HEALTH BELIEFS AND COMPLIANCE IN THE BLACK SOUTH AFRICAN POPULATION

BY

LUSANDA UNATHI ZISIWE RATAEMANE

This thesis is submitted in fulfilment of the course requirements for the Degree of Philosophy in Psychology

1992
ABSTRACT

The phenomenon of non compliance with medical regimens is universal and common, across different ethnic groups, age groups and belief systems. Health beliefs and attributions of illness are often cited as influential factors for compliance. Culture and explanatory models of illness provided a context for the attribution processes used by rural and urban Xhosa, Zulu and Sotho respondents and hospitalised patients regarding colour and effectiveness of treatment. These attributions are stronger among Zulu rural respondents and Zulu patients.

Most patients in the study had a traditional orientation. Orientation was measured by using a modified version of the Dressier (1980) Health Belief Questionnaire. Effectiveness was attributed to colour more by respondents with strong traditional beliefs.

Red and black tablets were perceived as being potent, while White was considered more effective for headaches. Black mixtures were not considered potent. Yellow ointments were the most effective for sores.

Pharmaceutical company representatives in Britain and Black Modern in South Africa doctors agreed that colour was an important placebo variable in treatment. Little is done, however, to exploit this issue because all new drugs have to be
white.

The implications of the perceptions about potency and activeness of medication are that non compliance may set in, if the colour is not 'right'. A study conducted at clinics in Soweto revealed that non compliance was a problem for both traditionally oriented and modern oriented respondents. Pill counts were used to measure compliance among Blacks living in Soweto who had a traditional orientation and a Western orientation. Colour was considered an important variable in treatment mostly by respondents with a traditional orientation. Health beliefs and views about the importance of colour in the treatment of disease were not determinants of compliance.
ACKNOWLEDGEMENTS

To all who made this study possible, I extend my deepest and sincerest gratitude.

Special thanks are, however, due to the following:

Dr David Uzzell whose support, guidance and supervision helped to bring the study to fruition.

Mr Ian Davies for help with statistics.

Mr Brian Jones (Eli Lilly Pharmaceuticals - U.K.) for introducing me to the use of colour in pharmaceuticals.

Mr Don Pavey for opening new horizons for me.

Traditional healers for allowing me into ‘their world’.
Staff and patients at the following hospitals and clinics; The Rand Mutual, Ngwelezane, Umtata and Butterworth, Zola, Chiawelo and Mofolo clinics in Soweto.

All the respondents who made these studies possible.

Pharmaceutical company representatives in Britain and the Black doctors in South Africa, who took part.

Ply Khusi, in Zululand for all the help, particularly at such short notice.

Mr Kees Maxey for his unfailing support.

My families for their forbearance and encouragement. Nangamso!

Tshimong, my husband to whom I owe an enourmous debt of gratitude. I hope that this thesis goes some way in justifying my absence.
LIST OF MAPS

MAP 1 THE TRANSKEI i
MAP 2 NATAL ii
MAP 3 THE TRANSVAAL iii
LIST OF TABLES

TABLE 5.1  THE SAMPLE 108
TABLE 5.2  DETAILS OF SAMPLE BREAKDOWN 109
TABLE 6.1.  CELL MEANS FOR LEVEL OF EDUCATION AND ETHNIC GROUP (with sample size shown underneath) 122
TABLE 6.2.  CELL MEANS FOR LEVEL OF EDUCATION AND AGE (with sample size shown underneath). 123
TABLE 6.3.  CELL MEANS FOR ETHNICITY AND AREA OF RESIDENCE 124
TABLE 6.4.  CELL MEANS FOR COLOUR IMPORTANCE AND AREA OF RESIDENCE 125
TABLE 6.5.  IMPORTANCE OF COLOUR FOR THE PATIENTS. 131
TABLE 6.6.  IMPORTANCE OF COLOUR AND USAGE OF TRADITIONAL HEALERS 132
TABLE 6.7.  IMPORTANCE OF COLOUR FOR DIFFERENT LEVELS OF EDUCATION 133
TABLE 6.8.  REASONS WHY COLOUR IS IMPORTANT 135
TABLE 6.9.  CORRELATIONS BETWEEN POTENCY AND ACTIVENESS 137
TABLE 6.10  COLOUR ASSOCIATIONS FOR TB 139
TABLE 6.11.  COLOUR ASSOCIATIONS FOR HYPERTENSION 140
TABLE 6.12.  COLOUR ASSOCIATIONS FOR CANCER. 141
TABLE 6.13.  COLOUR ASSOCIATIONS FOR STOMACHACHES. 142
TABLE 6.14.  COLOUR ASSOCIATIONS FOR BONE DISORDERS 143
TABLE 6.15.  COLOUR ASSOCIATIONS FOR HEADACHES. 143
TABLE 6.16.  COLOUR ASSOCIATIONS FOR SORES 144
TABLE 6.17.  COLOUR ASSOCIATIONS FOR DIARRHOEA 145
TABLE 6.18.  COLOUR ASSOCIATIONS FOR THE TREATMENT OF KIDNEYS 146
TABLE 6.19.  ILLNESS COLOUR ASSOCIATIONS FOR DOCTORS 155
TABLE 6.20.  ILLNESS COLOUR ASSOCIATIONS FOR THE DOCTORS. 156
TABLE 7.1.  SAMPLE BREAKDOWN BY AREA 173
TABLE 7.2.  AGE OF RESPONDENTS 173
TABLE 7.3.  SOCIO-ECONOMIC STATUS 176
TABLE 7.4.  RELATIONSHIP BETWEEN THE HEALTH BELIEF QUESTIONNAIRE AND COMPLIANCE. 179
TABLE 7.5.  COLOUR ILLNESS ASSOCIATIONS 181
TABLE 8.1.  DECISION MAKERS ON COLOUR OF NEW DRUG 190
TABLE 8.2.  DETERMINANTS OF COLOUR OF NEW DRUG 191
TABLE 8.3.  REASONS FOR CHANGING DRUG COLOUR IN OTHER COUNTRIES 192
TABLE 8.4  PLACEBO VARIABLES 193
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>FIG</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIG 1.1</td>
<td>PROGRESSIVE SEQUENCE OF BASIC COLOURS</td>
<td>2</td>
</tr>
<tr>
<td>FIG 5.1</td>
<td>MAP OF SOUTH AFRICA</td>
<td>106</td>
</tr>
<tr>
<td>FIG 5.2</td>
<td>LEVEL OF EDUCATION</td>
<td>111</td>
</tr>
<tr>
<td>FIG 6.1</td>
<td>HEALTH BELIEFS FOR THE TOTAL POPULATION</td>
<td>120</td>
</tr>
<tr>
<td>FIG 6.2</td>
<td>PERFORMANCE OF RITUAL</td>
<td>126</td>
</tr>
<tr>
<td>FIG 6.3</td>
<td>USE OF TRADITIONAL HEALERS</td>
<td>127</td>
</tr>
<tr>
<td>FIG 6.4</td>
<td>IMPORTANCE OF COLOUR IN THE TREATMENT OF DISEASE</td>
<td>129</td>
</tr>
<tr>
<td>FIG 6.5</td>
<td>HEALTH CARE SEEKING FOR THE ZULU POPULATION</td>
<td>149</td>
</tr>
<tr>
<td>FIG 6.6</td>
<td>COLOUR IMPORTANCE, USAGE OF TRADITIONAL HEALERS AND HEALTH BELIEFS</td>
<td>151</td>
</tr>
<tr>
<td>FIG 7.1</td>
<td>CATCHMENT AREAS FOR CLINICS IN SOWETO</td>
<td>166</td>
</tr>
<tr>
<td>FIG 7.2</td>
<td>MAP OF SOWETO</td>
<td>167</td>
</tr>
<tr>
<td>FIG 7.3</td>
<td>MARITAL STATUS.</td>
<td>174</td>
</tr>
<tr>
<td>FIG 7.4</td>
<td>YEARS OF SCHOOLING</td>
<td>175</td>
</tr>
<tr>
<td>FIG 7.5</td>
<td>MEAN SCORES OF HEALTH CARE SEEKING AND TREATMENT CHARACTERISTICS</td>
<td>183</td>
</tr>
<tr>
<td>FIG 9.1</td>
<td>STRESS FACTORS ON THE BLACK SOUTH AFRICAN AND ITS CONSEQUENCES</td>
<td>204</td>
</tr>
<tr>
<td>FIG 10.1</td>
<td>EXPLANATORY MODELS OF ILLNESS</td>
<td>236</td>
</tr>
</tbody>
</table>
# TABLE OF CONTENTS

## CHAPTER ONE: INTRODUCTION
1.1. COLOUR NAMES IN AFRICAN AND OTHER LANGUAGES  2
1.2 TREATMENT  4
1.3. COLOUR IN WESTERN MEDICINE  5
1.4 PURPOSE OF THIS STUDY  8

## CHAPTER TWO: COMPLIANCE WITH MEDICAL REGIMENS
2.1 INTRODUCTION:  14
2.2. DEFINITIONS OF HEALTH  15
2.3. MEANING OF ILLNESS  16
2.4. ILLNESS ATTRIBUTIONS  17
2.5. TRADITIONAL MEANINGS OF ILLNESS AND HEALTH CARE SEEKING.  18
2.5.1. RITUALS  19
2.5.2. MEDICAL SYSTEMS  20
2.5.3. HEALTH AND ILLNESS  21
2.5.3.1. METHOD:  22
2.6 COMPLIANCE A REVIEW OF LITERATURE  24
2.6.1. DEFINITION OF COMPLIANCE  24
2.6.2. FACTORS CONTRIBUTING TO NON-COMPLIANCE  26
2.6.2.1 RACE, SEX, AGE, LEVEL OF EDUCATION AS PREDICTORS OF NON-COMPLIANCE  26
2.6.2.2. SOCIO ECONOMIC STATUS AND COMPLIANCE  27
2.6.2.3. RELIGION, HEALTH BELIEFS AND COMPLIANCE  28
2.6.2.4. DOCTOR-PATIENT COMMUNICATION  29
2.6.2.5. NATURE OF ILLNESS  30
2.6.2.6. COMPLEX MEDICAL REGIMENS  31
2.6.2.7. SIDE EFFECTS  31
2.6.2.8. COLOUR AS A PREDICTOR OF EFFECTIVENESS PHARMACOTHERAPY  32
2.7. NONCOMPLIANCE IN DEVELOPING COUNTRIES  32
2.8. METHODS FOR MEASURING COMPLIANCE:  35
2.8.1. PILL COUNTS:  35
2.8.2 SELF REPORTS  36
2.8.3. URINE TESTS  36
2.8.4. OBSERVATION METHODS  37
2.8.5. BLOOD HAEMOGLOBIN AND STOOL SPECIMENS  38
2.8.6. CHILD AND PARENT REPORTS  38
2.8.7. MEDICATION MONITORS  38
2.9. DISCUSSION  39
2.10. CONCLUSION  40

## CHAPTER THREE: CULTURE, HEALTH AND ILLNESS
3.1. INTRODUCTION  41
3.2. THE STATUS OF HEALTH FOR BLACKS IN SOUTH AFRICA  41
5.4.2. COLOUR/ILLNESS ASSOCIATIONS 102
5.4.3. MEDICATION PERCEPTUAL CHARACTERISTICS 102
5.4.4. EXPERIMENTAL TECHNIQUES 103
5.4.5. THE PANTONE COLOUR WHEEL 104
5.4.6. PROJECTIVE TECHNIQUES 105
5.5. THE SAMPLE 105
5.5.1. DEMOGRAPHIC DETAILS 109
5.5.1.1. SEX 109
5.5.1.2. AGE 110
5.5.1.3. LEVEL OF EDUCATION 110
5.5.1.4. SOCIO ECONOMIC STATUS 111
5.6. TRADITIONAL HEALERS VIEWS ON COLOUR OF MEDICATION 112
5.6.1. INTERVIEWS 112
5.6.1. SNOWBALL SAMPLING 113
5.6.2. REFUSALS AND NON RESPONSE 113
5.7. MODERN DOCTORS VIEWS ON MODERN MEDICINE 115
5.8. CONCLUSION 116

CHAPTER SIX: ANALYSIS OF DATA AND RESULTS 119
6.1. HEALTH BELIEFS 119
6.1.2. RELATIONSHIP BETWEEN AGE, LEVEL OF EDUCATION, ETHNIC GROUPS AND SCORES ON THE PERSONALISTIC SCALE 121
6.1.3. RELATIONSHIP BETWEEN AREA OF RESIDENCE ETHNICITY COLOUR IMPORTANCE AND PERSONALISTIC BELIEFS 121
6.2 RITUALS 125
6.3. USE OF TRADITIONAL HEALERS: 126
6.3.1. REASONS FOR SEEING A TRADITIONAL HEALER: 128
6.4. IMPORTANCE OF COLOUR IN THE TREATMENT OF DISEASE: 129
6.4.1. RELATIONSHIP BETWEEN COLOUR IMPORTANCE AND BELIEFS 130
6.4.2. IMPORTANCE OF COLOUR BY PATIENT GROUP 131
6.4.3. COLOUR IMPORTANCE BY USAGE OF TRADITIONAL HEALERS 132
6.4.4. COLOUR IMPORTANCE AND LEVEL OF EDUCATION 132
6.4.5. REASONS WHY COLOUR CONSIDERED IMPORTANT IN THE TREATMENT OF DISEASE 134
6.5. COLOURS OF TRADITIONAL MEDICINE. 135
6.6. COLOURS OF MODERN MEDICINE. 136
6.7. MEDICATION PERCEPTUAL CHARACTERISTICS 136
6.8. CORRELATIONS BETWEEN TABLET, MIXTURE, OINTMENT 136
6.8.1. SIDE EFFECTS 137
6.8.2. COLOUR/ILLNESS ASSOCIATIONS. 138
6.9. TABLET COLOUR/ILLNESS ASSOCIATIONS. 138
<table>
<thead>
<tr>
<th>APPENDIX</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPENDIX A</td>
<td>PICTORIAL RATING SCALES</td>
</tr>
<tr>
<td>APPENDIX B</td>
<td>QUESTIONNAIRE FOR ALL RESPONDENTS</td>
</tr>
<tr>
<td>APPENDIX C</td>
<td>CASE STUDY GUIDE</td>
</tr>
<tr>
<td>APPENDIX D</td>
<td>QUESTIONNAIRE FOR MODERN DOCTORS</td>
</tr>
<tr>
<td>APPENDIX E</td>
<td>QUESTIONNAIRE FOR TRADITIONAL HEALERS</td>
</tr>
<tr>
<td>APPENDIX F</td>
<td>QUESTIONNAIRE FOR PHARMACEUTICAL COMPANIES</td>
</tr>
<tr>
<td>APPENDIX G</td>
<td>SELF PERCEPTIONS FOR FEMALES</td>
</tr>
<tr>
<td>APPENDIX H</td>
<td>SELF PERCEPTIONS FOR MALES</td>
</tr>
<tr>
<td>APPENDIX I</td>
<td>PANTONE COLOUR WHEEL</td>
</tr>
<tr>
<td>APPENDIX J</td>
<td>TABLETS, MIXTURES AND OINTMENTS USED IN STUDY</td>
</tr>
<tr>
<td>APPENDIX K</td>
<td>QUESTIONNAIRE FOR COMPLIANCE STUDY</td>
</tr>
</tbody>
</table>
CHAPTER ONE: INTRODUCTION

Compliance with medical regimens is a topic that has attracted worldwide interest. People who are ill are expected to move into the sick role (Parsons, 1964). Once the sick role has been adopted the patient is expected to seek professional care and to comply with the doctor's instructions. However, an individual's movement into the sick role is not automatic. Beliefs and representations mediate the process and affect the outcome. These beliefs may affect the nature of compliance.

There has not been any consensus regarding what the causes of non-compliance are, least of all in South Africa. The findings of a study conducted among the Xhosa (Mkumatela, 1986) suggest that people have certain expectations regarding the colour of medication when they are ill. Ngubane (1977) writes that traditionally colour is believed to play a role in the treatment of disease. It is the colour of medication rather than its pharmacological properties that are important to the traditional healer. The order in which the colours are used is also significant (Ngubane, 1977).

The belief that colour is important in the treatment of disease is not unique to Black South Africans. The Mende of Sierra Leone buy multi-coloured capsules and use them for health maintenance because they seem particularly efficacious because of the different colours that are suggestive that the
capsule contains different types of medicines (Bledsoe & Gouband. 1985, Nichter, 1980).

1.1 COLOUR NAMES IN AFRICAN AND OTHER LANGUAGES:

Literature on colour symbolism in African societies makes mention of three colours, red, black and white. These three colours are much richer than the chromatic vocabulary of the English language suggests. Zahan (1974) reports that, for the Bambara of the Niger Valley, for example,

Red includes lemon, yellow, tender green, purple and cafe-au-lait brown
Black includes light blue, dark blue, dark grey and grey
White includes bright white and pale white.

Berlin and Kay (1969), identified eleven basic colour categories viz. white, black, red, green, yellow, blue, brown, purple, pink, orange and grey. Not all spoken languages have these eleven basic colour categories. Berlin & Kay drew up the following progressive sequence of basic colours in natural languages.

FIG 1.1 PROGRESSIVE SEQUENCE OF BASIC COLOURS
All languages have terms for black and white.

Stage I: is represented by just two terms, black plus most dark hues and white plus most light hues. These colours, they call the basic terms.

Stage II: If a language has three terms, then it contains a term for red.

Stage III: If a language has four colour terms then it has a term, either yellow or green.

Most African languages only have terms for black, red, green and white, because nature has always been a great teacher of colour perception. Zahan (1974), claims that when dyeing techniques were invented the African never tried to look for colours outside nature instead he took advantage of it by imitating it.

Constantinides (1977), supports this by saying that before the coming of Western civilisation, the African had been accustomed to understand the contrasts and oppositions of the two basic colours white and black, for lightness and darkness. As for red he carried it in his veins, saw it in the blood of sacrificial victims and in the fire of the hearth. For the African, the three colours therefore form a continuum ranging from white to black but passing through red and this is how the individual's life develops in society.
1.2 TREATMENT:

Zulu medicines are divided into three types based on colour, each colour having associations that could be physiological, social or cosmological (Ngubane, 1977). The three colours are mnyama - black, bomvu - red, and mhlope - white, and they are used in this order.

Berglund (1975) and Bryant (1966), maintain that besides black and white medicines there is a third group; green medicines (imithi eluhlaza or amakhambi) that are prepared from green leaves, roots and herbs freshly collected from the fields. Amakhambi implies greenness and are the largest and most useful class. They comprise medicines that are given to children to make them feel strong and to convalescing patients for the same reasons. Both authors do not treat red medicines as a separate group.

Black medicines are given to the patient to move him out of darkness into the twilight of sunrise with red medicines and into daylight with white medicines (Ngubane, 1977, Bryant 1966). Black medicines are called thus because of their colour or the colour of their decoction are generally drastic in their nature. They are the first to be administered to the patient for the energetic expulsion of the evils afflicting him. White medicines are then administered after the black, as a tonic or sedative to work off the effects of the black medicines and to restore the patient again to a state of complete healthfulness.
White is a conspicuous feature of most rituals of healing. The first thing that is cut up on the stone on which the medicine is prepared is chalk. Headaches are treated with chalk (Jacobson-Widding, 1979).

The Mende of Sierra Leone buy white medicines for treating colds (Bledsoe & Gouband, 1985). This is probably because of the analogy white tablets have to white chalk that is used to treat headaches and colds. These authors report that Chloroquin is acceptable if it is white and if its bitterness is not disguised by sugar coating.

1.3 COLOUR IN WESTERN MEDICINE

If people have such beliefs about the importance of using the correct colours in treating disease is it not possible that all the reported improvement is attributable to the perceived potential curative effect of the colour of medication ie. a placebo?

Studies by researchers like Buckalew & Coffield (1982a, 1982b). Berg (1977), Schapira et al (1970), Jacobs & Nordan (1979) have shown that people tend to associate certain colours with the treatment of certain illnesses. This leads one to believe that colour could be used as a placebo in the treatment of disease. If these theories on colour symbolism in the treatment of disease are true, does colour not have a placebo effect on people?
Research on the treatment of disease in traditional societies abounds with references to the importance of colour. When people seek professional health care, they bring into the consulting room certain expectations (Leigh & Reiser 1985). Could it be possible then that some of these expectations relate to colour of medication?

Today’s physician is faced with three possibilities in explaining why a patient gets better after receiving therapy (Brody, 1985):

1) the patient improves due to the natural history of the condition in an organism with intact healing and recuperative powers
2) the patient improves due to the symbolic effect of the treatment, that is, its impact on his, her imagination
3) the patient improves due to some specific and characteristic feature of the treatment that can be studied isolated and predicted within the context of contemporary medical theory.

The now dominant biomedical theories say the effects of symbolism, expectation and emotional arousal are included as the characteristic constituents of therapy.

Plotkin (1985) sees the patients consulting a doctor as agents who are impassive, with no behavioral role in the treatment. When treatment is believed to have commenced, the individuals who have faith in that treatment
begin to treat themselves as persons whose problems have been cured. "Any attempt to deal with an illness, frequently has some kind of beneficial effect" (Jahoda, 1969, p.80).

It is necessary that a study be conducted to find out what role, if any, colour plays in the treatment of disease. Do patients have certain expectations regarding colour of medication when they consult a doctor?

In a previous study conducted in the Transkei, an independent homeland for Xhosas in South Africa (Mkumataela, 1986), it became apparent that people tend to associate certain colours of medication with certain illnesses.

The following associations were made:

Red - Blood related illnesses
Brown - TB, Laxative, Slimming
Green - Gall Sickness, Bile Disorders
Yellow - Cardiac Problems, TB
White - Pain, Headaches
Grey - Colds, Eye Problems
Black - Illnesses of the People
1.4 PURPOSE OF THIS STUDY

There is very little research that has been conducted in South Africa on compliance (Unterhalter, 1979, 1982, Mkumatela, 1986, Gillis et al 1987, and Gillis, Koch and Joyi, 1989). Based on the findings of the Mkumatela (1986) study it became apparent that there is a need for further research to be done in South Africa in the area of colour of medication. South Africa is rated as a country that has high morbidity, high mortality and high non compliance rates (Unterhalter, 1979, 1982, Moosa, 1984, Turshen, 1986, Mechanic, 1973, 1974)

A cross cultural study was conducted among the three major ethnic groups, the Xhosa, Zulu and the Sotho, to establish their attitudes to colour of medication.

South Africa has had a long tradition of separate development for the people of this country. "The concept of 'ethnic groups' and 'proto nations'... provided a rationale for the apartheid policy of allocating people to their respective homelands, however inadequate and artificial these might be" (Patterson, 1989, p.19). This study is not aimed at propagating the South African government's ideology of separate development.

The conditions in this country seem to be changing now. Any disparities in the findings of this study should therefore, not be used as a justification for encouraging these people to continue to grow and develop
separately. Crosscultural studies, although fraught with problems help researchers to establish the universality of propositions in which they are interested. They also help them to increase the range of independent variables (Brislin, Lonner & Thorndike, 1973, Jahoda M, 1961).

The research will establish if:

1) colour is considered important in the treatment of disease by a group of Black Western trained doctors, traditional healers and a sample of patients and members of the Black population.
2) which colours are considered the most potent in tablets, mixtures and ointments.
3) if colour of medication affects compliance with a medical regimen.

A total of six studies was conducted. The studies investigated the role of colour in treatment and peoples’ social representations of illness.

The first study was modelled after the Herzlich (1973) study. The sample interviewed ranged from a university lecturer to a housewife. The sample was not representative of the total population. The intention of the study was to look at people’s social representations, to lay foundation for later studies on perceptions of colour in the treatment of disease.
The second study, conducted among 783 rural and urban respondents examined their perceptions of colour of medication. A group of patients was included in the sample. The study was conducted in South Africa during the period, October, 1987 and September, 1988.

The second study is supported by two other studies conducted among Western trained doctors and traditional healers. This study investigated their attitude to colour of medication.

A fifth study examined compliance with a medical regimen, with particular reference to the colour of the medication prescribed.

The final study was conducted among pharmaceutical companies in Britain, that have an international market, to determine if they thought colour was important to the consumer, if so what steps were taken to satisfy that need.

The studies were conducted during the following periods:

a) Study One - during October, 1987, in the Transkei.
d) Study Five - during May and June, 1992.
e) Study Six was conducted in January, 1987.
Studies on compliance are, however, difficult to replicate as researchers tend to use different definitions for labelling people non-compliant. Studies on colour of medication also have the same problem. Researchers may use different hues of the same colour. In order to ensure future replicability it was decided to use a universal classification procedure - the colour of medication was matched to Pantone colour codes. The same colours could be used in later studies by the same or other researchers.

The research raised the question; although Africans traditionally attribute effectiveness of any medication to properties like its colour, taste and others, is it possible that these perceptions change once modernisation has set in?

Is it possible that younger respondents do not believe that colour is important in the treatment of disease and will therefore be more compliant?

These questions will be addressed in the following chapters:

Chapter Two addresses definitions of health, social representations of health and compliance. Studies that have been conducted in Western countries are compared with the few studies done in the developing countries.

Chapter Three is a review of culture health and illness for the Black people of South Africa. Case studies are presented to show the three explanatory models of illness; the naturalistic, the personalistic and the modern.
Chapter Four is a theoretical analysis of social attributions and social representations. These two theories form the theoretical basis for the studies.

Chapter Five describes the methodologies used. It also reviews the controversies about reliability and validity of studies conducted in developing countries. This chapter also addresses the researcher's experiences during data collection for the various studies.

In Chapter Six the results of the crosscultural study, the study conducted among doctors and traditional healers are presented. The views of Black Western trained doctors, traditional healers, patients and other informants on colour of medication are presented. This is the major study. Health care seeking behaviour and treatment characteristics of the sample are reported.

The study examining compliance is presented in Chapter Seven. The methodology and results are both presented. The colour of medication is important to respondents with a traditional orientation. The implications of this are that if these views are strong they may affect compliance and doctor shopping behaviour. This chapter reports on a study conducted in Soweto on compliance.

Chapter Eight: Having examined compliance and the perceptions of people regarding colour of medication, it is important to know what pharmaceutical companies do when a new drug is to be launched. Do they change the colour
of medication when they export drugs to developing countries? A small scale
study was conducted in Britain among pharmaceutical companies that have
an international market to examine what happens when a new drug is
launched.

Chapter Nine discusses the findings of all the studies and what the implications
of the findings are.

The conclusions and recommendations for further research are presented in
Chapter Ten.
CHAPTER TWO: COMPLIANCE WITH MEDICAL REGIMENS

2.1 INTRODUCTION:

When a person falls ill he assumes the sick role. This, according to Parsons (1964) means that he will not be held responsible for his actions and he is exempted from normal responsibilities. He is, however, expected to seek medical help and to co-operate with the doctors to speed up his recovery.

With the onset of an illness, several social processes are set in motion. Illness creates a new life situation to which a patient must adapt (Balint, 1967). Initially illness is a matter of direct experience but later it is learned. Illness becomes a social process with its norms and values (Herzlich, 1973).

Traditionally males are expected to be strong and not to complain about pain. This creates a problem because even though a person may feel unwell he may be reluctant to report this to the family for fear of being labelled 'weak', 'frail' or 'behaving like a woman or a child'.

