developmentally by effectively designing the existing resources. In relation to this study this could be achieved by informing the people about health care services available for them and by lobbying for more accessible, affordable and available services.

- Prevention of social dysfunctioning. This could be successfully done by early discovery (e.g. early diagnosis of tuberculosis), control and elimination of conditions and situations that potentially could hamper effective social functioning.

6.2.2.2. Characteristics of social work

According to Skidmore et al. (1991:8-12) the following are some of the characteristics of social work. Their relation to tuberculosis will be clearly reflected.

- Social work focuses on the wholeness and totality of the person. It encompasses the person and the environment. Tuberculosis patient is assisted on the wholeness basis, taking his personal being and the surrounding environment into consideration. Since the illness of the patient might have been precipitated by familial circumstances or the familial circumstances being

affected by the illness, the environment where the patient lives in needs to be looked at. The social improvements need to made to accomplish effective recovery.

- The emphasis of social work is on the importance of the family in moulding and influencing the behaviour of the people. The importance of involving the family as a unit in trying to improve the social functioning is emphasised. The family needs to be involved in the treatment of their family member. The family as a support system is the one that enhances and encourage treatment compliance to the patient.

- Community resources need to be utilized in helping people to solve their problems. Social workers need to have comprehensive knowledge of the available resources. For one to be effective and efficient, knowledge with regard to Primary health care services, Reconstruction and development programmes etc, need to be possessed.

6.3. DEVELOPMENTAL SOCIAL WELFARE.

Since social work profession in South Africa is trying to adopt a Developmental Social Welfare model, one needs first to understand this paradigm shift. It is for the first time in the history of South Africa to call upon people to participate in the development of an equitable, people-centred, democratic and appropriate social welfare system. With this approach greater involvement in tuberculosis may be possible as the goals and principles will prove.

The White Paper on Social Welfare (1996) is emphasizing a paradigm shift from both the residual and institutional social welfare models, which were previously used, to developmental social welfare. It attempts to translate the Reconstruction and Development Programme in the welfare field.

The residual model refers to interventions that perform a secondary, safety net function in society, focussing public resources on the most needy sector of the population. According to the residual model social welfare services are only to be supplied when the individual's needs are not properly met through other societal institutions, primarily the family. With the residual model, it is viewed that social services and financial aid should not be provided until all other means or efforts have failed and after the exhaustion of the individual's or his family's resources. In addition, this view assets that funds and services should be provided on a short-term basis (primarily during emergencies), and should be withdrawn when the individual or the family again becomes capable of being self-sufficient. The residual view has been characterised as being "charity for unfortunates". Funds and services are not seen as a right (something which one is entitled to), but as a gift, with the receiver having certain obligations. Associated with the residual view is the belief that the causes of an individual's difficulties are rooted in his own malfunctioning.

In contrast, the institutional model emphasizes interventions that play a "front line" role, treating social provision as a normal, integral part of society. According to the institutional model, social welfare programmes are "accepted as a proper, legitimate function of the government in helping people achieve self-fulfilment". Associated with this view is the belief that an individual's difficulties are due to causes beyond his control. While the residual favours limited and selective state intervention and a high degree of personal responsibility, the institutional model favours large scale state intervention and long-term provision (Midgley, 1996:2).

6.3.1. Goals of developmental social welfare.

The following are the goals of developmental social welfare:

- To facilitate the provision of appropriate developmental social welfare and attainment of basic social welfare rights to all South Africans, especially those living in poverty, those who are vulnerable and those who have special needs. These services include rehabilitative, preventive, developmental and protective services and facilities, as well as social security, including social relief programmes; social care programmes and the enhancement of social functioning.

- To eradicate poverty through promoting community participation and involvement, and by discouraging dependency, employing a multi-faceted, multi-sectoral approach and encouraging partnership between the state, provincial government and other stake holders in welfare.

- To redress the past imbalances in respect of those who have been historically disadvantaged, especially women, children, the disabled and people living in rural areas and informal settlements.

- To empower individuals, families and communities to participate in the process of deciding on the range of needs and problems to be addressed through local, provincial and national initiatives.

- To harmonise social and economic policies with a dynamic development process.

- To promote social development intersectorally both within the welfare departments and in collaboration with other government departments and non-governmental stakeholders.

- To give effect to those international conventions of the United Nations systems, which the government has rectified, and which are pertinent to developmental social welfare.

6.3.2. Principles of Developmental social welfare.

Developmental social welfare is based on the following principles, namely:

- Equity: Resources, facilities and services will be equitably distributed and all forms of discrimination in the social welfare system will be eliminated. Strategies to address racial inequalities will be considered. Equality of opportunities and social mobility of groups of people with special needs will be fostered.

- Democracy: Effective and appropriate mechanisms will be created to promote the participation of the public and all welfare constituencies in decision making about welfare policies and programmes which affect them.

- Non-discrimination: All social welfare services and programmes will promote non-discrimination. Women, children, the disabled, offenders, people with HIV/Aids, the elderly and gays will be served.

- Human rights: Social welfare services and programmes will be based on the respect for human rights and fundamental rights as articulated in the Constitution of South Africa, 1993 (Act 200 of 1993).

- ❖ Accessibility: Social welfare services, organisations and institutions will be accessible and responsive to all those in need. Obstacles and barriers, which have made it difficult or impossible for some people to participate equally in all spheres of life, will be removed.

- ❖ Ubuntu: The principle of caring for each other's well-being will be promoted and a spirit of mutual support fostered. Ubuntu means that people are people through other people. It also acknowledges both the rights and responsibilities of every citizen in promoting individual and societal well being.

6.4. METHODS OF SOCIAL WORK.

Skidmore and Thackeray (1982:7) view the following as methods of social work, which could be utilized by social workers in approaching tuberculosis as a social problem, namely case work, group work, community work, research and administration. For the context of this research only the first three methods will be discussed.

6.4.1. Casework.

Harris (1990:6) view social casework as an art in which knowledge of science of human relations and skills and relationships are used to mobilize the capacities of individuals and resources in the community appropriate for the better adjustment between the clients and all or any part of his total environment.

Casework may be regarded as an approach in social work with its characteristics being the provision of an individualized service. It is a one to one basis approach whereby the worker deals with the client at that particular time (Mc Kendrick, 1990:47). It is aimed at helping individuals to meet personal and social problems. It is

also geared to helping the client adjust to his environment, or to changing certain social and economic pressures, which are handicapping an individual.

Similarly Zastrow (1990:96) defines casework as a method of social work, which intervenes in the psychosocial aspects of a person's life to improve, restore, maintain, or enhance his social functioning by improving his role performance. Intervention occurs when the person, or members of his group or community, realizes that his role performance is hampered or threatened. The intervention takes place through a professional relationship between the worker and the client, and also between the worker and other individuals whose interaction with the person affects his role performance.

Other areas of agreement include the fact that the help is sought and given within the framework of a social agency, that the process of helping is carried on between the client and the worker, and that the helpfulness arises partially from the resources of the agency, partially from the unrealised resources of the client, and partially from the resources of the caseworker (i.e. his strengths and knowledge and feelings and his ability to make these available for the use of his clients).

Contexualizing casework in assisting tuberculosis patients, the social worker must first know and understand the patient, how and why he feels as he does, what his capacities are for assuming his share of the responsibility of getting well. The social worker need to know where the patient is blocked and why and what can be done to help the patient move on from there. He will want to learn what meaning this illness has for the patient and how it affects his feelings about himself and also how it affects or is affected by his social relationships. The social worker must meet the patient where he is, not where he thinks the patient ought to be, take him for what he is, not what he ought to be, and start moving with him at his pace and in his direction rather than at the worker's own speed toward a preconceived goal. This does not mean the social worker adds nothing to this relationship, he does, but he adds what the patient

needs, not what he needs. In short, the social worker will be dealing with the medical condition without being the medical doctor, he will be dealing with the emotional elements without being the psychiatrist, but he will be dealing with both of these in relation to the social situation and the social relationships of which the patient is a part.

The mere diagnosis that one has tuberculosis actually arouses many fears that the patient is unable to manage. Even repeating words of the diagnosis is not tantamount to accepting the fact of the disease. The social worker is then needed to assist the patient to understand what tuberculosis is all about, what its course is likely to be, what it may do to him, the adjustments it will necessitate, temporary or permanently in the life of the patient, the kinds of limitations it will set and how these can be handled.

6.4.2. Group work.

According to Toseland and Rivas (1984:12) group work is defined as a goal directed activity with small groups of people aimed at meeting socio-economic and emotional needs and accomplishing tasks. They further explain that this activity is directed to individual members of a group and to the group as a whole within a system of service delivery.

Similarly Skidmore and Thackeray (1988:80) view group work as a method of working with people in a group (two or more) for the enhancement of social functioning and for the achievement of socially desired goals. Group work is based on the knowledge of people's needs for each other and their interdependence.

Group work can assist in the following as mentioned by Skidmore and Thackeray (1988:82):

- Achieving mutually determined goals
- Achieving desirable change towards problems
- Developing self-enhancement and individual enrichment and using a combination of treatment, self-enhancement and personal fulfilment.

The following are the types of groups according to Toseland and Rivas (1984:18-32) which can be accommodated in a group work situation:

- Formed groups.
- Natural groups.
- Treatment groups.

For the purpose of this study, treatment groups will be discussed. Members of the treatment groups are bounded by the common needs and their common situation. The composition of these groups focuses on common concern, problems and abilities.

The following are the primary purposes of the treatment groups:

- Educational groups: The primary purpose of these groups is to help members learn about themselves. Examples of educational groups are amongst others tuberculosis patients, teenage mothers and prospective foster parents.

- Growth groups: A growth orientation in group work implies opportunities for members to become aware of or expand upon and change their thoughts, feelings and behaviour regarding self and others. The groups are used as a vehicle to develop members' capabilities to the fullest extent possible.

Examples of growth groups include tuberculosis patients that focus on how to make the most of the DOTS strategy in combating their illness.

- Remedial groups: Remedial groups help members change their behaviour, cope with or ameliorate their personal problems or rehabilitate themselves after a social or health trauma. Through the remedial model, the group offers means by which the profession could restore or rehabilitate individuals. The group is viewed as a tool or context for treatment of individuals. Examples are the recovering of drug dependants, and juvenile offenders on probation.

- Task groups: Task groups create a common bond among members by having them work together to accomplish a task, produce a product or carry out a mandate. The primary purpose of a task group is serving the organisational needs including committees, administrative groups and delegated councils.

6.4.3. Community work.

Baldock (1989:18) view community work as a type of activity practised by people who are employed to help others to identify problems and opportunities that they have and to come to realistic decisions to take collective action to meet those problems and opportunities in ways that they determined for themselves. The community worker needs to support the people in the process of putting any decisions that they make into effect in such a way to help them to develop their abilities and independence.

Lombard (1991:15) similarly defines community work as a social work method (based on a scientific process), which is directed towards achieving one or more of the following objectives:

- To satisfy the broad needs of the community and to create and maintain a balance between needs and resources in the community.

- To provide the community with the opportunity to exploit its strength and potentials (knowledge and skills) and to develop these in order not only to be able to deal with social problems but also to prevent them.

- To effect change in the community, in group relations and the distribution of decision making powers.

Similarly Buer(1989:489) is of the opinion that the main goals of community work include the following:

- Social problem solving.
- Satisfying social needs.
- Social development.
- Prevention at secondary and tertiary levels.
- Planning, initiating development, integrating, collaboration and coordination of services

Community work focuses on the environment and the bringing about of change in the sphere (McKendrick, 1990:107). McKendrick further explains that changes in the environment may be necessary in order to meet the needs of the people.

When one is using community work in an effort to combat the tuberculosis endemic, actions such as educational campaigns through the use of media like radios and

television, mobilization of the community, social action and advocacy which need to be initiated by the community worker. In areas where the services are not available due to some inequalities, the community worker could advocate the services on behalf of the community.

Outreach programmes to the communities and schools to make services accessible and available to people, need to be initiated by making the community aware of their health status with the view of assisting them to come up with some mechanisms of solution. Community participation needs to be encouraged and enhanced. Health promotion must be aimed at equipping the communities with health related issues that are affecting their lives for example tuberculosis and HIV/AIDS.

6.5. SOCIAL WORK INTERVENTION.

According to the New Social Work Dictionary (1984:61) social intervention is the process whereby professional methods and specific techniques are used to prevent, alleviate or eliminate problems to promote social functioning of a client system.

The following social work intervention could be used effectively to assist the patient and the family to cope with the impact of tuberculosis namely:

- Crisis intervention
- Family therapy
- Psychosocial approach and
- Client centered approach

Crisis intervention can be used firstly when the disclosure of tuberculosis has just been presented to the patient and his family. During this stage the diagnosis is perceived as the crisis and the patient could be unable to cope with. Family therapy can be used to treat the family as a whole since the illness of one family member is

affecting the functioning of the whole family system. Psychosocial treatment can be used considering the social interaction of the patient with the environment. Lastly client centered intervention can be used when trying to convey the support and concern to the patient. The choice of any social work intervention is dependant upon the presented problem.

6.5.1. Crisis intervention.

According to Aguilera and Messicik (1992:1) and Punukollu (1991:25) a crisis is defined as a response to external or internal stress which can not be managed by the usual coping mechanisms of the person in stress. A crisis occurs "when an individual is faced with an obstacle to an important life goal and finds that it is impossible for him to accomplish that goal through the utilization of problem solving methods"(Caplan: 1989:42).

A crisis is a danger because it threatens to overwhelm the individual or his family and it may result in many pathological states. It is also opportunistic, because during times of crisis individuals are more receptive to therapeutic influences.

A person in crisis is at a turning point. He faces a problem that he cannot readily solve by using the coping mechanisms that have worked for him before. As a result, his tension and anxiety increases and he becomes less able to find a solution. A person in this situation feels helpless – he is caught in a state of great emotional upset and feels unable to take action on his own to solve his problems.

Crisis intervention could be used to assist people who are experiencing a crisis. Golan (1990:5) define the following as the goals of crisis intervention:

- To alleviate the immediate impact of disruptive stressful events and

- To help mobilize the manifestation and psychological capabilities and social resources of those directly affected for coping with the effects of stress.

Aguilera and Messick (1992:5) and Golan (1995:189) are of the opinion that physical illness like tuberculosis usually represents stressful experiences both for the sick person and for his family. Similarly Silverman (1982:547) states that medical diagnosis is usually followed by emotional disturbances. Disclosure that one is suffering from a particular medical condition can be described as a hazardous situation as, in each of those situations, emotional strain would be generated, stress would be experienced and a series of adoptive mechanisms would occur that could lead to either mastery of new situations or failure with more or less lasting impairment to function.

Miller (1982:43-44) points out that the stresses to which sick individuals are subjected may be placed in three categories namely:

- The loss of functional ability and debilitation, pain and threat of death, which result from the disease itself. Associated with these stresses are other conditions, which result from the various threatening procedures and experiences to which the patient may be subjected to during the course of his evaluation and treatment.

- The dependency, passivity and the resulting regression, which the patient must accept especially during the early phase of the disease.

- ❖ The separation and aloneness which follow the removal of the sick individual both psychologically and spatially from his supportive social networks.

6.5.1.1. The stages of crisis intervention.

Golan (1990:190), Punukollun (1991:28-29) and Aguilera and Messick (1991:25-25) view crisis intervention as going through various stages that are outlined below:

6.5.1.1.1. Stage 1: Assessment, formulation and hypothesis.

During this stage the use of an active focusing technique on the part of the therapist is required to obtain an accurate assessment of the precipitating event and the resulting crisis that brought the individual to seek professional help. Punukollun (1991:28) states that during this stage the therapist need to look at the underlying issues of the iceberg and not limit himself to the top of the iceberg i.e. symptoms.

Hypothesis and formulation of a crisis at this stage requires assessment of the individual and the family and the understanding of the environment. In crisis intervention therapy, the first few interviews can be lengthy. It is necessary to develop a hypothesis at an early stage in order to formulate a management plan as the early stages are the sensitive periods where minimal intervention will have a maximum impact. Interviewing at this stage requires a good understanding of the conflicts involved and correct hypothesis. This period is exciting to the crisis therapist as it involves exploration.

Contextualzing this stage to tuberculosis, the social worker needs to get information as to why the disclosure of the diagnosis is viewed as a crisis by the patient. The implication of the disease to the patient needs to be explored. Tuberculosis is a crisis especially when one learns of the lengthy treatment, cost implication and losing a job etc. The social worker then needs to explore fears and uncertainties.

6.5.1.1.2. Stage 2: Management Plan.

After accurate assessment is made of the precipitating events and the crisis, intervention is planned. This is not designed to bring about major changes in the personality structure but to restore the person to at least his pre-crisis level of equilibrium (Aguilera and Messick, 1991:25).

The precipitating event usually occurs from 1 to 2 weeks before the individual seeks help. Frequently it may have occurred within the past 24 hours (Golan, 1990:192).

It is important to know how much the crisis has disrupted the individual's life (i.e. the impact of the diagnosis on the patient's life) and the effects of his disruption on others in his environment. Information is also sought to determine what the strengths the individual have, what coping skills he may have used successfully in the past and is not using presently and what other people in his life might have used to support him. Search is made for the alternative methods of coping that for some reasons he is not presently using.

6.5.1.1.3. Stage 3:Intervention.

According to Punulollun (1991:29) the therapist have adopted a good management plan based on the correct hypothesis. However, this needs patience, persistence and hard work. Although the real problem might be known, this does not mean that the problem will disappear automatically. It needs some time to work through. This particular stage may not necessarily be exciting but requires hard work of a conscientious therapist, persistently offering help to the individual and family affected in order to overcome conflicts and to help them adopt correct coping strategies for better mental health.

Biston (1992:253) is of the opinion that, for good intervention to take place, the therapist should do the following:

- Helping the individual to gain an intellectual understanding of his crisis. Often the individuals see no relationship between a hazardous situation occurring in his life and the extreme discomfort of disequilibrium that he is experiencing. The therapist must use a direct approach, describing to the individual the relationship between crisis and the event in his life.

- Helping the individual bring into the open his present feelings to which he may not have access. Frequently the person may have suppressed some of his real feelings such as anger. It may also be denial of grief, feelings of guilt or incompletion of the mourning process following bereavement. An immediate goal of intervention is the reduction of tension by providing means for the individual to recognize these feelings and bring them into the open.

- Exploration of coping mechanisms. This approach requires assisting the person examine alternate ways of coping. If for some reason the behaviour he used in the past for successfully reducing anxiety has not been tried, the possibility of their use in the present situation is explored. New coping methods are sought and frequently the person devises some highly original methods that he has never tried before.

- Reopening the social world. If the crisis has been precipitated by loss of someone significant to the person's life, the possibility of introducing new people to fill the void can be highly effective. It is particularly effective if support and gratifications provided by the lost person in the past can be achieved to a similar degree from new relationships

6.5.1.1.4. Stage 4:Resolution.

This is the final stage in which the person in crisis gains insight and resolves problems, learn new coping strategies and eliminate symptoms (Punukollu, 1991:28). The therapist reinforces those adaptive coping mechanisms that the person has used successfully to reduce tension and anxiety. "As his coping abilities increases and positive change occur, they may be summarised to allow the person to gain experience and reconfirm for himself the progress he has made" (Rooyen, 1992:249). Assistance is given as needed in making realistic plans for the future and there is discussion of ways in which the present experience may help in coping with the future crisis.

Lansley (1990:247) argues that crisis intervention could also be used in assisting the whole family. He further states that principles and stages of crisis intervention could be followed when focusing upon the family. According to him crisis tests the family's adoptive capacities and deficits in coping behaviour and it also presents opportunity for growth.

Morris (1987:12) noted that the rationale for the application of crisis intervention being the involvement of the family in the crisis or the family as a resource for the resolution of the crisis.

The move to involve the whole family is an aetiological approach. This approach could be defined as treatment of the sick family rather than treatment of the sick individual as the latter treatment leads to labelling the one member of that family who has been the identified patient.

The following techniques are viewed as essential in the application of family crisis intervention, as viewed by Kaufman (1990:225):

- Immediate assistance. Crisis therapy calls for rapid response since prolonging the problem will enhance the regression.

- Define the problem as within the family. By seeing the family conjointly, the therapist places the focus of the problem in the total family. Treating one person only confirms the family's efforts to solve the problem by scapegoating.

- Focus on the present. The current problem could be the focus of the crisis intervention.

- Reduce the level of tension in the family.

- Help resolve the precipitating crisis through negotiations about appropriate family roles or whatever active steps are necessary to assist the family to resolve the problem. By tension reduction and appropriate intervention the family returns to its usual problem solving capacities and continues its development.

- Identify help for future crises. Crisis therapy assumes that there will be future problems and the family should be given advice where to obtain assistance in the future.

Having looked into crisis intervention one would apply it on two areas i.e. individually with the patient as well as involving the whole family as a system. As it has been mentioned at the beginning, disclosure of diagnosis is a stressful period however through the application of crisis intervention the therapist will assist the patient to be in a better position to cope with the situation.

6.5.2. Family therapy.

Since tuberculosis is affecting the whole family, the family need to be involved in the treatment process thus the need for family therapy. Family therapy is described by Barker (1981:2) as the treatment of family systems. It is treatment designed to alter the way in which families function, how the members relate to and communicate with each other, the roles the different members play and how rules are set and controls exerted.

Minuchin (1984:2) similarly view family therapy as a body of knowledge and techniques that approaches the individual in his social context. The therapy is directed towards changing the organization of the family.

The theory of family therapy is predicated on the fact that man is not an isolate entity. He is an acting and reacting member of social groups.

In relation to the family with a tuberculosis sufferer, family therapy will be focusing on the following aspects of family functioning, namely:

- Problem solving
- Communication
- Roles and
- Affective involvement (Michael, 1987:223-228).

6.5.2.1. Problem solving.

Problem solving concerns the way the family deals with problems serious enough to threaten its integrity and functional capacity (Barker, 1981:42)

Similarly tuberculosis threatens the integrity, relationships and the capacity of the family to such an extent that the family relationships become strained to the illness.

Barker (1981:42-43) listed a series of stages that need to be followed in problem solving, namely:

a) The problem must be identified

b) Its existence must be communicated to whoever needs to know about it, whether inside or outside the family

c) Various alternative plans of action need to be considered

d) Decisions should be made of the alternative plan

e) Appropriate action should follow

f) Action should be monitored

g) Evaluation should take place

The same stages would be followed tackling the problems caused by tuberculosis within the family.

6.5.2.2. Communication.

The communication aspect of the family focuses on how family members communicate with each other. Some family relationships get into difficulty because too little information is communicated. In others, the messages are unclear such that the message received is different from the initial one. And in others communication is

through a third party with avoidance of confrontation and risk that the message will be distorted.

The social worker in this instance would want to consider the content of the message communicated for example whether it is sufficient for the purpose intended, whether multiple messages are being sent and whether the message is being properly attended to and interpreted by the listener.

During the disclosure of diagnosis to the patient, communication problems could be encountered and it is during this stage where the role and tasks of social workers are crucial.

6.5.2.3. Roles.

According to Lewis (1992:43) roles are the habitual patterns of behaviour that the members of the family display and through which a family's various functions are carried out.
Problems in role performance are said to exist when failure to perform such function result. Normally most roles are implicitly understood and evolve as a family develops though some may deliberately be discussed and consciously decided upon (Barker, 1981:68).

It is thus necessary for the social worker to ascertain what roles family members are carrying out and then consider whether or not they meet the needs of the family as a whole. In some instances there may be a need for dual roles to be carried out by one family member. For example, the husband who has been the breadwinner could also adapt to the role of being a caretaker of children during hospitalisation period of his wife who has been the caretaker of the children prior to her hospitalisation. There may also be a need for an outsider to take some of the roles of the ill family member. For

example, the siblings and the in-laws may feature in substituting for the absent member. All these practicalities could be facilitated by the social worker.

6.5.2.4. Affective involvement.

According to Blecker (1987:92) affective involvement is the extent to which family members are involved in and value each other's interest and activities.

A range of possible degrees of involvement exist in the family with tuberculosis sufferers namely:

- Lack of involvement with regard to motivating and encouraging the patient to comply with treatment.

- Emphatic involvement which focuses on realistic understanding of the needs of the patient.

- Over involvement.

One of the main functions of the family is to support its members. When a member is sick other family members needs to offer their support to accommodate his changed circumstances. The social worker needs to assess the involvement and support of other family members as involvement and support has an impact in aggravating or lessening the condition. If there is no involvement and support, members need to be encouraged and motivated to be involved. Both involvement and support needs to be enhanced and fostered.

6.5.3. Psychosocial approach.

According to Hollis (1972:251) psychosocial intervention is a process of observation and classification of the facts observed about a client and his situation with the purpose of securing as much information as is needed to understand the client and his problem and to guide treatment wisely.

Diagnosis and treatment are addressed in person-in-situation configuration. For an individual to be assisted with his problem he must be seen in the context of his interaction or transactions with the external world. This may be his family or particular members of it, his social group, his educational milieu, his employment milieu or some other social systems of which he is a part (Robert and Nee, 1990:35).

Psychosocial approach is conceptualised as the process directed toward modification in the person or his social or interpersonal environment or both. Communication forms the crucial part of this process. Contacts may be between the individual and the family.

The goals of the psychosocial approach are to understand and change the person, the situation or both, directly or indirectly (Coulshed, 1989:73). Similarly Robert and Nee (1990:35) view the objective of treatment as to enable change to occur in the individual or in the situation or in both.

The emphases in using psychosocial approach is on strengthening the interaction between the individual and his environment as well as the client's understanding of his situation, of significant others and of himself, upon the support he may secure in an accepting relationship with the worker, upon his adaptive capacities and on the relief he may feel from expressing his fears, anxieties and hostilities during the interviews. Central to psychosocial approach is the notion "the person-in-his- situation" as a

three- fold configuration consisting of the person, the situation and the interaction between them (Hollis, 1972:10).

The term situation implies amongst others, the family, friends, employers, neighbours, nurses etc. The situation in which one lives in offers opportunities and gratifications, frustrations and deprivations.

Relationship building is the corner stone of the psychosocial approach. It is assumed that in many cases the nature of the relationship is a major determinant of the degree to which the client is helped. To contextualize the psychosocial approach in this study, one would say that the patient with tuberculosis would come for assistance to the social worker when there has been a breakdown in his social interaction with his environment. The source of this breaking down in most cases is the medical condition that has been diagnosed and that exerts excessive pressure upon him.

6.5.3.1. Techniques of psychosocial approach.

The following are the six techniques of psychosocial approaches as stated by Hollis (1985:78):

- Sustainment. The technique include activities on the side of the worker to demonstrate interest, desire to help, understanding, expression of confidence in the client's abilities or competence and reassurance.

- Direct influence. The technique involves the expression of the worker's opinion about the kind of action a client should take. Suggestions and advice are frequently used.

- Exploration, description and ventilation. It consists of communications designed to draw out descriptive and explanatory material from the client and to

encourage him to ventilate in the interview feelings and emotionally charged memories. Often there is relief of tension just in this outpouring.

- ❖ Person-situation reflection. The technique focuses on the client's perception or understanding of others; his illness or on any aspect of the outside world; his understanding of his behaviour in terms of actual or potential outcome or effect on others or on himself; his awareness of causative aspects of his own behaviour when these lie in the interaction between himself and others; and his evaluation of himself.

- ❖ Pattern dynamic reflection. The client is helped to reflect upon some of the internal reasons for his actions and responses.

- ❖ Developmental reflection. The client is helped to deal with early life experiences that are important because although they occurred in the past, they have been internalised to such a degree that they are now part of his responses to current situations.

6.5.3.2. Values of psychosocial approach.

- ❖ The worker must accept the client by having a commitment to his welfare, caring about and respecting him.

- ❖ The worker must understand the client with objectivity, with the absence of personal bias.

- ❖ The worker must recognise the client's right to make his own decisions and the value of encouraging his self-directiveness.

6.5.4. Client centered therapy.

The central hypothesis of client centered therapy is that " the growth potential of any individual will tend to be released in a relationship in which the helping person is experiencing and communicating realness, caring, and a deeply sensitive non-judgemental understanding"(Zastrow, 1989:123).

Client centered therapy rests on the assumption that everyone has a self-actualisation motive. This motive is defined as the inherent tendency of every person to develop his capacities in a way which serve to maintain or enhance the person.

The following three therapeutic attitudes are necessary and sufficient conditions to effect a positive outcome. It is hoped that whenever the therapist display these attitudes toward the client, the actualising potential of the client will begin to change and grow.

- Empathy: This is the capacity of the therapist to "put himself in the shoes " of the client so that the therapist is able to understand what the client is thinking and feeling. Empathy also involves communicating this understanding to the client. For example, if the patient is worried, angry or upset about the diagnosis of his tuberculosis, the social worker need to display empathy, by feeling like the patient. This display of feeling needs to be reflected back to the patient.

- Unconditional positive regard: This means that the therapist should fully accept the client and convey a genuine caring for him. Involved in this approach is a non-judgemental attitude. Even if the patient is filthy and dirty looking the therapist should display a caring attitude because by rejecting the patient, the patient will be inhibited.

- ❖ Genuineness and congruence: This is the capacity of the therapist to trust his own gut reactions and to convey those feelings or reactions to the client, which he believes, have relevance in the relationship. This willingness of the therapist to be real and to express what he is thinking and feeling, provides the client with a reality base that the client can trust. It takes away some of the hidden agendas with one another.

6.6. SOCIAL WORK AND THE RECONSTRUCTION AND DEVELOPMENT PROGRAMME (RDP).

This section attempts to bring together social work and the Reconstruction and Development Programme of the government as an approach in combating the spread of tuberculosis. Since the bone of contention of the Reconstruction and Development Programme is addressing the policies and inequalities of the apartheid regime which resulted into poverty in most communities. Most of the unfavourable social circumstances being caused by poverty facilitated the spread of tuberculosis.

The RDP is designed to reverse the inequalities that are caused by apartheid. Previously the economy was built on systematically enforced racial division in every sphere of the society. Rural areas were divided into underdeveloped Bantustans and well-developed white-owned commercial farming areas. Towns and cities were divided into townships without basic infrastructure for blacks and well-resourced suburbs for whites. Segregation in education, health, welfare, transport and employment left scars of inequality and economic inefficiency. In commerce and industry, large conglomerates dominated by whites controlled the major part of the economy. Cheap labour policies and employment segregation concentrated skills in white hands. Workers were poorly equipped for the rapid changes taking place in the world economy. This programme provides a framework of priorities for the government to identify and meet the needs of various communities in South Africa.

The RDP similar to social work encourages participation of the people and view the programme as a prerequisite for the implementation of developmental activities. The people with their aspirations and collective determination are the most important resource of the RDP. The RDP is focused on the people's most immediate needs, and it relies, in turn, on their energies to drive the process of meeting these needs. Regardless of race or sex, or whether they are rural or urban, rich or poor, the people of South Africa must together shape their own future. Community needs are identified by the communities themselves and efforts are made by the communities themselves to meet those needs. Development is not about the delivery of goods to a passive person but instead the active involvement and growing empowerment of the community itself.

Both the RDP and social work aims to integrate growth, development, reconstruction and redistribution of resources in a unified manner. The key to this link is an infrastructural programme that will provide access to modern and effective services like electricity, water, telecommunications, transport, health and education. Both are also aimed at improving the quality of people's lives and in particular the most poor and marginalized sections of the society.

The RDP also increases the level of interaction between communities, the government, NGO's and other stakeholders. Partnership is enhanced and encouraged in the implementation thereof.

Ultimately RDP seeks to empower people to improve their socio-economic circumstances and to open effective communication channels with the government. The RDP reflects a commitment to grassroots, bottom-up development that is owned and driven by communities

6.6.1. The basic key programmes of the RDP in which the social worker could feature in an effort to improve the unfavourable social circumstances that precipitates the spread of tuberculosis.

In attacking poverty and deprivation, the RDP aims to set South Africa firmly on the road to eliminating hunger; providing land and housing to all; providing access to safe water and sanitation; ensuring the availability of affordable and sustainable energy sources; eliminating illiteracy raising the quality of education and training for children and adults; protecting the environment; and improving health services. For the purpose of this study, the social worker's involvement will be highlighted in the areas mentioned, in the RDP with the view of improving unfavourable social circumstances precipitating amongst others the spread of tuberculosis.

- Job creation

The RDP financial assistance through Community Public Works Programmes where the main aim being creation of jobs, could clearly highlight the involvement of social workers. The social worker could assist the community to identify community needs and to make plans in reaching the desired outcomes. Submitting relevant business proposals and plans with the assistance of social workers that clearly specifies the need for such a project, would access money and minimize possible failures. Various projects could be initiated amongst others building of community facilities like schools, clinics, roads etc. By mere involvement of community members, the projects would be addressing unemployment by means of creating job opportunities. Public works programmes can play an important role in delivering services and infrastructure to disadvantaged communities while providing an income and skill training to the unemployed.

With the experience that social workers have with regard to community work, their skills will be needed in identifying the unemployed and the skills that they lack. The

unemployed could then be linked with resources that offer training and avenues to employment. With the skills that the unemployed have the social worker could assist them with job searches

❖ Land reform

Since land is the most basic need for rural dwellers, apartheid policies pushed millions of Blacks into overcrowded and impoverished reserves, homelands and townships. Through the implementation of the land reform programme by the Department of Land Affairs involving community workers, overcrowding amongst others will be minimized and the spread of tuberculosis being limited.

❖ Housing

Housing is a critical asset for the poor and a situation of insecure housing increases their vulnerability to social and health problems. According to the RDP housing is a human right and is one of the first priorities for any community. The lack of adequate housing and basic services in urban townships and informal settlements today has reached crisis proportions. According to the RDP the urban housing backlog in 1990 was conservatively estimated at 1.3 million units. Including hostels and rural areas, the backlog rose to approximately three million units.

Social workers could link people who need houses with relevant resources like home loan guarantee funds, targeted subsidies, national housing banks and associations. They can also assist the communities in organizing themselves to form committees that can open communication channels with the government and advocate for their housing needs.

❖ Water and sanitation

The absence of palatable water and sanitation makes people vulnerable to poor health, which reduces their quality of life. It is thus noted that the availability of water is associated with healthy hygienic standards. In the context of this study, healthy hygienic standards need to be maintained amongst others to minimize the spread of tuberculosis.

Improved access to irrigation water can also open up production opportunities that are dependent on the resources as an input. There is evidence that where water is available, it is used for productive purposes like irrigation of small farms, commercial and community gardens, which will assist in providing, increased nutritional intake and alleviating malnutrition.

Social workers could on behalf of the community advocate for the supply of water or could organize people to take social action in presenting their water problem. The social worker could also link people with relevant resources and structures like Community Water Supply and Sanitation Programme of the Department of Water Affairs and Forestry.

❖ Education

People living in rural areas were denied educational opportunities to an even greater extent than those in urban areas. Most rural schools despite government efforts are poorly resourced with buildings, equipment, books and access to infrastructures such as electricity. Children usually walk long distances to schools and class sizes of 70 plus students are uncommon. Drop out and repetition rates are high and large number of children do not attend school at all.

Given the prevailing educational state of rural communities and contextualizing that into the current study, one can conclude by saying that people with more education lead healthier lives. There are several reasons for this association for instance better-educated people generally have greater access to information than those who are illiterate or uneducated, and they are more likely to make well informed decisions and act on that information. In addition, educated people have better jobs and greater access to money and other resources which could help them to live healthier lives.

The role of social workers in the educational sphere is not done directly. The social worker can however identify amongst others shortages of schools, which can be brought to the attention of the relevant authorities. Since tuberculosis is communicable disease the germ usually multiply itself in overcrowded areas such as overcrowded classrooms.

Capacity building programmes and life skills education can also be offered by social workers in an effort to improve living conditions and combat the spread of tuberculosis.

- ❖ Nutrition

Since malnutrition weakens the bodily immune system and make opportunistic diseases attacks to be damaging, social workers need to be involved in nutrition programmes. The nutritional programmes like National Nutrition and Social Development Programmes and the Primary School Nutrition Programme are the ones that social workers should be aware of in order to purposefully encourage their implementation.

6.6.2. The roles and tasks of the social worker in RDP, in an effort to improve unfavourable social circumstances that precipitates the spread of tuberculosis.

The roles of social workers are vital in the implementation of the RDP. Their assistance in determining the needs, prioritising them, developing programmes, monitoring and evaluating the whole programme is crucial.

6.6.1.1. Enabler.

In this role the social worker helps the patients to articulate their needs; to clarify and identify their problems; to explore resolution strategies; to select and apply strategies; and to develop their capacities to deal with their own problems more effectively.

When a particular community has a problem with regard to the availability of health care services, the social worker could assist in clarifying the need, exploring the strategies to be used to approach the health authorities and developing the community's capacity to deal more appropriately with their problems.

6.6.1.2. Broker.

A broker links individuals and groups who need help (and do not know where help is available) with the appropriate resources. The social worker needs to inform the communities about available services and to link them with those services. Referral must also be made to appropriate resources. For example, when the family is experiencing malnutrition, the social worker needs to refer the family to nutrition food suppliers attached to the Nutrition component of the Department of Health for food supply.

The problem with water supply and sanitation could be referred to the Department of Water Affairs and Forestry.

6.6.1.3. Advocate.

The role of an advocate has been borrowed from the law discipline. When a community is in need of some services and help is unavailable or the existing institutions are uninterested (and sometimes negative and hostile) in providing services then the social worker needs to feature as an advocate. In such a role, the social worker needs to provide leadership for collecting information, for arguing the correctness of the community's need and request, and for challenging the institution's decision not to provide services. The objective of advocating is not to ridicule the institution but to modify or change their policies.

Advocacy can be used dually when assisting communities in obtaining services when their request is rejected by the system and when helping to expand services to cover the needy people. It has been stated in the Developmental social welfare that services need to be provided to the most needy ones.

6.6.1.4. Activist.

The activist seeks basic institutional changes, often the objective being a shift in resources to the most needy people. An activist is concerned about social justice, inequity and deprivation, so as the social worker. The skills that the social worker should have in being an activist are conflict resolution, confrontation, and negotiation skills.

Since the current constitution of South Africa addresses the inequalities created by the previous regime, services should be provided to redress the past, but if this is not happening the social worker should assist the people to confront the service providers. Social action needs to be taken to address the concerns of the community.

6.7. SOCIAL WORK AND PRIMARY HEALTH CARE.

Primary health care as a mechanism through which the Department of Health is delivering health care services need to be understood, thus the inclusion of this section in relation to tuberculosis.