Patients are not always cooperative, if the demand on the patient is for passive co-operation (e.g. allowing things to be done for him) then he is more likely to co-operate than is the case if he is asked to participate actively (Twaddle, 1969).
2.2. DEFINITIONS OF HEALTH

Definitions of health vary across the world and across cultures. Health has been defined by the Charter of the World Health Organisation (1948) as 'a state of complete physical and mental and social well being and not merely an absence of disease'.

The Brent Community Health Council (1981) believes that good health is only possible if you are able to choose to do a job you enjoy in a pleasant and safe environment; to live in a warm house with enough space so that people do not get on top of one another and with a safe place for children to play; to be able to have your children looked after during the day; eat food you like best; to have a garden.....it is having time with people you love and time on your own.

Both definitions cited above create the impression that good health is impossible. The Brent Community Council definition makes good health, particularly for people in developing countries an impossible goal to achieve. In countries like South Africa where there are severe housing problems among the Black populations and many men, particularly migrant labourers live away from their families for periods of about eleven months each year then 'good health' is Utopia.

Normality or health is what prevalent social values hold to be acceptable or desirable (Jones & Moon, 1987). In contrast to the biomedical notion of universal generic diseases, the social view accepts that what constitutes
disease can vary temporally, culturally and indeed geographically. This view is shared by Twaddle (1969).

2.3. MEANING OF ILLNESS

The meaning of illness varies between individuals. Most people have certain characteristic attitudes towards illness. These reflect:

a, past personal experience
b, knowledge
c, cultural background

(Pfifferling, 1980).

A person needs to have experienced similar symptoms in the past or to have heard from others that certain symptoms are peculiar to a specific disease to know that they are ill. Illness is learned (Herzlich, 1973). It is also necessary that one knows what symptoms are considered legitimate in their culture before one can assume the sick role. Differences in pain behaviour were found by Zborowski (1952) and Twaddle (1969) among their subjects. Expression of pain during childbirth is also culturally determined (Sargent, 1982, Ngubane, 1977, Thompson, 1985).

According to Calnan (1987) at least one brand of Marxism may suggest that the most prevalent definition of health in a Western society is a functional definition where good health is based on the effective performance of normal
roles. For most socially deprived people health is defined in a functional way, in terms of the ability to carry on working (Blaxter & Patterson 1982).

There are three signs that people perceive as signs of illness:

a, changes in feeling states, the most important being the occurrence of pain
b, incapacity for normal role performance
c, other symptoms or changes in the biological state of the organism regarded as important because of their presumed implications for future activities.

Twaddle, 1969.

Sickness invites a certain amount of disapproval. The sufferer is unable to perform competently in the collectivities of which he is a member, like his family or his local community (Dingwall, 1976). People who are mentally ill are perceived as not being responsible for their actions as more often than not they are not aware of their behaviour nor that they are ill.

2.4. ILLNESS ATTRIBUTIONS

Shared meaning attributed to various elements in an individual’s spatio-temporal environment, the rhythm of life and certain behaviours makes 'way
of life' the integrating idea, the prime paradigm of the causality of illness (Herzlich & Pierret, 1986).

Farr (1977) believes that replies to questions concerning causes of illness result from what he calls 'fundamental attribution error'. Favourable outcomes (ie. health) are usually attributed to the self and unfavourable outcomes (illness) to the environment. This is perhaps the reason why people often take health for granted. It is their right - something that they are entitled to. When illness sets in the individual starts looking for causes in the environment.

The Bible stipulates that illness is caused by three things

a, demons of possession (St Mark 9:17-28)
b, the sinning of those involved or their ancestors against God's commandments (St John 5:14)
c, an act of God stemming from his omnipotence (St John 9:3).

Unschuld, 1986.

2.5. TRADITIONAL MEANINGS OF ILLNESS AND HEALTH CARE SEEKING.

The researcher has looked at the meaning of illness for people in developed countries, how do people in developing countries perceive health and illness?
In Africa as elsewhere, when people are ill they perform rituals. Ritual behaviour is also a way of communicating, with the divine purpose of changing the human situation, increase fertility, defeat enemies, change people’s social status, remove impurity and reveal the future (Ray, 1976, Maclean & Bannermann, 1982). Colour plays a significant role in rituals.

2.5.1. RITUALS:

Turner (1965), describes the ritual as a quintessential custom in that it represents a distillate or a condensation of many secular customs or natural regularities. Each dominant symbol has a ‘fan’ or ‘spectrum’ of referents, which are interlinked by what is usually a simple mode of association. For example, white chalk stands for a multiplicity of ideas and phenomena, ranging from biological referents as 'semen' to abstract ideas such as ritual purity, innocence from witchcraft and solidarity with ancestral spirits. In rituals, white stresses harmony, cohesion and continuity, while red is associated with blood spilling as well as blood kinship. It tends to denote strength acquired through breach of certain rules.

Use of white in a ritual is common. The shades abaphantsi are perceived as being white. White abaphantsi has the sense of being under the earth, it also implies whiteness (Berglund, 1975).
The red-blood theme is very important at the sacrificial stage of a spirit possession ritual. The release of blood of the sacrificial animal is considered the first and most important step to health and well being (Constantinides, 1977).

In rituals, black is the colour associated with the group of spirits that induce violent and uncontrolled behaviour. Black is seen as an undesirable colour associated with sorcery, madness and the evil eye. It also has connotations of a severe illness that leads to death.

2.5.2. MEDICAL SYSTEMS

Kleinman (1973) believes there are three general belief systems that people have about illness namely, the scientific, the primitive and the folk and anyone may hold more than one belief system. Addressing medical systems as cultural systems Kleinman (1978, p.86) writes, "the health care system articulates illness as a cultural idiom. It links beliefs about disease causation, the experience of symptoms, specific patterns of illness behaviour, decisions concerning treatment alternatives, actual therapeutic practices and evaluation of therapeutic outcomes. Thus it establishes relationships between the components".

Respondents in this study revealed that there are three health systems in South Africa, the scientific, traditional and faith healing. It appears that
traditional and faith healing are not used together, although both are used with Western medicine. This creates the impression that they are both seen by the respondents as complimentary to Western medicine.

2.5.3. HEALTH AND ILLNESS

A study was conducted in the Transkei among a total of fifteen people. The aim of the study was to look at their representations of illness. The sample was drawn over a period of two months from residents living in Umtata (Transkei). They had to meet these criteria:

1) they had to have a family for whom they were responsible
2) they had to be literate
3) they had to agree to an interview on the first day
4) they had to agree to fill in a diary
5) they had to agree to an interview on the day the diary was to be collected
6) they had to be above 25 years of age
7) they had to live in Umtata
8) they had to be listed in the local telephone directory

The above age cut-off point was used so as to increase the possibility of the respondents having their own children. There are cases where a person can assume responsibility for his parents and/or siblings before reaching 20 years
of age, for example, if the breadwinner dies and the son or daughter is the eldest.

The respondents were all from various townships or suburbs around Umtata. Townships are living areas that are designed for Black people. They are usually located some distance away from the city centre. They are characterised by small "match box" houses. Suburbs are very close to the city centre. They were initially designed as residential areas for Whites.

The study was modelled along the lines of the Herzlich study (Appendix C). The study was conducted in Umtata (Transkei. The population in Umtata has a higher literacy rate than other areas of the Transkei.

2.5.3.1. METHOD:

The sample that was selected was random but was not meant to be a representative sample of the total population. Twenty three respondents from the residential areas in Umtata were contacted. The respondents names were picked from the telephone book. Every fiftieth person listed (until twenty three people were contacted) was asked for an interview. Twenty three people were interviewed initially but eight people refused to fill in the diaries. The refusal rate was 35%. The reason they gave was that they were busy they would not be able to complete the diaries.
Diaries which were note pads with a date written on each page, were left with the remaining fifteen respondents.

On the first day, the respondents were interviewed about their health care behaviour patterns. They were asked to fill in, on a daily basis their health behaviour patterns. The instructions given were:

1) write down on a daily basis any health related issues affecting the family
2) say what line of action was taken
3) how long the illness lasted
4) the role of the family during illness

Factors cited by the respondents in this study as the main determinants of when professional help should be sought are:

a, failure of ailment to respond to home remedies or any left-over medication that they have in the house.
b, inability to identify what the problem is
c, the cost of seeking professional health care - cost also determines whether the family should seek help from the chemist, the hospital or the doctor.
Cost is more of a determining factor among people who are not working and are dependent perhaps on their husbands and children who could be working away from home.

2.6 COMPLIANCE: A REVIEW OF LITERATURE

When people seek medical help they are given some form of treatment with which they have to comply. This applies to both traditional and Western medicine.

2.6.1. DEFINITION OF COMPLIANCE

The Diagnostic Statistical Manual III-R (1987) of the American Psychiatric Association defines compliance with medical treatment as behaviour judged unrelated to a mental disorder such as concern that treatment may be worse than the illness itself.

When individuals seek medical help, it often happens that the doctor’s orders are not carried to the full. Studies published on compliance show wide variations. Fox (1969) reported a 4% non-compliance with TB treatment, while Bergman & Werner (1963) reported 92% non-compliance with treatment for streptococcal infections. Cross comparison in compliance studies is often problematic as different methods of measurement are used. Nevertheless, they all prove that non-compliance is a universal problem.
When professional help is sought, the patient comes out of the consultation, with either a prescription (with prescribing doctors, for example in the United Kingdom) or a combination or any one of the following (if the doctor is dispensing, for example, in South Africa) - pills/tablets, injection, mixture, ointment or whatever else is applicable. A patient may sometimes be told to adjust his diet, cease smoking, drinking or to present him/herself for diagnostic tests. These form the medical regimen. Compliance is a complicated set of behaviours that fall into two broad areas namely:

- Level 1 - receiving the drug
- Level 2 - using it correctly


2.6.2. FACTORS CONTRIBUTING TO NON-COMPLIANCE

Most of the studies reported in this section were conducted in Western countries. There is very little research that has been conducted in developing countries on compliance.

Ley & Spelman (1967) list several factors that they maintain affect compliance, for example, doctor's attitude, patient characteristics like medical knowledge and memory aspects.
The patient's personality, educational level, social relations, the type of medicine, the number of medicines taken concurrently, frequency of administration, duration of treatment, adverse effects - whether the patient feels ill or quite well are some of the factors that may promote compliance (Stimson, 1974). If it is true that these affect compliance, then compliance is likely to be low in Third World countries where sometimes illiteracy is still high. Also, if the patient is taking traditional medicine and Modern medicine concurrently there is bound to be a problem as he is likely to use that which he thinks is effective and appropriate for the type of illness.

It is, however, difficult for the doctors to identify the potential non co-operator (Caron & Roth, 1968). If this were possible, part of the problem of non compliance would be solved.

2.6.2.1 RACE, SEX, AGE, LEVEL OF EDUCATION AS PREDICTORS OF NON-COMPLIANCE

Researchers have tried to investigate if there are any correlations between race, sex, education, economic status and age.

Morrow and Rabin (1966), MacDonald (1963) found no possible links between race and compliance. This leads one to conclude that non compliance is a universal problem.
Women were less compliant than men in the studies conducted by Luntz & Austin (1960) and Dixon (1957). Other researchers have found no relation between sex and non compliance (Maddock, 1967, Davis, 1968b).

Little association has been found between education and compliance (Maddock, 1967, Neely & Patrick 1968). Davis & Eichorn (1963) found an increase in education was associated with non compliance. Age sex and educational level were not found to be predictive for either compliance or non-compliance by Packard and O’Connell (1986).

Lack of insight, the denial of the illness, paranoid delusions and low socio-economic states, age and substance abuse have all been associated with non compliance by Chen (1991).

2.6.2.2. **SOCIO ECONOMIC STATUS AND COMPLIANCE**

Low socio-economic status has been correlated with non compliance by some researchers (Mohler et al, 1955, Watts, 1966). Other studies have not reported any association between the two factors (Maddock, 1967, Mohler, 1955, Neely & Patrick 1968).
2.6.2.3. RELIGION, HEALTH BELIEFS AND COMPLIANCE

Morrow and Rabin (1966), MacDonald (1967) found no correlation between a person’s religious beliefs and compliance.

Other factors that need to be considered in compliance studies are the patient’s values and belief systems (Amarishangam, 1980). Sometimes it may be necessary to reinforce the patient’s delusional thoughts, to improve compliance (Beeber, 1988). Reinforcing patient’s delusional thoughts may, however, create some problems as the therapist may not be able to pick out how far that should go. The patient may then use the doctor and say that even the doctor agreed with him on the issue. Doctors are seen by the lay public as authority and if anything is endorsed by the doctor then it has to be right.

Literature on compliance suggests that health beliefs provide a promising alternative to personality theories. Findings of a study by Brownlee-Duffeck et al (1987) suggest that health beliefs play an important role in diabetic regimen adherence and metabolic control.

Measures on the Health Belief Model were found to be significantly correlated with compliance, but they did not predict adherence (Smith et al, 1987). Health beliefs, according to Becker et al (1979), may be highly correlated with mothers compliance to a diet regimen for their children. The magnitude of the correlation declined, however, by the fourth follow up visit.
2.6.2.4. DOCTOR-PATIENT COMMUNICATION

Several investigators have emphasised that importance of the patient doctor relationship in presenting compliance (Luntz & Austin 1960, Ley & Spelman 1967, Ley 1988, Prickman et al 1958, Abrahmson et al 1961, Hulka, 1979). If a doctor's attitude towards a patient is negative he may not establish rapport with the patients, comfort them, show care and concern and devotion and exert a profound interpersonal influence on them, in the absence of good will (Dimatteo & Di Nicola, 1982). Doctors should therefore try to talk to patients in a way that promotes trust and belief.

Davis (1968a) found that non compliance was associated with patients expressing their opinions and the doctor expressing disagreement, formality and rejection of patient. Compliant behaviour was associated with patient expressing agreement with physician.

Ley & Spelman (1967, Ley 1988) cite several studies that show that patients want to know what is wrong with them, whether they have cancer or not. Gotay (1984), found that patients with cervical cancer used coping strategies like taking firm action, once they were told that they had cancer. Studies indicate that there is a high level of dissatisfaction among patients about the amount of information doctors provide (Cartwright 1964, Duff and Hollingshead, 1968).
Tension in the relationship between doctor and patient, excessive doctor passivity and a lack of feedback from the doctor may influence drug taking behaviour (Appelbaum & Guthreil, 1980).

2.6.2.5. NATURE OF ILLNESS

The nature of illness tends to affect compliance. Sackett (1979) cite non compliance, particularly in chronic illnesses like hypertension, which may be asymptomatic for long periods as a problem. They may feel that they should give the body a rest (Stimson, 1974). Often the doctor and the patient's assessment of results of treatment or surgery differ (Cay et al, 1975). In their study of doctor patient assessment of results of surgery for peptic ulcers they found discrepancies in the doctor and the patient's perception of success. The doctor's criterion was based on acid reduction, absence of diarrhoea and other biological factors. The patient's criterion was based on psychosocial factors such as the current effect of the illness on family life, social life, work and sleep. This problem could be further compounded by society's definition of illness - when is pain legitimate and when is it not?

There is evidence that the length of time patients are under treatment influences compliance (Marston, 1970). Non compliance tends to increase over time. The longer the treatment, the more likely it is that non compliance will set in (Luntz & Austin, 1960).
2.6.2.6. COMPLEX MEDICAL REGIMENS

Multiple medications and frequent dose regimens, both foster poor compliance (Maddock 1967, Davis & Eichorn 1963, Francis et al 1969, Gravely and Oseasohn, 1991). When three or more medications were prescribed, Francis et al found a decrease in compliance.

This is supported by Neely and Patrick's (1968) findings that when patients are taking several different kinds of medication there is a high incidence of deviation.

2.6.2.7. SIDE EFFECTS

The occurrence of side effects can logically be expected to discourage compliance (Blackwell, 1973). Patients tend to cite side effects as reasons for stopping treatment, especially if the side effects were unexpected. This calls for more information giving when patients are treated with drugs that are likely to cause side effects.

Williams (1991) lists factors that decrease compliance and these are:

- Complexity of regimen
- Behaviour change required of patient
- Clinic waiting time
- Block versus individual booking
- Therapy perceived as painful
- Psychological problems
- Low Frustration Tolerance
Nervous symptoms
Working mothers

She lists the factors that increase compliance as the following:

Patients' view of illness as serious
Family stability
Patient satisfaction
Close supervision by physician
Private practice versus clinic
Patients' expectations met
Physician accepts patient
Degree of disability
Mother agrees with physician

2.6.2.8. COLOUR AS A PREDICTOR OF EFFECTIVENESS OF PHARMACOTHERAPY

Depressed patients were asked to make associations to eight Luscher colours (Demeter, Rihmer and Frecksa, 1985). The colours were blue, red, black, green, purple, grey, yellow and brown. The patients that responded to treatment furnished more responses on the seventh day than before treatment. The authors suggest that the method can be used to follow changes in the state of depressed patients and to predict response to pharmacology. The study was not focusing on compliance, however.

2.7. NONCOMPLIANCE IN DEVELOPING COUNTRIES

Nyazema (1984) attributes non compliance in Zimbabwe, to having to share medication with another member of the family who exhibits the same symptoms
as the patient. In some Third World countries, where poverty is crippling, this tendency is common.

Gillis, Trollip, Jackoet and Holden (1987), however, found no clear relationship between compliance and socio-economic standing in their study of South African Whites, Blacks and Coloureds.

In a study conducted by Dressler (1980) in St Lucia, a correlation was found between a person’s health beliefs and compliance. A personalistic belief system, i.e., beliefs that disease is caused by witchcraft, sorcery and evil spirits were found to correlate highly with non-compliance in Western medicine. Abrahmson et al. (1961) found no relationship between beliefs of African patients in Durban (South Africa) and their level of education. Patients with seven or more years of schooling were, however, likely but not significantly so, less likely to suspect a supernatural causation.

No significant differences were found between a group with a modern orientation to health care and a group that had a traditional orientation, regarding compliance (Mkumatela, 1986).

Doctors often do not tell patients what is wrong with them. "The doctors don’t say anything- they just examine one and then talk among themselves in English (Abrahmson et al. 1961). Instructions should be kept to a minimum as people tend not to take treatment if the instructions are too complex (Mfenyana, 1984).
Unterhalter, 1979, in a study carried out in Soweto, South Africa found rates of 62% non compliance among hypertensives. People stopped taking medication when they felt better. Disappearance of identifiable symptoms may not necessarily be accompanied by the disappearance of the illness, though.

Williams believes that information and patient education are essential but they are probably overrated as to their efficacy. Gillis, Koch & Joyi (1989) found high non compliance rates among Xhosa psychiatric patients despite the amount of patient education given.

Gillis et al (1987) found higher non compliance rates among Whites in South Africa than among Coloureds and Blacks. Their sample was small and their findings may therefore not be generalisable to the whole population of South Africa. In their sample younger respondents were less compliant. One would therefore, think that the younger respondents are more willing to take risks than the older respondents. Marston (1970) however, found that people who are prepared to take risks in other areas of their lives were not necessarily non compliant with a medical regimen. Her study was not conducted in a developing country.
2.8. METHODS FOR MEASURING COMPLIANCE:

Various methods are used for measuring compliance, for example, pill counts, self reports, observation methods, urine tests, child and parent reports, blood haemoglobin and stool specimens.

As far as methods of measuring compliance with oral medication are concerned there is a hierarchy of validity with subjective reports being the most suspect and steady blood assays being the most valid. Blood assays are, however, of questionable value in assessing partial compliance.

2.8.1. PILL COUNTS:

Return of patient for replenishment of drug supply is sometimes used as a measure of compliance (Lipman, 1965). This method is, however, not reliable as patients may replenish their supply even if they still have some tablets remaining (Unterhalter, 1979. Mfenyana, 1984) especially if the patients are not asked to bring the empty bottles/containers with them. Bringing the empty containers does not necessarily mean that the treatment has been used properly.

When people are aware that the researcher will call at their homes to do the pill counts, tablets may be flushed down the drain. Pill counts provide a quantitative assessment, allowing identification of the magnitude of the problem and some estimation of the effect of varying compliance levels on therapeutic outcome and
untoward effect (Dunbar, 1978). Pill count reliability is increased when the patient is not aware that they are being done.

2.8.2. SELF REPORTS

Verbal reports depend upon the skill of the interviewer and the willingness of the patient to describe his medication behaviour accurately (Rickels and Briscoe, 1970). Patients have been found to report greater adherence than is the case (Bergman and Werner, 1963).

Rickels & Briscoe (1970) maintain that they are unsuitable, if information regarding all levels of deviation is needed, when deviation is large, they found self reports to be seriously in error.

In his study, Cohen (1979), found over-reporting compliance was related to the degree of daily variability in medication consumption. He attributes this to the possibility that the patient may have forgotten on which days he had complied well and on which days he had complied poorly.

2.8.3. URINE TESTS

Although these are probably the most reliable tests for drug compliance - problems arise when attempts are made to compare compliance rates as definitions of compliance vary from one study to the other (Marston, 1970).
Some base their conclusions on a single test, whereas others base them on multiple observations. Some studies, Morrow and Rabin, 1966, classify patients as non compliant when 50% of urine specimens are negative, while others Wynn-Williams and Arris, 1958, use only one negative test as a conclusive measure of non compliance.

Dunbar (1979), warns that one needs to be cautious in interpreting the level of compliance based on biological assessment because of individual differences in the absorption and metabolism of drugs.

Interpretation does not yield degree of non compliance, rather it tells researchers that the patient did not take treatment.

2.8.4. OBSERVATION METHODS

This method involves direct observation into the patients' home to assess adequacy of self care. It was used among a group of diabetic patients by Watkins (1967) to see if the patients were administering the insulin in an acceptable manner. This method obviously influences compliance behaviour as the patient is aware he/she is being observed.
2.8.5. BLOOD HAEMOGLOBIN AND STOOL SPECIMENS

These measures, like the urine tests, although reliable, tend to be problematic, for example, some substance can be added to the medication and this can be detected in the blood if it has been ingested. Riboflavin, which is often used in such tests, is also secreted when the patient is on vitamin tablets (Dunbar, 1979). When these biological methods are to be used it is important that the researcher becomes aware that the marker used is excreted within twenty four hours, so only ingestion within the day preceding the test is assessed.

2.8.6. CHILD AND PARENT REPORTS

This method consists of utilising the observations of some person in the family either than the patient, especially in such prescriptions as exercise, diet and smoking cessation. The observer needs to be briefed clearly on what behaviour is to be observed and how to record it. For purposes of reliability, backchecks are important here. If the patient is aware he is being observed, behaviour may be affected (Dunbar, 1979).

2.8.7. MEDICATION MONITORS

These involve the use of a portable electronic device that automatically records the date and time the medication has been removed (Eisen et al, 1987, Rand,
1990). The compliance monitor system is removed and read by an interpreting
device that is coupled with an IBM PC or an Apple II or Apple Ile.

2.9. DISCUSSION

Authors like McCallum, Wiebe and Keith believe that when a patient is first
confronted with a diagnosis and a treatment regimen, he/she immediately begins
to process the information and forming an intention regarding whether they will
comply or not. This is perhaps the reason why, although a person may be
seriously ill, they may not take their medication. The implication of this statement
is that reactance sets in at the stage of diagnosis and not later.

There is very little research that has been conducted in Third World countries on
compliance, yet these countries have high mortality and morbidity rates.
Theories written on the evolution of diseases maintain that Third World countries
are suffering from diseases of the West and those of the Third World. This is
perhaps the reason why mortality rates are high in these countries. Research is
needed in the area of compliance. The alternative medical system also
compounds the problem of non compliance in developing countries.

When conducting research one has to decide on the methods to be adopted,
whether these will be appropriate for use in these countries. The researcher has
adopted methods that have been used effectively both in Western countries and
in Developing countries to measure compliance, namely, pill counts. Patients interviewed in the study were on Western medicine.

2.10. CONCLUSION

When a patient seeks medical help he brings certain expectations with him, the doctor has his (Leigh & Reiser, 1985) and these may vary from expecting to receive a combination of drugs, mixtures and an injection to receiving coloured pills.

Steffersen & Colker (1982), maintain that choices are not only made between different types of healer but also between diagnoses and advice that makes sense and those that do not. Diagnosis that does not make sense to a patient may invariably lead to non compliance and doctor-shopping behaviour. The intention whether or not to comply involves interactions of personal variables that are present before the diagnosis is made and other variables that are related to the treatment regimen.

Although there are several studies that have been conducted especially in Western countries on compliance, non compliance remains a problem. This could mean that the studies conducted are possibly not addressing the whole problem of non compliance or that the criteria used are different, so cross comparisons are not possible. therefore recommendations cannot be universally applicable.
CHAPTER THREE: CULTURE, HEALTH AND ILLNESS

3.1. INTRODUCTION:

This chapter deals with the meaning of health to different people in South Africa. It is an in depth study of what illness means to the Black people of South Africa. It gives one an idea of the health belief world of the people where most of the studies take place.

3.2 THE STATUS OF HEALTH FOR BLACKS IN SOUTH AFRICA:

Although the report by the Gluckman Commission into health conditions, in South Africa is dated 1942, the situation has not changed much from then;

a. there is still a shortage of services.
b. services provided by private doctors are totally inadequate for the great mass of people - with more doctors congregating in cities.

The status of health for the Black populations of South Africa particularly in the homelands, is low. Health services in these areas reflect not only the
general neglect of health care for Blacks, but also the urban and rural curative biases in South Africa (Turshen, 1986. Mechanic, 1973, 1974).

The Transkei has the highest incidence of active TB in South Africa - about 6% of the population suffers from active TB (de Beer, 1984). The Transkei Government tries to combat the disease and other communicable diseases but their efforts seem ineffective. The immune response of the BCG immunisation that is compulsory, does not seem to have enough power to fight against additional complications like malnutrition, serious illness and other kinds of physical and mental stress. Andersson & Marks (1989) report that the incidence of TB among Africans in South Africa (excluding the homelands) was 5.59 per 1000 in 1985. This high incidence is attributed to migrant labour (de Beer, 1984 Zwi, Marks and Anderson, 1988).

Acculturation can be modified or buffered by an individual's access to social support, such as a family available to them (Dressler & Bernal, 1982) and Graves (1967). Migrant labourers, usually do not have this basic form of social support. African domestic workers, who also live away from their families have the highest rate of hypertension in South Africa (Zwi, Marks & Andersson, 1988).

The emerging Black elite shows an increasing incidence of diseases associated with a Western life-style namely, hypertension, cardiovascular accidents, diabetes mellitus and peptic ulcers (Andersson and Marks, 1989). An
orientation to a Western life-style, without access to that life-style can result in a variety of stress-related illnesses Dressler (1985).

3.2.1. MEANING OF ILLNESS

A total of fifteen respondents in South Africa, were asked about their social representations of illness (methodology and sampling reported in Chapter Two). This study followed along the lines of the Herzlich study.

As in the Herzlich (1973) study, some of the respondents interviewed felt that 'way of life' or internal sources were responsible for illness.

"Modern life causes depression - when it is severe you find family problems - wives run away, husbands become irresponsible" (Mr Qengqeleka, 38 yrs)

"Illness could be due to accidents .......not eating properly" (Mr Cumngce, 39 yrs)

Illness is something that makes it difficult for me to work normally" (Mr Krazuka, 38, married - two children)

"It affects your mind...don't want to mix with people" (Mr Qhabalaka)

It is from a person's behaviour that you can infer that illness is becoming
serious" (Mr Qengqeleka)

Dressier (1985) reports high levels of belief in Obeah (personalistic beliefs-beliefs in witchcraft and sorcery) among people with high exposure to a Western life-style and low access to that life-style. He believes that the results support the hypothesis by Kluckholm that beliefs in witchcraft and sorcery are related to social stresses affecting individuals. Marwick (1970) also sees witchcraft beliefs as a safety valve for the discharge of anxiety.