Primary health care is the basic principle which focuses on the reorganisation of South Africa's health system, yet many people have only a vague idea of what it means. The term is used interchangeably with community-based care, preventive medicine and even rural care. Primary health care is a much broader concept because it places health alongside the country's social and economic development.

The vision and mission of the Department of Health of South Africa, is to render health care which is affordable, accessible and which is also meeting the communities' basic health needs. Basically the department aims at rendering primary health care (National Health Plan Policy, 1995:24).

6.7.1. Definition of Primary health care

Primary health care according to Schlesinger (1985:306) is defined as "an essential health care based on the practical, scientifically sound acceptable methods and technology made universally accessible to the individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of development in the spirit of self reliance and self determination". This health care system forms an integral part both of the country's health system and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and the community with the national health system that bring health care as close as possible to where people live and work.

The World Health Organisation suggests that Primary health care can be understood as a philosophy, an approach or a strategy, a level of care and a set of activities. At the philosophical level, it seeks to put into operation basic principles of social justice, equality and individual responsibility for health. As a strategy for enhancing health and health care delivery, it encompasses diverse activities and concepts ranging from efforts to enhance accessibility of care and legislative reforms. As a set of activities it focuses on treatment of common diseases and health education (Vuori, 1983:47).

From the above given definitions one could highlight the key words in relation to the combating of tuberculosis as follows:

- Accessibility – Health care must be accessible to the people it is intended for, particularly those who are being considered rural and isolated. The facilities are to be within reach geographically, functionally, financially and otherwise. Geographically, people should not walk or travel long distances to seek medical help, there should be mobile clinics in areas that do not have clinics, while financial accessibility looks into the financial constraints people experience.

- Acceptability – Health care must be of an acceptable manner and standard to the community. The community's norms, culture, and health beliefs should be respected and accommodated by the health care system.

- Equity – Since the health care system is lacking in the poor areas and rural areas, it must be delivered without sub-grouping of variability and discrepancies.

- Community participation – The community must be engaged in the implementation of health care delivery. The decisions that are taken with regard to health care delivery must reflect the opinion of the community.

In conclusion one could see a close relationship between the developmental social welfare and primary health care with regard to the combating of tuberculosis. Equity with regard to the distribution of resources to the needy areas and community participation are highly emphasised by both developmental social welfare and primary health care.

6.7.2. Goals of primary health care.

According to the World Health Organisation (1987:35) and Schlesinger (1985:95) the following are the goals of primary health care that are related to the combating of tuberculosis:

- To make education concerning the prevailing health problems and the methods of preventing and controlling them available to the population. People need to be provided with information with regard to the extent, nature, causes, symptoms and treatment modalities of tuberculosis.

- To promote the supply of food and proper nutrition. Since tuberculosis is related to lack of proper nutrients, people need to be provided with supplementary food to improve their health status.

- To ensure adequate supply of safe and basic sanitation. Proper water supply and sanitation need to be maintained for hygienic purposes to minimize the spread of diseases.

- To ensure immunization against the important infectious diseases. Tuberculosis could be prevented by proper immunization thus people need to be taught about the importance of immunizing children. They need to be encouraged and motivated to bring their children for immunization.

- ❖ To prevent and control endemic diseases. As it has been mentioned, the disease could be prevented and controlled by getting medical attention in good time.

- ❖ To ensure the provision of essential drugs. Essential drugs need to be available to the patients so as to curb the prevalence of the disease.

All these goals are ultimately aiming at improving the health status of the communities. The social workers could engage themselves in achieving some of these goals especially those relevant to their work with the view of combating tuberculosis. For example the one of ensuring immunization against infectious diseases like tuberculosis. Social workers could also conduct health education ANDensure adequate supply of safe and basic sanitation by liaising with relevant stakeholders. They could also promote the supply of food and proper nutrition by engaging people in vegetable gardening projects.

6.8 SUMMARY.

This chapter has looked at social work intervention in relation to the combating of tuberculosis. As tuberculosis is regarded as a social disease the active involvement and participation of the social workers were highlighted.

The distinction between social welfare and social work is clearly explained. The functions, purposes and characteristics of social work, which are relevant to the combating of tuberculosis, were briefly touched. The Developmental Social Welfare approach in relation to the combating of tuberculosis which is implemented by the Department of Welfare was also discussed.

Methods of social work, which are relevant to the combating of tuberculosis, were highlighted for example, casework, group work and community work. Social work interventions that are usually used when assisting tuberculosis patients and their families to cope with the disease, like crisis intervention, family therapy, psychosocial approach and client-centered therapy were discussed.

The relationship between social work and the Reconstruction and Development Programme in relation to the combating of tuberculosis was touched on. The key programmes of the Reconstruction and Development Programmes in which the social workers could feature in regarding the combating of tuberculosis, were also discussed such as job creation, land reform, housing, water and sanitation, nutrition and education. Social workers roles in the implementation of the Reconstruction and Development Programme with the view of combating tuberculosis were highlighted.

Lastly the commonality between social work and primary health care with regard to the combating of tuberculosis was discussed.

CHAPTER 7

EMPIRICAL FINDINGS

7.1. INTRODUCTION.

In this chapter the researcher provides the analysis and interpretation of the results of the empirical study. Although the researcher is aware that the disease, tuberculosis, is caused by a bacillus (physical disease), an effort is made by means of empirical findings to prove its socio- economic origin. In other words, although the disease is physical in nature, its main cause and concomitant development are dependent on social factors. Therefore, tuberculosis is known as a social disease.

By proving the socio-economic basis of the disease the researcher will also emphasise the main reason why the disease can not be controlled. Emphasis is given to the physical dimension of tuberculosis sufferers whereas the socio-economic factors are totally neglected in an effort to prevent or combat the disease.

Although the medical care could be sufficient, social factors conducive to the spread of tuberculosis are not attended to. A person is diagnosed, hospitalised, treated and discharged to the very unchanged unfavourable social environment which most probably was originally responsible for the development of the disease. The person will ultimately relapse and the whole circle will begin again. Since low economic state of the respondents perpetuates the spread of tuberculosis, the cyclical reaction is illustrated by the following example: -

Working in an unfavourable environment like the mine, with little education and earning a low salary, which cannot meet the necessary basic necessities, lead to the

spread of tuberculosis. Overcrowding due to shortage of space also make people susceptible to the disease as it is communicable by nature. The poor construction of the houses with the absence of cross ventilation, which is necessary to destroy the tuberculosis germ, also expose people to tuberculosis. Insufficient diet due to lack of money to buy healthier food and also due to lack of information with regard to healthier foods also play a role in weakening the immune system of the individual against diseases especially tuberculosis.

Based on the afore-mentioned cyclical reaction of tuberculosis, as a social disease, low psycho-social and economic standing of the respondents in relation to tuberculosis as well as direct causes will also be attended to.

A total of 150 questionnaires were administered to tuberculosis patients admitted at selected hospitals in the North West Province and the researcher accepted the representation of his sample

7.2. DATA ANALYSIS AND RESEARCH FINDINGS.

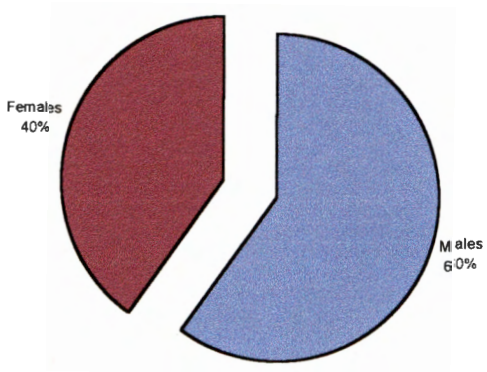
Data analysis and research findings of this study will be discussed. Amongst others the following will be touched on namely: demographic data of respondents, socio-economic factors precipitating the spread of tuberculosis and additional factors involved in the spreading of tuberculosis.

7.2.1. Demographic data of respondents

In this section attention will be given to the gender, age, highest scholastic qualification, occupation, marital status and number of children and dependants of the respondents.

Figure 1 represents the gender status of the respondents.

Figure 1: Gender



According to the above figure it is evident that males are the most suffers of tuberculosis as they represent 60% of the patients contacted. This could be attributed to the fact that most men to a greater extent are exposed to unfavourable working environments especially those who are working in the mines, whereas many of them also engage in unhealthy life styles like smoking and using alcohol.

Figure 2 represents the age range of the respondents

Figure 2: Age Range

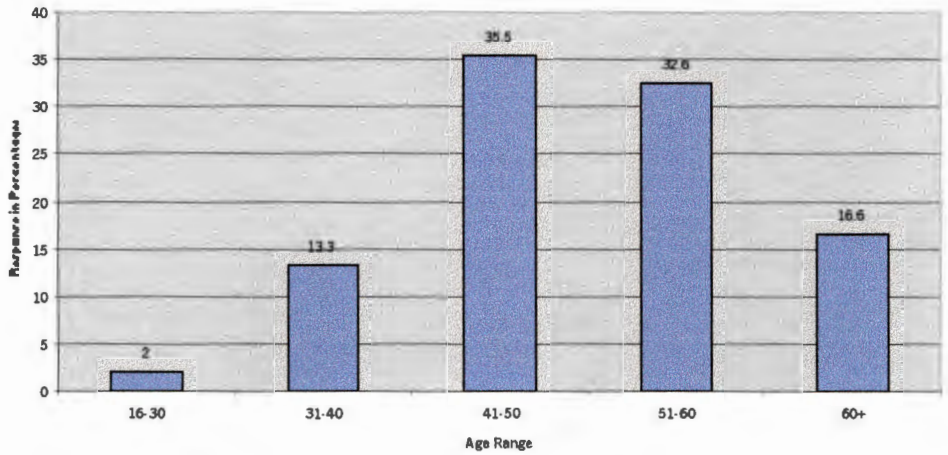
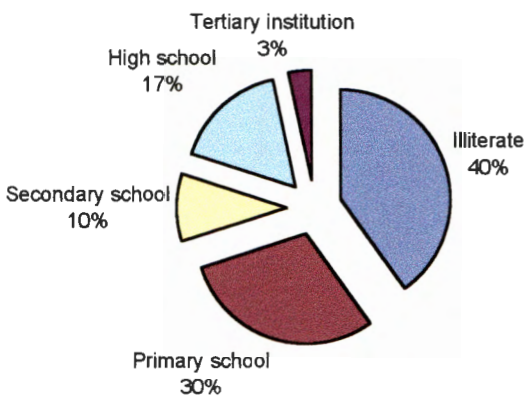


Figure 2 shows that 35.5% of the respondents range between the ages of 41 to 50 and 32.6% between 51 to 60 years of age. The reason why most patients fall within the age range 41 to 60 years (68.1%) can be ascribed to two factors. Firstly, the disease develops over a lengthy period of time and only become chronic later in the patients' life and secondly a great number of people are not aware that they have tuberculosis and only become aware of the disease in later years. The patients' health beliefs also contribute to the development of the disease later in life as the patients do not comply with treatment requirements after the diagnosis.

Figure 3 represents the scholastic qualifications of the respondents

Figure 3: Qualifications



According to figure 3, 40%, which is the highest percentage, is of the illiterate group. Adding to this figure a further 30% is of people with only primary school education. This means that 70% of the respondents have an educational level of primary school and less. This could be attributed to the fact that tuberculosis is mostly affecting people from low socio-economic population groups. A very low percentage of 3.3 is of people having tertiary qualifications. Given the prevailing educational state of low socio-economic people and contextualizing that into the current study, one concludes by saying that people with more education most probably lead healthier lives. There are several reasons for this association: better- educated people generally have greater access to health information than those who are illiterate or uneducated, and they are more likely to make well informed decisions and act on that information promptly. In addition, educated people have better jobs and greater access to money and other resources and facilities, which could help them to live healthier lives.

Figure 4 represents the occupation of the respondents

Figure 4: Occupation

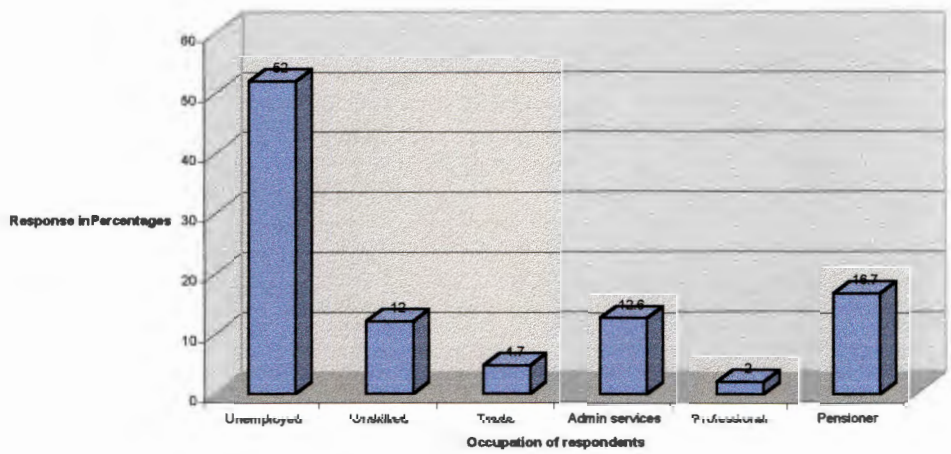


Figure 4 reflects that 52% of the respondents are unemployed and 16.7% rely on a meagre pension. Unemployment and a limited income are indicators of a low socio-economic level of the population. Since employment is the basic necessity for the quality of life, which include commodities such as food, shelter, accommodation and services, then if one is unemployed he is unable to satisfy the required primary needs. Unskilled working conditions (12%) are also associated with low salaries and unfavourable living conditions, which again affect the quality of life. As 80.7% of the respondents including the unemployed, pensioners and unskilled are found to live below the breadline they are unwantingly exposed to diseases such as tuberculosis.

Figure 5 represents the marital status of the respondents

Figure 5: Marital status of respondents

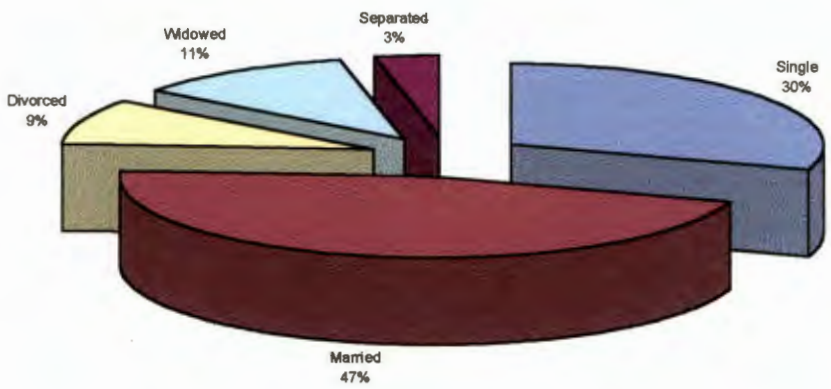


Figure 5 above reflects that 47% of the respondents are married while 53% are on their own either being single, separated, widowed or divorced. This variable whether married or not apparently has no effect on the disease as the majority of respondents are not living on their own as will be indicated in Figures 6 and 7.

Figure 6 represents the number of children the respondents have. According to the family size, the families with 0-2 children are considered small, while a family with 3-5 children are considered as average and lastly a family with 6 and more children are viewed as large families.

Figure 6: Number of children

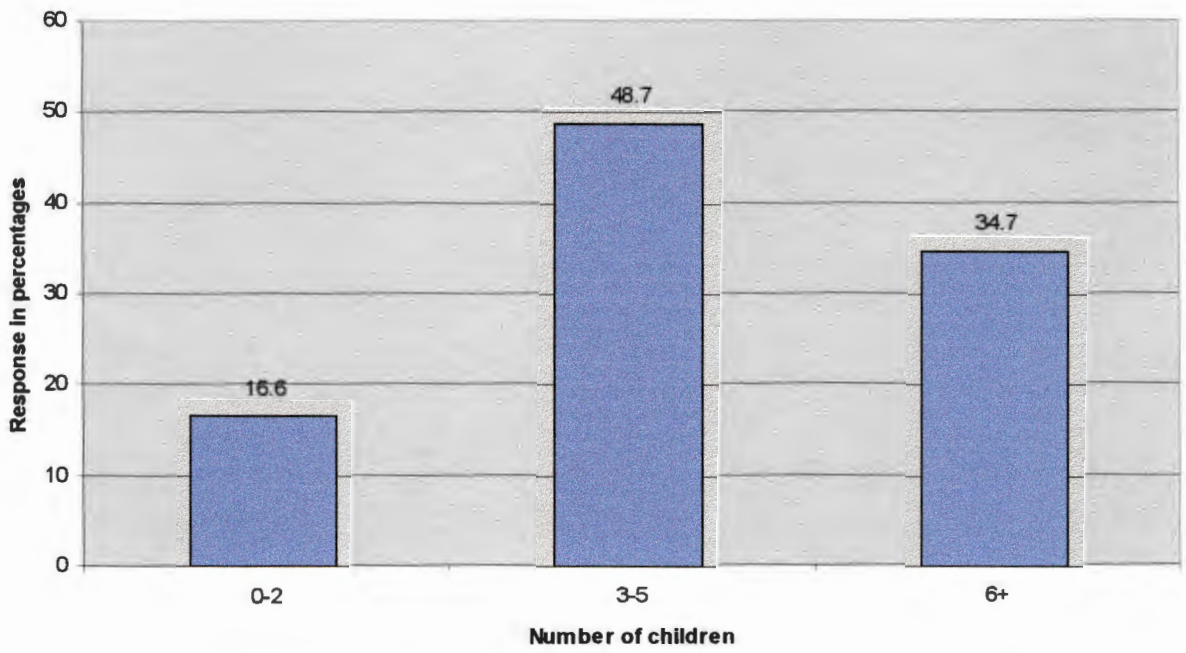
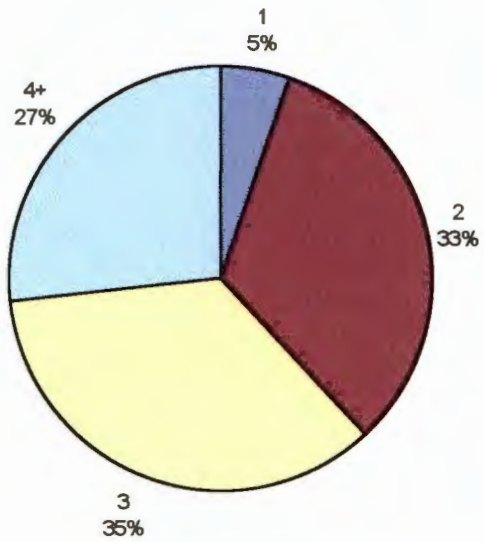


Figure 6 reflects that 48.7% of the respondents have 3 to 5 children, while 34.7% indicated that they have more than six children. Considering the low qualifications, high percentage of unemployment, unskilled labour and low salaries, the number of children (83.4% with three or more) further contributes to a low socio-economic standard as necessities may not be sufficient enough to cater for larger families.

Figure 7 reflects the number of the dependants other than the respondents' own children who reside with the respondents. The dependants other than the children of respondents include grandparents, uncles, aunts, nices, nephews, brothers and sisters living with the respondents in the same household.

Figure 7: Number of dependants other than their own children



According to the above figure all respondents are living with at least one other person in the household. It is also significant to observe that 62% have three or more "other" people in their household. This may be a compulsory measure as a result of the poor socio-economic status of these people or the shortage of accommodation.

Since most of the Black population prefers extended families, this may have an effect in making the families more poorer, particularly during these days where there is no longer subsistence farming and because of the limited resources to many people. As

already stated in figure 6, the number of children and dependants worsen the socio-economic state of the family. The bigger the low socio-economic family is the greater hardships the family will experience.

Having looked at the demographic data of the respondents one can see the link between them and the socio-economic factors that leads to the high prevalence of tuberculosis.

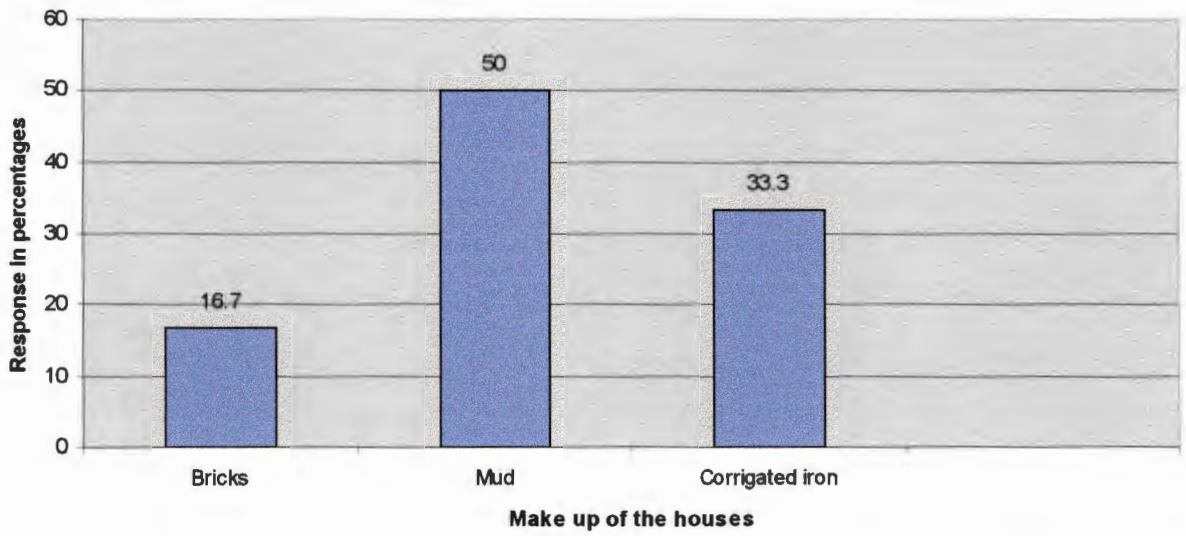
To summarize, the majority of respondents are unemployed (52 %). Because of their advanced age (84.7% being older than 41 years of age) and minimal educational qualifications (70% with primary or no education) their chances of improving their socio-economic status is exceptionally slim. The household composition where 83, 4% have three or more children as well as other dependants in the same household also contribute to the further lowering of the standard of living of the respondents. These and concomitant factors not only form the breeding ground for the development of the potential disease but will also not favour the patients return after being cured in a modern hospital setting.

7.2.2. Socio-economic factors

In this section attention will be given to socio-economic circumstances which are either responsible for or aggravated the prevalence of tuberculosis. In the demographic section it was already pointed out that factors such as low scholastic qualifications, unemployment and large families may lead to low socio-economic living conditions. These living conditions again lead to further unfavourable conditions, which are highly conducive to the spread and development of tuberculosis. These conditions include amongst others the construction of houses, overcrowding, cross ventilation, water supply and toilet facilities.

Figure 8 reflects the construction of the respondents' houses.

Figure 8: The construction of houses



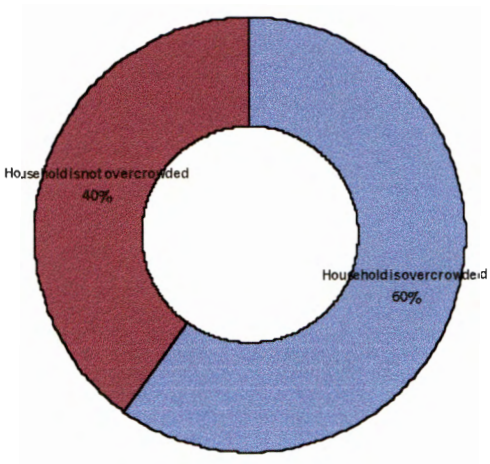
According to the above figure, only a small percentage being 16.6% live in properly build houses whereas the majority (83.3%) find themselves in mud and corrugated iron built houses. This is an indication of the low socio- economic status of the respondents.

Since corrugated iron built houses are associated with informal settlements, to start with, these shacks are built very close to one another which may also facilitate the spread of diseases. Because of the unacceptable socio-economic factors prevailing in informal settlements, one would expect to find a higher prevalence of tuberculosis in these areas compared to the average residential areas. The set up of these shacks therefore facilitate the spread of tuberculosis.

A further problem is that during winter seasons people living in the corrugated iron built houses experience extreme cold due to the nature of their houses that lead them to be susceptible to illnesses like flue and asthma, which again is highly linked to tuberculosis. Given this scenario corrugated iron built houses aggravate the situation.

Figure 9 reflects the overcrowding state of the respondents' houses. The number of square metres and the number of people occupying the household determines overcrowding in this context. According to the Slums Act 76 of 1979 it is stated that two people should occupy a six square-metered house with basic facilities like water and sanitation, proper ventilation etc.

Figure 9: Overcrowding



Since most respondents (83.4%) have more than three children and 62% have three or more dependants other than their own children living in the same household one can conclude that the houses that they stay in are very small compared with the number of occupants. 83.3% of the respondents are staying in mud or corrugated iron

built houses which on average usually have limited room space. In this regard it is evident that the majority of houses may be overcrowded.

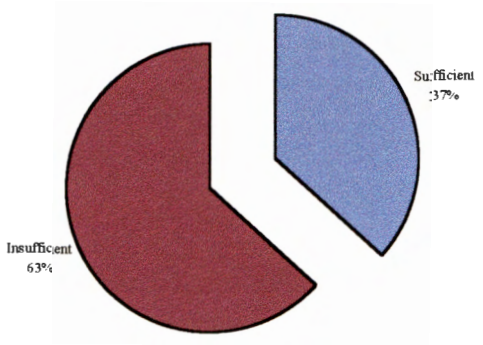
Figure 9 above reflects that 60% of the respondents' households are overcrowded. Overcrowding is an indicator of unfavourable social circumstances that may lead to the spread of diseases such as tuberculosis. Since tuberculosis is communicable it is easily transmitted in an overcrowded situation. Taking into account the number of children and dependants as already reflected in figures 6 and 7 respectively, living in the same household, one could conclude that the households are overcrowded and therefore conducive to the spread of the disease.

Overcrowding could also be linked to unemployment and a limited monthly income. Because unemployed, unskilled and pensioned people do not have money for basic necessities like shelter, they tend to live in squatter camps and crowded areas, which are more affordable to them. It is thus in these conditions that the tuberculosis germ spread easily and rapidly. Studies by Peter (1990:467) also reveal that crowding has an impact on the high prevalence of tuberculosis. He measured crowding in terms of persons per square miles and persons per dwelling unit or persons per room. Since shortage of space is reflected by the number of rooms shared especially the bedrooms, there is also a likelihood that beds are also shared which may also contribute to the cross infection of the disease.

Nivel (1994:924) also states that excessive crowding or overcrowding within a dwelling obviously promotes person-to-person spread of various communicable diseases like tuberculosis by airborne route

Figure 10 reflects the cross ventilation in the respondents' houses. Cross ventilation was determined by means of the description given by the respondents concerning the situation of doors and windows in their dwellings.

Figure 10: Cross Ventilation



Alexander (1990:46) view adequate cross ventilation as the provision of cool dry moving air in the dwelling in sufficiently large amounts to keep the inhabitants healthy. Badly ventilated overcrowded dwellings are unhealthy because of the following reasons:

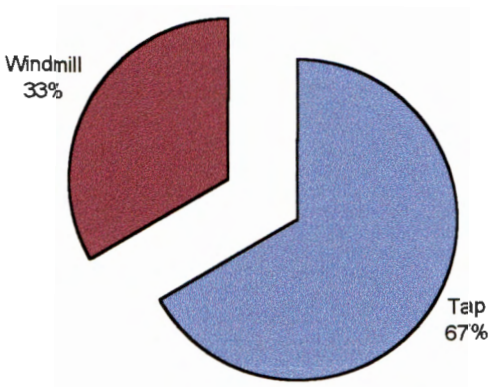
- ❖ They lower the standard of health and resistance of inmates; and
- ❖ They spread infection rapidly

Dark, damp and badly ventilated houses have a direct bearing on the spread of tuberculosis, since myco-bacterium tuberculosis multiplies itself more rapidly in such conditions. Diagonal ventilation is undesirable as air is replaced in one section of the room and left to stagnate in other portions.

Figure 10 shows that cross ventilation is insufficient inside the houses of the majority of respondents (63%). Since the germ that causes tuberculosis multiply itself in a moist and damp environment, where there is a lack of ventilation and sunrays, the environment then becomes conducive for the germ to replicate itself. It is thus concluded that lack of ventilation precipitates the spread of tuberculosis.

Figure 11 reflects the source of water for the respondents.

Figure 11:Main source of drinking water



According to the above figure the main source of drinking water is a tap with 67%, followed by windmill with 33%. This is due to the water reticulation system that is in operation by the Department of Water Affairs and Forestry. As the water supply seem to be sufficient it can be concluded that this variable has no influence on the prevalence of tuberculosis.

Figure 12 reflects the toilet facilities the respondents are using.

Figure12: Toilet facility

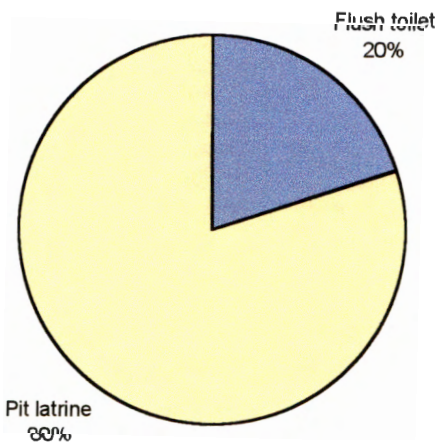


Figure 12 reflects that 80% of the respondents use a pit latrine. This could be attributed to the nature of the ruralness of their environment. The pit latrines are mostly used in rural areas as they are not costly and need no technological innovations. This apparently has no effect on the disease.

As mentioned in the introduction of this chapter, the chosen sample can be considered representative of the phenomenon of tuberculosis. Because of the low socio-economic situation of the majority of respondents, they were compelled to live in informal settlements where tuberculosis most probably reign supreme. The houses in which they find themselves (83.3%) are sub- standard in nature, overcrowded (60%) and poorly ventilated (63%). These factors do not only create a breeding ground for the development of the disease but also facilitate and aggravate the spreading of

tuberculosis. It is therefore obvious that people living under these circumstances are not only throughout exposed to the disease but will most probably experience a relapse after being treated successfully in hospital.

7.2.3. Additional precipitating factors conducive to the spread of tuberculosis

Factors of importance, which may facilitate the development of tuberculosis, are amongst others diet, substance abuse, illnesses suffered prior to the onset of tuberculosis as well as circumstances such as mine working environment and distances travelled to work.

The following table reflects the eating habits of the respondents. Since a healthy diet is associated with a healthy body and less diseases, poor diet is linked with the proneneness of diseases.

Food plays a particularly important role in health throughout the life course. Good health is dependent not only on having enough to eat, but also on eating a balanced amount of nutrients. The researcher determined the sufficiency of the respondents' diet by asking them whether they had the basic foods at home like maize meal, samp, eggs, vegetables, meat etc.

Table 1: Eating habits

	N	%
Diet is sufficient	40	26.7
Diet is insufficient	100	66.7
Uncertain	10	6.6

It is reflected that 66.6% of the respondents did not have a sufficient diet. According to the researcher, the eating habits of people are determined by their socio-economic standards. People who have little or no education (70%), those who are unemployed and pensioners (68.6%) and having no or limited money to buy food, may not have sufficient food. The foods on the contrary may be available, but they may not be nutritious because of their combination and grouping. In most cases the groupings are neglected and ignored and most concentration is put on the staple foodstuffs and the relish. The staple foods could be porridge and the relish could be potatoes. In this context both foods are carbohydrates and they are not nutritious. Malnutrition due to an insufficient nutritious diet contributes to the weakening of the immune body system, thus exposing the body to opportunistic diseases.

Table 2 reflects the substances the respondents are using or have used prior to their hospitalization.

Table 2: Substance usage

Type of substance	At present		Previously		Never	
	N	%	N	%	N	%
Smoking	0	0	90	60	60	40
Alcohol beverages	0	0	100	66.7	50	33.3

According to the above table it is obvious that the respondents because of their hospitalization did not use any substance at the time of the interviews. This however, was not a guarantee that they would not return to their established habits after being discharged from the hospital.

It is further noted that 60% of the respondents did smoke and 66.6% did use alcohol previously. Accordingly, tuberculosis mostly affects the lungs, thus if someone is smoking, there is a high risk of infecting the lungs with the chemical substance

nicotine mostly contained in cigarettes. Most health consequences of smoking are not manifested until three to four decades after the onset of persistent smoking. The chemical agents in tobacco smoke reduce and eventually destroy cilliary movement in the bronchial mucus, making the lungs more susceptible to infection. The hot smoke dries out and flames the delicate tissues of the mouth, larynx, trachea, and the lungs (Ames and Kneisl, 1990:331).

Table 3 reflects the frequency of substance usage by the respondents prior to their hospitalisation.

Table 3: The frequency of substance usage.

Only those respondents who indicated that they used substances are included into this table.

	Frequency	
	N	%
Daily	90	85.7
Weekly	0	0
Sometimes	15	14.3

It is noted that 85.7% of the respondents used substances daily. It is thus concluded that daily usage resulted into body damage and malfunctioning especially the lungs. It is also a known fact that substance usage or abuse lowers or suppress appetite and may therefore also influence the intake of a balanced diet.

Table 4 reflects the illnesses that the respondents suffered from during or prior to them being diagnosed with tuberculosis.

Table 4: Illnesses suffered

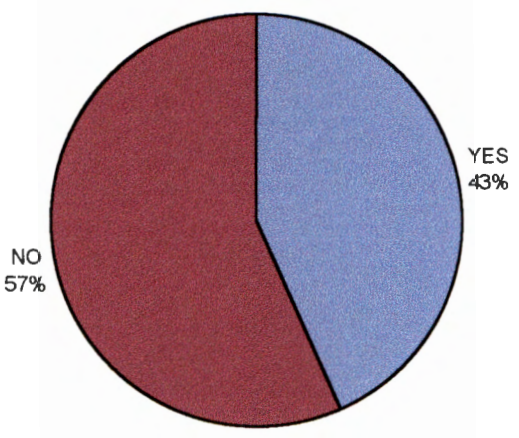
	N	%	
Pneumonia	22	14.7	
Bronchitis	15	10	} 54.7%
Asthma	45	30	
Hypertension	67	44.6	
STD/HIV/AIDS	1	0.7	

The above table shows that most of the respondents suffered from asthma, pneumonia and bronchitis (54.7%) followed by hypertension (44.6%). These mentioned illnesses except hypertension are respiratory diseases, which are closely associated with tuberculosis. According to the pathophysiology of the tuberculosis germ, it is noted that the germ usually accumulates in the human body and may ultimately penetrate into the lungs, which are already defective because of chronic respiratory illnesses.

Hypertension may have resulted from the socio-economic situation in which most of the respondents found themselves, like unemployment, alcoholism, illiteracy etc.

Figure 13 reflects mine experience of the respondents.

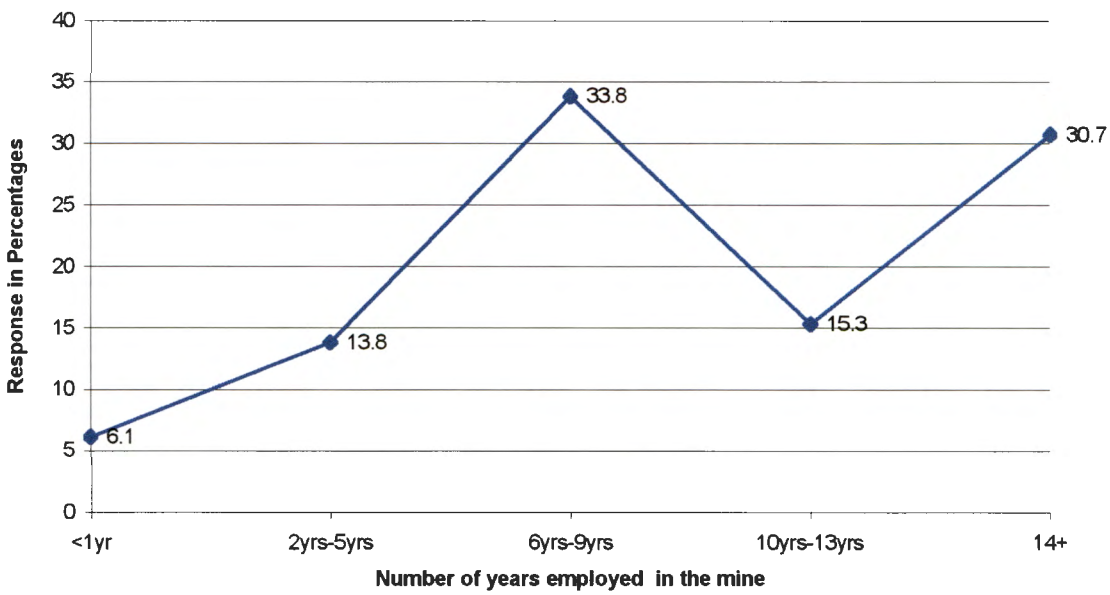
Figure 13: Previous mine experience



Although not conclusive, a mining background may be a contributory factor towards the development of tuberculosis. Therefore it may be that a certain percentage of those who previously worked on a mine (43%) were detrimentally affected by the mining environment.

Figure 14 reflects the duration of employment of the respondents in the mine

Figure 14: Duration of employment in the mine



The above figure indicates that 33.8% of the respondents worked in a mine for six to nine years whereas 30.7% worked there for fourteen years and more. The longer period working underground most probably aggravated the prevalence of the disease.

Many arguments have been held, as according to Joshua (1992:65) with regard to recognizing an occupational disease. It is stated that when the time interval between the cause and effect is short there is usually little or no difficulty in recognising the causal relationship between event(s) and diseases. However, many occupational diseases like tuberculosis take time to develop and when a person with a disease is seen by a doctor who asks himself the question "could this disease relate to the person's occupation?" the answer may be anything but simple. The relationship of the

disease to occupation may be either that of the cause or that of association. Duration of exposure to substances must also be borne in mind when identifying and recognising the disease. For example, an individual who is in his twenties and working as a mine worker, being exposed to dust environment, would not have showed evidence of any occupational disease after his first four years of employment. If he were asked whether he felt anything wrong with him after his four years of employment, his reply would probably have been negative. Similarly his supervisor might have believed that the dust was harmless or replied that, there was so little of it that no harm could result. Airborne allergens can cause or aggravate respiratory diseases. The most common respiratory disease associated with allergens is tuberculosis (Ames and Kneils 1990:303). Pollution of air by industrial and agricultural chemicals can increase the severity of respiratory conditions including long term obstructive disorders. Individuals who have conditions such as asthma, chronic bronchitis and tuberculosis may have to change their residence or their working environment.