The results of Dressler's (1985) study and that of others (Jahoda, 1962, 1970) show that these beliefs persist in the context of culture change and are related to stresses caused by the change. There is a need for therapists working in societies where people have these personalistic beliefs to de-emphasize the culture-bound syndromes, as there are numerous severe stresses that impinge on people. Therapists should not think that witchcraft beliefs are typical of the people's culture. Traditionally, Africans recognise both a natural and supernatural cause of disease, the supernatural world being attended to when faced with the unusual and uncanny, in the face of emotionally charged situations and in certain types of crisis which threaten the fabric of society (Horton 1967). The naturalistic system is used to explain illness in impersonal systemic terms. These two systems are not mutually exclusive. People who invoke personalistic causes to explain most illnesses usually recognise some natural or chance causes, similarly people for whom naturalistic causes predominate, may explain some illnesses as being due to witchcraft or the evil
Illnesses of naturalistic origin are sometimes treated with Western medicine (Helscher and Sommerfeld 1985, Dressier 1980, Scotch & Geiger 1963, Green 1985). The ambiguities highlighted, together with the fact that the responses to the Health Belief Questionnaire are taken at face value are likely to affect comparisons between the two groups.

Authors like Spiro (1965) see personalistic beliefs as a culturally constituted defence mechanism that enables the individual to express their distress in a culturally acceptable way. These beliefs help resolve the distress by projecting it into the supernatural world. Kaplan & Johnson (1964) see the attribution of illness to a power that possesses the individual, whether it be the devil or consciousness as a typical mechanism of hysterical illness.

Phares (1976) in his study on locus of control found that American Blacks were more externally oriented than their White counterparts. People of a low social status tend to be more externally oriented than those people of higher socio-economic status. Shindell (1976) and Unschuld (1986) see people of a lower social status as being more at life's mercy than their rich counterparts. The same pattern appears true of the South African Black who at the best of times is more disadvantaged than his White counterpart and at worst has a health care system that is very inadequate (Turshen 1980, Mechanic, 1973, 1974, Moosa, 1984). For the average Black South African, an external locus of control could be attributable to both racial discrimination and a low socio-economic status. Beliefs in bewitchment and ancestral anger as being the
cause of disease are definite indices of an external locus of control.

As Orpen (1971) showed in his study, people may develop an external locus of control if they feel they are not in control of events. People who regard themselves as being denied the opportunity to obtain the material rewards offered in the wider culture tend to attribute what happens to them in their personal life to forces outside their control. Geber & Newman (1980) report that in all but one essay, the political system in South Africa was held responsible for all the misery and suffering described by the informants in their study.

Abramson, Seligman and Teasdale (1978) believe that people make external attributions for outcomes that they believe are likely to happen to themselves and to relevant others.

"Illness affects the happiness of an individual and the ability to carry on with normal everyday activities.... depressing"  (Mrs Qombolo)

"I can’t afford to be ill now - I still have goals to achieve"  (Mr Qothololo, 47, married - two children)

"I almost slipped into a depressed state, because people were advising me to take some days off. I couldn’t, I had work to do"  (Mrs Ngxolo, 33 yrs, divorcee - one child)
Respondents also gave a functional definition of illness. It is not unusual to hear people say "I go along with them" when they are asked about their health (Ngubane, 1977, Mkumatela, 1986). This means that although people may not be feeling well the illness has not reached a stage where it warrants that one should move into the sick role.

It is clear from the above definitions that definitions of health or illness are subjective. Lambo (1964) sees health not as an isolated phenomenon but as part of the entire magico-religious frame. It is more than the absence of disease.

It seems that none of the definitions of health currently in use can be applied in developing countries. Perhaps there is no need to have definitions of variables like health as they do not seem to be relevant even in developed countries.

3.2.2. PHYSICAL ILLNESS AND MENTAL ILLNESS:

The respondents felt that there was a difference between physical illnesses and mental or psychological illnesses. In the former one could say where the pain was "you can touch it". With mental illnesses physical examination alone was often not sufficient.

Physical illness manifests itself in pain. You can demonstrate where it is painful"  (Mrs Mphokoqo)
"The cause of mental illness is not in the body itself but in the society - social relations. You become mentally ill because of something in the society" (Mr Krazuka)

"mental illness is more serious - caused by very serious forces of life, for example in the rural areas it would be witchcraft that would cause someone to run mad, whereas physical illness usually does not take that form of seriousness....if physical illness continues over a long period of time again it is associated with some form of evil" (Mr Qengqeleka).

This attitude of externalising mental illness is reported by Asuni (1979) as the difference between a traditional healer and a psychiatrist's approach to the illness. The former externalises the illness while the latter internalises it.

3.2.3. HEALTH CARE SEEKING BEHAVIOUR

Traditionally, Africans recognise both a natural and a supernatural cause of disease. The supernatural world is attended to when faced with the unusual and uncanny, in the face of emotionally charged situations and in certain types of crisis that threaten the fabric of society (Horton, 1967).

Mr Qengqeleka, 38, sees illness as:

"something that is used by some supernatural authority to govern life - to govern the way people live."
For Mr Bhaqio 39, illness can be inflicted by other people through devious means for example witchcraft.

Very important here is the belief that the dead maintain relations with the living and that they may also be the source of good fortune and illness (Fortes, 1965). Rituals are a means of communicating with the ancestors.

Society and family determine whether the person is ill or not. It is from his behaviour that they will decide that the illness is now getting more serious. They will give him medication that he has to take to induce vomiting or suggest an enema. The responsibility at this stage is still that of the person who is ill. Once the people realise he is not taking instructions, they will take over the responsibility of getting him better. Once they take over then they become harsh. 'Do that...do that'... instructions....directions - he is not expected to object or respond” (Mr Qengqeleka)

The above seems to reflect very clearly the aspects of the sick role identified by Parsons (1964). Patients are exempted from normal responsibilities and that the patient may not be expected to take care of himself or to get rid of the illness by willpower, although he should want to get well. The fourth element of the sick role is that which obliges the sick person to seek competent help. This is usually but not necessarily from a qualified doctor. This stage begins when the individual or those around him decide to seek help. The choice of doctor is often determined by, type of help available, cost to be incurred and the perceived aetiology of the disease (Helman, 1984, Mkumatela, 1986).
Mr Qengqeleka believes that the patient is first given the opportunity to do things for himself. Once the family takes over, they treat the patient unsympathetically.

The following cases will illustrate illness behaviour and doctor shopping behaviour among the people of South Africa. They were selected from the fifteen cases reported above.
CASE 1: MRS MNGQUŞHO. A CASE OF WESTERN MEDICINE ONLY.

Mrs Mngquşho, 37 years old has two adolescent children. She also lives with two of her younger sister’s children. Being the only one in her family with some good education and a good job she had to take responsibility for her other two sisters who are not married. Her brother is married and does not contribute anything towards the maintenance of the sisters. Mrs Mngquşho is a divorcee. Her sisters have a total of six children. One sister who has only one child works, while the other does nothing to help at all. This obviously puts a lot of financial strain on Mrs Mngquşho. Although she has a good job, she has other expenses such as mortgage for her house and a car. One of her children works, this helps a bit. When I interviewed Mrs Mngquşho she was complaining of severe headaches that her doctor had attributed to stress. Her younger sister had just lost her job and so she was maintaining her as well. Her condition deteriorated to such an extent that she was ultimately hospitalised for observation. While in hospital it was discovered that she had a tumour on her breast. An operation was recommended.

Mrs Mngquşho only believes in Western medicine. She felt that it was best to have the tumour removed, although her sisters were against this idea. They had heard of other people who had gone into hospital for similar operations and never came back alive. This obviously depressed Mrs Mngquşho. One of her sisters had recommended that she goes to see a faith healer whom she
had been to on Mrs Mngqusho's behalf. The faith healer had told the sister that she should not allow Mrs Mngqusho to go ahead with the operation.

Conflict is created here, because the patient is not be expected to take care of herself, it is the responsibility of the family or those around her to help patient to get well. Consensus was not reached by the family, regarding what the best treatment was, so she decided to go it alone with the support of a few close friends. Her sisters never visited her while she was in hospital. Mrs Mngqusho's operation was a success: she spent six weeks recuperating at home. She was due to go back to work two weeks after the last day of making entries in her diary.
CASE 2: MRS XAKEKILE. A CASE OF WESTERN MEDICINE AND TRADITIONAL MEDICINE.

Mrs Xakekile, is 30 years old. She has one child who is six years old. Because she and her husband both worked and could not get a reliable child minder they had to make the painful decision of taking the child to the husband's parents who live in another city. They can only see their child when they go on holiday, which is usually once a year. At the time of the interview Mr Xakekile was not working. His wife attributes the redundancy to his alcohol problem.

Mrs Xakekile was told she could not have any more children. She has undergone several tests to investigate what the problem is but the tests had not detected any abnormalities. She complains of serious lower abdominal pains. A year ago, before this interview she was operated on but nothing was detected. Mrs Xakekile recorded in her diary that she started feeling unwell while at work. She was taken to see a doctor but her condition did not get better. Her doctor sent her for some X-Ray examination but nothing was revealed by the examination. Her husband decided to take her to see umuntu (the common term used to refer to traditional healers). The traditional healer told them that the reason she was sickly and unable to get children again was because somebody who does not like her had inserted some evil things inside her intravaginally. Mrs Xakekile was given some medication that she claims she only took for three days. She became so ill that she decided to go and
see her doctor again. She was X-Rayed again, but this time the X-Rays revealed an abnormal growth on the left side of the uterus. Mrs Xakekile had her X-Ray plates as proof of this. Mr and Mrs Xakekile were both convinced that the medicine that she had been given by the traditional healer helped the growth to appear. Mrs Xakekile mentioned in a conversation that her mother had problems getting children also. She has one sister.
CASE 3: MR BHAQOLO. A CASE OF WESTERN MEDICINE, TRADITIONAL MEDICINE AND FAITH HEALING.

Mr Bhaqolo, 39 years old is a father of two children, aged twelve and nine. Mr Bhaqolo has spent most of his married life away from his family. The wife lives and works in another city. He visits home at least once each month. He takes one long holiday each year to be with his family. Mr Bhaqolo has been diagnosed as having tension headaches. Mrs Bhaqolo is a nurse at a clinic. This is good for Mr Bhaqolo who claims that whenever he goes home his wife gives him a fresh supply of tablets. At the time of the interview Mr Bhaqolo had a jar that is supposed to contain five hundred analgesics half, full with different tablets. He explained what each one was prescribed for. He used colour and size for identification.

Mr Bhaqolo loves collecting tablets. He reported an incident when he had gone to see a homoeopath for his headaches and found the nurses unpacking some tablets that had just been delivered. He asked them what the tablets were for and when they told him they were for kidneys he asked them to give him a few, just in case he ever suffered from kidneys.

Mr Bhaqolo comes from a family that believes in traditional medicine. He admits having been to see several traditional healers because he is always sickly. He complains of severe headaches especially when under a lot of stress. These headaches date back to his childhood. He was told by a...
traditional healer once that these headaches were caused by somebody who was envious of his family's achievements. This person did not want him to progress academically. He has a matriculation certificate (a university entry qualification). He has tried to register for a university degree on a part time basis, but he develops headaches and never writes his examinations, when due. Mr Bhaqolo went to see a traditional healer, four or five months before this interview for his headaches. The healer induced him to vomit and some thread like stuff came out which the healer said was what was causing the headaches. He felt better but the headaches have started again. He decided, on the advice of a colleague to go to a faith healer. He is very happy with this healer. She told him what his problems were very accurately.

Mr Bhaqolo also claimed he was not happy at work. He did not get on well with his supervisor so he did not stand any chance of getting any promotion. The healer told him this as well. The healer gave Mr Bhaqolo some water that has been blessed. He had to boil the water and add some pink powder that was also supplied by the healer. This water Mr Bhaqolo calls uzifo zonke (all diseases) because he can drink it, add it to his bath, his cooking and he can also sprinkle it over whatever he would be wearing at work or at home. This would make him likeable and bring him luck. Mr Bhaqolo reports receiving compliments to the effect that he was looking well and healthy ever since he started using the water. His last entry reports that he has been able to get a job nearer home, something he had been trying to do for years. Mr Bhaqolo had to go to the faith healer every fortnight to replenish the water supply.
3.2.4. COMMENT:

These three case studies were chosen because they reflect the three belief systems identified by Kleinman (1973, 1978). Mrs Mngqusho believes only in Western medicine. Even when her family tried to persuade her to go and see a faith healer she refused because the Western paradigm is the only one that makes sense to her.

Mrs Xakekile, on the other hand, uses both traditional and Western medicine. After experiencing a lot of frustration, not knowing what was wrong with her, she was advised by some members of her husband’s family to go and see a traditional healer. There were some results, the X-Ray results were proof of this.

Mr Bhaqolo was brought up in Zululand. Beliefs in traditional medicine are the norm rather than an exception, in Zululand. He still believes in traditional medicine but after consulting several healers and modern doctors, he was advised by a colleague to go and see a faith healer. He reports some improvements in most aspects of his life now ever since he started these consulting the faith healer.
3.3. THE HEALERS.

The following case reflects the attitudes of a traditional healer, who is a qualified nursing sister.

CASE 4: MRS QONGQOTHWANE. TRADITIONAL MEDICINE AND WESTERN MEDICINE IN CONFLICT.

Mrs Qongqothwane, 47 years old works as a nursing sister at one of the hospitals in the Transkei. Mrs Qongqothwane is undergoing training as a traditional healer. Although Mrs Qongqothwane has already accepted 'the call' - that is a ceremony where traditional beer is brewed and consumed and a goat slaughtered, she is still in permanent employment at the hospital. She feels she is not ready to take up traditional healing on a full time basis yet.

Using both traditional and Western medicine creates conflict for Mrs Qongqothwane. Two months before the interview she had been admitted in hospital. She had sprained her ankle whilst doing gardening at home. Initially X-rays could not determine what was wrong with her. She was then referred to some specialists in South Africa. They had suggested an operation. She was not keen on the operation because she had several dreams where she was told she should not go ahead with the operation.
The specialists, on the other hand were also putting pressure on her, saying if she refused to have the operation she could become paralysed. Mrs Qongqothwane, says the ‘the nurse in me said I should go for the operation, but the African in me was saying I should not’. The ‘nurse’ in her won finally.

After the operation her condition got worse. She had a dream where a White girl came to her. She was holding a stick that she pointed at the scar. The White girl then told her she, Mrs Qongqothwane, had spoiled her chances of quick recovery by agreeing to the operation. The White girl apparently symbolises, ancestors that live in the river. When she finally left hospital, she performed a ceremony to propitiate her angered ancestors. At the time of the interview she was wearing a string of white beads underneath her uniform.

3.3.1. COMMENT:

The "African personality" may, according to Swartz (1987) appear to have disappeared in a 'Westernised Black.' but it can reappear at times of stress. It is believed that Westernisation has affected the African’s basic personality in a harmful, if not directly pathogenic manner. Intwaso is attributable to stress (O’Connell, 1982). It is perhaps worth mentioning that Mrs Qongqothwane has four children aged, nineteen, seventeen, fourteen and seven. Her husband, an ex-priest who left the priesthood because of political reasons, is now alcohol dependent. Their eldest son is at university, a fact that contributes to Mrs Qongqothwane’s reluctance to leave her job which offers
her a steady income. She feels, however, that eventually she will have to leave nursing completely as she is mostly off sick, with illnesses that cannot be treated with modern medicine. She admits advising some of her patients to try traditional medicine when all else fails.

Lewis (1966, cited in Jahoda, 1969) suggests that depressed women can use spirit possession to exert mystical pressure upon their superiors. Mr Qongqothwane, formerly a priest, is now an alcoholic. Society expects women to be inferior and subservient to their husbands. Although Mr Qongqothwane did not approve of his wife's intwasa his family and friends convinced him that his wife needed treatment. Society will now condone Mrs Qongqothwane for behaving and feeling superior to her husband. She is now regarded as a gifted person, whose skills are even better than those of most traditional healers. She can use both healing methods.

Black nurses working in a biomedical health system are caught in a dialectical tension. They are socialised to two belief systems about health and healing; the traditional health belief system and the acquired belief system (Barbee, 1986). This argument could be true for other people in the medical profession. Some may choose to reject their traditional beliefs for modern beliefs, while others may adopt a position of peaceful coexistence.
3.4 DISCUSSION

It is clear that people have different definitions of illness. These may range from a functional definition that relates to inability to function normally, to a change in feeling states, where the occurrence of pain is the determinant. Behaviour is also cited as one way in which other people become aware that a person is ill. Some of the respondents admitted taking health for granted as if it was their right to be well. Man is naturally healthy and illness is exogenous, due to an evil will or some noxious elements. Others felt that everybody consciously or unconsciously strives to be healthy. Because illness is also indogenous everyone carries it in his embryo (Herzlich, 1973).

There are differences between physical illness and psychological or mental illness. The former is characterised by the presence of pain. One can explain what is wrong or even point out the affected part, whereas in the latter case the patient may not even be aware that she/he is ill. It is not uncommon, however, for physical illnesses to be relabelled mental illnesses or 'illnesses of the people' particularly if the illness becomes chronic and does not fit the normal explanatory models for physical illness.

The study also showed that people use three systems of belief to explain illness. Some illness are perceived as natural illnesses ie those that can be treated with Western medicines. There is another type that can be treated with traditional medicine. Traditional medicine, nevertheless, fails to treat other
types of illness. These are treated with spiritual or faith healing but people often do not use the three types at once. The use of two medical care systems should create problems particularly regarding attributions of health behaviour and compliance. The patients claim to use one type of medical care at a time. When there is no immediate improvement then they move over to another one, a characteristic of doctor-shopping behaviour. When one is the breadwinner becoming ill is likely to be perceived either as being inconvenient at the time or a sign of weakness, particularly in males.

It is members of the society, colleagues, neighbours or friends that help in the definition of sick behaviour because "the cause of mental illness is not in the body itself but in the society."

Mental illness is much more serious than physical illnesses because with physical illness one can learn to cope with the illness whereas this is not so with mental illness. Also society tends to have certain attitudes towards the mentally ill -

"it is a weakness to suffer from mental illness". Again the theme of weakness as an undesirable element comes out.

When anyone is ill many factors have to be considered before the patient is taken to seek health care. These are such factors as the perceived aetiology of the disease, the cost of seeking medical care, the convenience of seeking
help then and determining which of the providers of health care should be consulted. The options available are the state clinics, hospital, the private doctor, the traditional healer and the faith healer.

The family may not reach consensus as to what type of medical care should be sought, as is true of Mrs Mngqusho. If the patient is financially dependent on the other members of her family she/he may be forced to take whatever action the family recommends. This may result in a conflict of belief systems and this could affect recovery because belief can cause illness, it can kill and it can heal also (Khan, 1985).

The main difference between traditional medicine and Western is that, the traditional healer tells the patient what is wrong with them whereas the modern doctor asks this information from the patient so that a diagnosis can be made. Both cases of alternative medicine cited here, Mrs Xakekile and Mr Bhaqolo, were impressed by the accuracy of their healer's diagnosis without their help. "She actually told me everything about myself that I know already and also explained other things that have been puzzling me". In countries where people have several belief systems it becomes difficult for Western medicine to claim any success.
3.5. CONCLUSION

This study was an attempt to establish what illness means to people. Because of the sample size one cannot, however, be able to generalise these findings to the rest of the population. The study does, however, give the reader an idea of people's perceptions of illness and health.

Although some of the informants in the study said they could not afford to be ill they felt that if they were ill or suffered a handicap they would be able to deal with it. Chronic illnesses such as cancer created problems though.

The study did not address people's attitudes to colour of medication because its main aim was to determine definitions and attitudes to illness and health care seeking behaviour so as to lay a foundation for the major study. Another aim of the study was to establish if people have different belief systems regarding health.
CHAPTER FOUR: SOCIAL REPRESENTATIONS AND ATTRIBUTIONS

4.1. INTRODUCTION

The motivation for this research was Ngubane’s book on “Body and Mind in Zulu Medicine (1977). When she writes on colour symbolism in traditional medicine she refers to the colours that are used traditionally by the Zulus to treat disease. She asserts that each colour is of symbolic importance. The order in which the colours are prescribed is important too. The Zulu, according to this author and Bryant (1966) and Berglund (1975) believe it is the colour of medication rather than the pharmacological properties of the medication that are important in treatment. The Zulus and the Mende of Sierra Leone (Bledsoe and Gouband, 1985) attribute efficacy of any treatment to its colour.

This chapter will look at the definition and meaning of social representations and attributions as these are the main theories that form the basis for the study.

Knowing the respondent’s social representations and attributions of illness and colour in the treatment of disease will enable one to see why they think colour is significant in the treatment of disease.
When symbols are used in a particular context by certain people in a certain circumstance, one of their associations is selected as relevant while the others are ignored (Hallpike, 1979). These Moscovici (1981, 1984) refers to as the social representations - a set of ideas, statements and explanations originating in daily life in inter-individual communication; the myths and belief systems in traditional societies. The meaning symbols have for people is based on two things, what to do with it and what they say of it.

It seems possible that colour of medication adopts an incidental meaning in that colour becomes associated with the effective treatment of a specific illness, whereas it is the pharmacological properties of the medication that have the healing effect.

Anthropologists like Levi-Strauss, 1963, Turner, 1967) assert that:

1) humans have a general ability to build associations based on contiguity or similarity and to use them as described by classical associationists. Among the Ndembu, for instance, white is commonly represented by powdered white clay (mpemba or mpeza, red by powdered mukundu, ng’ula, mukungu) and blackness by charcoal (makala) (Turner, 1965).

2) a finite subset of these associations is learned as part of the acquisition of the culture, for example, white among the Zulu and Xhosa of South Africa is known as the colour of abaphantsi, the shades.
3) subjects learn to give preference to these cultural associations (Foster & Brandes, 1980).

Jahoda (1988), Moscovici & Hewstone (1983) and Moscovici (1984) believe that anyone who is looking at cultural or social attributions should look at representations first. Each society has its own culturally and socially sanctioned explanations or range of explanations for phenomena such as health, illness, poverty, success etc. In Western countries individualist explanations are more prevalent because of the dominant representation of the person as the locus of responsibility in all actions and processes (Augustinos, 1991, Kashima et al, 1992). The situation is different for developing countries where explanations tend to be collectivist and causes of illness, for example are externalised.

4.2. SOCIAL REPRESENTATIONS:

Every individual is, according to Moscovici (1984) surrounded by images, ideas and words. The function of representations is to give these, form and meaning. These are established into a model that becomes unique to a certain group of people. The representations are prescriptive, imposing themselves on us with an irresistible force. Representations circulate, merge attract and repel each other and give birth to new representations while old ones die out. The representations are created by people, they are a consensual universe that develops in the areas of our lives where the scientific
model is not dominant (Carugati, 1990). They serve to translate difficult formulaic principles into ordinary language (Parker, 1989).

Parker (1989) sees the social representation theory as the theory that promises to dislodge attribution theory from its grip on the discipline of social psychology. Social representation theory is, however, a controversial theory which has instigated some debate.

4.2.1. DEFINITION OF SOCIAL REPRESENTATIONS

The concept of social representations derives its origin to what Durkheim referred to as collective representations. The collective representations were, according to Durkheim preestablished and they excluded any active process from the individual group concerned. Jahoda (1988), maintains that the collective representation theory was relevant for dealing with small homogenous cultures. In today's diverse and heterogenous cultures it is difficult to apply. The distinction between Moscovici's social representations theory and Durkheim's collective representation theory is not clear (Jahoda, 1988). It appears that Moscovici (1988), does not see a difference between the two, he maintains that it is just a change in terminology.

Moscovici (1973) defines social representations as cognitive systems with a logic and language of their own. They represent theories that are used for the discovery and organisation of reality. Social representations are thoughts and
knowledge that are shared by members of a social category. They are consensual universes of knowledge socially created through social interaction and communication by individuals and groups (Echabe et al, 1992).

One of the controversies surrounding the definition of social representations is the statement; "they are prescriptive, that is, they impose themselves upon us with an irresistible force". Members of a society are portrayed by Moscovici as passive receptors, yet they can think for themselves and communicate their social representations (Jahoda, 1988). Sotirakopoulou (1991), writes that not all social representations come as a set of prescriptive ideas that are imposed upon individuals. It is only such representations as traditions that are inflexible. Others are actively created by people. They change or cause others to change, before they become a social representation they are negotiated and argued.

In traditional African cultures, it is the elderly, "the wise ones" who offer an explanation. The explanation then becomes common knowledge or a social representation.

4.2.2. SOCIAL REPRESENTATIONS AS CONSENSUAL UNIVERSES

Moscovici sees social representations as consensual universes of thought in which things are more agreed on than demonstrated. This is contrary to the scientific approach, where demonstration of an event is the norm. Social
representations emphasize consensus at the expense of diversity (Hewstone, 1985). It is therefore necessary to specify a particular level of consensus (Potter & Litton, 1985).

One of the major criticisms levelled against the theory by authors like Jahoda (1988) is its lack of a formal definition. Moscovici and Hewstone (1983) argue that the theory allows some degree of flexibility. It is perhaps this flexibility that is creating the debate.

Social representations imply diversity, representations are in the making, in the context of interrelations and actions that are themselves always in the making. Does this imply that they are irreproducible and inconsistent? In answer to this Abric (1984) asserts that social representations have a nucleus which is stable and unchangeable. Changes to representations occur at the periphery. In a similar vein Diop (1967) sees those parts of culture that change as those that are not strong.

The social nature of social representations implies that the theory allows for the explanation of variation (Emler, 1987). Social representations need to be examined at different levels to see which ones form the core and therefore remain unchanged over time. Group membership should be seen as time and context specific (Potter & Litton, 1987).
4.2.3. ANCHORING, FAMILIARISATION AND OBJECTIFYING:

Anchoring forms the basic tenet of the social representation theory. By this, Moscovici, meant that whatever is unfamiliar and intriguing for a people acquires qualities and characteristics of an exiting concept and then it ceases to be a threat. Carugati, (1990) believes that if anything is compared with a specific system, the strange and unfamiliar can be explained. The already existing belief systems constitute a part of the objective knowledge of individuals and the ones that become the subjective part of departure and the frame of reference for the new and unfamiliar.

Jahoda (1988), argues that there is no evidence that what is unfamiliar and threatening is turned into familiar by being a representation. Unfamiliarity can play the same role as curiosity and attraction to novelty. Furthermore, it may be difficult to prove familiarisation. The theory undermines the ability of children to think and perceive.

There is, perhaps a need to study the social representations of children at different age levels to see which representations remain after a certain period of time.

Sotirokopoulos (1991) asserts that people do not anchor new information unthinkingly. In traditional societies, arguing and questioning of representations is not encouraged. The tendency is to anchor whatever is
new to pre-existing belief systems. If the colour of medication is considered to be important it seems possible then that modern medicine may be attributed with certain properties of traditional medicine. This would make modern medicine acceptable and unthreatening. Anchoring, may not always lead to familiarity, but perhaps acceptance, because acceptance does not imply familiarity. What seems unfamiliar for a group can be transformed and accommodated in a modified form by means of interpersonal communication (Jahoda, 1988).