Mode of transport to workplace.

The question of mode of transport the working respondents are using to go to work was included into the research as the researcher assumed that most of the respondents despite their illness would still be in some sort of employment. This was not the case as only approximately one third still work. Previous employment circumstances were not investigated. The reason for the inclusion of this question, which may have been of importance for this study, is that many people in the lower socio-economic strata live in outlying areas whilst working in urban areas. Because of distance as well as transport difficulties, people are compelled to travel to work early in the morning and only arrive at home late at night after work. As can be expected this arrangement do drastically interfere with sufficient sleep and rest. Anxiety also plays an important role as transport services are unreliable and may cause people

losing their jobs. Insufficient rest coupled with anxiety can be important agents in the development of tuberculosis.

It was found that most of the respondents use bus services. This could be attributed to the fact that, busses unlike taxis, accesses rural areas due to the poor nature and condition of the roads. Taxis in most cases are found in urban areas where roads are not bad and tarred. It is further noted that because of the long distance the respondents travel to work they have little time to rest.

Having looked at additional precipitating factors conducive to the spread of tuberculosis, one can conclude that diet, substance abuse, previous mine experience or other occupational diseases and certain medical conditions do have an effect in aggravating the disease.

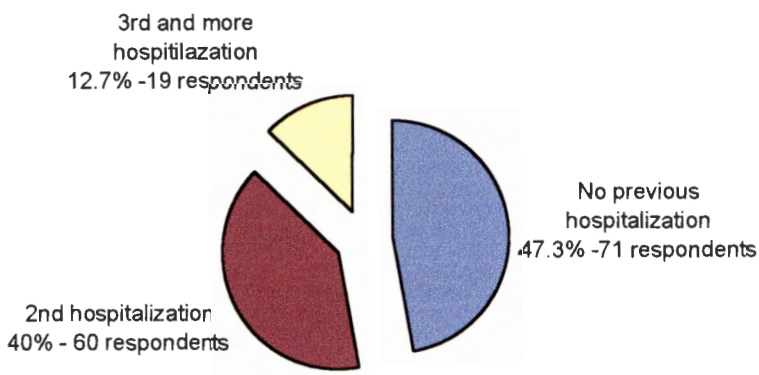
7.2.4. Hospitalization of respondents

As a starting point the respondents were asked where they normally used to go when they were ill before they were hospitalised for tuberculosis treatment. Visiting governmental hospitals (54%) is understandable as these services are offered to the lower income groups at no or little cost. Of greater interest is that 46% of the respondents preferred to visit traditional healers or sangomas. Without doubting the value of these, their contribution to the successful treatment of tuberculosis is highly questionable. Reasons for using or believing in the worth of traditional healers and sangomas may be one or more of the following. Firstly, the cost factor. It is an accepted fact that these healers in general are exceptionally reasonable or lenient concerning the payment of their services. This arrangement is most suitable to people with a limited income. Secondly, it may be due to the belief system coupled with witchcraft of a great number of people. Thirdly, it may be the consequence of mere ignorance. However, from a health point of view this belief system either prolonged or aggravated the disease.

Concerning the hospitalisation of tuberculosis patients this matter will be viewed from two angels. Firstly, the importance of previous hospitalisation of the respondents or their immediate household members and secondly their present hospitalisation.

Figure 15 reflects the number of times the respondents were hospitalized for the same disease, tuberculosis.

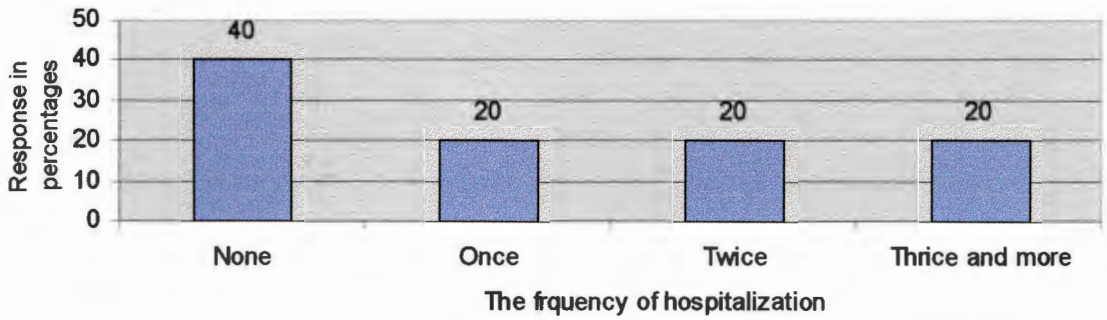
Figure 15: Number of previous hospitilization of the respondents



It is of utmost importance to note that 52.7% of the respondents were hospitalized twice or more for tuberculosis treatment. Re-admissions could be attributed to the unimproved unfavourable social circumstances that the patients are discharged to. In most cases little or no improvements are made to their socio-economic conditions and thus make the patients to relapse.

Figure 16 reflects the previous hospitalization of immediate household members of the respondents due to tuberculosis.

Figure 16: Previous tuberculosis hospitalization of immediate household members

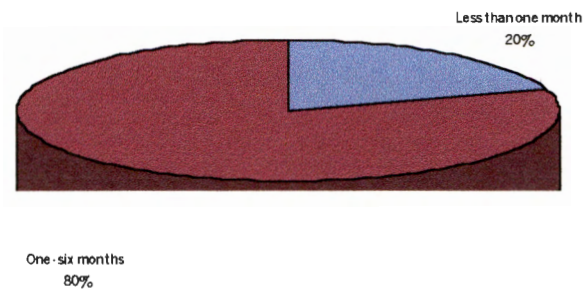


According to the above figure 60% of the immediate household members of the respondents were hospitalized (20% were hospitalized once, 20% twice and lastly 20% thrice and more).

Figures 15 and 16 are of great significance with regard to the prevalence of tuberculosis. Firstly, it has been indicated that 52.7% of the respondents were hospitalized more than once. It can be deducted that although these patients are well cared for and cured in hospitals, they are sent back to the same socio-economic circumstances which most probably originally contributed towards the development of the disease. Secondly, 60% of the respondents' immediate family members who reside under the same circumstances as the respondents were also hospitalized once or more for the disease. These figures conclusively prove that amongst others the socio-economic circumstances under which these people live greatly contribute to the development and the spreading of the disease and the consequent relapse of the patients. It can therefore be concluded that tuberculosis will and can not be stamped out unless peoples' socio-economic living conditions are not attended to and drastically improved.

Figure 17 reflects the expected duration of respondents' hospitalization

Figure 17:Expected duration of hospitalization



According to the above figure 80% of the respondents are expected to be hospitalised for one to six months. This could be attributed to the normal known hospitalisation period for tuberculosis patients. Both the family and the patient experience the implications of long hospitalization like the financial burden of paying the hospital bills, loss of jobs particularly those who were working, change of family roles to accommodate and substitute for the affected party etc.

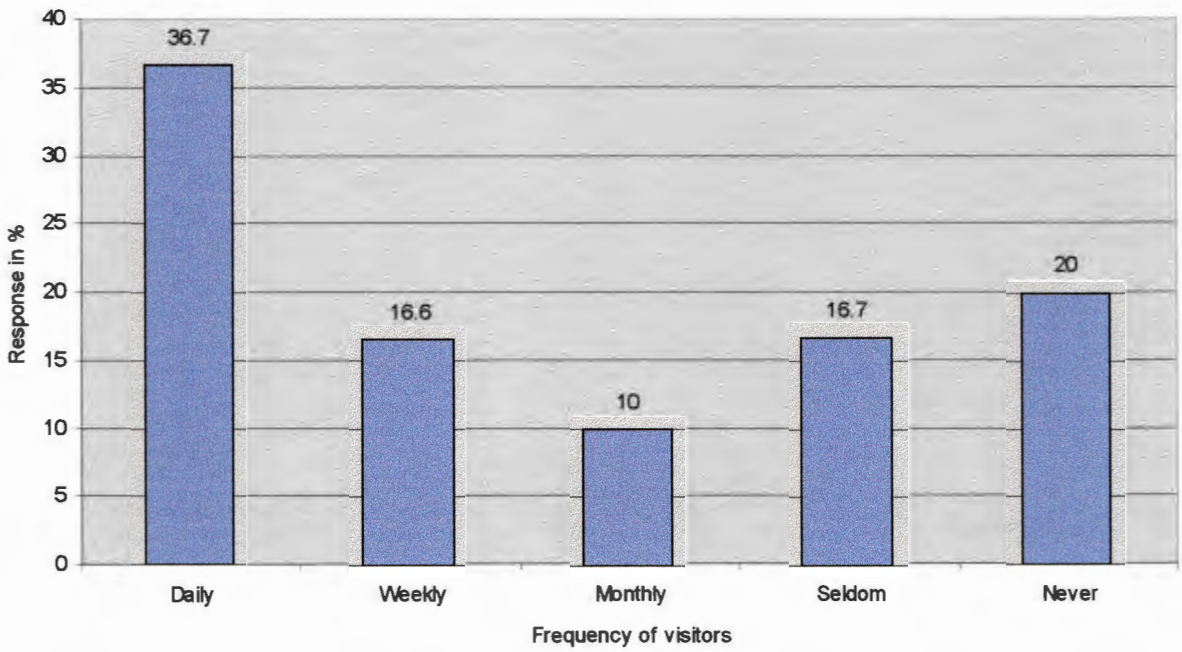
Supporting the implication of hospitalization, Adam's (1972:22) studies revealed that most individuals and their families have only vague, general and usually distorted ideas about why they are being hospitalised and what will happen to them while they are in the hospital. This lack of knowledge is responsible for increasing the typical fears and anxieties. Included in this research the respondents were requested to give their opinions with the medical care they are presently receiving in the hospital. It is noted that the respondents view the medical staff as being extremely helpful because they were treated holistically by being provided with both medical and psycho-social treatment. This was confirmed by the positive response of majority of the respondents.

The medical staff is also helpful because they do explain the medical procedures that need to be performed on the patients for example when X-rays are to be taken. The medical staff does not ignore the problems the patients have rather they offer assistance to make the patient feel comfortable and relaxed. The high quality care that the medical staff is offering to the patient could be attributed to the implementation of the Batho Pele principles, launched by the Department of Health of the North West Government. According to Batho Pele principles, people must be treated with the dignity they deserve and they should also be provided with the necessary information.

As a result of the lengthy period that patients spend in hospital as well as the importance of psycho-social treatment, the interest of family members as well as their inclusion in the treatment process are of great importance. Attention in the following two figures (Figure 18 and 19) is given to the composition of visitors and the frequency of their visits.

Figure 18 reflects the frequency of the visitors who visited the respondents at the hospital.

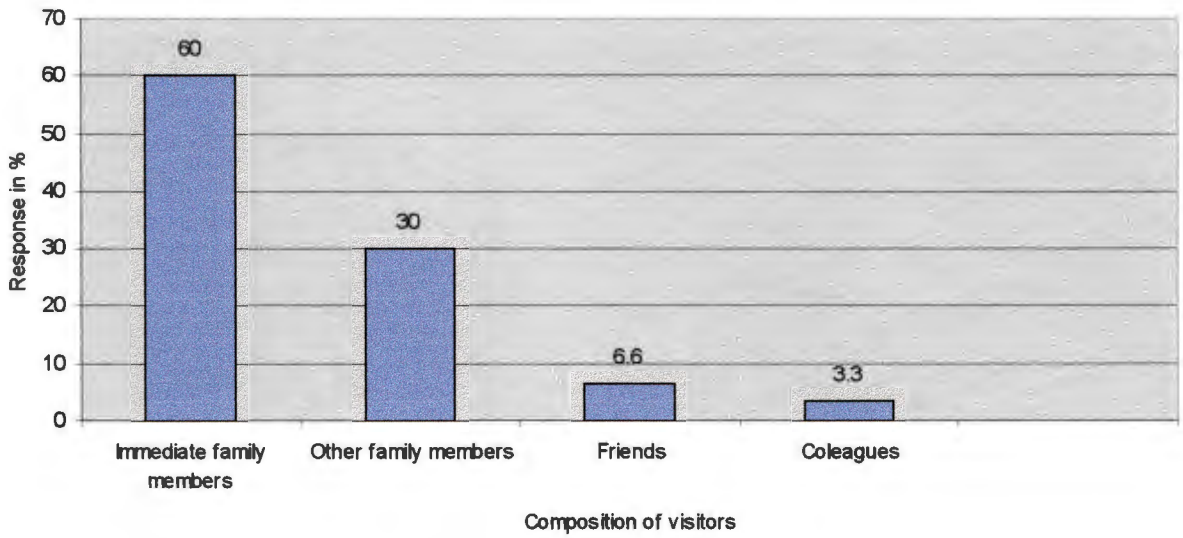
Figure 18: Frequency of visitors at the hospital



Evaluating the response as reflected in the above figure, it became clear that there is a reasonable interest from family members to visit the patients in the hospital. However, nearly half of the patients indicated a low interest rate of visitors. Although constant interest is imperative for the recovery of the patients, there may be various factors why this interest is not forthcoming in a great number of cases. Amongst others the hospitals may be far from the villages and the expected visitors having no money to pay for the travelling fares. The other factor could be attributed to the prolonged length of stay of the respondents in the hospital as being reflected in Figure 17. Nevertheless, it was noted that the medical staff is encouraging the family members to visit the respondents.

Figure 19 reflects the composition of visitors at the hospital.

Figure 19:Composition of visitors



It is satisfying to note that 60% of the visitors are the immediate family members. It means that immediate family members like husband, wife, mother, father, sisters and brothers, are really caring and thinking about their hospitalized member. The interest shown by the family and the incorporation and participation of the family in the treatment of the patient is highly valued for a speedy recovery.

As will be reflected in table 5, the social work profession and other service providers not only have a major responsibility towards the prevention of tuberculosis but should also form part of the inter-disciplinary team when dealing with tuberculosis patients in hospitals. This task is known as tertiary prevention where relapse of patients can successfully be prevented. The disease is coupled with diverse behavioural, emotional and cognitive deviations, which needs a holistic approach.

The table mentioned below reflects the conditions, which the respondents have suffered from prior to hospitalization and which they are presently suffering from. The disclosure that one has tuberculosis is a devastating experience, which needs tactical counselling from a social worker. The broad medical and psycho-social services that the respondents receive during their stay in the hospital, have a major impact on their recovery and better social functioning. The following are the psychological reactions that the respondents have experienced prior to the counselling services they received (i.e. pre-counselling) compared with the reactions that are presently being experienced after counselling was received (post-counselling).

Table 5: Conditions the respondents suffered previously compared with the current conditions.

	Previously		At present	
	N	%	N	%
Denial	150	100	62	41.3
Anger	133	88.7	54	36
Depression	100	66.7	49	32.7
Blame	90	60	42	28
Anxiety	80	53.3	0	0
Guilt feeling	70	46.7	50	33.3
Suicidal tendencies	70	46.7	0	0
Shame	65	43.3	0	0
Self harm	50	33.3	0	0
Eating disorders	15	10	0	0

According to the above table denial, anger and depression are the main conditions, which needed attention.

All the respondents denied their diagnosis of tuberculosis. Denial is a coping behaviour, which indicates the failure to acknowledge either the existence of a known fact or its significance. Denial lessens the impact and allows time to adjust to the dreadful illness (McCown, 1989:412). Although people in general have some knowledge of the disease, it still comes to them as a shock if it is immediately conveyed to them that they are suffering from tuberculosis. Then for the first time, they realise that they are suffering from a serious disease, which not alone entails a lengthy period of treatment, but can be lethal if not correctly dealt with. Fortunately, this condition is temporary and gives way to a gradual awareness of reality. As mentioned in the table only 41.3% still denied their condition at the time of the interview. Anger and dissatisfaction with oneself are experienced when the person realises that he allowed himself to be subjected to the disease. This feeling of anger was mentioned by 88.7% of the respondents.

Concomitant feelings include depression (66.7%), blame (60%), guilt feelings (46.7%) and shame (43.3%). Many of these feelings occur as result of the stigma attached to the disease, the realization of a lengthy hospitalization period and a bad conscience knowing that his or her dependants will suffer during his/ her absence. Because of the serious impact of the disease on the person's mental well-being, some respondents even indicated that they entertained suicidal thoughts (46.7) whereas 33.3% and 10% respectively experienced self-harm tendencies and eating disorders. All the feelings mentioned above emphasise the enormous impact the disease has on the person's psychological well-being.

If these circumstances as they existed prior to hospitalization are compared with the present time, after the patient has spent some time in hospital, a marked difference is observed. This may be due to the holistic medical and psycho-social treatment received during hospitalization.

Additional to the psycho-social conditions suffered by tuberculosis patients, various attitudinal questions were directed at them to determine their feelings concerning certain fears.

Table 6: Attitude questions regarding fears experienced by respondents.

	Agree		Disagree		Uncertain	
	N	%	N		N	%
Fearful of death	150	100	0	0	0	0
Hopeless over inability to get an end to the suffering	150	100	0	0	0	0
Depressed of feeling pain	150	100	0	0	0	0
Fearful of loosing personal control	150	100	0	0	0	0
Feeling worthless	150	100	0	0	0	0
Fearful of loosing body function especially the lungs	130	86.6	0	0	20	13.4
Denial of diagnosis	120	80	30	20	0	0
Angry over inability to overcome the illness	120	80	20	13.4	10	6.6
Having had low self esteem	90	60	10	6.6	50	33.4
Fearful of loosing personal appearance	80	53.3	30	20	50	33.4

Table 7 continued

	Agree		Disagree		Uncertain	
Having had suicidal thoughts	70	46.6	50	33.7	30	20

Of importance is where all the respondents (100%) reacted positively on the following variables. They all admitted that they feared death and they were depressed of feeling pain. The illness soon aroused the feeling of worthlessness coupled with hopelessness over the inability to get an end to the suffering.

Further statements of apparent importance were put to the respondents in an effort to determine significant tendencies. Almost all the respondents had fears for example being fearful of death, fearful of loosing personal control, fearful of loosing body functions, and fearful of loosing personal appearance.

7.2.5 . Questionnaires administered to community members.

The researcher also administered 20 questionnaires to Motlhabeng Villagers in Mafikeng with the view of eliciting the communities' knowledge and attitudes with regard to tuberculosis. This pilot study was undertaken based on the previous empirical findings as mentioned in this chapter. The notion arose that most probably the community is not well informed about the disease.

7.2.5.1. Demographic data.

The study group consisted of 60%females and 40% males. Their age ranged from 16 – 30yrs (20%), 31 – 41yrs (35%) and 51 – 60yrs (45%). Their qualifications were as follows: illiterate (20%), primary education (35%), secondary education (20%) and tertiary education (25%).

More than half of the interviewed community members were unemployed (55%) which corresponds favourably with the previous findings where 52% were found to be unemployed.

Although the sample is limited it can be considered representative of the knowledge and attitudes of the broader community with regard to tuberculosis.