Moscovici (1988) criticises Jahoda for considering the unfamiliar as being based on intellectual uncertainties. Is it not through intellectualising, trying to understand how the 'mysterious tablet' and injection, both of which are new to traditional people that social representations are arrived at?

When the unfamiliar is compared to a specific familiar system, the strange and intriguing, according to Moscovici (1984), can be explained and understood. This is, however, not always guaranteed. People sometimes will not question issues that are not easily explained. This is a characteristic that is typical of Africans and perhaps forms the basis of a lack of assertiveness in them.

Is it not possible then that what Moscovici (1981) terms, 'anchoring' occurs and Western medicine is incorporated in the traditional African's network of categories? According to the theory of anchoring when Western medicine is assimilated to a typical member of the healing methods it would then take the
characteristics of traditional medicine. Because Western medicine is quite unfamiliar to the African, to become acceptable, "it may have to suffer transformation in the direction of the familiar" (Bartlett. 1932, cited by Moscovici, 1981)

The process of objectifying is seen by Moscovici (1984) as being far more active than anchoring. "It saturates the idea of unfamiliarity with reality, turns it into the very essence of reality" (p.38). It takes place when the unfamiliar is turned familiar. According to Breakwell (cited in Sotirakopoulou, 1991) it is through objectifying that abstract knowledge, science and scientific knowledge are transferred into representations and result in being domesticated into everyday discourse.

Culturally agreed upon explanations come to be regarded as common sense explanations. These are learned and communicated through language. Every member of a group by birth or otherwise has the group’s representations impressed on him or her. These representations restrain one’s attitudes and perceptions and one’s attachments and avoidance of objects. They mediate an individual’s construction of reality (Moscovici & Hewstone (1983)
4.2.4. SOCIAL REPRESENTATIONS AND CULTURE.

One of the definitions of culture is that it enables a group of people to adjust to its recurrent problems. Culture is learned and the result of this learning is the establishment of habits in a particular group (Berry et al, 1992). This explanation of culture seems to embrace the whole concept of how representations are made. Social representations deal with social reality, in a structural and cultural sense. They are social in origin and shared by people (Jaspars and Fraser, 1984).

Social representations must (my parenthesis) the central parts of culture (Jahoda, 1988). Social representations that are unique to a certain group of people are part of their cultural belief systems. Moscovici maintains culture is not social representations and cannot be studied by the social representation approach. To him, culture is separate from representations because culture belongs to a reified universe rather than a consensual universe. It is related to social representations as a symbolic meaning that is referred to for explanations. It is employed to facilitate and to direct behaviour. Jahoda (1988) sees culture as an integral part of social representations otherwise it becomes difficult to understand how it can be independent and separate from social representations.

The social representation theory despite some of the controversial issues listed above remains a relevant theory for research that looks at people's belief
systems. The fact that Moscovici thought it up and opened a field of research is not proof of its distinctiveness (Moscovici, 1985). It is a theory that offers a plausible explanation of human behaviour in a changing society.

The study on social representations of illness will establish what labels and reasons people give for illness. Leventhal, Meyer and Nerenz (1982) maintain that representations of illness involve:

a) a label for the illness
b) consequences of being ill
c) a time line
d) the cause of illness.

To these, Lau & Hartman (1983) add representations about the cure for the disease; how one goes about recovering from the disease. Mechanic (1977) believes that these representations could have been learned early in life - a result of a person's early experiences. Lau (1982) refers to these early experiences as the uncontrollable health locus of control beliefs. Social representations of illness always offer an explanation (Mechanic, 1977).

Reasons for becoming ill and for getting better are often culturally defined. They are often defined along lines familiar from attribution research (Lau & Hartman, 1983). Reasons for recovering are often related to more general health beliefs and sometimes to the performance of related preventive health
behaviours. In Africa, performance of rituals for the curing of disease are common. Africans also believe that colour is significant in the treatment of disease.

The study hopes to establish if Zulus, Xhosas and Sothos believe that colour is significant in the treatment of disease and the attributions given for getting better.

4.3. ATTRIBUTIONS

Attributions are used by people so they can make sense of themselves and their environment. They also help the individual to anticipate future occurrences by providing the means by which commonsense explanations of behaviours and events can be tested. Attribution theory requires an understanding of the natural process in which the process being studied occurs.

According to Shaver (1975), attribution theory is based on the commonsense observation that human beings try to understand their experiences and perceptions by assigning causes to them. Jahoda (1988) maintains that it is the individuals, not the groups or societies who do the thinking and the attributing. They do so, however, based on widely circulating information, a cultural information pool. Culture provides a context for attributional processes. What constitutes objective knowledge is often framed in terms of
culturally variable concepts. These are acquired during development and are
passed on through communication from generation to generation. They offer
culturally determined ways of interpreting experiences.

Attribution theory is interested in common sense explanations that people
make. The African knows very little about medical terms such as antibiotics,
anxiolytics etc, so he uses that which is simple, familiar and uncontroversial -
colour of medication. Colour has always been part of their everyday
existence. Black and white symbolise lightness and darkness, red they see in
their sacrificial rites or its in their veins and green surrounds them. The lay
person, according to Moscovici and Hewstone (1983) is always consuming,
digesting and transforming scientific knowledge into simple everyday
language.

Culture, has until recently not been considered an additional necessary and
independent influence on the attributional process (Miller, 1984). Similarly,
traditional healers were shunned for a long time. Attitudes towards them are
changing now. "Scientists do not know that; all the while they are fighting in
people's minds against accepted forms of language and thinking, they are
imposing new perspectives on the lay person" (Moscovici and Hewstone, 1983
p101). Is it possible then that to perpetuate the mystery surrounding
traditional healers, they decided to talk about colour rather than the properties
of their medication?
4.3.1. THEORIES OF ATTRIBUTION

Heider (1958), believed that the job of the perceiver was to detect whether a given act was due to something within the person performing it.

The action that is observed could have positive or negative consequences and that the perceiver believed that the action that he observed had been uniquely conditioned by his presence (Jones & Davis 1965).

To Kelley (1967), the principle of covariation was used to explain both attributions made for the behaviour of other people, attributions that were made to oneself for internal feeling states.

Hewstone (1983), believes that the attribution theories have been rather individualistic in their explanation of the behaviour of people. He suggests a social extension that should look to the shared beliefs that underlie attributions that are common to members of a group or society. Socially shared patterns of individual’s thoughts, feelings and behaviour are according to Hewstone and Jaspars (1984), the building blocks for any social approach. These are different from the individualistic phenomena that underlie most traditional theories in social psychology. Buss (1978), criticises the attribution theory. It is a theory that stands for a general perspective and or problem orientation rather than for a theory.
Semin (1980), believes that attribution theory disregards the role played by the “complex heritage of centuries of preinterpreted experiences distilled by human beings and constantly and systematically handed down to their offspring” (p.291). Attribution theory tends to ignore these social representations. Deschamps (1983) believes that attribution theories seem to apply to an isolated individual detached from the social context and passive to the world that surrounds him or her.

Two major criticisms that have been levelled against attribution theories by Augustino (1990) is that it exaggerates the tendency for people to seek causal explanations for everyday occurrences. It is possible that people do not make attributions all the time. It is only when they are asked about the attributions that they make them.

The second criticism of the theory is that it has been asocial. It isolates the individuals from their environment. Also, certain typical results in attribution theory may be true only at certain time points in an interaction (Lau, 1984). He suggests that time is an important variable in attribution research. Researchers need to examine whether the attributions are made at one or at multiple time points. Changes at the periphery of attributions suggests that attributions are made at multiple time points.
A study by Hewstone, Jaspars and Lalljee in 1982, demonstrated that there was a strong correspondence between a group's attributions and the beliefs that the members of the group shared.

Attribution theories do not study the truth of the phenomena, rather they look at varying accounts. They accept each person's interpretation in its own right.

4.3.2. CULTURE AND ATTRIBUTIONS

Hewstone (1983) writes, "we seem to know quite a lot about interpersonal attributions, somewhat less about attributions in intergroup contents and precious little about societal foundations of explanation" (p.15). In other words little is known about the cultural foundations of attributions. Detweiler (1978), believes that culture can have an important impact on certain contexts of the attribution process. People are constantly classifying the world around them to be able to deal with it. Events that are similar have to be treated as equivalent - thus creating categories into which these equivalents can fit.

Hewstone & Jaspars (1984) suggest that by focusing on the context in which attributions are made it is possible to use the term 'consensus' in a more social way. If the representations are social, they should be known to the individuals. Attribution processes are based on beliefs about the social world - social representations (Deschamps 1983).
Colour of medication is given the attribute of effectiveness through, perhaps a process that Lalljee calls global association where an (actor) is held responsible for acts that are in any way associated with (him).

Why do people attribute effectiveness to colour? Semin and Manstead (1983) write that accountability is a human artifact, with social rules and conventions. While such human artifacts may be culturally relative in their expression, their existence in some form is an essential and inescapable feature of human coexistence and a necessary condition for the creation of a mutually shared reality. Gergen (1973) sees accountability as nothing but a historical documentation within a broader temporal conception of science.

This knowledge is, according to Miller (1984) not acquired through processes of autonomous individual discovery but it requires the communication of culturally derived conceptual premises for interpreting experience. The Zulus, according to Ngubane, 1977, believe that colour is significant in the treatment of disease. This information, it seems, is translated from generation to generation of traditional healers and other members of the population.

4.3.3. ATTRIBUTIONS OF ILLNESS:

King (1983), maintains that the way a person explains or interprets the cause of his or her illness influences beliefs about the illness. These affect the behaviour of the individual. This behaviour could range from the nature of
medical care sought to whether or not the prescribed treatment makes sense to the patient or those around him (Stimson, 1974, Steffersen & Colker, 1982) who have taken the responsibility of seeking professional health care for the sick person.

Morris & Kanouse (1979) contend that making erroneous attributions can have some serious consequences for drug taking and could result in non compliance. They recommend that patients should be helped to make correct causal attributions to drug, disease and other environmental factors.

Doctors often do not bother to establish patient’s attributions of illness. This could result in non compliance, a lack of confidence in both the doctor and the treatment, or sometimes a move away from biomedicine to traditional medicine. Nearly all patients entertain some attributions about their condition and often want to know what the diagnosis is. They are not just preoccupied with the attributions of illness. These attributions influence them in their approach to treatment as well as management of their condition.

Is it possible then that if the illness is perceived as chronic and serious, they expect treatment with certain properties, for example in developing countries, an injection (Mfenyana, 1984, Mkumatela, 1986, Zorza, 1982) or tablets, mixtures of a certain colour.
4.3.4. TRADITIONAL MEDICINE AND ATTRIBUTIONS:

Traditional healers are members of the society in which they live. Thus they understand the culture of the patient and the representations attached to both the illness and its treatment. Stockle & Barsky (1980), maintain that causal explanations provide control because they give personal meaning to bodily discomfort as well as suggest what action should be taken. These causal explanations are often shaped by the patient’s personality, prior knowledge and experience, cultural beliefs and characteristic defence mechanisms.

South Africa, like other African countries has a higher ratio of traditional healers than modern doctors (Swaziland - Green, 1985, Zimbabwe - Nyazema, 1985, Mali - Helscher & Sommerfeld, 1985). Traditional healers are found in all villages and townships. There is therefore, easier access to them than to Western medical care. Snow (1974), sees the presence of an alternative medical system, which is different from and even in direct conflict with that of the health professional as a source of problems. He maintains that these beliefs may greatly colour the doctor - patient relationship and influence the decision whether or not to follow the doctor’s orders. It is perhaps important that traditional medicine should not be seen as being in direct conflict with modern medicine but it should be seen as an alternative health system that people opt for when other systems do not work.
Foster (1978), maintains that evidence is overwhelming that in countries where traditional peoples have had access to modern medicine for a generation or longer and where this medicine has been of reasonably good quality, the battle has been won and scientific medicine is the victor. This, however, is not true of South Africa, a country that has had more than a generation of Western medicine. South Africa was a pioneer in heart transplant surgery, yet one still finds in this country alternative medical systems. Perhaps one needs to accept that alternative medicine will always exist in all countries however developed those countries are.

Most African societies have alternative health care systems. Frankenberg & Leeson (1976), point out that in Lusaka, the ngonga's (traditional healer) patients are often a population of survivors, the patient and the illness having survived Western medicine. Western medicine is often perceived as strong and quick acting and is therefore the treatment of choice. It is only when there is no immediate relief that traditional medicine is considered, as the illness is now relabelled 'the illness of the people'.

Nichter (1978) reports that in India, a traditional referral network has emerged. When a curer is unsuccessful in treating an illness, he may ask an astrologer to determine what aspects of the condition have been left untreated. Parker (1988) acknowledges that Western medicine is not considered the proper remedy for every affliction.
Most English speakers find it functional to group the colour spectrum into eleven most frequently used categories (Berlin & Kay, 1969). In a similar vein Africans categorise their colour spectrum into three or four of the most used colours in their world. These are the colours used mostly in rituals: black, red and white. The fourth colour is green, it is the colour that surrounds them. This of course does not mean that they cannot identify the other colours, it is more functional for them to group the colours into these three or four category widths. Similarly, the Hanuno of the Philippines and southern Indian languages reduce their colour categories into four (Conklin, 1955). None of the four colours is further reducible (Conklin, 1955, Beck, 1969).

Literature written on colour symbolism in the African countries abounds reference to the three colours red, black and white. The theory of category widths is the only plausible reason there is no reference to any of the other colours except green, which in most African languages has the same term as blue.

4.4 CONCLUSION

Behavioral theorists maintain that beliefs are learned. These are often learned through socialization. Attitudes to colour in the treatment of disease are also learned either during socialization or through what Skinner refers to as accidental leaning. Jahoda (1969) writes that according to Skinner, superstition in human society involves verbal elements that are passed on
through generations. These could have started with accidental learning and been subsequently sustained by similar ones. This is how social representations are learned.

Social representations form the basis of social attributions. The social perspective of attributions stresses that individuals belong to different social groups and should not be detached from this social context. The study hopes to address social representations of health and illness and the role of colour in the treatment of disease.

Behaviourists view development as a function of learning, while learning depends on experience. The idea of reinforcement maintains that a stimulus event that follows a behaviour increases the likelihood or probability that the behaviour will occur again. Along with Skinner's work came another phenomenon called 'superstitious behaviour' - behaviour that is accidentally reinforced. It is unplanned learning that takes place when a behaviour (health behaviour in this case) and a stimulus (red capsule) acting as reinforcer when a person feels weak after a long debilitating illness, are inadvertently paired together, often based on coincidence alone. They are behaviours that have been learned through the accidental pairing of the behaviour with some condition in the environment. Is it not possible then that the colour treatment associations that people have particularly regarding Western medicine are a result of this phenomenon?
This study will address the attributions of the health behaviours of the Xhosa, Zulu and Sotho people of South Africa to the colour of medication. Chapter Two reports on studies that show that the Africans attach a lot of significance to colour especially in the performance of rituals that are used to treat disease. Is it possible then that this colour significance is carried over to Western medicine?

Is it possible that the effectiveness of the tablet is discounted as an element in the causal factors, because the colour is visible and therefore its presence is acknowledged?

This study looks at social attributions among the Xhosa, Zulu and Sotho. Bond (1983) believes that the crosscultural approach to attributions is one that compares the extent or type of attributional activity across different cultures. Bond believes that people in developing countries make attributions when asked. Similarly, the traditional healers in this study did not talk about colour in the treatment of disease until specific questions were asked (see Chapter Six). It is difficult for a researcher to know how often the attributions are made in everyday situations (Bond, 1983).

It is also difficult at times to know how the attributions are arrived at. Perhaps this is because common sense is a body of knowledge that is accepted by everyone, no-one bothers to ask how the explanations are arrived at.
In traditional societies if the younger generation question certain well established beliefs they are labelled "children of the modern era" or "onoyawakhontoni" "those who are always wanting to know about things".

There is a need for researchers to try to delve deeper into the processes of attribution formation. When dealing with people from developing countries, one has to try to understand not only their language and culture but their logic as well otherwise one may find that they are imposing their attributional approaches onto the people from these cultures.

Social psychology is, however, still very weak as regards theories relevant to studies in developing countries (Jahoda, 1980). It is important that theories applied in these countries should take the issue of social change into account. These studies that will be reported in this thesis aim to show that, although traditionally, Africans may have certain belief regarding colour of medication, social change has modified their attitudes, beliefs and values to a certain degree.

The study will test the following hypothesis:

1. Colour symbolism in modern medicine is due to coincidental reinforcement. Effectiveness is attributed to colour more by respondents with a traditional orientation than it is by those with a modern orientation.
2. No significant differences will be recorded between urban and rural respondents' perception of colour in relation to treatment.

3. Older respondents are more likely to have a traditional orientation than younger respondents.

4. Red and Black tablets are likely to be perceived as more potent than all other colours.

5. Red tablets are likely to be perceived as more active than white tablets.

6. People with low levels of education likely to be traditional in their orientation than those with higher levels of education.

7. Respondents with a traditional orientation likely to be less compliant than those with a Western orientation.

8. Respondents who believe that colour is significant in the treatment of disease are less likely to be compliant.
CHAPTER FIVE: METHODOLOGY

5.1 INTRODUCTION

Research among Xhosas in the Transkei (Mkumatela, 1986) revealed that they have certain expectations regarding the colour of medication that they receive from doctors. It became necessary therefore to test these expectations and see whether they were true of the three largest population groups in South Africa, namely, the Sotho, Xhosa and the Zulu. It was also necessary to check whether these views were held by both rural and urban respondents.

The approach which was adopted in this study is that which is recommended for research in developing countries, eg

a, questions were translated into the vernacular for all members of the illiterate section of the population

b, income was not included in the definition of socio-economic status, as it is very difficult to determine in Africa (Hoffman, 1967).

c, Likert-type rating scales were only used with pictorial rating scales. The reading out of the possible responses only creates confusion for the respondent. Furthermore an element of bias could be introduced as the researcher may stress the responses that he wants the respondents to make.
Patients in hospitals in the Transkei, Zululand and The Rand Mutual were interviewed as well, to establish if there would be any significant differences between people receiving treatment and those who were not. The Rand Mutual is a mine hospital in Johannesburg. It is owned by the Chamber of Mines. Patients are referred from all the mines in South Africa.

5.2. PROBLEMS OF CONDUCTING RESEARCH IN THIRD WORLD COUNTRIES.

There are numerous problems that researchers in Third World countries report. Listed below are some of the problems encountered in collecting data for this research and the ways in which they were resolved, where possible. Some of the problems are, however, not unique to Third World countries only.

5.2.1. POLITICS AND ETHICS IN SOCIAL RESEARCH:

Whatever the origins of a research project, research in the social sciences often raises questions of politics and ethics. Politics in one form or another do impinge on the study - from the initial choice of a topic, choice of research site, choice of population up to the interpretation that is made of the results of the study (Warwick, 1983). Permission to collect data in the Ciskei was not granted to the researcher. The Transkei was reflected as the place of birth in her identity documents.
In order to enter one homeland permission had to be obtained from their Department of Health. This was granted after months of negotiations. This involved submitting not only a research proposal and questionnaires but also a letter of recommendation from the University.

Road blocks are not uncommon in the country. This often means taking out all the questionnaires, clothing and books from the car and having them scrutinised. Entering Government premises also entails such scrutiny, having one's clothes etc. dumped on the ground and left there for you to repack. This can be very humiliating and frustrating if one is rushing for an appointment. Cameras are also seized.

Follow-up interviews in Soweto were problematic. The current violence made it impossible for researcher to visit certain areas. Respondents living opposite the hostels were not followed up as there is random shooting in the vicinity of the hostels. In some areas the researcher was offered two male escorts to protect herself and to ensure that her car was not hijacked.

Ethics on the other hand deal with the questions of morality and with the proper standards of human action. No research in the social sciences is immune from such questions as informed consent, harm resulting from research findings and policy recommendations based on evidence that is flimsy.
Cross-cultural studies raise both ethical and political issues because what is considered normal and is accepted in one society may not necessarily be considered normal in another.

It is clear from the above that research in developing countries is fraught with problems. Social research, irrespective of where it is conducted has its own problems, the major ones are validity of the study and the reliability of the findings. It should be remembered that man is dynamic, so his attitudes may change with time. It is only those attitudes that are strong in any traditional culture that are able to resist change, all others become replaced by new ones.

5.2.2. WHY DO A CROSSCULTURAL STUDY?

It is not uncommon for propositions to be stated as if they applied to all cultures e.g. Africans attach a lot of symbolic significance to colours. The universality of such propositions and the culture bound nature of these theories needs to be examined. Findings can help in the development of certain theories and also open up new avenues for research. The other reason is for the researcher to increase their range of independent variables of interest (Brislin, Lonner & Thorndike, 1973, Jahoda M, 1961).
5.2.3. LINGUISTIC EQUIVALENCE

In cross-cultural surveys, there should be linguistic equivalence within the languages. Iyengar (1983) maintains that validity within languages implies that the indicators measure what they purport to measure in each language. This requires that questions be translated into other languages in such a way that they retain their meaning. He suggests that this can be assessed by comparing correlations among sets of indicators purporting to measure the same concept in different languages. Another method which could help eliminate error in the translation of text into different languages is to translate the text into the vernacular then back-translate the translated script into English. If the back-translations are the same then linguistic equivalence has been achieved.

In order to control for uniformity of language used in the interviews and the adaptation of questionnaire content without loss of message, questionnaire translation was done at the South African Broadcasting Corporation (SABC) for all three languages by language advisers. The questionnaires were translated into Sotho, Zulu and Xhosa. These were then backtranslated into English. Differences in the backtranslations were edited and modified until all backtranslations into English were the same.
5.2.4. SAMPLING

Sampling text books were not written with developing countries in mind. The standard approach to sampling suggests how random, stratified or quota samples can be drawn up following certain principles. In developing countries where there are a lack of street plans in rural areas, and most people do not own a telephone, it becomes difficult to apply the conventional rules of sampling. Even in urban areas where housing is a problem, there is often no residential definition according to type of housing or ethnic grouping.

The method used for sampling in the rural areas for this study was the random walk plan. Routes leading into the villages were examined, houses were then sampled along these routes. There is still the question of how representative of the total population the sample was? This is a question that cannot be answered satisfactorily as there are people who live in areas that are not accessible by motorised transport. Floods in the country also made it impossible to reach certain areas which under normal circumstances would have been accessible.

5.2.5. KNOWLEDGE OF CULTURE:

Although there are similarities between the cultures of the three groups studied, there are nevertheless important differences. For example, in some cultures you announce your presence by greeting before entering the house.
The researcher set aside a week for orientation purposes before embarking on a study of any of the groups, particularly those in the rural areas.

Before entering a traditional healer's consulting room shoes have to be removed and there are no chairs. People sit on grass mats that have been spread out on the floor. Before a traditional healer can talk one has to make a donation (see Addendum).

5.2.6. USE OF TAPE RECORDERS:

These were used for the interviews with the traditional healers and the case studies. Some traditional healers insisted on seeking and gaining permission from their ancestors. This was often a lengthy ceremony. The researcher had a problem with the tape recorder in one such interview. The other traditional healers attributed this problem to the fact that the healer in question had not requested permission from her ancestors.

5.2.7. COURTESY BIAS:

Jones (1983) lists among the characteristics of courtesy bias hospitality in the form of shared food. It is not uncommon in developing countries if one arrives when people are having a meal, to be asked to share. This often involves eating from the same plate or dish as one of the family members. This can create problems for the researcher as refusal may not be taken kindly.
especially if the researcher is still hoping to interview one of the members of the family.

5.2.8. LACK OF PRIVACY:

Another problem which has been identified by researchers, which appears to be unique to developing countries is lack of privacy. In traditional societies life tends to be centred around the family, kinship group, clan, or village, furthermore village life sometimes is communal. More often than not the interviewer has to administer the interview schedule in the presence of members of the immediate family, assorted cousins, aunts, uncles and groups of curious bystanders (Girard, 1963)

Mitchell (1984) argues, however, that the presence of a third person can be advantageous especially to provide information that the respondent either does not know, is vague about or does not want to know. Other researchers have reported incidents where the Chief of the village chooses who in the village should be interviewed. In some cases the chief himself would be present during the interview. This naturally inhibits the respondents as they can only make responses that are acceptable to the chief.

This was one of the problems the researcher had to contend with. Some traditional healers would only grant the researcher an interview in the presence of their apprentices. Some women refused to be interviewed on their own
because they felt they would not be able to answer the questions on their own.

In some of the villages, the *induna*, the local representative who reports to the Chief, insisted that he attends some of the interviews. This obviously limited the responses.

5.2.8. **BEING A FEMALE RESEARCHER:**

Some societies segregate the sexes, women who frequently move outside the house are considered to be morally loose. If single, society thinks one should have a husband or a protector who is male. If married, the favourite question is 'what type of husband is this who allows you to go out alone like this, or have you given him *korobela*? This is a concoction given by traditional healers to make husbands servile and understanding.

5.3. **TOOLS OF RESEARCH**

Social scientists have identified a number of tools for collecting data which are applicable in this type of research environment. The following methods were adopted for this study.

a, questionnaires with Likert type rating scales

b, experimental techniques

c, projective techniques
5.4. THE STUDY

5.4.1 THE HEALTH BELIEF QUESTIONNAIRE

In order to determine whether respondents had a traditional or a Western orientation, a Health Belief Questionnaire was administered. This is a 16 item questionnaire which was designed by Dressler (1980) to determine health beliefs among respondents in St. Lucia. It was designed to establish whether respondents were aware of certain belief statements and if they believed them to be true or false. The responses are then used as evidence of commitment. Construction of the test is based on the theory that disease aetiology in traditional societies is perceived as being either naturalistic i.e. a disease just happens or personalistic, i.e. it is attributable to an active sensate object.

Because the Dressler Health Belief Questionnaire cannot be applied universally, it was modified so as to suit African beliefs. Marwick's *Witchcraft and Sorcery* (1970) was used as a guide to Xhosa, Zulu and Sotho belief systems. This modified version of the Health Belief Questionnaire (see Appendix B) was also used successfully in a previous study among the Xhosas in the Transkei (Mkumatela, 1986).
5.4.1.1. LIKERT SCALES

Likert type rating scales were used to establish attitudes to colour of medication.

Oppenheim (1966) reports that the most serious criticism of the Likert scales is its lack of reproducibility, as the same score can be arrived at in many different ways. As such, the pattern of responses becomes more interesting than the total score. Another criticism of the scale is that it lacks a neutral point.

The advantages are:

1, they provide more information about the respondent’s degree of agreement or disagreement and respondents are reported to prefer them to the simple agree/disagree score
2, it becomes possible to include items whose manifest content is not obviously related to the attitude in question so that the subtler and deeper ramifications of an attitude can be expressed.

Pictorial rating scales which were used successfully in a previous study (Mkumatela, 1986), were used for the illiterate section of the population (Appendix A), to explain what was meant by the different categories of the Likert scale.
A questionnaire with Likert type rating scales was administered to help establish people’s attitudes to colour in illness and in the treatment of disease. The questionnaire also attempted to establish whether the respondents attribute the effectiveness of medication to its colour (see Appendix B). The questionnaire took 45 - 60 minutes to administer.

5.4.2. COLOUR/ILLNESS ASSOCIATIONS

Respondents were shown eight coloured tablets (Appendix J). Tablets of the various colours and the same shape were obtained from pharmacists.

Respondents were asked what they thought the tablets could be prescribed for. Only tablets were shown at this time.

5.4.3. MEDICATION PERCEPTUAL CHARACTERISTICS

The informants were asked to say which of the eight coloured tablets (Appendix J) they thought was the most potent, the most active, the most familiar colour and the coloured tablet they thought was likely to cause side effects. The colours used here were; Red, Black, White, Yellow, Blue, Green, Grey and Brown. The same procedure was repeated for mixtures and ointments. Each category was shown separately. The question on side effects was not included for the ointments. The colours used for the mixtures were; Red, White, Black, Yellow and Brown. A sixth colour, Green, was added for the ointments study.
5.4.4. EXPERIMENTAL TECHNIQUES

The application of some laboratory techniques particularly in Third World countries can be problematic as people may find it difficult to relate to certain situations.

Another area of concern is what Bulmer (1983) calls an adequate frame of reference. Lack of an adequate frame of reference makes it difficult for the respondents to imagine certain situations, hence it is not always wise to ask hypothetical questions. Answers to such questions could be highly unreliable and if asked at a later time may not even yield the same response.

5.4.5.1. THE PANTONE COLOUR WHEEL

This was used to establish what colours the respondents associated with a list of ten ailments, which are the most prevalent in the country namely, TB, Hypertension, Rheumatic Pain, Headaches, Colds, Diarrhoea, Sores, Stomachaches and Cancer.

In order to keep the colours used in the study uniform, a total of twenty people were asked to match the Pantone Colour Blocks (matt) with the colours of the tablets, mixtures and ointments used (see Appendix I). The following colour codes were used in the study, white, black, 575, 552, 181, 151, 127, 185, 283, 429, 340, 587, 573, 413, 195, and 186. The blocks were then mounted on a
round frame, which could be rotated. The respondents had to point to the colours but not name them. Pointing the colours out helped to eliminate the language problem. African languages do not have appropriate terms for all the colours of the spectrum. Also, pointing the colours out on the Colour Wheel helped to eliminate any bias that could be introduced by the interviewer through tone of voice.

5.4.6. PROJECTIVE TECHNIQUES.

Artistic impressions of the following categories, a Europeanised African, a Mixture and a Traditional African (adopted from the Pollinac and Robbins Scale, 1972) were drawn up by an artist at a Johannesburg Advertising agency (Appendix G & H).

Traditionally married women dress differently from girls and each of the three ethnic groups used in the study has its own particular traditional dress. It would therefore have been necessary to draw true representations for each of the three groups. A compromise was reached - the traditional impression would represent neither of the three groups, individually. They would have features that are common to all. When these impressions were tested among some respondents they had no trouble in identifying the three groups. There was no comparable problem with the male impressions.
The basic tenet of a self perception scale is that "human beings learn about themselves by comparing themselves with others" (Pettigrew, 1967, p243). The scale addressed two of the constituents that comprise what a person can call 'the me', namely;

a, the material self - body, clothes, material possessions
b, the social selves - all of a person's social selves.

Shaver (1975) writes that there is a single material self, a single spiritual self but multiple social selves. Although the social selves are separate none of them is unique as each one shares at least some common elements with the others. Some respondents felt that they could not categorise themselves explicitly according to the categories portrayed by the pictures as there are several stages between each of the categories shown in the pictures.

Asking the respondents to categorise themselves helped to eliminate the problem of having to explain to them what was meant by each of the categories, thereby introducing an element of bias through suggestion or tone of voice. It was imperative that the researcher explained, when administering this scale what was meant by each of the categories. It was also explained that the terminology used for the categories was not the researcher’s original idea. The explanation was necessary in order to avoid or eliminate any negative inferences that could result from the use of the term 'Europeanised African', particularly under the present political climate in South Africa.
5.5. THE SAMPLE:

Random sampling methods were used to determine who in the population would be interviewed. Every member in the selected population, therefore had an equal chance of being selected in the sample. Because the research was conducted in some rural areas it was necessary therefore to take into consideration such factors as accessibility. The problem of inaccessibility could give rise to problems of misrepresentation and ungeneralisability of findings. Care was taken, however, to ensure that the sample was as representative of the whole population in the area as possible. An assessment of the villages was made before sampling was done.

The sampling method used in rural areas was the random walk plan. Routes leading into the village were examined a day or two before the day data was to be collected. The total number of houses that were easily accessible were counted. The number of routes into the village were also counted. The number of houses divided by the routes gave the number to be sampled.

If there were seventy homesteads and five routes, the number to be interviewed was fourteen. It was, however difficult to formulate a plan that was applicable to all villages, regarding how the houses were to be selected. Houses were selected both from the periphery and from the centre of the village.
Xhosa respondents resident in the Transkei constitute the rural population. The Xhosa population group is found in the Cape Province and in all the other provinces, in smaller groups. There are two homelands for the Xhosas, the Transkei and the Ciskei. The boundary between the two homelands is the Kei River. The study cannot be generalisable for the Xhosa population. The researcher who had documents from the Transkei was barred from entering the Ciskei.
The South African Government's policy of regarding the Transkei as separate and independent from South Africa has not been followed in this study. The Transkei is treated as an integral part of South Africa. Reasons for interviewing informants in Umtata, the capital of the Transkei as a separate group from those resident in various parts of the Transkei, were to see if there would be any significant differences between their responses and those of Xhosas resident in Soweto (Johannesburg) and Mamelodi (Pretoria). Data for the Zulu rural population was collected in Zululand in the Empangeni area (see Fig 5.1 for map of South Africa). Permission to conduct research in Zululand was obtained from the KwaZulu Department of Health, only after a letter of recommendation had been requested by the Government and sent by the University of Surrey.

Sothos resident in Matatiele and Maluti regions were interviewed for the rural Sotho population.

People resident in Soweto, Johannesburg and Mamelodi, in Pretoria, were interviewed for the urban samples. The interviews for the Sotho urban group conducted in Mamelodi (Pretoria). In Pretoria one finds more Sotho speaking people in one area than is the case in Soweto. The population of Soweto is mixed, with people from all population groups living together.
TABLE 5.1. THE SAMPLE

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>PATIENTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transkei</td>
<td>70</td>
<td>9</td>
</tr>
<tr>
<td>Zululand</td>
<td>71</td>
<td>9</td>
</tr>
<tr>
<td>Rand Mutual</td>
<td>43</td>
<td>6</td>
</tr>
<tr>
<td>XHOSA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural Xhosa</td>
<td>72</td>
<td>9</td>
</tr>
<tr>
<td>Umtata Xhosa</td>
<td>71</td>
<td>9</td>
</tr>
<tr>
<td>Soweto Xhosa</td>
<td>71</td>
<td>9</td>
</tr>
<tr>
<td>SOTHO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural Sotho</td>
<td>100</td>
<td>13</td>
</tr>
<tr>
<td>Urban Sotho</td>
<td>98</td>
<td>12</td>
</tr>
<tr>
<td>ZULU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural Zulu</td>
<td>92</td>
<td>12</td>
</tr>
<tr>
<td>Urban Zulu</td>
<td>94</td>
<td>12</td>
</tr>
<tr>
<td>TOTAL</td>
<td>783</td>
<td>100</td>
</tr>
</tbody>
</table>

Sampling in the townships was done according to house numbers. Every hundredth house in each area was included. If a Sotho speaking family lived in the house then the number would be taken off and the researcher moved on to the next hundredth house. Squatter camps were not included in the sampling. Details of sample follow;

Interviews were carried out in various parts of South Africa (see maps 1, 2, 3) during the period October 1987 to July 1988.

A total of 820 respondents were interviewed. Thirty seven questionnaires were not included in the analysis as the respondents refused to complete the questionnaires. This gave a refusal rate of 3.7% and left a total of 783 respondents.
### TABLE 5.2. DETAILS OF SAMPLE BREAKDOWN

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>Transkei Patients from Butterworth and Umtata Hospitals.</td>
</tr>
<tr>
<td>71</td>
<td>Zulu Patients from Ngwelezane Hospital, in the Empangeni area.</td>
</tr>
<tr>
<td>43</td>
<td>Rand Mutual Hospital Patients, a Chamber of mines hospital.</td>
</tr>
<tr>
<td>72</td>
<td>Xhosa rural respondents (resident in different parts of the Transkei.)</td>
</tr>
<tr>
<td>71</td>
<td>Xhosa respondents, resident in Umtata, the capital of the Transkei.</td>
</tr>
<tr>
<td>71</td>
<td>Xhosa respondents resident in Soweto</td>
</tr>
<tr>
<td>100</td>
<td>Sotho rural residents resident in Maluti</td>
</tr>
<tr>
<td>98</td>
<td>Sotho urban respondents resident in Soweto and Mamelodi.</td>
</tr>
<tr>
<td>92</td>
<td>Zulu rural respondents resident in the Empangeni area.</td>
</tr>
<tr>
<td>94</td>
<td>Zulu urban respondents resident in Soweto.</td>
</tr>
</tbody>
</table>

#### 5.5.1. DEMOGRAPHIC DETAILS

##### 5.5.1.1. SEX:

A total of 382 males and 401 females were interviewed for the study. The 43 Rand Mutual Hospital patients interviewed were all male, as this is a mining hospital. A minimum of 40 male patients had been interviewed in the other hospital samples. The researcher’s limited knowledge of Sesotho (the language spoken by Sothos) made it difficult to have a Sotho hospital sample. The hospitals did not approve of having someone else either than the researcher interview patients. Only Zulu and Xhosa speaking patients are included in the sample.
5.5.1.2. AGE:

The median age of the respondents interviewed was 25-34 years. The WHO age classification index (1977) was adopted for this study, so as to make the study comparable with other studies that may have been conducted or that are likely to be conducted in this area, using the classification.

Another advantage of this classification index is that some respondents do not know their dates of birth. The index which uses a ten year interval makes it easier to estimate the respondents' age. The disadvantage is lack of specificity.

5.5.1.3. LEVEL OF EDUCATION:

The level of education was divided into eight categories. It was necessary to use the above categories as number of years or age tends to be problematic. The system of education used in South Africa is different from that used in other countries. The median level of education for the respondents was Incomplete Secondary.

The equivalent of these levels of education according to the British system are; Incomplete Primary is any class below Senior Two. Complete Secondary schooling is almost equivalent to 'O' levels. Complete Matriculation is equivalent to 'A' levels. It is a university entry qualification.
FIG. 5.1 LEVEL OF EDUCATION

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Matric</td>
<td>11.0%</td>
</tr>
<tr>
<td>Complete Matric</td>
<td>14.9%</td>
</tr>
<tr>
<td>Incomplete Matric</td>
<td>6.6%</td>
</tr>
<tr>
<td>Complete Sec.</td>
<td>7.8%</td>
</tr>
<tr>
<td>Incomplete Sec.</td>
<td>12.0%</td>
</tr>
<tr>
<td>Complete Prim.</td>
<td>11.7%</td>
</tr>
<tr>
<td>Incomplete Prim.</td>
<td>23.4%</td>
</tr>
<tr>
<td>None</td>
<td>12.8%</td>
</tr>
</tbody>
</table>

5.5.1.4. **Socio Economic Status:**

Because of a lack of clear cut income categories and a lack of knowledge as to actual income, particularly in rural areas and the dependency of these people on income sent by their migrant sons and husbands (usually not a fixed amount and only about 10% of the total income, Folscher quoted in Rutman, 1976), it was not possible to obtain a socio economic profile that would be valid across rural and urban populations. Nature of occupation was used as a means of differentiating between the socio-economic classes. These were later collapsed according to job requirements. People working in rural areas tend to earn less than their urban counterparts, even for the same job. The typical socio economic status for the
respondents was clerical work or office jobs. The sample distribution showed a positive skewness there were very few people in the sample who were in professional jobs.

5.6. TRADITIONAL HEALERS VIEWS ON COLOUR OF MEDICATION

5.6.1. INTERVIEWS

Interviews were used with traditional healers to establish their diagnostic and treatment patterns, their use of colour in the treatment of disease and their perceptions of colour (Appendix E). The interviewer tried to establish how these were learned. They were asked if recovery from illness was attributable to colour of medication. In order to understand how traditional healers work, the interviewer asked how their knowledge was gained. The interviewer also asked how they were trained.

These conversations were recorded on tape because the interviews were unstructured. Unstructured interviews were used as most of the traditional healers had no experience in answering structured questions.

A total of nineteen Xhosa and Zulu speaking traditional healers were interviewed. Due to communication problems (inability to speak Sotho fluently) it was not possible for the interviewer to do any interviews among Sotho speaking traditional
healers. The interviews were carried out in the traditional healer's home and in some cases in their consulting rooms.

5.6.1. SNOWBALL SAMPLING

Snowball sampling involves using a small group of informants who are asked to put the researcher in touch with their friends who are also asked to put the researcher in touch with their friends until a whole chain of informants is selected. This method was to identify the traditional healers in the different areas. Most traditional healers unlike modern healers are not registered, so tracking them down may prove to be difficult especially because some do not practise openly.

5.6.2. REFUSALS AND NON RESPONSE

Herschfield et al (1983) believe that unless gross errors are made in entering the village there are comparatively low refusal rates in rural areas of developing countries. Curiosity, fear, a desire to be hospitable to strangers and a sense of flattery for being selected for the interview, generally motivate respondents to agree to be interviewed. These authors probably experienced no problems in their survey because they were foreign. The respondents were curious to know what the foreigners wanted. This response is not always guaranteed, however, even if one is a foreigner in a country and conducting a survey. After a while the novelty of having foreigners around, who are often White people wears off. The
fear that these authors refer to could easily lead to courtesy bias. It could also lead to sucker bias. Respondents may give wrong answers deliberately.

The refusal rate among the traditional healers was low. Only two of the traditional healers targeted for the interviews were not available for their appointments with the researcher. Traditional healers are now members of different healers organisations and they have regular meetings. Requests to conduct research are often referred to the president of that organisation. The researcher is then introduced to the members or her proposal is discussed at one of the meetings. It also appears that because they are now called traditional healers rather than witchdoctors, this makes them agreeable to research. Some volunteered this information, saying that they are now registered members of various traditional healers organisation. They see this as some form of recognition by the health authorities.

Non response can also be attributed to suspicion and distrust. Bulmer (1983) warns that these feelings should not be treated as some kind of irrational backwardness, but as a perfect rational desire to defend the community against outside intruders. The interview may be regarded as an intrusion into rural society, which has no immediate or visible benefit to the respondents.

The study among traditional healers was aimed at establishing the following;
a) how illnesses are treated  
b) how medications are prepared  
c) if colour is taken into consideration when medication is prepared  
d) use and significance of colour in rituals  
e) the order in which colour is used (for both rituals and treatment  
f) how their knowledge of treating diseases is gained.

The interviews were taped. Later a transcript of the interview was made and the contents were analysed.

5.7. MODERN DOCTORS VIEWS ON MODERN MEDICINE:

A study was carried out among Western trained Black doctors in South Africa to establish their views on colour of medication. Lists of registered doctors were obtained from both the South African and the Transkei Medical and Dental Councils. The doctors in South Africa are likely to know the properties of the drugs they have in stock because they dispense medication.

Doctors were classified according to the towns in which they practised. At least one doctor per five doctors listed was chosen. In areas like Soweto where there are large numbers of doctors, only four names were chosen. This was to ensure that the other areas were represented in the sample as well.
Questionnaires were left or mailed to a total of 101 randomly selected doctors. The aim of the questionnaire (Appendix D) was to establish:

a) if they knew the colour of medication they dispensed
b) if they considered colour to be an important placebo variable.
c) if any of their patients have ever refused to take medication because of its colour
d) perceived potency and activesness of colour of medication
e) colours associated with the treatment of various illnesses
f) illnesses associated with the various colours of medication.

The questionnaire was eight pages long and took about fifteen minutes to complete. Only fourteen questionnaires were completed. Most of the doctors did not fill the questionnaires despite several telephone reminders. Reasons given for not returning the questionnaires were that they were busy.

5.8. CONCLUSION:

Given all these constraints, most research conducted in developing countries has a range of problems that are not encountered in the Western countries. Few guidelines are available for dealing with them. The researcher needs to integrate research methods so as to reduce error. The researcher should be willing to admit the biases of the study - give a clear picture of the sample which includes
the characteristics of the respondents and their environment and all the factors which could potentially influence the results and their interpretation. All these should help to make the findings of a study more understandable to those people who are not aware of them. Although there were problems regarding collecting data for this research, the researcher believes that the samples are good.

Another problem which has been debated by several authors is whether or not it is in the interests of the study that is conducted for researchers to conduct studies in their own societies. This problem seems to be prevalent mainly in developing countries. Stephenson and Greer (1981), believe that researchers cannot recognise and interpreting meanings attached to cultural patterns with which they are familiar. It is the stranger who finds what is familiar to the group significantly unfamiliar and so is prompted to raise questions for inquiry (Merton, 1972). But, the outsider has 'stranger value' (Beattie, 1964). It is possible, however, that even though a researcher may begin work in another culture as a stranger, later he may become familiar with the surroundings and everything else in that society. Total objectivity is problematic whether the researcher conducts the study in his own society or outside his society. But being 'one of them' has the advantage of building up a meaningful rapport much quicker, as the researcher and respondents would be sharing the same language and even the same socio-political environment. The fear and suspicion which always lurks in the minds of subjects and informants during social research in general is almost absent. They have confidence in researcher because they knew he can not 'sell them' (Nukunya, 1969).
It is a well known fact that traditional healers are reluctant to divulge their treatment and diagnostic methods to strangers because the information is considered privileged. If the researcher is perceived as 'one of them' and not as a total stranger then, one may be able to get some information.

On the other hand, one could argue that a stranger could be seen to be more acceptable than a local as a traditional healer may feel that giving trade secrets to a stranger is less threatening than to a local who could be seen as a threat or competition.

The analysis of the data is presented in the next chapter.
CHAPTER SIX: ANALYSIS OF DATA AND RESULTS

This chapter reports mainly on the respondents' scores on the Personalistic scale (items 1-6 of the Dressler Health Belief Questionnaire). The overall aim of the study is to use the Personalistic scale. Only data related to this scale will be reported. The analysis is presented in the following order.

1) The first part deals with health beliefs, the proportions of people with a traditional orientation and the relationship between health beliefs and the age of the respondents.

2) Performance of rituals and the reasons why rituals are performed are presented next.

3) The next analyses look at the use of traditional healers, the reasons given for consulting them.

4) The respondents' perceptions regarding the importance of colour in the treatment of disease are analysed. The relationship between importance of colour and other variables is also presented.

5) The next section deals with the health care seeking behaviour of the respondents and expectations regarding treatment.

6.1. HEALTH BELIEFS

A modified version of the Dressler (1980) Health Belief Questionnaire was administered. The Personalistic scale (item 1-6) were used to calculate belief
orientation. A score of three (3) and above was taken to be indicative of a traditional belief orientation. A score of two and below was an index of a Western orientation.

FIG 6.1. HEALTH BELIEFS FOR THE TOTAL POPULATION
Figure 6.1. shows that all the informants in the Zulu rural category had a
traditional orientation. Only 70% of the urban Zulus had a traditional
orientation. All groups, with the exception of the Sotho groups show a decline
in traditional orientation among urban populations. A T-test revealed some
differences between the rural and urban groups were significant at \( p < .05 \).
The t value was 2.21 with 503 degrees of freedom. The groups that were
included in the t-test excluded patients.

6.1.2. RELATIONSHIP BETWEEN AGE, LEVEL OF EDUCATION,
ETHNIC GROUPS AND SCORES ON THE PERSONALISTIC SCALE.

An analysis of variance was computed to see if there were any effects on age,
education and ethnic group, the Xhosa, Zulu and Sotho. Table 6.2 and Table
6.3 show the means for the age and level of education and level of education
and ethnic group.

Table 6.1. shows that the least educated Zulu and Xhosa are the most
traditionally oriented. A significant interaction effect was found between
ethnic group and level of education. This was because at secondary school
level the Xhosas are the least traditionally oriented. The more educated Xhosa respondents are the most traditional in their orientation than the Zulus and the Sothos. The F value was 2.78 and this was significant at $p < .05$, df=4, 577.

**TABLE 6.1. CELL MEANS FOR LEVEL OF EDUCATION AND ETHNIC GROUP (with sample size shown underneath)**

<table>
<thead>
<tr>
<th>EDUC. LEVEL</th>
<th>XHOSA</th>
<th>SOTHO</th>
<th>ZULU</th>
<th>GROUND MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incomplete Primary</td>
<td>4.86</td>
<td>3.10</td>
<td>4.69</td>
<td>.84</td>
</tr>
<tr>
<td>Primary</td>
<td>42</td>
<td>48</td>
<td>68</td>
<td>158</td>
</tr>
<tr>
<td>Complete Secondary</td>
<td>3.22</td>
<td>3.02</td>
<td>3.77</td>
<td>.68</td>
</tr>
<tr>
<td>Secondary</td>
<td>51</td>
<td>81</td>
<td>70</td>
<td>202</td>
</tr>
<tr>
<td>Matric</td>
<td>3.31</td>
<td>2.03</td>
<td>2.91</td>
<td>.53</td>
</tr>
<tr>
<td></td>
<td>121</td>
<td>68</td>
<td>47</td>
<td>236</td>
</tr>
<tr>
<td>MEAN</td>
<td>3.59</td>
<td>2.70</td>
<td>3.89</td>
<td>GROUND MEAN</td>
</tr>
<tr>
<td>ETHNIC</td>
<td>214</td>
<td>197</td>
<td>185</td>
<td>3.39</td>
</tr>
</tbody>
</table>

Table 6.2. shows that the older least educated respondents were the most traditional when compared with the younger least educated. At secondary school level the pattern changes, the younger respondents become more traditional than their older counterparts. The older most educated respondents are the least traditional in their orientation.
### TABLE 6.2. CELL MEANS FOR LEVEL OF EDUCATION AND AGE

(with sample size shown underneath).

<table>
<thead>
<tr>
<th>EDUC LEVEL</th>
<th>AGE</th>
<th>MEAN EDUC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>34⁺</td>
</tr>
<tr>
<td>Incomplete Primary</td>
<td>4.00</td>
<td>4.35</td>
</tr>
<tr>
<td>Complete Secondary</td>
<td>3.63</td>
<td>3.07</td>
</tr>
<tr>
<td>Matric</td>
<td>3.59</td>
<td>1.90</td>
</tr>
<tr>
<td>MEAN AGE</td>
<td>3.67</td>
<td>3.16</td>
</tr>
</tbody>
</table>

Significant interaction effects were found between age and level of education.
The F value was 11.6 (df=2, 577) and this was significant at p < .001.

#### 6.1.3. RELATIONSHIP BETWEEN AREA OF RESIDENCE ETHNICITY COLOUR IMPORTANCE AND PERSONALISTIC BELIEFS

The sample was divided into three ethnic groups and into an urban sample and a rural sample. An analysis of variance showed significant relationships for area of residence (rural versus urban) ethnicity and perceptions regarding the importance of colour in the treatment of disease. Respondents who were unsure about the role of colour in treatment were not included in the study.
The differences were due to the fact that the rural sample was more traditionally oriented than the urban sample. The Zulus, followed by the Xhosa were the most traditionally oriented. The Zulu rural believed more than the other groups that colour was important in the treatment of disease. Respondents who believed that colour was significant were the most traditional.

Table 6.3 shows the cell means for the ethnic groups and area of residence.

<table>
<thead>
<tr>
<th>Residential Area</th>
<th>XHOSA</th>
<th>SOTHO</th>
<th>ZULU</th>
<th>Mean Resid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>3.79</td>
<td>2.54</td>
<td>4.84</td>
<td>3.72</td>
</tr>
<tr>
<td></td>
<td>72</td>
<td>90</td>
<td>90</td>
<td>252</td>
</tr>
<tr>
<td>Urban</td>
<td>3.49</td>
<td>2.80</td>
<td>2.90</td>
<td>3.91</td>
</tr>
<tr>
<td></td>
<td>142</td>
<td>93</td>
<td>92</td>
<td>234</td>
</tr>
<tr>
<td>Mean Ethnic</td>
<td>3.59</td>
<td>2.67</td>
<td>3.86</td>
<td>GROUND</td>
</tr>
<tr>
<td></td>
<td>214</td>
<td>183</td>
<td>182</td>
<td>MEAN</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.39</td>
</tr>
</tbody>
</table>

There was a two way interaction between area of residence and ethnicity. This was significant at p < 0.001. The F value was 12.92, the df was 2, 567. There was another two way interaction effect between respondents who believed that colour was important and area of residence. This effect was significant at p < 0.005. The F Value was 8.88, the df was 1, 567.
TABLE 6.4. CELL MEANS FOR COLOUR IMPORTANCE AND AREA OF RESIDENCE

<table>
<thead>
<tr>
<th>Residential Area</th>
<th>Colour not Important</th>
<th>Colour Important</th>
<th>Mean Residence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>3.60</td>
<td>3.86</td>
<td>3.72</td>
</tr>
<tr>
<td></td>
<td>132</td>
<td>120</td>
<td>252</td>
</tr>
<tr>
<td>Urban</td>
<td>2.69</td>
<td>3.96</td>
<td>3.13</td>
</tr>
<tr>
<td></td>
<td>213</td>
<td>114</td>
<td>327</td>
</tr>
<tr>
<td>Mean Colour</td>
<td>3.03</td>
<td>3.91</td>
<td>GROUND MEAN</td>
</tr>
<tr>
<td>Importance.</td>
<td>345</td>
<td>234</td>
<td>3.39</td>
</tr>
</tbody>
</table>

6.2. RITUALS:

When asked if they performed rituals, most of the respondents admitted to performing rituals but rural Xhosa and rural Zulu were the two groups that admitted more than most to performing rituals. Reasons given for performing rituals were: illness, making peace with members of the family (dead and alive) following instructions given in dreams, introducing new members of the family (newly born babies and brides) and a new house to the ancestors, enuresis, preventing miscarriages, abortions and infant mortality.

Figure 6.2 shows the proportion of respondents that performed rituals.
6.3. **USE OF TRADITIONAL HEALERS:**

Respondents were asked if they have ever sought medical help from traditional healers. The responses show that the rural Sotho (although they were low ritual users) and the rural Zulu use traditional healers more than the other groups.
These responses have to be treated with caution, however, as some people think that it is not socially acceptable to admit consulting a Traditional healer. Courtesy bias (as discussed in Chapter Five) could result in informants giving responses that they think the researcher wants to hear.

FIG 6.3. USE OF TRADITIONAL HEALERS
Significant differences were recorded between the total rural and urban respondents for their usage of traditional healer ($X^2 = 33.4$, df = 1 and $p < .001$). The Sotho rural and urban respondents also produced significantly different responses to this question ($X^2 = 4.3$, df = 1). These were significant at $p < .05$.

6.3.1. REASONS FOR SEEING A TRADITIONAL HEALER:

Apart from seeking help because of dreams, illnesses and seeking peace in the family other reasons cited were:

- protection against lightning\(^1\)
- luck with money
- when personal belongings go missing
- sunken fontanelle\(^2\)
- sleeplessness due to thikoloshe\(^2\)
- to cast evil spirits away
- sudden deaths

---

\(^1\) There is a belief among Africans that lightening can be used to harm the enemy and their livestock. Witchdoctors are often responsible for 'smelling out' (accusing) the evil doers.