7.2.5.2. Knowledge about tuberculosis.

Although tuberculosis does not receive the same attention as given to HIV/ AIDS, it would seem that the community has some knowledge of the disease.

When the respondents were asked whether they knew what tuberculosis was, the majority mentioned one or more of the following:

- Disease of the lungs
- Continuous coughing
- Malfunctioning of the respiratory organs
- Disease of the chest
- Germs of the lungs

It is noted from the comments that the respondents are aware that tuberculosis affects the respiratory organs, particularly the lungs.

Following the nature of the disease, respondents were asked what they considered to be the main causes of the disease. It was notable that all the respondents had some idea what the causative factors are. These responses included one or more of the following causes:

- Accumulated contaminated dust in the lungs
- Smoking of cigarettes
- Inhalation of carbon monoxide

- Poor diet
- "Sejeso"- Culturarally induced disease contacted by eating bewitched food
- HIV/Aids

When asked about the symptoms of tuberculosis, the majority of respondents mentioned one or more of the following:

- Coughing
- Night sweat
- Tiredness
- Chest pains
- Loss of appetite
- Restlessness and fever

Turning to the mode of transmission all the respondents mentioned one or more of the following;

- Inhalation of contaminated air
- Contact with infected persons
- Intake of infected food

Although food as a mode of transmission has not been supported by the literature some of the respondents were of the opinion that food intake may also be a mode of transmission.

When asked about the measures to be used to prevent tuberculosis, the respondents mentioned the following as possible preventative measures: health education, proper diet, regular check-ups, proper housing (which includes availability of space and ventilation), non- smoking and abstinence of substances especially alcohol beverages.

7.2.5.3. Attitudes towards tuberculosis patients.

Of the respondents 90% stated that people suffering from tuberculosis are being stigmatised as the disease is associated with HIV/AIDS, unhygienic standards and filthy lifestyles. It is as a result of these factors that tuberculosis suffers are not coming up easily for medical attention and remain hidden thus spreading the disease.

According to the responses obtained from the community members with regard to their knowledge about tuberculosis and attitude towards tuberculosis patients, it is apparent that the community do have information about the disease. With regard to the attitude towards tuberculosis patients, it is noted that people still discriminate, reject and isolate tuberculosis patients mainly because they link tuberculosis with HIV / AIDS, unhygienic standards and filthy lifestyles.

7.3. SUMMARY

This chapter has covered the empirical findings of the study. As mentioned earlier a probability sample of 150 respondents hospitalized due to tuberculosis were interviewed. Information pertaining to their demographic status in relation to tuberculosis was obtained by means of their educational qualifications, employment status, employment history, number of children and dependants other than own children living with them, housing, water supply, sanitation, eating habits and substance usage. Having looked at the information obtained one is convinced that the demographic information of the respondents does have a link to poverty as the precipitating factor in the spread of tuberculosis.

The cyclical pattern of poverty in relation to tuberculosis was clearly proved. Although the medical care of tuberculosis sufferers is sufficient, social factors conducive to the spread of tuberculosis are apparently not attended to. A person is

diagnosed, hospitalised, treated and discharged to the very unchanged unfavourable social environment which most probably was originally responsible for the development of the disease. The person will ultimately relapse and the whole circle will begin again.

Since low economic state of the respondents perpetuates the spread of tuberculosis, the cyclical reaction is illustrated by the following example: -

Working in an unfavourable environment like the mine, with little education and earning a low salary, which cannot meet the necessary basic necessities, creates a fertile breeding ground for tuberculosis. Overcrowding due to shortage of space also make people susceptible to the disease as it is communicable by nature. The poor construction of the houses with the absence of cross ventilation, which is necessary to destroy the tuberculosis germ also expose people to tuberculosis. Insufficient diet due to lack of money to buy healthier foodstuffs and also due to lack of information with regard to healthier foods also play a role in weakening the immune system of the individual against diseases especially tuberculosis.

With regard to treatment, it is noted that the majority of the respondents prefer going to traditional healers and sangomas than going to ordinary hospitals. This is due to their believe systems where they mostly believe in witchcraft and feel bewitched when they are ill. When asked about their present hospitalisation, they stated that they were well cared for and appreciated the medical attention and treatment received from the medical personnel.

It is reflected that almost half of the respondents were hospitalized twice or more for tuberculosis treatment. Re-admission is attributed to the unimproved unfavourable social circumstances that the patients are discharged to. In most cases little or no improvements are made to their socio-economic conditions and thus make the patients to relapse. On the same note more than half of the respondents' immediate

family members who reside under the same circumstances as the respondents were also hospitalized once or more for tuberculosis. These figures conclusively prove that amongst others the socio-economic circumstances under which these people live greatly contribute to the development and the spreading of the disease and the consequent relapse of the patients.

It was also noted that the respondents received regular visitors who are mainly immediate family members. This shows the interest the immediate family members have on the respondents. Their involvement in the respondents' treatment procedures was acknowledged.

During the time of the interview the respondents showed a vast improvement with regard to their psycho-social conditions. These improvements came as the result of the good quality service provided by the medical and psycho-social professionals during the hospitalization.

The latter part of the chapter entailed the analysis of information gathered from the community members. The researcher got opinions and knowledge that the community members have about tuberculosis. Although the community is not subjected to the same campaigns as given to HIV/AIDS it was apparent that the general public has some knowledge and information about tuberculosis. All the respondents viewed tuberculosis as affecting the lungs as a respiratory disease.

The relationship between tuberculosis and HIV/AIDS and other unhygienic circumstances are factors that cause stigmatisation towards tuberculosis patients. This relationship is most probably one of the blocking factors why people are afraid to come to the forth for regular medical treatment, thus remaining undetected and untreated leading to the further spread and development of the disease.

The community members also highlighted their plight of witchcraft belief system in relation to tuberculosis. They believe that a person gets tuberculosis when she/ he has ate “sejeso”- bewitched foods. The researcher is of the opinion that despite socio-economic factors these belief systems also contribute to the prolongation and spread of tuberculosis.

CHAPTER 8

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

8.1. INTRODUCTION.

Tuberculosis is a social disease precipitated by unfavourable social circumstances mainly caused by poverty. Poverty is the main contributory factor leading to the high spread and prevalence of tuberculosis. According to Blackbum (1996:7) poverty is a multidimensional phenomenon, encompassing inability to satisfy basic needs, lack of control over resources, lack of education and skills, poor health, malnutrition, lack of shelter, poor access to water and sanitation etc. Poor people are faced with extreme vulnerability to ill health.

Poverty and health are intrinsically linked. Not only are the poor more likely to suffer ill health and premature death, but also poor health and disability are themselves recognised to be causes of poverty (Blackbum, 1996:7). Ill health is both a cause and consequence of poverty. Poverty also breeds ill health. As been mentioned in the previous chapters, illness can reduce household savings, reduce productivity and lead to a diminished quality of life, thus creating and perpetuating poverty. Investing in health is a well-documented strategy for lifting a population out of poverty. Tuberculosis is much more than a health concern. It is a complex socio-economic problem that impedes human development and traps the world's poorest and most marginalized in a vicious circle of disease and poverty. Tuberculosis exerts its greatest toll on the poor. A total of 98% of the deaths due to tuberculosis and 95% of the 8 million new cases every year are in developing countries like South Africa, making the poor poorer.

The scourge of HIV/AIDS has also worsened the increase of tuberculosis. According to Stop Tuberculosis Initiative Journal (2000: 98), almost 30% of people with HIV are also infected with tuberculosis. Tuberculosis is the common opportunistic infection among people with HIV and is the largest killer of HIV positive people. In more and more countries a dual epidemic of TB and HIV is emerging fuelled by each other. The TB and HIV co-epidemic impacts on the economic development and posses new challenges to health and social systems which increasingly have to address issues such as integrating HIV and TB services, facilitating access to drugs and treatment, and caring for infected people.

By proving the socio-economic basis of the disease the researcher emphasised the main reason why the disease cannot be controlled. Emphasis is given to the physical dimension of tuberculosis sufferers whereas the socio-economic factors are totally neglected in an effort to prevent or combat the disease.

Although the medical care are most probably sufficient, social factors conducive to the spread of tuberculosis are not attended to. A person is diagnosed, hospitalised, treated and discharged to the very unchanged unfavourable social environment which most probably was originally responsible for the development of the disease. The person will ultimately relapse and the whole circle will begin again. Since the low socio-economic state of the respondents perpetuates the spread of tuberculosis, the cyclical reaction is illustrated by the following example: -

Working in an unfavourable environment like the mine, with little education and earning a low salary, which cannot meet the necessary basic necessities, perpetuate the spread of tuberculosis. Overcrowding due to shortage of space also make people susceptible to the disease as it is communicable by nature. The poor construction of the houses with the absence of cross ventilation, which is necessary to destroy the tuberculosis germ also expose people to tuberculosis. Insufficient diet due to lack of money to buy healthier food and also due to lack of information with regard to

healthier foods also play a role in weakening the immune system of the individual against diseases especially tuberculosis.

Based on the afore-mentioned cyclical reaction of tuberculosis, as a social disease, low psycho-social and economic standing of the respondents in relation to tuberculosis as well as direct causes were attended to in this study.

A total of 150 questionnaires were administered to tuberculosis patients admitted at selected hospitals in the North West Province. The researcher also administered 20 questionnaires to Motlhabeng Villagers in Mafikeng with the view of eliciting the communities' knowledge and attitudes with regard to tuberculosis. This pilot study was undertaken based on the empirical findings derived from the respondents in selected hospitals. The notion arose that most probably the community is not well informed about the disease.

This chapter encompasses the summary, conclusions and recommendations emanating from this study.

8.2. SUMMARY.

The objectives of this study as reflected in Chapter 1 will subsequently be mentioned and how they were met.

8.2.1. The nature, extent, causes, symptoms and treatment of tuberculosis.

The extent and statistics of tuberculosis in Africa as a continent and Southern Africa as a region is highlighted and lastly the South African situation is also looked at. It is clearly reflected in the statistics that tuberculosis is on the increase. Immediate and proper intervention is thus necessary.

Wilkinson (1992:424) states that tuberculosis has emerged in the last 25 years as the single most important bacteria pathogen threatening the global health control having been responsible for more than a quarter of preventable adult deaths worldwide. He also says that an estimated number of 7,4 million people has developed tuberculosis in 1995, with 1,3 million of these residing in Africa and with South Africa particularly hard hit.

In Africa, the tuberculosis case rate is 216 per 100 000 of the population. The 11 countries of the Southern Africa sub-region contribute approximately 275 000 cases every year to the total caseload in Africa. Almost half of these cases come from South Africa (Fourie, 1999:1).

In an analysis of tuberculosis trends and the impact of HIV infection on the situation in the sub-region, it was estimated that by 2001 the smear positive case rate would have increased from 198 per 100 000 of the population for the region as a whole, to 681 per 100 000 if tuberculosis control efforts are not optimised. To aggravate the situation, 69% of these cases would be directly attributable to HIV infection (Fourier, 1999:1).

According to TB Times Journal (2000:68), of the ten countries with the highest incidence rate of TB per capita, nine are in Africa. Four of the nine are in Southern Africa (South Africa, Democratic Republic of Congo, Tanzania and Zimbabwe).

South Africa has one of the highest tuberculosis rates in the world, and the incidence is increasing. South Africa's current rate is 419 per 100 000 people, which is more than double that in other developing countries. According to Dr Karin Weyer, of Medical Research Council, tuberculosis rates have doubled in most provinces in the past five years with the projections of a five-fold increase by 2005 to 600 000 cases a year.

An estimated 7 302 000 persons are co-infected with tuberculosis and HIV in Africa. Of these tuberculosis and HIV infected persons, 31.5% (2 301 000) reside in South Africa, Democratic Republic of Congo, Tanzania and Zimbabwe. These tuberculosis and HIV co-infected persons represent one-fifth (21.6%) of the global Tuberculosis/HIV co-infected pool. Of the 22 highest tuberculosis incidence countries in the World, Zimbabwe has the highest rate of co-infection (4603 per 100 000) and Tanzania the sixth highest (1026 per 100 000).

The nature and pathophysiology of tuberculosis is explored. Tuberculosis is a bacteria infectious disease transmitted by mycobacterium tuberculosis. It usually involves the lungs, but it also occurs in the kidneys, bones, lymph nodes and meninges, and can be disseminated throughout the body (Sharon and Collier, 1992:468; Crofton, Horne and Miller, 1992:7; Porter and McAdam, 1994 and Kersten, 1990:182).

Mycobacterium tuberculosis is usually spread via airborne droplet nuclei which are produced when an infected person cough, sneeze or speak. Only people who are sick with tuberculosis are infectious. Once the tuberculosis germ is released into a room, the organisms are dispersed and can be inhaled by a susceptible host. Brief exposure to a few tubercle bacilli rarely causes an infection. Rather, it is more commonly spreading to individuals who have had repeated close contact with an infected person (Sharon and Collier, 1992:468).

The clinical features of tuberculosis with special reference to symptoms that distinctly differentiate tuberculosis from other diseases were discussed. According to Ames and Kneisl (1990:386) tuberculosis of the lung most often develops as a chronic illness, and symptoms appear over weeks or months. Barber, Stokes and Billings (1980:818) similarly states that "the onset signs and symptoms of pulmonary tuberculosis in many clients may be insidious. Some may even be asymptomatic". On the same note Sharon and Collier (1992:469) say in the early

stages of tuberculosis, the person is usually asymptomatic. Many cases are found incidentally when routine chest X-rays are done.

It is further argued that symptoms of pulmonary tuberculosis are influenced greatly by the activity of the disease and by its extent. The primary infection is asymptomatic in over 90% of the people and symptoms are trivial and non specific in most of the remainder (Pully, 1987:71).

Having explored various authors opinions on the symptoms of tuberculosis, there are similar symptoms stated by the various authors which will be summarised as follows:

- Cough
- Sputum
- Blood spitting
- Chest wall pain
- Breathlessness
- Frequent colds
- Localised wheeze
- Loss of weight
- Fever and sweating
- Tiredness
- Loss of appetite

Diagnostic procedures for example sputum testing, chest x-rays and tuberculin skin test has been discussed. The researcher has observed the most commonly used diagnostic procedure as being the chest x-ray. According to Strickland (1990:395), the most valuable diagnostic investigation in assessing the presence and extent of tuberculosis is by taking X-rays of the chest. Where an old disease has been present, the early subtle changes indicative of activity can best be discerned by a comparison of the radiograph with ones taken months or years

earlier. Evidence of pre-existing scars can be found in the previous films in about 70% of persons with active tuberculosis. Hence, efforts to obtain old radiographs may allow recognition of an active process and initiation of therapy before further progression has occurred including the spread of infection to other parts of the lungs and to other persons.

Treatment modalities for example chemotherapy and surgical treatment were also touched on. According to Ignatavicius and Marylin (1991:2043) chemotherapy is the most effective method for managing tuberculosis and preventing transmission. Similarly Sharon and Collier (1992:470) view pharmacological treatment as the best for treating tuberculosis.

Lastly, the relationship between HIV/AIDS was looked at, as both are social diseases. Tuberculosis is a leading cause of death among people who are HIV positive. It accounts for about 15% of AIDS deaths worldwide. In Africa, HIV is the single most important factor determining the increased incidence of tuberculosis.

Similarly it was also highlighted during the World Tuberculosis Day that the high HIV/ AIDS rate in South Africa is fuelling the increase of tuberculosis rate and it is urged that the government need to implement a strategy that would combat the HIV/AIDS fight along with tuberculosis epidemic (Citizen, 21 March 2001).

8.2.2. The impact of tuberculosis on the patient and the family.

Basic to the understanding of a patient with tuberculosis is an understanding of the family context within which the patient lives. Because the family is the individual's most important social unit, it constitutes the most important social context within which illness occurs and is resolved. It thus serves as a primary unit in health and illness (Litman, 1994:93). The family is involved in promoting everyday health

behaviours, defining when a family member is sick and thus promoting the sick role, and initiating medical care for the ill person.

Psychological responses like denial, depression, anxiety, anger, hostility and rejection that may occur, are observed and experienced in individuals who are being told that they have tuberculosis. This again will reflect an influence on the family functioning.

According to the empirical findings all the respondents denied their diagnosis of tuberculosis. Denial is a coping behaviour which indicates the failure to acknowledge either the existence of a known fact or its significance. Denial lessens the impact and allows time to adjust to the dreadful illness (McCown, 1989:412). Although people in general have some knowledge of the disease, it still comes to them as a shock if it is conveyed to them that they are suffering from tuberculosis. Then for the first time, they realise that they are suffering from a serious disease, which not alone entails a lengthy period of treatment, but can be lethal if not correctly dealt with. Fortunately, this condition is temporary and gives way to a gradual awareness of reality. As mentioned only 41.3% still denied their condition at the time of the interview.

Anger and dissatisfaction with oneself are experienced when the person realises that he allowed himself to be subjected to the disease. This feeling of anger was mentioned by 88.7% of the respondents.

Concomitant feelings include depression (66.7%), blame (60%), guilt feelings (46.7%) and shame (43.3%). Many of these feelings occur as a result of the stigma attached to the disease, the realization of a lengthy hospitalization period and a bad conscience knowing that his or her dependants will suffer during his/ her absence. Because of the serious impact of the disease on the person's mental well-being, some respondents even indicated that they entertained suicidal

thoughts (46.7) whereas 33.3% and 10% respectively experienced self-harm tendencies and eating disorders. All the feelings mentioned above emphasise the enormous impact the disease has on the person's psychological well-being which will also affect the family detrimentally.

If these circumstances as they existed prior to hospitalization are compared with the ones that existed during the interview, after the patient has spent some time in hospital, a marked difference is observed. This may be due to the holistic medical and psycho-social treatment received during hospitalization.

Additional to the psycho-social conditions suffered by tuberculosis patients, various attitudinal questions were directed at them to determine their feelings concerning certain fears.

Of importance is where all the respondents (100%) reacted positively on the following variables. They all admitted that they feared death and they were depressed of feeling pain. The illness soon aroused the feeling of worthlessness coupled with hopelessness over the inability to get an end to the suffering.

Further statements of apparent importance were put to the respondents in an effort to determine significant tendencies. Almost all the respondents had fears for example being fearful of death, fearful of loosing personal control, fearful of loosing body functions, and fearful of loosing personal appearance.

Physiological impact of tuberculosis on the patients like noisy respiration, weight loss, loss of appetite was noted. The individual with tuberculosis is well aware of the changes that have occurred in his appearance and may be self-conscious about these changes. Common bodily changes may include noisy respirations, excessive sputum production, weight loss etc. Excessive sputum production may hinder the individual from engaging in social contacts if he feels that frequent coughing and

expectorating are not condusive to social conversation (Duddly, 1981:425). The patient may feel that members of the society find the frequent expectations as distasteful and hence avoid him. Skin colour change is a difficult manifestation to hide. Each time the individual looks in the mirror, the pallor or the bluish tint to the skin may be noted. As a result, the individual may not wish to look in the mirror or be seen by others.

Occupational impact due to the disease is highlighted. Alterations in job settings as a result of tuberculosis is emphasized. One of the greatest impacts of tuberculosis disease is the change it imposes upon the individual's work role (Taskin, 1982:213). Since the physiological consequences of tuberculosis produce a decrease in energy level, the individual affected often is required to make alterations in occupational pursuits.