\(^2\) Sunken Fontanelle: people with a Western medical orientation probably know that this is a sign of severe diarrhoea and dehydration in children. People with a traditional medical orientation believe that a sunken fontanelle is a sign that there is a 'thikoloshe' inside the child's body. This is proved by the child's loss of weight, weakness and diarrhoea—symptoms that 'rightfully' earn it the explanation that "ikho le nto edla lo mntwana" (explained above).
6.4. IMPORTANCE OF COLOUR IN THE TREATMENT OF DISEASE:

When the informants were asked if they thought colour was important in the treatment of disease, the following pattern emerged. Rural Zulu informants and patients from the Transkei and Zululand believed, more than the other groups, that colour was significant in the treatment of disease.

![Bar chart showing the importance of colour in the treatment of disease.](image-url)
It appears that according to this diagram the patients who were obviously on some form of medication at the time of the interview believe that colour is important in the treatment of disease.

A high percentage of urban Zulus believed that colour of medication was not significant, however. The diagram (Fig 6.4) of the respondent’s attitudes to the importance of colour in the treatment of disease shows that, the rural Zulus (patients and ‘healthy respondents) believe that colour is significant in the treatment of disease.

The urban Xhosa respondents resident in Umtata appear certain that colour does not play a role in the treatment of disease. None of the urban respondents thought that colour was important in the treatment of disease. The Sotho Rural respondents were the most uncertain about the role of colour in the treatment of disease.

6.4.1. RELATIONSHIP BETWEEN COLOUR IMPORTANCE AND BELIEFS

Significant relationships were found between respondents with a traditional orientation and those with a western orientation regarding beliefs about colour importance. The Chi-Square value was 17.2 and was significant at p < .001. There were three (3) degrees of freedom.
6.4.2. IMPORTANCE OF COLOUR BY PATIENT GROUP

Table 6.4 shows the number of patients from the three hospitals who believed that colour was important and those that believed that it was not.

**TABLE 6.5. IMPORTANCE OF COLOUR FOR THE PATIENTS.**

<table>
<thead>
<tr>
<th></th>
<th>NOT IMPORTANT</th>
<th>IMPORTANT</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TRANSKEI PATIENT</strong></td>
<td>30</td>
<td>39</td>
<td>70</td>
</tr>
<tr>
<td><strong>ZULU PATIENT</strong></td>
<td>21</td>
<td>50</td>
<td>71</td>
</tr>
<tr>
<td><strong>RAND MUT. HOSP</strong></td>
<td>22</td>
<td>21</td>
<td>43</td>
</tr>
<tr>
<td><strong>COLUMN TOTAL</strong></td>
<td>74</td>
<td>110</td>
<td>184</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>40.2%</td>
<td>59.8%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The three patient groups' responses to the question on importance of colour in treatment were: the Zulu patients believed more than the other patient groups that colour was important. The patients from the Rand Mutual Hospital (miners from various homelands in South Africa did not believe that colour was important. The differences between the patient groups were significant at $p < .05$ ($\chi^2 = 6.0, \text{df} = 2$). The Xhosa patients believed in the importance of colour in treatment.
6.4.3. COLOUR IMPORTANCE BY USAGE OF TRADITIONAL HEALERS

Respondents who admitted to consulting traditional healers were compared with those who do not, regarding significance of colour in treatment. There were significant relationships between the two groups. A significant number of respondents who consult traditional healers believed that colour was not important. Over fifty percent (53.8%) of the respondents believed that colour was not important. The $X^2$ value was 13.4, significant at $p < .005$ and with 3 degrees of freedom.

TABLE 6.6. IMPORTANCE OF COLOUR AND USAGE OF TRADITIONAL HEALERS

<table>
<thead>
<tr>
<th></th>
<th>NOT IMPORTANT</th>
<th>IMPORTANT</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT CONSULT</td>
<td>130</td>
<td>67</td>
<td>197</td>
</tr>
<tr>
<td>CONSULT</td>
<td>291</td>
<td>278</td>
<td>569</td>
</tr>
<tr>
<td>COLUMN TOTAL</td>
<td>421</td>
<td>345</td>
<td>766</td>
</tr>
<tr>
<td>TOTAL</td>
<td>53.8%</td>
<td>44.1%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

6.4.4. COLOUR IMPORTANCE AND LEVEL OF EDUCATION

The level of education was selected as one of the variables that could affect beliefs about the importance of colour in treatment. Level of education was divided into eight (8) categories (discussed in Chapter Five).
Significant relationships were found between respondent’s perceptions about colour and their level of education. The levels of education were collapsed into three groups.

Group 1: had all the respondents with either no education or incomplete primary,

Group 2: were respondents with complete primary education and complete secondary school education.

Group 3: had either not completed their matric or were at post matric level.

**TABLE 6.7. IMPORTANCE OF COLOUR FOR DIFFERENT LEVELS OF EDUCATION**

<table>
<thead>
<tr>
<th></th>
<th>NOT IMPORTANT</th>
<th>IMPORTANT</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NONE TO INCOMPLETE PRIMARY</strong></td>
<td>109</td>
<td>165</td>
<td>274</td>
</tr>
<tr>
<td><strong>COMPLETE PRIM. TO COMP. SEC.</strong></td>
<td>135</td>
<td>109</td>
<td>245</td>
</tr>
<tr>
<td><strong>INCOMPLETE MATRIC TO POST MAT.</strong></td>
<td>177</td>
<td>71</td>
<td>248</td>
</tr>
<tr>
<td><strong>COLUMN TOTAL</strong></td>
<td>421</td>
<td>345</td>
<td>766</td>
</tr>
<tr>
<td></td>
<td>54.9%</td>
<td>45.1%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Respondents with little or no education thought that colour was important, respondents with a higher level of education thought that colour was not important. There were no significant differences between those who were in the group with either complete primary and complete secondary school level than there were older people. This means that there is no association between level
of education and perceptions about colour. The $X^2$ value was 54.7, df was 4 and the level of significance was $p < .001$.

6.4.5. **REASONS WHY COLOUR CONSIDERED IMPORTANT IN THE TREATMENT OF DISEASE**

When the respondents who answered affirmatively to the question regarding the significance of colour in the treatment of disease were asked why they thought colour was important they gave the responses listed in Table 6.12.

Some of the respondents mentioned that colour was used for identification purposes. In cases where the people are illiterate or semi-illiterate colour is then used to differentiate between the prescribed drugs. In cases where the medication is of the same colour other variables like size, shape (in the case of tablets) are used. To differentiate between mixtures of the same colour consistency could be used.

The respondents gave the impression that they have a right to tell the doctor which medication they want. This is particularly common with chronic illnesses.
TABLE 6.8. REASONS WHY COLOUR IS IMPORTANT

<table>
<thead>
<tr>
<th>Reason</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour treats specific illness</td>
<td>57</td>
<td>16.5</td>
</tr>
<tr>
<td>Feel better after taking medication of a certain colour</td>
<td>49</td>
<td>14.2</td>
</tr>
<tr>
<td>Helps in identification*</td>
<td>41</td>
<td>11.9</td>
</tr>
<tr>
<td>Shows what illness you suffer from</td>
<td>41</td>
<td>11.9</td>
</tr>
<tr>
<td>Certain colours good for specific illnesses eg white for diabetes etc</td>
<td>38</td>
<td>11.0</td>
</tr>
<tr>
<td>To attract patient</td>
<td>26</td>
<td>7.5</td>
</tr>
<tr>
<td>They would not have them if not important</td>
<td>26</td>
<td>7.5</td>
</tr>
<tr>
<td>Medication does not work if colour wrong</td>
<td>19</td>
<td>5.5</td>
</tr>
<tr>
<td>Some colours more effective than others</td>
<td>18</td>
<td>5.2</td>
</tr>
<tr>
<td>Doctor decides what colour is relevant for the illness.</td>
<td>16</td>
<td>4.6</td>
</tr>
<tr>
<td>Tell doctor what medication I want</td>
<td>16</td>
<td>4.6</td>
</tr>
<tr>
<td>Colour symbolises the strength of medication</td>
<td>14</td>
<td>4.1</td>
</tr>
<tr>
<td>If urine changes colour, a sign that the treatment is working.</td>
<td>13</td>
<td>3.8</td>
</tr>
<tr>
<td>In traditional medicine some colours help in interpretation of dreams</td>
<td>13</td>
<td>3.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>5</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>345</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The patient believes that by telling the doctor which medication was effective on a previous occasion this makes things easier for the doctor. When the name of the drug is not known colour is used for identification.

6.5. COLOURS OF TRADITIONAL MEDICINE.

Informants were asked what colours were common in traditional medicine. Multiple mentions were made here. Red was mentioned by 57.5% of the
respondents as a colour that is mostly associated with traditional medicine. This was followed by Black (49.8%), Green (42.1%) and white (36.3%).

6.6. COLOURS OF MODERN MEDICINE.

The colour that is mostly associated with Western medicine is White (84.9%). This is followed by Red (72.7%) and Yellow (57.6).

6.7. MEDICATION PERCEPTUAL CHARACTERISTICS

Respondents were shown eight coloured tablets and asked which tablet they thought was the most potent, the most active, the most familiar and the most likely to cause side effects. The colours used in this part of the study were the following; red, black, white, yellow, blue, green, grey and brown.

6.8. CORRELATIONS BETWEEN TABLET, MIXTURE, OINTMENT POTENCY AND ACTIVENESS

A correlation matrix of perceived potency and activeness for tablets mixtures and ointments is presented in below. The matrix shows that activeness is highly correlated with potency for each of the three types of medication. These values were significant at the $p < .01$ level. There is a higher degree of correlation between mixtures and ointments than there is between tablets and ointments.
TABLE 6.9. CORRELATIONS BETWEEN POTENCY AND ACTIVENESS

<table>
<thead>
<tr>
<th></th>
<th>TAPO</th>
<th>MIPO</th>
<th>OIPO</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABAC</td>
<td>.8639</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MIXA</td>
<td></td>
<td>.7832</td>
<td></td>
</tr>
<tr>
<td>O1AC</td>
<td></td>
<td></td>
<td>.8195</td>
</tr>
</tbody>
</table>

KEY

Tapo Tablet Potency  Tabac Tablet Activeness
Mipo Mixture Potency  Mixa Mixture Activeness
Oipo Ointment Potency  Oiac Ointment Activeness

6.8.1. SIDE EFFECTS

The question on side effects proved to be problematic as there is no equivalent for this term in any of the languages spoken in South Africa. The colour of the tablet seen as the most likely to cause side effects was Black. The responses could have been biased by the fact that the colour is uncommon. Although attempts were made to control for size in this study, it was not possible to get a Black tablet of the same size as the other tablets and so respondents may have assumed an association between size and side effects.
6.8.2. COLOUR/ILLNESS ASSOCIATIONS.

The Pantone Colour Wheel was introduced at this stage to establish what colours, if any, the respondents associated with the illnesses used in the study. Attempts were made to include illnesses that were familiar. The illnesses were:

TB
Hypertension
Cancer
Stomachache
Bone Disorders
Headaches
Sores
Diarrhoea
Kidneys
Colds and Flu

6.9. TABLET COLOUR/ILLNESS ASSOCIATIONS.

Respondents were shown eight coloured tablets and asked which illnesses they thought could be treated effectively with each of the tablets. An attempt was made to obtain uncoated tablets of the same size in order to control for bias that could be introduced if the coated tablets were put alongside uncoated ones.
Table 6.10. reports on the colour associations given by all the respondents for TB. As will be seen in the tables the some colours appear to be associated with more than one illness. This Table shows responses made by the patients and all the respondents in the study. The $X^2$ value for the associations given for TB was 46.4, df was 24 and these were significant at $p < .005$.

Red was the colour that was associated with TB by respondents who thought that colour was not important in treatment.

There were significant relationships between colour importance and the associations given by the respondents for all the illnesses.
Red was associated with Hypertension by both those respondents who did not believe that colour was significant and those who believed that it was significant. The differences between the two groups were significant at $p < .05$, df = 24 and the $X^2$ value was 38.1.

Red, brown and green are the colours that were mostly associated with Cancer by the respondents who believed that colour was significant in the treatment of disease.

Red and White are the colours that were mentioned most by people who did not believe that colour was important.
TABLE 6.12. COLOUR ASSOCIATIONS FOR CANCER.

<table>
<thead>
<tr>
<th>CANCER</th>
<th>NOT IMPORTANT</th>
<th>IMPORTANT</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>78</td>
<td>76</td>
<td>154</td>
</tr>
<tr>
<td>BLACK</td>
<td>32</td>
<td>33</td>
<td>65</td>
</tr>
<tr>
<td>WHITE</td>
<td>66</td>
<td>30</td>
<td>96</td>
</tr>
<tr>
<td>YELLOW</td>
<td>39</td>
<td>33</td>
<td>72</td>
</tr>
<tr>
<td>BLUE</td>
<td>26</td>
<td>20</td>
<td>46</td>
</tr>
<tr>
<td>GREEN</td>
<td>31</td>
<td>50</td>
<td>81</td>
</tr>
<tr>
<td>GREY</td>
<td>18</td>
<td>15</td>
<td>33</td>
</tr>
<tr>
<td>BROWN</td>
<td>39</td>
<td>50</td>
<td>89</td>
</tr>
<tr>
<td>COLUMN TOTAL</td>
<td>329</td>
<td>307</td>
<td>636</td>
</tr>
</tbody>
</table>

$X^2 = 57.0$, df = 24, $p < .001$.

The respondents in the study associated Cancer mainly with Red. The respondents who thought that colour was important also associated Cancer with Green and yellow medication. Respondents who did not associate effectiveness thought that White medication was effective for the treatment of Cancer. The colour associations were significantly different at $p < .001$.

Table 6.13 shows the colour associations that the respondents gave for stomachaches. The associations were significantly different. Although all the respondents
TABLE 6.13 COLOUR ASSOCIATIONS FOR STOMACHACHES.

<table>
<thead>
<tr>
<th>STOMACHACHE</th>
<th>NOT IMPORTANT</th>
<th>IMPORTANT</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>35</td>
<td>32</td>
<td>67</td>
</tr>
<tr>
<td>BLACK</td>
<td>12</td>
<td>19</td>
<td>31</td>
</tr>
<tr>
<td>WHITE</td>
<td>142</td>
<td>119</td>
<td>261</td>
</tr>
<tr>
<td>YELLOW</td>
<td>59</td>
<td>60</td>
<td>119</td>
</tr>
<tr>
<td>BLUE</td>
<td>13</td>
<td>15</td>
<td>28</td>
</tr>
<tr>
<td>GREEN</td>
<td>35</td>
<td>32</td>
<td>67</td>
</tr>
<tr>
<td>GREY</td>
<td>7</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>BROWN</td>
<td>39</td>
<td>44</td>
<td>83</td>
</tr>
<tr>
<td>COLUMN TOTAL</td>
<td>342</td>
<td>325</td>
<td>667</td>
</tr>
<tr>
<td>TOTAL</td>
<td>51.3%</td>
<td>48.7%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

associated stomachaches with white medication, it was respondents who thought that colour was not important who gave this answer significantly more than the other group. The $X^2$ value was 53.6, the df was 24 and $p < .001$.

Respondents who did not believe that colour was important in treatment associated bone disorders mostly with white medication. Although the second group also associated bone disorders with white this was to a significantly less extent than the first group. Differences were also found regarding red blue and brown. The differences were significant at $p < .005$ ($X^2 = 48.5$, df = 24).
### TABLE 6.14. COLOUR ASSOCIATIONS FOR BONE DISORDERS

<table>
<thead>
<tr>
<th>BONE DISORD</th>
<th>NOT IMPORTANT</th>
<th>IMPORTANT</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>38</td>
<td>44</td>
<td>63</td>
</tr>
<tr>
<td>BLACK</td>
<td>23</td>
<td>23</td>
<td>46</td>
</tr>
<tr>
<td>WHITE</td>
<td>137</td>
<td>110</td>
<td>247</td>
</tr>
<tr>
<td>YELLOW</td>
<td>33</td>
<td>36</td>
<td>69</td>
</tr>
<tr>
<td>BLUE</td>
<td>16</td>
<td>25</td>
<td>41</td>
</tr>
<tr>
<td>GREEN</td>
<td>20</td>
<td>23</td>
<td>43</td>
</tr>
<tr>
<td>GREY</td>
<td>19</td>
<td>16</td>
<td>36</td>
</tr>
<tr>
<td>BROWN</td>
<td>41</td>
<td>35</td>
<td>76</td>
</tr>
<tr>
<td>COLUMN TOTAL</td>
<td>327</td>
<td>313</td>
<td>640</td>
</tr>
<tr>
<td>TOTAL</td>
<td>51.1%</td>
<td>48.9%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

### TABLE 6.15. COLOUR ASSOCIATIONS FOR HEADACHES.

<table>
<thead>
<tr>
<th>HEADACHE</th>
<th>NOT IMPORTANT</th>
<th>IMPORTANT</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>32</td>
<td>31</td>
<td>63</td>
</tr>
<tr>
<td>BLACK</td>
<td>32</td>
<td>25</td>
<td>57</td>
</tr>
<tr>
<td>WHITE</td>
<td>225</td>
<td>217</td>
<td>442</td>
</tr>
<tr>
<td>YELLOW</td>
<td>26</td>
<td>18</td>
<td>44</td>
</tr>
<tr>
<td>BLUE</td>
<td>11</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>GREEN</td>
<td>12</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>GREY</td>
<td>9</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>BROWN</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>COLUMN TOTAL</td>
<td>362</td>
<td>327</td>
<td>689</td>
</tr>
<tr>
<td>TOTAL</td>
<td>53.8%</td>
<td>47.5%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

\[ X^2 = 45.6, \text{ df } = 24, p < .005. \]
The treatment of headaches was associated with white medication by both groups. Other colours that were mentioned more by the respondents who believe that colour was important were yellow and green.

**TABLE 6.16. COLOUR ASSOCIATIONS FOR SORES**

<table>
<thead>
<tr>
<th>SORES</th>
<th>NOT IMPORTANT</th>
<th>IMPORTANT</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>136</td>
<td>92</td>
<td>228</td>
</tr>
<tr>
<td>BLACK</td>
<td>18</td>
<td>17</td>
<td>35</td>
</tr>
<tr>
<td>WHITE</td>
<td>41</td>
<td>39</td>
<td>80</td>
</tr>
<tr>
<td>YELLOW</td>
<td>90</td>
<td>108</td>
<td>198</td>
</tr>
<tr>
<td>BLUE</td>
<td>27</td>
<td>15</td>
<td>42</td>
</tr>
<tr>
<td>GREEN</td>
<td>12</td>
<td>23</td>
<td>35</td>
</tr>
<tr>
<td>GREY</td>
<td>2</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>BROWN</td>
<td>26</td>
<td>19</td>
<td>45</td>
</tr>
<tr>
<td>COLUMN TOTAL</td>
<td>352</td>
<td>318</td>
<td>670</td>
</tr>
</tbody>
</table>

Significant relationships were found between the respondents' colour associations for sores. The treatment of sores was mostly associated with red by the group believing that colour was important. The $X^2$ value was 50.0, the df 24, $p$ was significant at .001.
The respondents in the study believed that diarrhoea could be treated effectively with white and yellow medication. The respondents who do not believe that colour is important gave yellow as the appropriate colour for this condition. There were significant differences in their responses to this question. The differences were significant at $p < .05$. The $X^2$ and the degrees of freedom were 24.

### TABLE 6.17 COLOUR ASSOCIATIONS FOR THE TREATMENT OF DIARRHOEA.

<table>
<thead>
<tr>
<th>DIARRHO</th>
<th>NOT IMPORTANT</th>
<th>IMPORTANT</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>44</td>
<td>39</td>
<td>83</td>
</tr>
<tr>
<td>BLACK</td>
<td>16</td>
<td>21</td>
<td>37</td>
</tr>
<tr>
<td>WHITE</td>
<td>83</td>
<td>77</td>
<td>160</td>
</tr>
<tr>
<td>YELLOW</td>
<td>77</td>
<td>46</td>
<td>123</td>
</tr>
<tr>
<td>BLUE</td>
<td>26</td>
<td>24</td>
<td>50</td>
</tr>
<tr>
<td>GREEN</td>
<td>38</td>
<td>39</td>
<td>77</td>
</tr>
<tr>
<td>GREY</td>
<td>14</td>
<td>12</td>
<td>26</td>
</tr>
<tr>
<td>BROWN</td>
<td>45</td>
<td>56</td>
<td>101</td>
</tr>
<tr>
<td>COLUMN</td>
<td>343</td>
<td>314</td>
<td>657</td>
</tr>
<tr>
<td>TOTAL</td>
<td>52.2%</td>
<td>47.8%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
TABLE 6.1 & COLOUR ASSOCIATIONS FOR THE TREATMENT OF KIDNEYS.

<table>
<thead>
<tr>
<th>KIDNEYS</th>
<th>NOT IMPORTANT</th>
<th>IMPORTANT</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>98</td>
<td>92</td>
<td>190</td>
</tr>
<tr>
<td>BLACK</td>
<td>9</td>
<td>17</td>
<td>26</td>
</tr>
<tr>
<td>WHITE</td>
<td>33</td>
<td>25</td>
<td>58</td>
</tr>
<tr>
<td>YELLOW</td>
<td>40</td>
<td>33</td>
<td>73</td>
</tr>
<tr>
<td>BLUE</td>
<td>54</td>
<td>45</td>
<td>99</td>
</tr>
<tr>
<td>GREEN</td>
<td>29</td>
<td>31</td>
<td>60</td>
</tr>
<tr>
<td>GREY</td>
<td>11</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>BROWN</td>
<td>63</td>
<td>58</td>
<td>121</td>
</tr>
<tr>
<td>COLUMN</td>
<td>337</td>
<td>312</td>
<td>649</td>
</tr>
<tr>
<td>TOTAL</td>
<td>51.9%</td>
<td>48.1%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The respondents believed that kidneys could be treated effectively with red tablets. Other colours mentioned were yellow, blue, and white. Consensus regarding the last three colours was low. The differences were significant at p < .05. The chi-square value was 45.1 and there were 24 degrees of freedom.

6.10. HEALTH CARE SEEKING AND TREATMENT CHARACTERISTICS

The Health Care Seeking and Treatment Characteristics Scale is a 68 item scale (alpha = 0.98 and 0.99 - split half model, for internal consistency) which was designed specifically for this study to establish health care seeking behaviour and respondents' expectations of treatment. It is a five point Likert type rating scale (see Chapter Five). Pictorial rating scales were used with this scale in order to
eliminate problems of comprehension particularly with illiterate members of the community.

Responses were later scored individually by a panel of eleven judges. The judges represented a cross section of society, ranging from a housewife to an anthropologist. They were selected from rural areas both in Zululand and the Transkei. The assumption was that they would know what responses were considered to be traditional. The following scoring method was agreed on:

| 0 = responses considered very modern |
| 1 = responses considered modern     |
| 2 = undecided                     |
| 3 = responses considered traditional |
| 4 = responses, very traditional    |

When the scores on the health care seeking scale were correlated with those of the personalistic scale, a correlation level of .26 was found. Although the correlation level was significant, it was low. This means that the health care seeking behaviour scale is not strongly related to the personalistic belief scale.

The difference between 'very modern' and 'modern' is that; modern is judged as having some residual traditional traits whereas very modern is assumed to be a typical 'Western' response. The same definition was used for the traditional category. For example, if the response to the question: seeking medical attention means going to see a traditional healer, was strongly agree, it was given the score of 4, if the response was agree it was scored as 3. It was imperative that
the number of judges be an odd number in order to eliminate the number of ties in their scoring of responses. Their scores were used as guide in coding the responses.

6.11.1. HEALTH CARE SEEKING BEHAVIOUR FOR ZULU RESPONDENTS

Responses to the questionnaire showed statistically significant differences only between the rural and the urban Zulu groups. The null hypothesis which specified that members of the two groups were drawn from a sample with similar distributions was therefore rejected at $p < .001$. Fig 6.5. shows the plot of the mean scores of the two groups.

The other groups were not as disparate in their distributions as the Zulus. Zulu respondents definitely do not want all their medication to be White. This question was included in the study because research among pharmaceutical companies in Britain regarding colour of medication exported to other countries, revealed that there is a move to have all new drugs in a neutral colour, White, in order to facilitate world-wide acceptability (see Chapter Eight). The results of this study suggest that there could be some resistance in developing countries to this proposed move. Zulus believe in traditional medicine more than the other groups. The modernised group believe that white medications are not strong. The other group disagrees. The two groups differed in their responses to consulting a traditional healer when ill, believing that you are bewitched and being ill because one has angered their ancestors. The group with a modern
orientation maintain that they always finish their prescribed medication whereas the other group do not.

6.11. SUMMARY OF FINDINGS

The study was aimed at establishing whether Zulus, Sothos, Xhosas and patients thought colour was significant in the treatment of disease.

1. There were significant differences between rural and urban respondents regarding importance of colour in treatment. The patient samples, with the exception of the Rand Mutual patients believed that colour was important. The Rand Mutual patients were uncertain. The urban Xhosa resident in Umtata were the only group that had more respondents who thought that colour was not significant.

2. Significant responses were obtained for the Zulu and Xhosa with regard to self perceptions. Xhosa and Zulu rural respondents often wear traditional dress. This may have influenced responses to the Self Perception Scale.

3. Level of education differed significantly with various variables, for example importance of colour in the treatment of disease, age and beliefs for the different ethnic groups.
FIG 6.6. HEALTH BELIEFS, USAGE OF TRADITIONAL HEALERS AND IMPORTANCE OF COLOUR IN THE TREATMENT OF DISEASE.
4. The graph plotted in Fig 6.6 gives a comparison of health beliefs, usage of traditional medicine and importance of colour in the treatment of disease. The graph shows that the rural Zulu are the most traditionally oriented group. They, however, consult traditional healers at a lesser rate than the rural Sotho respondents. The rural Zulu and patients from Zululand believe more than the other groups that colour is important.

There were no significant differences between the rural and urban samples on the question of seeking help from traditional healers. Urban Sothos also differed with their rural counterparts regarding consultation with traditional healers and performance of rituals.

5. Zulu respondents believe in rituals, and the most important colours in the treatment of disease are Red, Black and White. Xhosa respondents expect an injection when they seek medical care. Sothos believe that modern medicine always takes colour into consideration in the treatment of disease. All the rural respondents interviewed in this study did not think it was essential to see a modern doctor whenever they were ill.

When the responses of the Zulu sample were plotted on a graph, the respondents with a Western orientation disagreed with those with a traditional orientation on questions relating to causes of illness and consulting traditional healers.
Findings of the study on health care seeking suggest that people with strong beliefs in a traditional medical paradigm believe that colour is significant in the treatment of disease. Introduction of tablets in one colour is therefore likely to be met with resistance. This may result in non compliance. Another problem is that of illiteracy. Colour is often used for identification purposes. If all tablets are White, this could result in drug misuse, which in such cases would not be deliberate.

6.11.1. RELATIONSHIP BETWEEN AGE, LEVEL OF EDUCATION AND HEALTH CARE SEEKING

An analysis of variance was done to see if there were any effects on age education and health care seeking. A significant difference was recorded in terms of level of education. This was because people with a low level of education were more traditional in their approach to health care seeking. They believed in consulting traditional healers when ill, illness was caused by ancestral anger or sorcery. People with higher levels of education sought health care early and did not have the same attributions regarding illness as did the traditional group. The differences were significant at p < .001. No significant two way interactions were found for this analysis.
6.12. MODERN DOCTORS' VIEWS ON COLOUR OF MEDICATION.

The second study that was carried out in this area was among Western trained Black doctors in South Africa. Lists of registered doctors were obtained from both the South African Medical and Dental Council and the Transkei Medical and Dental Council. The Doctors in South Africa are more likely to know the properties of the drugs they keep in stock because they dispense medication unless the patient is on medical aid, then they can write out a prescription.

Questions asked related to whether they have patients who refuse to take medication because of the colour. Doctors were also asked if they thought the colour of medication was a relevant placebo variable.

Of these doctors, twelve claimed to know the colour of the medication they dispensed. Only one doctor admitted not knowing any of the colours of the medication he dispensed or prescribed. Ten doctors believed colour of medication was important to their patients.

6.12.1. COLOUR/ILLNESS ASSOCIATION

The doctors were asked what colours they associated with a given list of illnesses. The summary below is based on the responses of seven doctors. The
responses of the doctors could have been based on existing colours of medication that they prescribe or dispense. In some cases only one doctor gave a response. The frequencies will thus not be included.

**TABLE 6.19. ILLNESS COLOUR ASSOCIATIONS FOR DOCTORS**

<table>
<thead>
<tr>
<th>ILLNESS</th>
<th>COLOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB</td>
<td>Green, White</td>
</tr>
<tr>
<td>Hypertension</td>
<td>Yellow, Red</td>
</tr>
<tr>
<td>Cancer</td>
<td>Red, Brown.</td>
</tr>
<tr>
<td>Stomachache</td>
<td>White</td>
</tr>
<tr>
<td>Bond Disorders</td>
<td>Red, White, Green.</td>
</tr>
<tr>
<td>Headaches</td>
<td>White, Yellow.</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>White, Brown, Yellow.</td>
</tr>
<tr>
<td>Kidneys</td>
<td>Green, Red, White, Yellow</td>
</tr>
<tr>
<td>Colds/Flu</td>
<td>White, Red.</td>
</tr>
</tbody>
</table>

6.12.2. **ILLNESS/TABLET COLOUR ASSOCIATIONS**

Doctors were asked what illnesses they thought could be treated effectively with a list of coloured tablets. Only five doctors gave responses to this question. The doctors' responses were as follows. Doctors who did not answer the question mentioned that they did not think that the colour of medication was relevant, although some of their patients thought that it was important.
TABLE 6.20. ILLNESS COLOUR ASSOCIATIONS FOR THE DOCTORS.

<table>
<thead>
<tr>
<th>COLOUR</th>
<th>ILLNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Bone Disorders, Rheumatic Aches, Vitamins.</td>
</tr>
<tr>
<td>Black</td>
<td>Flatulence</td>
</tr>
<tr>
<td>White</td>
<td>Headaches, All Diseases, Flu</td>
</tr>
<tr>
<td>Yellow</td>
<td>Hypertension, Headaches, Flu</td>
</tr>
<tr>
<td>Blue</td>
<td>Insomnia, Urinary Tract Infections</td>
</tr>
<tr>
<td>Green</td>
<td>Cystitis, Urinary Tract Infections</td>
</tr>
<tr>
<td>Grey</td>
<td>Imagined Impotence</td>
</tr>
<tr>
<td>Brown</td>
<td>Loss of Appetite, Avitaminosis</td>
</tr>
</tbody>
</table>

One doctor mentioned that patients expect tablets of a different colour from those that are dispensed at the hospital or clinic, because of the "inherent belief that drugs from a private doctor are superior to those from the state hospital or clinic". This belief probably stems from the fact that doctors charge more than the state run health care centres.

Another doctor reported using food colorants to change the colour of her medication. The reason she gave was, because she runs a practice in a rural area patients travelling home on buses not only discussed their health problems but also showed each other what the doctor had prescribed. If a person suffering from a backache was given the same colour medication as someone suffering from hypertension, then the patients thought they had been cheated. Colour was also used by this doctor for identification, for example, instead of telling an illiterate patient to "take 'x' number of tablets from 'y' packet 'n' times a day" she would instruct her patient to "take one red tablet, in the morning only". If the
prescribed tablets were the same colour but different sizes then she would use size for differentiating between the two types.

There was consensus among the doctors interviewed that they associated the colours with the illnesses mentioned. The associations are thus not spontaneous but are based on existing knowledge.

6.12.3. TABLETS, MIXTURES AND OINTMENTS

Red tablets were perceived as the most potent, while white was the most familiar colour.

The most potent mixture was thought to be the Red mixture, Brown the most familiar and Black the most likely to cause side effects.

The Red and White ointments were the most potent and familiar respectively.

Because very few doctors responded it is not possible for one to determine whether colour of medication is a problem for patients or not and if it is, what percentage of the total number of patients the doctors treat object to colour of medication.
Because very few doctors responded it is not possible for one to determine whether colour of medication is a problem for patients or not and if it is, what percentage of the total number of patients the doctors treat object to colour of medication.

6.13. TRADITIONAL HEALERS' VIEWS ON COLOUR OF MEDICATION

6.13.1. Sampling:

The traditional healers who were interviewed in the study came from various parts of the Transkei, Soweto (Johannesburg) and Zululand (Empangeni area). They were interviewed to establish whether they thought colour was significant in the treatment of disease.

Traditional healers were asked questions relating to their use of colour in rituals and in the treatment of disease. Traditionally colour is supposed to be significant in treatment and the order in which the colours are used is also important.

6.13.2 RESULTS:

There was no consensus among the nineteen traditional healers interviewed that colour was significant in the treatment of disease. They, however, agreed that the nature of the illness determines the nature of the medication that should be used.
These responses cannot be taken at face value and should thus be interpreted with care. Traditional healers are known for their secretiveness regarding what they consider to be privileged information. Others may have responded to the questions in ways they thought were acceptable to the researcher, for example, that colour was important in the treatment of disease even if they never paid any attention to what colour of medication they used.

They seem to agree that most of their medication is brown, white, red, green and black. Some mentioned yellow and colourless medication as well.

Despite differences in training, it appears that there is consensus among the traditional healers that witchcraft involves the use of black medicines. These black medicines are obtained from herbalists. Most of them agree that black medication should be used to remove the person out of the state of darkness (Ngubane, 1977). Some believe it is just coincidental that illnesses of the people should be treated with black and or red medication, and then with white medication. The latter group maintain that if one concentrates on what colour to use when treating an illness, then that undermines the whole process of treating diseases.

The healers who do not believe that colour is significant in the treatment of disease, maintain that if it is colour that is responsible for curing then one could take any medication provided it was the relevant colour.
6.13.3. **TREATMENT**

For treating *intaka* an evil bird which is supposed to be able to pick out its victim in a crowd. One healer said he gives the patient black medication first. This is taken orally, as a laxative and applied on the body and face "so that the bird is not be able to identify its victim."

The researcher gained the impression that traditional healers do not take particular notice of the colour of medication that they use. It was only when direct questions about the colour of medication were asked that the healers commented on what colours they normally used.

For headaches, however, most used some white powder that was inhaled by the patient. Stomachaches could be treated with white and/or red medication or any other colour eg yellow.

Some healers claimed they were able to treat infertility. For this they used red and white medication. The red medication was administered, to cleanse the system and was taken by both spouses. The white medication was administered much later to *ukumilisela* - implant. When asked what the significance of the white medication was both healers (who were much older than the researcher) would not say. When the interviewer asked if the white medication symbolised semen, as suggested by their use of the term *ukumilisela* both healers did not answer.
This was probably because of the perceived age difference between the researcher and the interviewees.

Green medication that is prepared from green leaves is used at times for protecting the family house against evil spirits. Some healers mentioned that it was also effective in the treatment of worms.

*Idliso*, called *kaffir poison* by White doctors as it is an illness that is unique to Blacks in this country, is one illnesses that traditional healers claim they can treat effectively. Symptoms of 'idliso' are similar to those of TB; loss of appetite, loss of weight and severe coughing. Treatment of idliso often involves purging.

One healer who claimed she could treat this condition maintains that the *idliso* is taken in by the unsuspecting victim with food. Once inside, a protective case forms around it. To treat this the healer prepares *imbodilela* (mixture) from several herbs. These are cooked, cooled and sieved. Once the mixture is ready the healer drops some new needles into these bottles. "These needles help to crack the hard case covering 'idliso". The presence of the needles obviously suggests to the patient how potent the mixture is. Edgerton (1977) in his paper on the African psychiatrist makes reference to the powers of suggestion used by these healers and how effective these can be. It could be possible that the same principle applies in the treatment of this disease. Colours that are deemed appropriate and potent because they are dark may be prescribed for chronic and debilitating illnesses.
6.14. SUMMARY OF HEALER'S VIEWS ON COLOUR OF MEDICATION

There was no agreement among traditional healers that colour is significant in the treatment of disease. Those that disagreed maintained that concentrating on the colour when treating disease was not appropriate. Colour was often used for identification purposes. Sometimes, their ancestors would guide them in their sleep and show them where to find a cure for an illness. Details of where the plant would be found, together with the properties of the plant, shape and colour are given in the dream.

It seemed, however, that it was the healer rather than the patients who knew about the colour of medication. Colourants are not used when they prepare medication. Medication, therefore tends to be colours such as red, brown, black, green, colourless and white.

Modern doctors did not attach any significance to colour of medication. They knew that some of their patients did, colour of medication is a strong placebo variable. Some doctors did not give colour illness associations or illness tablet colour associations because they felt that colour was incidental. The doctors who made these associations based them on the knowledge they have of the colours of drugs that they prescribe.

It is important to note that the samples for both the traditional healers and the modern doctors were small. One cannot interpret the findings as representative.
of both populations. They do, however, give an idea of the healers' perceptions of the role of colour in the treatment of disease.
CHAPTER SEVEN: COMPLIANCE TO A MEDICAL REGIMEN

7.1 INTRODUCTION

The study reported in Chapter Six demonstrated that respondents with a strong traditional orientation believed that colour was significant in the treatment of disease. Rural and urban differences were found also. The study also demonstrated that younger educated respondents had a strong traditional orientation. The Zulu were the most traditional ethnic group.

Significant differences were obtained between the rural and urban samples on their health care seeking behaviour. Respondents resident in urban areas did not believe in seeking care from traditional healers.

In this chapter the researcher intends looking at health beliefs, beliefs about significance of colour in the treatment of disease and whether or not these two variables affect compliance to a medical regimen.

A study conducted in the Transkei (Mkumatela, 1986) showed no significant differences between people with a traditional orientation and those with a modern orientation. Non compliance rates of 45.1% and 50% were obtained for respondents with a Modern orientation and those with a traditional orientation, respectively.
Compliance rates are expected to be high in urban areas because people who live in urban areas do not attach much significance to colour of medication.

7.2. SAMPLING

The sample was drawn over a two month period from patients seeing Western trained doctors at Chiawelo, Mofolo and Zola clinics in Soweto during May and June, 1992. There are four big clinics in Soweto and eight smaller ones, serving a population of about 2½ million people. The Chiawelo, Zola and Mofolo clinics are three of the four biggest clinics. There is a fourth clinic, the Koos Beukes Community clinic. It was not included in the study as it has a large catchment area that goes beyond the Johannesburg area.

7.2.1. SAMPLING CRITERIA:

Respondents had to meet the following criteria:

- they should be above 18 years of age
- they should live in Soweto
- they should have received oral medication on the day of the initial interview
- they had to agree to the clinic interview and a home visit on the fifth day after the consultation.

The respondents were not given the reason for the home visit other than to say it was to check on how they were feeling.

The catchment areas for the clinics are;

<table>
<thead>
<tr>
<th>FIG.7.1. CATCHMENT AREAS FOR CLINICS IN SOWETO</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHIAWELO:</td>
</tr>
<tr>
<td>Dhlamini 1, Dhlamini II, Dhlamini Squatter Camps, Dhlamini Extension, Chiawelo 1, Chiawelo II, Chiawelo III, Protea North, Protea South, Phiri, Senaoane, Mapetla 1, Mapetla 2, Mapetla Extension.</td>
</tr>
<tr>
<td>ZOLA:</td>
</tr>
<tr>
<td>MOFOLO:</td>
</tr>
<tr>
<td>Mofolo South, Mofolo North, Mofolo Central, Mofolo Village, White City, Molapo, Central Western Jabavu, Pimville Rockville, Moroka South, Moroka North, Mshenguville Squatter Camp.</td>
</tr>
</tbody>
</table>

All these clinics are administered by the Baragwanath Hospital. Figure 7.2. shows the location of the clinics in Soweto.
7.3. **TOOLS OF RESEARCH:**

7.3.1. The Health Belief Questionnaire (reported in Chapter Five) was used in this study.

7.3.2. The Illness Behaviour, Health Care Decisions and Attitudes to Medication Questionnaire (alpha = .98) is a 40 item test which was designed so as to establish behaviour patterns during illness. The questionnaire was designed and used successfully in a previous study (Mkumatela, 1986 see Appendix K). Because of the high rate of illiteracy in the country, pictorial rating scales were used to distinguish between the five categories, strongly agree, agree, undecided, disagree and strongly disagree.

7.3.3. Interviews were used to establish recall of instructions and doctor-patient communication. Other areas investigated were: length of time spent in the doctor’s consulting room.

7.3.4. The Attitudes to Medication scale used is a 14 item scale which consists of stems which are followed by four completing statements which express a positive attitude, a statement concerning a side effect, a statement concerning a negative attitude and a statement that shows some indifference.

The above scale was used to establish patients’ attitudes to medication in the hope that this information could yield a clue as to whether they are likely to be compliant or not. The test was originally designed by Herman (1960) for
hospitalised patients, so it was adapted to suit outpatients. The scale was modified and used with outpatients in a previous study on compliance (Mkumatela, 1986).

7.3.5. Compliance was measured by using pill counts. The number of tablets remaining was recorded. The number dispensed minus the number of tablets that have been taken (according to the instruction written on the pack) gave the researcher the number that should be remaining at the time of the interview.

7.4. METHOD

The data collection was divided into two parts:

Stage One: At the time of the consultation.

Stage Two: On the fifth day after the initial interview.

7.4.1. Stage One:

The aims of this stage were to establish;

1) Health Beliefs - using an adapted version of the Dressler Health Belief Questionnaire (Dressler, 1978), discussed in Chapter Five
2) Illness behaviour, health care decisions, doctor shopping and attitudes to medication eg. injections, colour, taste and quantity of medication dispensed.
3) Recall of instructions.
4) Doctor-patient communication.

7.4.2. **Stage Two**: on the fifth day after the initial interview, to establish:

1) attitudes to medication - using an adapted version of the Gorham and Sherman Scale (1961).
2) Compliance using pill counts
3) Importance of colour in the treatment of disease.

Respondents visiting the clinics during this period were interviewed after they had been examined by a doctor and had collected their medication. The sample comprised 60 females and 43 males.

Every tenth patient was chosen from each one of the rows of patients waiting to see a doctor. The first part of the questionnaire was filled in (first five pages). The patient was required to see the interviewer after they had seen the doctor and collected their medication. The last page of Stage Two was then filled in. The follow-up interviews were planned such that they did not fall on a weekend as funerals are mostly held during these days. Africans attach considerable significance to burying their dead. Having funerals on Saturdays makes it possible for friends and relatives to travel from various places to pay their last respects to the dead. Every effort was made to accommodate the times that would be convenient for the patient rather than the researcher.
This sometimes meant doing the follow-up interviews late in the evenings and arranging to have at least two males escorting the researcher to and from. This was arranged through the matron of the clinics. The Zola clinic, for example, is in Deep Soweto. This area has a high crime rate, cars get stolen or hijacked. It was therefore necessary to have one male escort accompany the researcher into the house while the other remained in the car. This procedure was followed when follow-ups were scheduled for late in the afternoon as well.

During the follow-up interviews attempts were made to interview the patients privately. This was not always possible. Most people in Soweto live in four roomed houses and there is often not much privacy one can get. This meant asking the other family members not to interfere whilst the interviews were being conducted.

The respondents were asked if they had taken their medication on the day of the interview and if so, how many times the medication had been taken.

7.3.3. **Attitudes to Colour of Medication:**

Respondents were shown eight coloured sugar coated tablets and asked to rank them in order of preference, from 1-8. the following colours were included in the study; red, brown, green, yellow, white, blue, grey and black.
The tablets were mounted on a white board, using Prittack, so that the order of presentation could be rotated. An attempt was made to obtain tablets of the same shape and size. This was achieved except in the case of the grey tablet which was slightly bigger than the others.

7.4.4. Tablet colour Associations:

Respondents were shown the tablets once more and asked what illnesses they thought could be treated effectively with tablets of those colours. Each tablet was presented individually in order to reduce any distractibility that could be caused by having all the tablets presented at once.

7.5. THE SAMPLE:

The total number of patients interviewed was 110. Of these seven did not report back to the researcher after collecting their medication.

7.5.1. SAMPLE BREAKDOWN

The sample breakdown by area was as follows. Fifty eight respondents were interviewed from the Chiawelo clinic, twenty five from Zola clinic and 20 from Mofolo Clinic.
TABLE 7.1. SAMPLE BREAKDOWN BY AREA

<table>
<thead>
<tr>
<th>CLINICS</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZOLA</td>
<td>25</td>
<td>24.3</td>
</tr>
<tr>
<td>CHIAWELO</td>
<td>58</td>
<td>56.3</td>
</tr>
<tr>
<td>MOFOLO</td>
<td>20</td>
<td>19.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>103</td>
<td>100.0</td>
</tr>
</tbody>
</table>

These were patients who were calling at for various health conditions. The composition of the sample was as follows:

7.5.2. AGE OF RESPONDENTS

The median age for the sample was in the 35-44 range. Only fifteen respondents were above fifty five years of age, thirty six were below thirty four.

TABLE 7.2. AGE OF RESPONDENTS

<table>
<thead>
<tr>
<th>AGE</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-24</td>
<td>16</td>
<td>15.5</td>
</tr>
<tr>
<td>25-34</td>
<td>20</td>
<td>19.4</td>
</tr>
<tr>
<td>35-44</td>
<td>26</td>
<td>25.3</td>
</tr>
<tr>
<td>45-54</td>
<td>16</td>
<td>15.5</td>
</tr>
<tr>
<td>55-64</td>
<td>11</td>
<td>10.7</td>
</tr>
<tr>
<td>65+</td>
<td>4</td>
<td>3.6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>103</td>
<td>100.0</td>
</tr>
</tbody>
</table>
7.5.3. **MARITAL STATUS**

The largest number of people who were interviewed was married, then single. The divorced category also include people who were separated from their spouses.

![Graph of marital status](image)

**FIG 7.3** MARITAL STATUS.

7.5.4. **LEVEL OF EDUCATION:**

The sample had the following profile, in terms of level of education. The mean level of education was seven years of schooling. This resulted in a negatively
skewed distribution as most of the respondents were people who were poorly educated.

FIG 7.4. YEARS OF SCHOOLING

The plot shows that eleven respondents had never had any education, five had two years of schooling. Twenty three had spent eight years at school. The largest number, forty had nine to ten years of schooling. Ten years of schooling would be equivalent to O Levels in the British system.
7.5.5. **SOCIO-ECONOMIC STATUS:**

In this question the respondents were asked if they were working or not. Thirty eight were working, the remaining sixty five was either unemployed, pensioned or in some form of training for example a secretarial course.

**TABLE 7.3. SOCIO-ECONOMIC STATUS**

<table>
<thead>
<tr>
<th>EMPLOYMENT</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>38</td>
<td>36.9</td>
</tr>
<tr>
<td>NO</td>
<td>65</td>
<td>63.1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>103</td>
<td>100.0</td>
</tr>
</tbody>
</table>

7.6. **RESULTS:**

The number of respondents in the initial study was 103. Twenty three were lost in the follow-up studies either because they were not at home at the time of the scheduled interview or they lived opposite the hostels. The hostels have been the source of violence and people living opposite these areas have been targets of stray bullets. In some cases it was not possible to locate the house numbers. This was the case with people living in squatter camps where there is no systematic house numbering system. The squatter camps have also been targets of violence.
7.6.1: PERSONALISTIC BELIEFS:

When the scores on the Personalistic scale (a subscale of the Health Belief Questionnaire) scale were computed 39 people were found to believe in traditional medicine in varying degrees. Thirteen people were not sure about traditional medicine whereas fifty one did not believe in traditional medicine. Only one respondent did not believe in Western medicine at all.

7.6.2. PERSONALISTIC BELIEFS BY ALL VARIABLES:

As the aim of the study is to compare the traditionally oriented group with the modern oriented group, the respondents will be split according to their health beliefs. No significant differences were found between members of the two belief systems for area, marital status, level of education, employment and number of children. The means of traditionally oriented respondents were similar to those of the modern oriented group for the variables mentioned.

7.6.3. RELATIONSHIP BETWEEN DEGREE OF BELIEF IN TRADITIONAL MEDICINE AND BELIEF ORIENTATION

The respondents were asked about their degrees of belief in traditional medicine. Significant differences were found between their belief orientation and their degree of beliefs.
When the scores on the degree of traditional scale were correlated with scores on the personalistic scale a negative correlation of .60 was found. This was significant at $p < .001$. This means that a respondent with a high score on health beliefs who strongly agreed with traditional medicine tends to be traditional.

7.6.3. RELATIONSHIP BETWEEN HEALTH BELIEF QUESTIONNAIRE SCORES AND PILL COUNTS

When all the scores on the Health Belief Questionnaire were taken and compared with pill counts to see if there was any relationship between compliance and beliefs about various health related issues, significant differences were found.

Answers to questions on the naturalistic scale and the modern scale were expected to be the same despite compliance rates of the individuals. Responses relating to the questions about: bush tea being good for illnesses such as hypertension (Q,9) and if a person gets TB, he should see a Modern medical doctor (Q,13) were significantly different at $p < 0.05$ and $p < .001$, respectively. People who believed that the statement read out was true would answer “true” to that question, otherwise false.
### TABLE 7.4. RELATIONSHIP BETWEEN THE HEALTH BELIEF QUESTIONNAIRE AND COMPLIANCE.

<table>
<thead>
<tr>
<th>BUSH TEA</th>
<th>NON COMPLIANT</th>
<th>COMPLIANT</th>
<th>ROW TOT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>35</td>
<td>24</td>
<td>59</td>
</tr>
<tr>
<td>AGREE</td>
<td>6</td>
<td>15</td>
<td>21</td>
</tr>
<tr>
<td>COLUMN TOTAL</td>
<td>41</td>
<td>39</td>
<td>80</td>
</tr>
</tbody>
</table>

$X^2 = 5.9, df = 2, p < .05$

<table>
<thead>
<tr>
<th></th>
<th>NON COMPLIANT</th>
<th>COMPLIANT</th>
<th>ROW TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>AGREE</td>
<td>41</td>
<td>39</td>
<td>80</td>
</tr>
<tr>
<td>COLUMN TOTAL</td>
<td>41</td>
<td>39</td>
<td>103</td>
</tr>
</tbody>
</table>

|          |             |           |           |
|----------|-------------|-----------|
| TOTAL    | 51.3%       | 48.7%     | 100.0%    |

The $X^2$ value was 14.5, the $df$, 2 and $p < .001$.

#### 7.6.4. CONSULTATION

The accuracy of information given by the respondents regarding doctors' attitude and the length of time spent with the doctor is questionable. Most admitted that they were merely guessing. Also, some patients arrive at the clinics at Seven o'clock and doctors come in at Ten o'clock. By that time the patients are tired and the time spent with the time is very short compared to the time they spent waiting.
The reliability of the information regarding doctor's attitude is also questionable. The researcher was assigned a room at the clinic. Patients may have perceived her as a member of the nursing team (as was evident in the manner they addressed her - nurse). The issue of the home visit could have been confusing as well. Being seen as a member of the Health Care team would make it difficult for the patients to complain about the doctor's attitude. Only two respondents complained about the attitude of the doctor towards them. The mean time spend with the doctor was given as 10 minutes. The respondents felt that they did not have to remember the instructions as these were written on the label.

7.6.5. **COLOUR SIGNIFICANCE:**

No significant relationships were found for colour significance in the treatment of disease for the respondents in the study.

7.6.6 **COLOUR ASSOCIATIONS:**

When respondents were asked to tell the interviewer what illnesses they associated with tablets of the colours shown, several associations were made. Although some thought that colour was important in the treatment of disease they felt that it was difficult to make the associations. The inside of a tablet is often different from the outside. The following association were made. The number of responses to this question declined to 37.
There were no significant differences between their colour illness associations. Respondents in this study also associated red tablets with blood related disorders. White was associated with headaches and pains. Brown was associated with vitamins and a laxative.
White was associated with headaches and pains. Brown was associated with vitamins and a laxative.

7.6.7. COMPLIANCE:

Pill counts were calculated by subtracting the number of tablets remaining from the total number that was dispensed. The number prescribed per day multiplied by the number of days gave the total that should have been taken. The following rates of noncompliance were recorded, 51.2% for respondents with a Western orientation and 48.8% for those with a traditional orientation.

There were no significant differences between those respondents who were compliant and those who were not. Forty one respondents were non compliant while thirty nine were compliant.

No significant differences were found between the respondents in terms of their residential areas.

7.6.8. DOCTOR SHOPPING AND TREATMENT CHARACTERISTICS:

Significant differences were recorded for the two health belief groups with regard to questions relating to doctor shopping and treatment characteristics. Their responses have been plotted on a graph (Fig 7.5).
BELIEF SYSTEMS BY TOTAL POPULATION

Fig 7.5

DOCTOR SHOPPING AND TREATMENT CHARACTERISTICS
Professional help was sought quite soon by both groups but this may not 
necessarily be true. The traditionally oriented group admitted shopping around 
if not satisfied with treatment. Doctor shopping included traditional healers

When they were asked about treatment characteristics they differed in their views. 
All the respondents did not expect injections as part of treatment.

The responses to questions relating to medication characteristics were not 
significant. Respondents from both groups agreed on questions about taste, 
colour of tablets and the quantity of medication dispensed by both traditional and 
modern doctors.

7.7. DISCUSSION

The respondents interviewed for this study had more similarities than differences 
in their responses. The sample comprised people who live in Soweto, some of 
whom were born in this area. The level of education was low for the sample, with most having had education only at primary level.

When the sample was divided according to their belief systems they were found 
to have similar responses. It is suggested that the similarities are due to a strong Western influence which is environmental.

The findings of the study should not be interpreted to mean that the population
in Soweto is homogeneous. The variables that the researcher was interested in have no way of measuring the heterogeneity of the population.

Although some of the respondents had a traditional orientation they questioned thing like colour associations. This attitude of questioning issues is characteristic of modern times (as mentioned in Chapter Five).

When a similar study was conducted in the Transkei in 1986, no significant differences were found between the two groups. Non compliance was high for both groups. The respondents in the study conducted in the Transkei showed a similar profile regarding doctor-shopping and treatment characteristics. The rural respondents expected to be given an injection when they consulted a modern doctor. This belief in injections has been reported by other researchers (Mfenyana, 1985, Zorza, 1982, Alland, 1969). The belief that one should inflict pain in order to remove pain seems to be dying among urban respondents.

Responses to questions regarding consulting traditional healers may not be a true reflection of the doctor shopping behaviour for bot the modern oriented and the traditionally oriented respondents. Many of them will not admit consulting a traditional healer very openly.

Area was not a determinant of either non compliance nor beliefs about the significance of colour in the treatment of disease. Non compliance was slightly higher for the Westernised rural group than it is for the urban groups; 54.9% and
51.2% for the Westernised group, 50.0% and 48.8 for the traditionally oriented groups.