The empirical findings reveals that 33.8% of the respondents worked in a mine for six to nine years whereas 30.7% worked there for fourteen years and more. The longer period working underground most probably aggravated the prevalence of the disease.

Many arguments have been held, as according to Joshua (1992:65) with regard to recognizing an occupational disease. It is stated that when the time interval between the cause and effect is short there is usually little or no difficulty in recognising the causal relationship between event(s) and diseases. However, many occupational diseases like tuberculosis take time to develop and when a person with a disease is seen by a doctor who asks himself the question "could this disease relate to the person's occupation?" the answer may be anything but simple. The relationship of the disease to occupation may be either that of the cause or that of association. Duration of exposure to substances must also be borne in mind when identifying and recognising the disease. For example, an individual who is in his twenties and working as a mine worker, being exposed to a dust environment, would not have

showed evidence of any occupational disease after his first four years of employment. If he were asked whether he felt anything wrong with him after his four years of employment, his reply would probably be negative. Similarly his supervisor might have believed that the dust was harmless or replied that, there was so little of it that no harm could result. Airborne allergens can cause or aggravate respiratory diseases. The most common respiratory disease associated with allergens is tuberculosis (Ames and Kneils 1990:303). Pollution of air by industrial and agricultural chemicals can increase the severity of respiratory conditions including long term obstructive disorders. Individuals who have conditions such as asthma, chronic bronchitis and tuberculosis may have to change their residence or their working environment to safeguard themselves against more serious diseases.

Martinson (1989:5) says the illness of a family member has been reported to influence the family or other individuals within the family. As a responsive context reacting to illness of a family member, many researchers have studied the family.

Kruger (1980:42) has noted changes in spouse behaviour following the diagnosis of tuberculosis. Davids (1983:942) similarly documented changes in family functioning. The family as a unit does not function properly when one of its members is ill.

Once a diagnosis is made the family must face major changes in daily family routine. Bran (1992:24) states that sudden illness within the family can disrupt established roles and force other members to reintegrate positions in order to regain equilibrium. Doherty (1987:42) is also of the opinion that changes in the family division of labour are experienced.

It is further noted especially in the Black culture that role and status realignment involve role restructuring. An example of the necessity for role restructuring can be observed in a nuclear family where the mother who has tuberculosis need to be hospitalised. In this situation the spouse must take care of the children and the

household. There may also be extra demands such as relatives coming to stay with the family.

According to Goffman (1979:337) stigma involves adjustment to a new and painful identity. The social stigma associated with tuberculosis can be devastating to both the patient and the family. Time is needed to cope with public disclosure in the face of potential social stigma. The family may not know what to tell friends, neighbours or relatives. They may try to hide the illness or attempt to prevent the diagnosis from being known.

According to Hunsberger (1992:929) hospitalisation is a threatening experience for everyone. New caretakers for example nurses and doctors, different routines like x-rays' taking and separation from familiar people are experiences encountered by the hospitalised individual.

Adam's (1972:22) studies revealed that most individuals and their families have only vague, general and usually distorted ideas about why they are being hospitalised and what will happen to them while they are in the hospital. This lack of knowledge is responsible for increasing the typical fears and anxieties. Family members also worry about the impending separation and the effects on their sick individual.

Contrary to the above it is noted from the empirical findings that the respondents viewed the medical staff as being extremely helpful because they were treated holistically by being provided with both medical and psycho-social treatment. This was confirmed by the positive response of the majority of the respondents. The medical staff was also helpful because they did explain the medical procedures that needed to be performed on the patients for example when X-rays are to be taken, daily routines and treatment procedures. The medical staff attended to the problems the patients had and they also offered assistance to make the patients feel comfortable and relaxed. The high quality care that the medical staff has offered to

the patients could be attributed to the implementation of the Batho Pele principles, launched by the Department of Health of the North West Government. According to Batho Pele principles, people must be treated with the dignity they deserve and they should also be provided with the necessary information.

Payment of hospital bills also cause anxiety to the family especially if there is no stable source of income or if the family is experiencing some financial problems. A total of 80% of the respondents were expected to be hospitalised for one to six months. This could be attributed to the normal known hospitalisation period for tuberculosis patients. Both the family and the patient experienced the implications of long hospitalization like the financial burden of paying the hospital bills, loss of jobs particularly those who were working.

8.2.3. Tuberculosis preventative and control measures.

It was clearly indicated that tuberculosis can be prevented. The health personnel should be instrumental in prevention of tuberculosis by teaching people facts about tuberculosis. Individuals should be encouraged to avoid factors that predispose them to tuberculosis. Nutrition should be adequate. Individuals should be helped to understand the importance of an annual physical examination. The value of early diagnosis should also be stressed.

The social workers could promote health by educating and equip people with the information and skills needed to promote and prevent tuberculosis. Through health education people turn to maintain their healthy lifestyles by abstaining from habits that are detrimental to their health. Health education assist people for example to abstain from smoking as this causes further damage to the lungs.

The social worker could also take part in immunization as part of preventative measures of tuberculosis. He could educate the expectant mothers during pre-natal

sessions on the importance of immunization. Even after the delivery of the children, the social worker could motivate and encourage the mothers to bring their children for immunization.

The social workers could also restore the lost aspects of life of the patients. If during the course of the illness the person losses an aspect of his life such as damaged lungs, the information received from health education could reassure the person that he can live with only one functional lung.

The influence of overcrowding on the transmission of infection is well documented and known. It bears a direct relationship to air borne and other communicable diseases. The prevention of overcrowding decreases the probability of effective contact with infectious agents whereas the promotion of health, through the application of principles of good housing, reduces infection and disease. Good personal hygiene further minimizes the risks of infection and transmission. The simple hygiene act of washing hands, for example, can make person to person transfer of pathogens virtually impossible

In response to the exacerbated spread of tuberculosis, the Department of Health has implemented the Direct Observed Treatment Strategy advocated by the Union Against Tuberculosis and the Global Programme against Tuberculosis of the World Health Organization in which the social workers could play a role in preventing the spread of tuberculosis. The focus of this strategy is on encouraging the patients to complete their treatment course.

Treatment is free of charge at all public clinics and hospitals in the country. In this instance, the social workers could recruit volunteers within the communities who would motivate, support and monitor the tuberculosis patients to complete their treatment courses.

8.2.4. Social work intervention in assisting the patient and the family to cope with the impact of tuberculosis.

As tuberculosis is regarded as a social disease the active involvement and participation of social workers is of utmost important and is the core of this study. Their importance of improving the unfavourable social circumstances that precipitates the spread of tuberculosis needs to be emphasized by the social workers as they are the specialists in remedying social ailments.

Since social workers are tasked with the function of enhancing the problem solving, coping and developmental capacities of people tuberculosis patients will be assisted accordingly. They will also link people with systems that provide them with resources, services and opportunities. Since some people especially in rural areas do not have knowledge and insight about the services that are being rendered to them, social workers then feature in, by linking and referring people to appropriate services.

Methods of social work which are relevant to combating tuberculosis, are the following: casework, group work and community work. Harris (1990:6) view social casework as an art in which knowledge of science of human relations and skills and relationships are used to mobilize the capacities of individuals and resources in the community appropriate for the better adjustment between the clients and all or any part of his total environment.

Contexualizing casework in this study, the mere disclosure of diagnosis that one has tuberculosis actually arouses many fears that the patient and the family are unable to handle. Even repeating words of the diagnosis is not tantamount to accepting the fact of the disease on the patient's side. The social worker is thus needed to assist the patient to understand what tuberculosis is all about, what its treatment course is likely to be, what it may do to him, the adjustments it will necessitate, temporary or

permanently, in the life of the patient, the kinds of limitations it will set and how these can be handled.

According to Toseland and Rivas (1984:12) group work is defined as a goal directed activity with small groups of people aimed at meeting socio-economic and emotional needs and accomplishing tasks. They further explain that this activity is directed to individual members of a group and to the group as a whole within a system of service delivery.

Similarly Skidmore and Thackeray (1988:80) view group work as a method of working with people in a group (two or more) for the enhancement of social functioning and for the achievement of socially desired goals. Group work is based on the knowledge of people's needs for each other and their interdependence.

From the definitions given above, group work in social work is used when the social worker is assisting people to resolve their problems in a group setting.

For the purpose of this study, treatment groups are dealt with. Members of the treatment groups are bounded by the common needs and their common situation being tuberculosis. The composition of these groups focuses on common concerns, problems and abilities related to tuberculosis. Treatment groups help tuberculosis patients change their behaviour especially those perpetuating the disease like smoking. It also assist patients to cope with or ameliorate their personal problems or rehabilitate themselves after a social or health trauma. Through the remedial model, the group offers means by which the profession could restore or rehabilitate individuals. The group is viewed as a tool or context for treatment of individuals

Community work focuses on the environment and the bringing about of change in the sphere (McKendrick,1990:107). McKendrick further explains that changes in the environment may be necessary in order to meet the needs of the people.

When one is using community work in an effort to combat tuberculosis endemic, actions such as educational campaigns through the use of the media like radio and television, mobilization of the community, social action and advocacy need to be initiated by the community worker. In areas where the services are not available due to some inequalities, the community worker could advocate the services on behalf of the community.

Out reach programmes to the communities and schools to make services accessible and available to people, need to be initiated by making the community aware of their health status with the view of assisting them to come up with some mechanisms of solution.

Social work interventions that are usually used when assisting tuberculosis patients and their families to cope with the disease especially in this context are crisis intervention, family therapy, psychosocial approach and client centered approach.

Crisis intervention could be used firstly when the disclosure if tuberculosis is known to the patient and his family. During this stage the diagnosis is perceived as the crisis. Family therapy is used to treat the family as a whole since the illness of one family member is affecting the functioning of the whole family system. Psychosocial treatment is used considering the social interaction of the patient with the environment. Lastly client centered intervention is used when trying to convey the support and concern to the patient.

- Crisis intervention: This is applied immediately after the patient has learned about his tuberculosis diagnosis as this is in most cases perceived as a crisis. Both the patient and the family are assisted with this intervention to cope with the diagnosis.

- Family therapy: Family therapy is used, as the patient is not living in isolation rather he is part of the family. Changes in the patient's life brought about by the illness do affect other family members, thus family therapy application.

- Psychosocial approach: Psychosocial approach looks at the interaction between the person and the environment. The social environments within which the tuberculosis patients are living in are looked at to assess the impact that the environments have on the spreading of tuberculosis for example overcrowding. Resources that are available are assessed whether they are sufficient or not.

- Client-centred therapy: This intervention centres on the patient. The feelings of the patients are assessed and the therapist empathises with the patients

The Developmental Social Welfare approach as a paradigm shift in relation to combating of tuberculosis, as being implemented by the Department of Welfare is highlighted.

The following are the goals of developmental social welfare that are relevant in combating tuberculosis:

- To facilitate the provision of appropriate developmental social welfare services and attainment of basic social welfare rights to all South Africans, especially those living in poverty as poverty accelerates the spread of tuberculosis. The services that are provided includes rehabilitative services for those who are already suffering from tuberculosis and preventive services to avoid the disease taking place as well as social security, including social relief programmes, social care programmes and the enhancement of social functioning for those who need tangible assistance.

- To eradicate poverty through promoting community participation and involvement, and by discouraging dependency, employing multi-faceted, multi-sectoral approach and encouraging partnership between the state, provincial government and other stake holders in welfare. As poverty is a multi-faceted phenomenon it needs attention of all the state departments. Their contribution in alleviating poverty will have an impact in lessening the spread of tuberculosis.

- To redress the past imbalances in respect of those who have been historically disadvantaged, especially people in rural areas and informal settlements. Services to the needy people need to be available to redress the past imbalances brought about by apartheid.

- To empower individuals, families and communities to participate in the process of deciding on the range of needs and problems to be addressed through local, provincial and national initiatives. The people need to be consulted and involved in the execution of the Reconstruction and Development Programme with the view of addressing their needs more effectively.

The relationship between social work and the government's Reconstruction and Development Programme in relation to the combating of tuberculosis is looked at. The key programmes of the Reconstruction and Development Programmes, which are relevant to combating of tuberculosis, like job creation, land reform, housing, water and sanitation, nutrition, education etc are emphasized.

Community workers have an important role to perform in preventing and combating tuberculosis. Amongst other roles community workers could be enablers. When a particular community has a problem for instance the availability of health care services, the social worker could assist in clarifying the need, exploring the strategies

to be used to approach the health authorities and developing the community's capacity to deal appropriately with their problem.

They could also act as brokers. A broker links people who need help (and do not know where help is available) with the appropriate resources. The community worker needs to inform the communities about available services and to link them with those services. Referral must also be made to appropriate resources. For example, when the family is experiencing malnutrition, the social worker needs to refer the family to nutrition food suppliers attached to the Nutrition component of the Department of Health for food supply. The problem with water supply and sanitation could be referred to the Department of Water Affairs and Forestry.

The community workers when assisting communities in obtaining services when their requests are rejected by the system can also play an advocacy role.

Lastly the commonality between social work and primary health care to combat tuberculosis is clearly indicated. Primary health care as a mechanism through which the Department of Health is delivering health care services need to be understood, thus the inclusion of Primary health care section in relation to tuberculosis.

Both concepts social work and primary health care have some similarities for example outreach programmes, community participation and involvement in relation to the combating of tuberculosis.

8.3. CONCLUSIONS.

The following are the conclusions derived from the study:-

- Tuberculosis remains one of the world's leading infectious killers with 3 million people dying each year. South Africa is burdened by one of the worst

tuberculosis epidemics in the world, with the disease rate more than double those observed in other developing countries and up to 60% higher than those currently seen in the USA or Western Europe. The impact of tuberculosis and HIV co-infection is leading to sharp increases in tuberculosis rates. Given the figures, tuberculosis and HIV, are the most important infectious diseases facing South Africa. Internationally South Africa is ranked second to Zimbabwe in terms of the combined burden of these overlapping epidemics. Tuberculosis is thus declared as a problem which needs speedy intervention.

- Since tuberculosis is mostly attacking people of low socio-economic standards, it is viewed as a social disease. It is usually prevalent in people experiencing poverty. Thus unfavourable social circumstances like malnutrition, overcrowding, smoking, unemployment etc, are precipitating the spread of tuberculosis. Social workers in this context need to be highly involved in the combating of the diseases by improving the socio-economic standards of the people. Their roles need to be clearly observed and executed, particularly in the implementation of the key programmes of the Reconstruction and Development Programme that are relevant to the combating of tuberculosis..

- Stigmatisation and discrimination displayed by the community against tuberculosis and HIV patients respectively cause sufferers to hide their conditions from the people for as long as possible allowing the spread of the disease that could have easily been prevented to take place.

- The impact of tuberculosis on the patient and family is evident. The diagnosis comes as a shock and crisis situations usually arise. Many reactions are observed and noted like denial, depression and anger. The disease thus has implications emotionally, psychologically, physically and financially, both to the patient, his family and the community. There is a need for psycho-social

treatment to be provided to the patient and the family in this regard with the view of lessening the impact of the disease.

- The study has bridged the gap between social work intervention, the Reconstruction and Development Programme and Primary Health Care with the view of combating tuberculosis. The traditional roles of the social workers have been contextualized in the combating of tuberculosis.

- Although the results and findings of this study cannot be generalised to the entire population, they should however add to the body of knowledge, and information concerning the roles and tasks of social workers in the combating of tuberculosis. More research in the field of tuberculosis should be undertaken by social workers. This study has scratched the surface because of its nature and because of lack of previous research of social workers concerning tuberculosis.

8.4. RECOMMENDATIONS.

- Since tuberculosis is regarded as a social disease being perpetuated by unfavourable social circumstances and poverty being the main factor, social workers need to be highly involved in combating the disease by improving the social environment the people are living in. Social workers need to be involved, participate and be utilised in the implementation of the government's Reconstruction and Development Programmes for example provision of housing to overcrowded people, provisioning of health care services to the most deserving communities, provisioning of proper water and sanitation facilities etc. The social workers' precious experience in community development could be utilized.

The Reconstruction and Development Programme is the government's structure through which the unfavourable social circumstances for example overcrowding, job creation, malnutrition etc, that perpetuates tuberculosis can be improved.

Social workers need to be involved in the implementation, monitoring and evaluation of services particularly the key programmes of the Reconstruction and Development Programme. Their background on socio-economic circumstances is vital in this regard. They need to assess the impact that the service delivery has on the communities especially the underdeveloped ones and advise policy makers accordingly.

- Most of the social workers in health settings are not well equipped with the knowledge and skills regarding tuberculosis as a social disease. They regard tuberculosis as a medical or a physical disease. The social workers should thus equip themselves with the phenomenon of tuberculosis as well as other communicable or social diseases. Workshops and in service training with regard to Public health and Primary health care issues with special reference to tuberculosis should be organised and arranged, so that ultimately social workers could be equipped with appropriate knowledge about tuberculosis.

- More research needs to be undertaken so that literature pertaining to social work and tuberculosis can be available. Presently little is known about the social aspects of the tuberculosis disease.

- Since the South African Department of Health has declared tuberculosis as a priority, health care personnel together with the medical social workers should work together to combat the disease. Their services should be geared towards the combating of tuberculosis. The mission of primary health care should be accomplished by making services available, accessible and affordable. Out

reach programmes and health education efforts need to be undertaken to accomplish this goal.

- The emphasis in social work education must be on development. This will be in line with the paradigm shift from residual and institutional models of welfare to the Developmental Social Welfare approach and the Reconstruction and Development Programme. There should be specialized training for social workers to render quality services that accommodate the key programmes of the Reconstruction and Development Programme like housing, nutrition, water and sanitation etc.

- The concept of primary health care should be included in the undergraduate curriculum of social work education at the universities particularly in the module that deals with various fields of social work. This will enable social workers to adjust more easily to health settings as they are expected to render primary health care.

- The link between HIV/AIDS epidemic and tuberculosis cannot be overemphasized. This implies that the improvement in health care alone, may be largely ineffective in promoting better health unless they are incorporated within all the state departments' programmes (Buthelezi, 2001: 182).

- The social workers need to do community service before they can practice like medical doctors especially in the rural areas where there is a shortage of manpower. Such an arrangement will supplement and improve welfare and developmental services in rural areas.

- The need for health care personnel in rural areas is crucial and unfortunately in many rural areas the vacant posts remain unfilled. The government should thus

try to offer more attractive rural allowances to health care personnel working in rural areas especially medical doctors.

- Without any doubt the most important way in dealing with social and health problems is to direct prevention programmes at young children where the internalization of a healthy life-style and a sound socially acceptable value system is still possible. In this regard life skills education need to be afforded to the children with the view of equiping them with knowledge on how their body works and to maintain their health and in particular to educate them on the effect of tuberculosis(Anderson and Okoro,2000:18). Matters such as nutrition, rest, the importance of fresh air, exercise, constructive leisure time activities and safe living in general should be included in the life skills programme.

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QUESTIONNAIRE TO TUBERCULOSIS PATIENTS **ANNEXURE A**

1 Identifying particulars

1.1 Gender

Male	
Female	

1.2 Age

16 – 30	
31 – 41	
41 – 50	
51 – 60	
60+	

1.3 Highest qualifications

Illiterate	
Primary School	
Secondary school	
High School	
Tertiary Institution	

1.4 Occupation

Unemployed	
Unskilled	
Trade	
Admin Services	
Professional	
Pensioner	
Other	

1.5 Did you ever work in a mine and if so what was the duration of your employment there?

.....
.

1.6 Marital status

Single	
Married	
Divorced	
Widowed	
Separated	

1.7 Number of children

0 – 2	
3 – 5	
6+	

1.8 Number of dependants other than children:

1	
2	
3	
4+	

2. Household information

2.1 Family composition

Name	Relationship	Age	Designation	Income
a.				
b.				
c.				
d.				
e.				
f.				
g.				
h.				
i.				
j.				

2.2 Number of people occupying the household.

				Bedrooms					
	Kitchen	Dinning room	Lounge	1	2	3	4	5	6
0 – 10 yrs									
11yrs+									

Household is overcrowded	
House is not crowded	

2.3 The house you are staying in is made up of:

Bricks	
Mud	
Prefab	
Corrugated iron	
Other specify	

2.4 Cross ventilation in the house is:

Sufficient	
Insufficient	

2.5 What do you use as a toilet facility?

Flush toilet	
Bucket toilet	
Pit latrine	
Bush/veld	
Other specify	

2.6 The main source of drinking water for your household is?

Dam/river/stream/spring	
Borehole	
Rainwater	
Tap	
Windmill	
Other specify	

2.7 Do you boil water for drinking purposes?

Always	
Sometimes	
Never	

3. Hospitalization

3.1 How long are you expected to be hospitalized?

Less than one month	
One – six months	
Seven months and more	

3.2 How many times previously have you been hospitalized for TB?

Once	
Twice	
Thrice and more	

3.3 How many times have any of your immediate household members been hospitalized for TB?

Once	
Twice	
Thrice and more	

3.4 Mention who those household members were:

.....
.....

3.5 How often do you get visitors at the hospital?

Daily	
Weekly	
Monthly	
Seldom	
Never	

3.6 Visitors mainly consist of:

Immediate family members	
Other family members	
Friends	
Colleagues	
Others	

3.6 Would you agree with the following statements about the medical care you are at present receiving?

	Agree	Disagree	Uncertain
1. Staff is extremely helpful			
2. Staff is friendly			
3. Staff do not explain much about procedures, prognosis and treatment			
4. Staff ignores the problems you have			

4. Habits and Life Style

4.1 Do you use or previously used any of the following substances?

	At present	Previously	Never
Dagga			
Nicotine *Smoking*			
Beer			
Wine *Alchol beverages*			
Spirits			
Other (specify the substance)			

4.2 Usage of substances

	Substance	At present	Previously
Daily			
Weekly			
Sometimes			
Never			

4.3 Explain to the researcher eating habits

Diet is sufficient		
Diet is insufficient		
Uncertain		

4.4 How would you describe your working situation with regard to relations with management?

Satisfactory	
Unsatisfactory	
Uncertain	

4.5 If unsatisfactory, please motivate:

.....
.....
.....
.....
.....

4.6 How would you describe your working situation with regard to relations with colleagues?

Satisfactory	
Unsatisfactory	
Uncertain	

4.7 If unsatisfactory, please motivate:

.....
.....
.

4.8 How would you describe your relations with your marriage partner?

Not applicable	
Satisfactory	
Unsatisfactory	
Uncertain	

4.9 If unsatisfactory, please motivate:

.....
.....
.

4.10 Which illness have you suffered from during your lifetime and the duration thereof?

	Age	Duration
Pneumonia		
Bronchitis		
Asthma		
Hypertension		
Sexually transmitted diseases		
AIDS/HIV		
Polio		
Measles		
Other specify		

4.11 Where do you normally go when you are ill?

Government hospital	
Private hospital/clinic	
Faith healer	
Traditional healer	
Sangoma	
Other specify	

4.12 Where did you mainly live during your life time? (Name place and period).

.....

.

4.13 How do you travel to your workplace?

By bus	
By train	
By taxi	
No applicable	
Other specify	

4.14 How long does it take you to get to work and what is the distance?

.....

5. Psychosocial reactions

5.1 Do you suffer or did you suffer previously from any of the following conditions:

	At Present	Previously
Depression		
Guilt feelings		
Anxiety		
Anger		
Emotional condition		
Blame		
Shame		
Cognitive condition		
Denial		
Dissociation		
Amnesia		
Perceptual disturbances		
Hallucinations		
Behavioral conditions		
Eating disorders		
Suicidal tendencies		
Self harm		

5.2 Do you agree/disagree with the following statements with regard to your illness?

	Agree	Disagree	Uncertain
a. Fearful of loosing personal appearance			
b. Fearful of loosing personal control			
c. Fearful of loosing employment			
d. Fearful of loosing significant others			
e. Fearful of loosing body functions especially the lungs			
f. Fearful of death			
g. Uncertain of diagnosis			
i. Guilty of being responsible for acquisition of the illness			
j. Angry over inability to overcome the illness			
k. Helplessness of being rejected and isolated by significant others			
l. Depressed of feeling pain			
m. Hopeless over inability to get an end to the suffering			
n. Feeling worthless			
o. Denial of the diagnosis			
p. Anxious of getting opinion from the different health settings			
q. Having had suicidal thoughts			
r. Having had low self esteem			

THANK YOU VERY MUCH FOR YOUR TIME

ANNEXURE B

QUESTIONNAIRE TO THE COMMUNITY REGARDING TUBERCULOSIS

A. DEMOGRAPHIC INFORMATION

1. Gender

	N	%
Male		
Female		
Total		

2. Age

Age range	N	%
16-30		
31-41		
51-60		
60+		
Total		

3. Highest qualification

	N	%
Illiterate		
Primary school		
Secondary school		
High school		
Tertiary institution		
Total		

4. Occupation

	N	%
Unemployed		
Unskilled		
Trade		
Admin services		
Professional		
Pensioner		
Other		
Total		

B. INFORMATION REGARDING TUBERCULOSIS

5. What is tuberculosis.

.....
.....
.....
.....
.....
.....
.....

6. What are the causes of tuberculosis/

.....
.....
.....
.....
.....
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.....
.....
.....
.....

7. The following are the symptoms of tuberculosis

	Agree		Disagree		Uncertain	
	N	%	N	%	N	%
Coughing						
Weight loss						
Chest pains						
Night sweat						
Tiredness						
Loss of appetite						
Restlessness						
Fever						

8. The following are the modes of tuberculosis transmission

	Agree		Disagree		Uncertain	
	N	%	N	%	N	%
Hereditary						
Infected food intake						
Inhalation of infected air						
Contact with infected person						

9. The following are the measures to prevent tuberculosis

	Agree		Disagree		Uncertain	
	N	%	N	%	N	%
Health education						
Poverty alleviation						
Proper diet						
Regular medical check-up						
Stress free (exercises)						
Non smoking						
Cleanliness						
Non drinking						
Proper housing (crowding, ventilation etc)						

10.Where do people go to when they are ill to seek medical attention?

	N	%
Government hospital		
Private clinic/hospital		
Faith healer		
Traditional healer		
Sangoma		
Total		

11. Are you presently suffering or have you previously suffered from tuberculosis?

	At present		Previously	
	N	%	N	%
Yes				
No				
Total				

12. Did you have the following reactions when being told that you have tuberculosis **(i.e. only those who had tuberculosis).**

	Agree	Disagree	Uncertain
Depression			
Denial			
Self blame			
Shame			
Suicidal tendencies			
Anger			

13: Would you have the following reactions when being told that they have tuberculosis **(i.e. only those who had no tuberculosis-12).**

	Agree	Disagree	Uncertain
Depression			
Denial			
Self blame			
Shame			
Suicidal tendencies			
Anger			

14. Do you think there is a stigma attached to tuberculosis?

	N	%
Yes		
No		
Uncertain		
Total		

14.1. IF YES, PLEASE EXLPAIN

.....
.....
.....
.....
.....
.....

15. Is tuberculosis related to HIV/Aids?

Yes	N	%
No		
Uncertain		
Total		

15.1. If yes, how are they related?

.....
.....
.....
.....
.....
.....
.....
.....
.....

16. Do you think tuberculosis patients comply with their treatment?

	N	%
Yes		
No		
Uncertain		
Total		

16.1. If not what makes them not to comply with their treatment?

.....
.....
.....
.....
.....
.....
.....

THANK YOU VERY MUCH FOR YOUR TIME

ANNEXURE C

CASE STUDY

1. INTRODUCTION

This case study illustrates the important aspects of social work intervention to health problems like tuberculosis in a hospital setting and the need for the creation of supportive network systems outside the hospital. The study was undertaken at Gelukspan Hospital in the North West Province, for nine months, during 1999 (i.e. from February to October 1999).

The researcher was attached to a ward of tuberculosis patients. The medical doctor referred the case to the researcher (social worker) and during the case discussion the doctor pointed out that the patient has been relapsing and has been in and out of the hospital for the past four years. The case was thus referred to the social worker for a professional psychosocial investigation.

1.2. CONTACT WITH PATIENT

During the first interview, having established a working relationship, which is very crucial in therapy and also having established basic contact with the patient, relevant information was gathered from him.

Having developed trust in the researcher, the patient started to ventilate his feelings. He told the researcher (social worker) that he is a heavy smoker, an abuser of alcohol and was also working in the mines sometimes back. He mentioned that he was presently unemployed but he usually gets piece jobs to do, to fend for his family as his wife is also unemployed and they have a responsibility of maintaining their seven children of which four of them are schooling. They are living in a two-roomed house which they also share with his sick mother in-law. The mother in-law and his two children were previously

treated for tuberculosis. He seemed to be more concerned about his family than his own condition.

He further stated that his brother is bewitching him because of his cattle. He said his father before he died, divided his wealth amongst them and he was given some cattle of which his brother was objecting. His brother got tractors and a farm to plough. There is presently a conflict between the two families because of this wealth issue (i.e. his brother's family and his own family). The patient stated that since he ate bewitched food at his brother's place fours year back, during the wedding of his nice, he become ill and was in and out of the hospital. So he believes that he got "sejeso" since then.

According to the medical diagnosis he has tuberculosis which he does not agree with, as he consulted several times with his traditional healers who also confirmed "sejeso". He has been getting treatment from his traditional healer. He has been drinking a concoction of herbal medicine for gastric lavage and bowel wash –out.

1.3. TENTATIVE SOCIAL WORK DIAGNOSIS

The social worker and the patient agreed that the problems were as follows:

- Overcrowding, which resulted in the spread of tuberculosis to the other members of the family.
- Health belief system that prohibits the patient to comply with medical treatment thus resulting into his relapse.
- Poverty state the family is experiencing for example lack of proper food, poor hygienic standards etc.

1.4. PLAN OF ACTION

The social worker and the patient agreed on a plan of action for investigating and solving the outlined problems. The plan of action was as follows:

- That the social worker visits the patient's family to try and educate them about tuberculosis (i.e. nature, causes, treatment and preventive measures). Since the patient's relapse is being caused by interrupted and discontinued treatment and unimproved social circumstances, the need for the completion of treatment and improved social circumstances and healthier life-style ought to be emphasized. As it is noted that the patient has a traditional health belief system with regard to his condition, family members' belief systems needs to be examined as this has an influence to the compliance of patient's treatment.

- That the social worker examine the home circumstances for himself to ascertain whether it was as described by the patient during the previous sessions.

- That the social worker would report to the referred medical doctor about the psychosocial circumstances of he patient.

1.5. IMPLEMENTATION.

The patient sanctioned the social worker's visit to his family at home. The role of the social worker was now that of a change agent. However, before the social worker visited the home of the patient, both medical and psychosocial treatment of the patient have already been initiated. The social worker on several times talked to the patient about the nature, causes and treatment modalities of tuberculosis. The importance of taking treatment regularly up to course completion, with no interruptions and discontinuity as this result in drug

resistance state (i.e. the inability of the body to respond to the drugs) was highlighted. He was made aware that he might feel better after three to four weeks but he needs to complete the course of treatment.

Feelings and expressions with regard to the cause of tuberculosis in relation to the health belief systems of the patient, since this was very crucial as it is the stumbling block to treatment compliance, were explored.

1.6. HOME VISIT.

The social worker found the situation at home even worse than he expected from the patient's description. Before long the social worker succeeded in establishing a working relationship with the patient's wife and the mother- in –law as they were the only people found at home by then. However, the social worker could hear the persistent cough of the mother-in-law, which led to the confirmation that she also had tuberculosis. The social worker observed that both persons present were depressed despite the fact that they wanted to know the condition of the patient. The reason for their depression came out clearly as the worker was enquiring about individual members who also suffered from tuberculosis. He observed that they were uneasy and wished to evade his question. Subsequently, the wife disclosed with reluctance that her mother and their two children were once diagnosed with tuberculosis at the mobile clinic which comes bi-monthly to the village. When asked about the treatment, she bowed her head. The worker became suspicious that treatment was not complied with. It then became clear to the social worker that treatment was not taken, thus further recurring transmission.

The wife further explained that she wanted to take the children for medical treatment but the patient objected to that as he wanted to take them to the traditional healer because of his health beliefs in witchcraft. She said the patient believed that the children have also been bewitched. In this particular instance,

the wife asked the social worker not to tell the patient about this information as she is scared of him. The social worker could see how the patient is being feared and promised not to disclose this information obtained from her. Rather he could say that he got information about the children from the mobile clinic personnel who also referred the case for further follow ups to him, as they are also operating from the hospital.

When asked when the mother-in law become ill, the wife stated that her mother got ill two months after the children were diagnosed. The social worker then suspected transmission from both untreated children as the germ is live and active.

The social worker then explained to the wife and the mother-in law about the nature, causes, mode of transmission and treatment of tuberculosis. He encouraged the wife to take the children to the mobile clinic, which was the following day, for the nurse's opinion in this instance. The mother-in-law was also encouraged to attend the clinic as she also needs medical attention.

Both the wife and the mother-in-law showed interest in the advice given of attending the clinic. They both said that they have been keen to do that, but because of the difference in the health belief system of the patient it was not possible. They also requested that a similar health talk to be given to the patient, as this would be beneficial to him.

As it was noted that the house, which the family occupies, is very small and could lead to the transmission and harbouring of tuberculosis germs. The wife was advised to arrange proper ventilation as this might minimise the availability of the germs. Health education with regard to hygienic standards was also emphasized.

The family is experiencing hardship, this was noted when the wife stated that she can not even offer tea to the social worker as they have no groceries in the

house. The worker observed the house and noted the absence of basic necessities. The wife stated that since the patient has been hospitalised, they find it hard to survive as he is the only one who does piece jobs. Now that he is unavailable, the wife was compelled to secure washing piece job on certain days. As the month is not yet over she has not received any money.

The couple has seven children of which four is attending school and three are non-scholars. Of the non- scholars, two are over twenty-one years but due to low educational standards they have been unable to secure jobs. Both of them dropped out of school while doing standard five. The youngest child is three years old. The wife stated that she did not further children but her husband objected to contraceptives. Her last three children were conceived through a cesarean-section and due to that she was made sterile, as further pregnancies could be detrimental to both herself and the unborn child.

When asked as to where do they get water from, the wife stated that they get it from the communal street taps, as they do not have their own yard tap.
The social worker terminated his visit by stating that he will inform the mobile clinic nurse to expect the family tomorrow during the clinic visit.

1.7. MOBILE CLINIC.

The social worker contacted and informed the mobile clinic nurse to expect the family the following day. The nurse recalled the family and stated that she has been wondering as to why the children were not brought for treatment.

1.8. OUTCOME.

The social worker returned to the patient. The patient appreciated the social worker's visit and stated that he has been looking forward to the social worker's visit as he has noted and observed some changes taking place. He stated that after the social worker talked to him about the nature, causes and treatment of tuberculosis and the importance of taking treatment regularly, he realized that he has been doing injustice to himself by shopping around for traditional healers' opinions. He said he did not realize how the germ got into the human body, but after several talks with his doctor and nurses he now understands how the disease enter the body.

The patient then opened up to the social worker by letting him know that he feels that he has denied his two children medical treatment as they were also diagnosed with tuberculosis. The social worker listened carefully and probed the patient appropriately as if he did not know about the children's' diagnosis. The patient then requested the social worker to make the necessary arrangements for his children to receive the necessary medical treatment. He stated that his present hospitalisation has taught him a lot about tuberculosis. At the discharge of his previous hospitalisations he was requested to visit the mobile clinic but never did that.

The social worker tactfully asked the patient how he would feel if his wife took the children to the clinic for medical attention. To this he responded positively, as he now understood the importance of medication. The social worker reassured him that arrangements would be made to take the children for medication.

The patient was extremely grateful that he is getting better and that his children will also be treated. He stated that he would change his health belief systems and his life style patterns of smoking and drinking as both the belief system and unhealthy life style patterns worsen the disease.

The social worker did not find it difficult to overcome the resistance from the patient of his belief systems which were based on ignorance of the factors causing tuberculosis, as the patient has received proper health education and he was also aware of his improving condition.

Several follow-ups with the family were made by the social worker to support the family members.

The children and the mother-in-law got better as they were put on Direct Observed Treatment which did not require hospitalisation. Both the mobile clinic nurse and the social worker mandated the wife to be the supervisor and administrator of treatment to the affected, as DOT stresses supervision for proper compliance.

Approximately after four months of hospitalisation, the patient was discharged. He was requested to continuetreatment from home. As the wife was used to supervised treatment to the children and the mother-in-law, she also extended her supervision to her husband. The patient completed his course of treatment and became extremely better.

1.9. TERMINATION PHASE.

Before termination, the social worker brought in the local social worker from Gelukspan hospital to attend to the family. The reason for this was that the present social worker (researcher) was not permanently responsible for this and other clients. It was felt that the local social worker should give the family the support and supervision for the process of adjustment.

1.10. EVALUATION.

1.10.1. Evaluation by the family.

The family evaluated the social work intervention positively. They felt that the medical doctor who referred the patient to the social worker really has done a great job. They felt that if the patient was not referred circumstances would not have improved. Apart from the improvement of the patient the rest of the family also received timely treatment. The patient has now become aware of his health belief systems that hindered him from getting proper medical attention. He is also aware of unhealthy life style patterns that contribute to the spread of the disease. The family is aware of the nature, causes and treatment modalities of tuberculosis.

1.10.2. Evaluation by the social worker.

The patient is a typical traditional person who had superstitious health belief systems. He believed in witchcraft and thought that his condition is the result of witchcraft. He has been hospitalised several times and got discharged. On his discharge he never continued with medical treatment. He is an authority figure who is being scared and who makes unilateral decisions for his family, even on contraceptive usage for the wife.

The wife is cooperative and willing to improve the condition of her family members as proved by acceptance to supervise them in taking treatment correctly. She is also supportive as she regularly visited the patient at the hospital. She is concerned, loving and caring for her family.

The patient and the family responded positively to social work intervention and this ultimately resulted into successful outcomes.

The family is poor and is experiencing hardships as they are poverty-stricken. They live under unfavourable social circumstances e.g. there is overcrowding, unemployment, illiteracy and poverty in broad terms. There was a time during the social worker's visit when there was hardly food for that evening. The area the family is residing is so rural that there are no employment facilities.

Since the family occupied two-roomed, an overcrowded and poorly ventilated house, the spread and transmission of tuberculosis was facilitated, from the infected to the uninfected person.

It can be concluded that unfavourable social circumstances as exemplified in this case study do contribute to the development and spread of tuberculosis.