Rioting broke up at some of the schools in Soweto during the time of data collection. This necessitated a change of plan. More respondents were seen in Chiawelo as this area was not seriously affected at the time. This may have introduced an element of bias in the results as more people were interviewed from one clinic.
CHAPTER EIGHT: COLOUR OF MEDICATION

8.1: INTRODUCTION.

Literature reported in Chapters Two and Three suggests that colour has a symbolic importance in the treatment of disease. While the main purpose of the study is to examine the meaning of colour to the three ethnic groups, the Xhosas, Sothos and Zulus of South Africa, in two settings (urban and rural) and how the social, economic and environmental context can lead to change in belief systems (ie. people living in urban areas have beliefs that conform to a more Western orientation) it is the intention of the researcher in this chapter to examine the meaning of colour from the perspective of a provider of medication, namely; Pharmaceutical Companies.

Chapter Six reported on the findings of a study conducted among Zulus, Xhosas and Sothos. Findings of the study suggested that people with a traditional orientation believe that colour is significant in the treatment of disease. The implications of these findings were that the beliefs could affect health care behaviour and compliance to a medical regimen.

A study on compliance, showed that there were no significant differences between respondents with a traditional orientation and those with a modern orientation.
The pharmaceutical companies were included because they make certain decisions regarding the properties of medication. The results of the studies reported in Chapter Five and Chapter Seven suggest that people have certain expectations regarding colour of medication. It is important to know if pharmaceutical companies believe that colour is important to the consumer, do the companies conduct any research in this regard?

Pharmaceutical companies are, according to Marmion (1984) a minor but important consumer of colourants. Colourants were originally used to make drugs more appealing to the consumer, but now they are used for identifying the company’s products. Of course, colour cannot be the only identifier that the pharmaceutical companies use; form, shape, size and coding are other means of identification.

Claridge (1970) writes that the effect of any medication on an individual, the ‘total drug effect’ depends on several elements, besides its pharmaceutical action. These are attributes of the drug itself eg taste, shape, colour and name - those of the person receiving the drug, for example, experience, personality and socio-cultural background. The attributes of the person dispensing the drug and the setting in which the drug is dispensed are also considered by Claridge to be important for the ‘total drug effect’.

In Africa, as in other Third World countries, rituals are performed to cure illness, increase fertility, defeat enemies, change people’s social status,
remove impurity and reveal the future (Ray, 1976, Maclean & Bannermann, 1982). Ngubane (1977) reports that among the Zulu of South Africa, it is the colour of medication rather than its pharmacological action that is considered the most important attribute. The Mende of Sierra Leone buy medicines from open air markets. They use colour as a criterion of choice (Bledsoe & Gouband, 1985).

If colour plays such an important role in the treatment of disease in these countries, are pharmaceutical companies who export drugs aware of these attitudes. What determines and who determines what colour a new drug should be?

8.2. REPORT ON A STUDY CONDUCTED IN BRITAIN AMONG PHARMACEUTICAL COMPANIES

8.2.1. METHOD:

Questionnaires (see Appendix F) were mailed to a total of 101 randomly selected pharmaceutical companies in Britain. The names of the companies were obtained from the Chemist and Drug Directory. Pharmaceutical companies in South Africa were not included as most of them are subsidiaries of overseas based drug companies. As such they do not make any decision regarding the colour of a new drug. The questionnaire was three pages long and easy to complete. Questions addressed related to whether colour was
considered important when decisions were made regarding properties of a new drug. Other questions related to the question of colour as a placebo variable.

8.3. RESULTS.

Nine of the forty companies that responded did not fill in the questionnaire either because they manufactured only one product and they thought that colour was not an important variable for the product or because they manufactured other products either than drugs.

8.3.1. WHO DECIDES ON THE COLOUR OF A NEW DRUG?

The first question asked who determined what the colour of the new drug should be. The marketing department was listed as the major decision maker. Other departments listed were:

TABLE 8.1. DECISION MAKERS ON COLOUR OF NEW DRUG

<table>
<thead>
<tr>
<th>MEDICAL</th>
<th>CHEMIST</th>
<th>PRODUCTION DEP</th>
<th>MARKETING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>23</td>
</tr>
</tbody>
</table>

Other departments mentioned were, Product Formulation, Management, and
Production and Marketing combined.

8.3.2. WHAT DETERMINES THE COLOUR OF A NEW DRUG?

It was important to check whether research was carried out concerning acceptability of the colour of the new drug. A question was asked what determined the colour of the new drug. The following responses were given by the drug companies.

TABLE 8.2. DETERMINANTS OF COLOUR OF NEW DRUG

<table>
<thead>
<tr>
<th>MEDICAL</th>
<th>CHEMISTS</th>
<th>PRODUCTION DEPT.</th>
<th>MARKETING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>23</td>
</tr>
</tbody>
</table>

Other factors mentioned here, were:

1, regulatory authorities and the ease of registration
2, international considerations; what colourants, dyes are accepted internationally.
3, therapeutic area, existing company products and other marketed products; avoidance of confusion with existing products
4, need to avoid any potentially harmful dyes
5, controlled by which drugs are approved under EEC/USA laws and the company house style
6. formulations have input if a particular colour or colour combination proves impractical or unstable

7) general colourings should only be inert or occasionally with traces of naturally occurring substances eg riboflavin

According to some respondents colour of medication only becomes important if the product is to be bought over the counter. Sometimes the product's active principle determines the colour of the colourant. Most new products are or should be white, however, to facilitate world wide acceptability.

8.3.3. **DO PHARMACEUTICAL COMPANIES CHANGE THE COLOUR OF A DRUG IN OTHER COUNTRIES?**

Sixteen companies changed the colour of medication when exporting the drugs overseas, fourteen did not. Reasons given were:

<table>
<thead>
<tr>
<th>TABLE 8.3. REASONS FOR CHANGING DRUG COLOUR IN OTHER COUNTRIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESEARCH DOCTORS</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

Other reasons mentioned were:
1. registration

2. to satisfy local demands regarding colouring agents and E numbers

3. product ancestry in those countries

4. economics of world production

5. variation of production techniques, patents

6. policy for new products to have the same colour preferably white, internationally

8.3.4. PLACEBO VARIABLES

The following is a summary of the responses to the questions relating to placebos. The question asked was that of the following variables did they consider relevant as placebo variables.

TABLE 8.4. PLACEBO VARIABLES

<table>
<thead>
<tr>
<th>COLOUR</th>
<th>TASTE</th>
<th>SIZE</th>
<th>ROUTE OF ADMIN</th>
<th>NATURE OF DRUG</th>
<th>NAME OF DRUG</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>27</td>
<td>25</td>
<td>23</td>
<td>25</td>
<td>19</td>
</tr>
<tr>
<td>NO</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>D/K</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

It appears that most companies consider colour to be the most important placebo variable. In second place were taste and route of administration while in third place was the size of the tablet.
The above findings appear to suggest that people make their decisions on whether they will like the tablet based, firstly on colour of medication and then on the other properties of the drug.

8.4. DISCUSSION

It appears that although doctors and pharmaceutical companies believe that colour is a relevant placebo variable, not much effort is made by pharmaceutical companies to exploit this issue. Research among patients is not conducted by most companies to determine people's perceptions of the relevance of the colour used for a new drug. This is probably because once the sick role has been adopted, it is the responsibility of the patient or those close to him to seek professional help. It is then the patient's obligation to take the treatment whether he likes it or not.

In Third World countries where colour symbolism in the treatment of disease is reported to be very important it is possible that the colour of drugs could be a cause of non-compliance. Bledsoe and Gouband (1985) report that in Sierra Leone, Quinine is accepted if it is white and bitter because of its associations with the traditional treatment for a fever.

There is wide controversy as to what the causes of non-compliance are. Some researchers have looked at factors like doctor-patient communication, sex, race, number of previous illnesses and health beliefs, but there is no
consensus as to what the cause of non-compliance is. It is therefore possible that colour of medication could be a factor because belief can sicken, kill or heal (Kahn, 1985).

Research among pharmaceutical companies has also revealed that they consider colour to be an important placebo variable. Consequently, some pharmaceutical companies conduct research among doctors and amongst the prospective consumers to check if the colour of the new drug would be acceptable.
CHAPTER NINE: DISCUSSION

9.1 HEALTH AND ILLNESS

The Herzlich (1973) approach was adopted to establish people's representations of health and illness. The results suggest that there are three explanatory models for illness which are used in South Africa: modern, traditional and faith or spiritual. Like the informants in the Herzlich study the respondents believed that external forces such as 'way of life', or modern life could cause disease.

9.1.1. DEFINITIONS OF ILLNESS

Illness was defined by some respondents in terms of the ability to perform normal everyday functions. "Sihamba nazo" meaning 'we go with the symptoms' is a popular response when people are asked how they are.

Blaxter and Patterson (1982) maintain that this is typical of socially disadvantaged people; health is defined in terms of the ability to carry on working. This is a variant of Marxism and is also common in Western countries as well (Calnan, 1987). The respondents in the study did not want to take time off work when ill because they "had goals to achieve". In a country like South Africa, that has high levels of unemployment a functional definition of health or illness may be given by people because of a fear of losing a job. In
South Africa there has always been a problem regarding sick leave that has been recommended by a traditional healer. Traditional healers' patients are now allowed a certain number of days off work. They should produce a "bed letter" from a registered healer.

One respondent who saw the cause of illness as being exogenous equally saw the cause of mental illness as being in society, as it is society that defines behaviours which are acceptable and unacceptable. Society is thus seen to be responsible for mental illness, or at least where explanations of mental illness lie.

To Lambo (1964) the concept of health within the framework of African culture is far more social than biological, illness is more than the absence of disease. O'Connell (1982) sees intwaso among traditional healer initiates as being caused by external factors like stress - stress which O'Connell attributes to modernization and the pressures associated with White South Africa. Again the impression that illnesses, particularly those of a psychological nature are caused by external factors is endorsed by O'Connell.
In indigenous societies, illness is attributed to an external cause, the individual's vulnerability and personality are not considered. This makes it difficult for the patient to have any control over the illness. Vulnerability is only mentioned when people talk of illnesses like colds which a person may get if they expose themselves to cold weather if they are not dressed up warmly. It may be difficult, however, for the poor to keep warm if they do not have warm clothing, a fact which can result in the cause of illness being externalised once more.

9.2. TRADITIONAL AND WESTERN MEDICINE

The scores of the informants on the Personalistic Scale (item 1 - 6 of the Health Belief Questionnaire) revealed an exceptionally high degree of support for beliefs in traditional medicine. The findings suggest that the nature of health services for Black people in South Africa makes it difficult for them to understand and accept Western medicine without reservations. South Africa, although perceived as a developed country by some authors (Bulmer, 1983) still has high morbidity and mortality rates among the Black populations (Unterhalter, 1979, 1982, Moosa, 1984). South Africa has the unique character of being both a First World country (for Whites) and a Third World country (for Blacks). It is not surprising therefore that for the Black people to whom Western medicine is sometimes not readily available or is costly, traditional beliefs in the cause of disease still persist.
If one compares the scores on the Personalistic Scale with the informants' self perceptions it would seem that self perceptions are a true reflection of the informants' health beliefs because there are some similarities. People who perceived themselves as a 'mixture', according to the Self perception scale did not, however, necessarily have corresponding scores on the Personalistic Scale.

9.3. ILLNESS AS EXOGENOUS

Explanatory models of illness have been defined by Kleinman (1975) as attempts to understand illness and treatment. They are used to explain the aetiology of disease, the time and mode of onset and the course of treatment.

The Personalistic Scale (items 1 - 6) of the modified version of the Dressler (1980) scale was used to determine the health beliefs of all the respondents in the sample. The Personalistic Scale addresses questions relating to beliefs in sorcery and supernatural forces as being the cause of disease. It is clear from the scores on this scale that a large proportion (81.0%) of the Black population in the country believe to some degree in a traditional medical paradigm. If it is to be argued that health beliefs are an index of modernization then the results of this scale reveal a low degree of modernisation among the Black people of South Africa.
More than three quarters of the total sample saw themselves as being either 'traditional' or a 'mixture', according to the Self Perception Scale. The latter category means that although the informants think of themselves as being modern they still see themselves as possessing some traditional traits. Despite the similarities in the percentages of people who perceived themselves as either traditional or a mixture and that of respondents with a traditional medical orientation, the scores of the personalistic scale should not be interpreted literally to mean that the respondents are not modernised. Jahoda (1962, 1970) found a high incidence of beliefs in traditional medicine among university students in Ghana. Furthermore is it necessarily contradictory to hold traditional beliefs at the same time as engaging in a Western lifestyle? All that this means is that the people have different priorities and values.

None of the respondents interviewed for the rural Zulu sample answered negatively to the questions on the Personalistic Scale, which gives the impression that in Zululand beliefs in traditional medicine are the norm rather than the exception. Most of the Xhosa rural sample also answered affirmatively to the questions on this scale. The urban samples, except the Sotho sample, show a significant decline in the number of affirmative responses. It may be concluded therefore that these beliefs, although still present, persist to a significantly lesser degree in urban populations.

Half (51%) the total sample with a traditional orientation were scored as strongly traditional, 32% as moderately traditional and 17.4 % as slightly
traditional. This is obviously not encouraging for health professionals who for many years have seen it as important to fight these beliefs. The above figures contradict the statement by Foster (1978) that in countries where traditional people have had access to good quality Western medicine for more than a generation or longer traditional medicine has been eclipsed and superseded by Western medicine.

Once the cause of the illness has been externalised, external agents ranging from ancestors to the colour of medication are expected to determine the situation by helping the patient to regain normality. King (1983) maintains that an external locus of control implies a fatalistic approach, or the belief that events are controlled by external influences.

The belief commonly held by people in South Africa that intwaso is caused by ancestors provides a good example. All events related to ntwaso are believed to be controlled by the ancestors. Treatment of intwaso addresses this belief as everything is centred around communication with them through dreams and the use of colours associated with them. A goat or beast may be slaughtered in order to propitiate them.
9.4. **LOCUS OF CONTROL**

Locus of control beliefs that are uncontrollable have been associated with early experiences of disease in terms of the frequency of childhood disease and prevalence of major diseases (deaths) in the immediate family (Lau, 1986). South Africa has high morbidity and mortality rates. Deaths, that are a result of the violence in the country are becoming common too.

The results of this study cannot be interpreted in a socio-political vacuum. It is necessary that they are understood in the context in which they occur. It is possible that the beliefs about an external cause of disease are reinforced by the Black South African's feeling of helplessness in as far as most things are concerned. Helplessness can be learned in situations where one believes that one has no control (Seligman, 1975). As a consequence the individual may feel there is nothing they can do to control their environment and probably their health as well.

Dommissé (1986) believes that the policy of apartheid affects people psychologically as well as politically, socially, economically and medically. Faced with all these odds the individual is likely to feel helpless in a great many situations. Based on the information gathered from the case studies and responses to questions on health care behaviour the following model was designed. The model (Fig 9.1) shows the possible effects of stress on the
Black South African and how these could lead to an externalised cause of disease and form of treatment.

The model is an attempt to understand the social processes of becoming ill and how the Black South African’s attributions and social representations of illness can be explained. There is a need for more research in the areas of social attributions and social representations of illness.

Respondents in the study saw illness as being caused by an external agent and often the situation in the country was blamed for the condition in which they found themselves. This resulted in feelings of helplessness and feeling that one has to go to work although they were not feeling well.

The attitude of attributing illness and other failures to an outside agent is typical of people with an external locus of control. Once control has been externalised, people can either lose hope, or learn to be helpless. In some cases loss of control is followed by reactance. Some people may refuse to take prescribed medication because they want to be in control of the illness and not have the illness controlling them.

All these three forms of reaction may lead to illness. The respondents made a distinction between physical illness and mental illness. Mental illness was derived from society and a person often did not know that he/she was ill. When a person was physically ill they could point out where it was painful.
Brewin (1988) believes that it is possible to feel helpless to influence the future without actually feeling that the future will necessarily be bad; it is hopelessness that makes the person feel that the future holds nothing but disaster and disappointment. "Thus it is possible to feel helpless without being hopeless, but not vice versa" (p111). Hopelessness, helplessness and sometimes reactance can lead to illness. It has been found that an orientation to a Western life-style and living at its margins but without access to that life-style can be stressful and can result in a variety of health problems such as psychological distress (Chance, 1965), alcohol abuse (Graves, 1967, Lambley, 1980) and high blood pressure (Unterhalter, 1982, Scotch and Geiger, 1963/4).

Gatchel & Baum (1983) also maintain that the loss of control over one's social experience is often associated with withdrawal and a limited form of helplessness. According to Baum & Gatchel (1981) the initial reaction to loss of control is resistance (reactance). This is later replaced by helplessness. Raps et al (1982) argue that loss of control can lead to helplessness.

Respondents attributed the illness to the modern times, witchcraft and certain natural causes such as colds. Some attributed it to ancestral anger.

The culture of the people determines the social representations of illness and the attribution process. Social representations could be linked to the individual as well as the locus of control. Studies show that the situation in South Africa
affects people in many ways (Dommisse, 1986) and this leads to an external locus of control (Orpen, 1971).

Barker (1973) believes that if people cease to look within themselves for reasons but see all misfortune as radiating from the many forces of spiritual enmity, then the reaction becomes that of reasonably resigned acceptance. The avoidance of misery is seen as something beyond their control.

There is also the possibility of what Mason (1967) (cited in Jahoda 1970), calls the revolt against Western values. Western values in the South African situation could be seen as being synonymous with oppression, misery emotional and material deprivation. Resorting partially to African cosmological notions (Jahoda, 1970) could give the individual a sense of security.

Clearly there is a need for further research in the areas of locus of control and helplessness among the Black populations in South Africa. Studies by psychologists like Lambley (1980) which have been conducted mostly among the Coloured population encourage the study of racial differences only for the purpose of justifying apartheid, "just as the Afrikaaner needed his system, so I saw that the Coloureds and the African people needed apartheid. It had become so much a part of their lives, their status, their personal psychology. I felt sure they could not live without it" (Lambley, 1980, p125).
Illness behaviour refers to varying perceptions, thoughts, feelings and acts affecting the personal and social meaning of symptoms, illness disabilities and their consequences (Mechanic, 1978). It is the illness experience that determines how people respond to presenting symptoms. Illness behaviour is socially learned, expression of pain is culturally determined (Ngubane, 1977, Zborowski, 1952, Thompson, 1985, Sargent, 1982).

Respondents with a traditional orientation and those with a Western orientation claimed to seek medical help 5-7 days after onset of illness. Some respondents attributed the delay to economic reasons, while others said they tried irati - home remedies first. As mentioned earlier most of the respondents depend on their migrant sons or husbands for income and this is often sent at the end of each month. This allowance is used mainly for buying the bare essentials. When a member of the family falls ill, home remedies are used initially, if these do not help, the family gets together to decide what action should be taken. Western oriented respondents claimed they did not use home remedies as much as the traditionally oriented respondents did.

Traditionally oriented respondents reported shopping around for doctors, particularly if they thought they were not getting immediate relief from the prescribed treatment or did not have confidence in its effectiveness. One patient reported seeing two different doctors in two days. She was,
unfortunately given the same treatment on both occasions. She ended up with large quantities of tablets which she was not taking because she maintained they were ineffective.

9.7. CULTURE

Illness behaviour takes place in a cultural context. It is society that legitimises symptoms. It is important that one should know and understand the culture of the people before illness behaviour, social representations and illness attributions can be understood. Lambley (1980) cautions that treatment modalities accepted unthinkingly by clinicians in Europe and America as obvious and correct become, in the South African context, modalities that could compound a Black/Coloured patient's pathology and possibly even cause harm.

Manganyi (1981) who sees culture as a medium for human self-extension: a kind of symbolism which has a lot to do with the notions of individual and group identity, maintains that culture can consolidate group cohesion and national identity without suffocating the concurrent blossoming of individualised identities. Although the informants in the study showed a high degree of traditional orientation in their health beliefs, they nonetheless showed individuality in as far as significance of colour in the treatment of disease is concerned and in other areas.

Lambley (1980) found that the South African situation creates conditions in the
Coloured population in which psychotic-like levels of symptoms become normal reactions. "As a result of prolonged exposure to apartheid, they had to develop ways of coping that in any other culture and even among the Whites in South Africa would be regarded as psychotic or borderline" (p100).

It is important that Western trained health professionals, some of whom have never been exposed to these belief systems learn about people's attributions, as observer/actor inferences may be distorted. Harré (1981) believes that the observer often does not know the background to the action, the actor's intention and so on as the observer's eye is drawn to the actor rather than the background against which he moves. The differences according to Harré account for the actor's tendency to attribute cause of their behaviour (illness) to the environment (sorcerers, ancestors) and the observer to attribute them to the actor (delayed response in seeking medical care). It is for these reasons that the Western trained health professional working among indigenous populations should understand not only the language of the people but their culture as well.

Shotter (1981) reinforces this by arguing that it is wrong for the actor/observer task to be treated mainly as that of referring to causal antecedents of action. It should rather be that of attempting to grasp what in their actions people have in mind.
The findings of this study seem to suggest that beliefs in a traditional medical paradigm are the norm for Black South Africans. The culturally accepted way of dealing with such distress is to attribute illness and failure to personalistic causes.

It is, however, strange that beliefs in traditional medicine still persist among those people living and working in urban areas. Modernization is often seen as being synonymous with a Western paradigm. One would expect that people living and working in urban areas would not believe in traditional medicine. Researchers on modernization perhaps make the false assumption that an adoption of a Western life-style means that people have to do away with their traditional health beliefs. Jahoda (1962) and Hunter (1936) maintain that beliefs in traditional medicine among literates, even university students are high. Urban life with all its requirements and pressures creates anxiety among the people and the old way of dealing with anxiety was through magic. A traditional healer may be consulted at times because people feel frustrated, they cannot get employment or because they think that other people are envious of their achievements.

Scores on the Personalistic Scale suggest that most of the people in the sample have a traditional orientation. These beliefs form what Hewstone
(1983) refers to as social extensions. It is these beliefs that shape people’s responses to issues related to medical care.

9.9. TRADITIONAL HEALING METHODS

Some of the traditional healers interviewed in the study did not agree that colour was more important in treatment than the actual pharmacological action of the medication. Due to a delay in obtaining permission from the kwaZulu Government to undertake research in the Homeland it was not possible to interview traditional healers from several areas.

Traditional healers receive their training in various parts of the country and from other healers. This makes it difficult therefore to generalise one’s findings for the whole population of healers. It is doubtful whether Ngubane’s findings are applicable for all the traditional healers either in Zululand or South Africa. Authors citing Ngubane’s work always claim "Zulus believe ..." or "among the Zulu of South Africa". Research in Zululand was, like the Ngubane study (1977) conducted in one area only.

No consensus was found among the healers in this study on their use of colour in the treatment of disease. Some of the healers thought the questions relating to their use of colour were at best an insult to their integrity and at worst insulting to their healing practice. This, they interpreted as meaning that when they treat disease any medication could be used as long as it was of the
The attitude that colour is considered more significant than the pharmacological action of the medication could lead to a lack of confidence in traditional medicine among Western trained doctors. There is evidence, however, that some traditional healing methods are of scientific value (Unschuld, 1980, Akerele, 1987).

9.10.1. RITUALS

In African societies, rituals are organised around births, puberty, marriage and death. These are the major transitional events in a person's life. Rituals, according to Kafka (1983) can produce a feeling of completeness, a finished sequence, the achievement (at least for a while) of satisfaction, satiation and perhaps serenity. The colours used in a ritual are significant. Rituals are a way of communicating with the ancestors.

In the case of illness where a goat is slaughtered in order to appease the ancestors, if calamity and health are achieved as a consequence of this ritual, it is possible that the knowledge will be passed on to other people that some illnesses are due to ancestral anger.

9.11. COLOUR IN THE TREATMENT OF DISEASE

Traditionally oriented respondents interviewed for this study attached significance to colour in the treatment of disease.
There are various ways of explaining the perceived effectiveness of colour in the treatment of disease.

a, attribution theory
b, social representations theory
c, incidental learning

9.11.1. ATTRIBUTIONS

The essential concern of attribution theory is to understand how people ascribe situational, emotional and dispositional causes to the behaviour of others and to other factors in the environment.

Watts (1982) believes that clinicians will get better results if they adapt their treatment programmes to the attributional styles of their patients. This, however, does not mean that clinicians should go out of their way to change the colour of drugs in order to comply with patient expectations.

Hewstone & Jaspars (1983) outline three propositions for social attributions:

1) attributions are social in origin (may be strengthened through social interaction or may be influenced by social information)
2) attributions are social in their reference or object (they may be demanded by the behaviour of an individual categorised as a member of a social group, rather than in purely individual terms)

3) attributions are social in that they are common to the members of a society or group (eg members of different groups may hold different attributions for the same events)

The attributions of the informants studied here are social in as far as they are common to members of the groups studied. The beliefs are social in origin because they are strengthened or reinforced by parents during socialisation or other members of the extended family.

It can be argued that the informants’ shared beliefs about attitudes to health care influenced their attributions of colour in the treatment of disease. Social representations of illness determine the nature of treatment that the members of the family seek, and so by definition these representations should also determine the nature of the treatment expected.

Doise (1978) believes that these shared systems of belief are bridges between the individual and social reality and their function is to determine, justify and anticipate intergroup relations. It is these beliefs that keep the groups together. Customs have this effect.
Social extensions of attributions look to the shared beliefs that underlie attributions common to members of a group or society. (Hewstone, 1983). Karanci (1987) believes that attributions may be shaped by one's training or experience. They could also be learned from parents. Society stresses the importance of work for people and malingering is treated with contempt (Ngubane, 1977). It is perhaps for this reason that a functional definition of health is given by the informants in the study.

The findings of the study, regarding perceived relevance of colour in the treatment of headaches yields high consensus among doctors, patients and the healthy respondents, as all the informants associated the condition with white. This creates the impression that as White is traditionally the colour that is used in the treatment of this illness, analgesics are acceptable if they are White in colour (Bledsoe and Gouband, 1985). When something that is unfamiliar is given attributes of the familiar, Moscovici (1981) calls the process 'anchoring'.

Findings of the study suggest that some people, particularly those with a traditional orientation, believe that colour is important in the treatment of disease. This view is not shared by those with a Western orientation; or a very slight or moderate traditional orientation. This suggests that beliefs about colour being important in treatment could be as a result of a carry-over effect from traditional medicine dispensing patterns.
9.11.2. SOCIAL REPRESENTATIONS

Hewstone and Jaspars (1983) believe that social representations constitute a more pertinent cognitive basis for social psychology than the individual processes which have often been emphasised by research in this area.

"Myths, be they called representations collectives, social representations or social (as distinct from individual) stereotypes, constitute in turn a crucial part of the background affecting the collective aspects of social behaviour of masses of individuals" (Tajfel, 1984, p.696). This does not mean that people do not differ in most of their individual choices actions and attitudes. The sample used in the study, although showing a traditional orientation, still differ in some of their beliefs towards, for example, the significance of colour in the treatment of disease.

The case studies, on the social processes of becoming ill, describe respondent's representations of illness. These included labels that society gives to a disease. De Lauwe (1984) maintains that the social transmission of lifestyles, knowledge, systems of representation and values is not only carried out from one generation of adults to another but also through the crucible of infancy. The child's mind at birth is presented as a tabula rasa on which all the knowledge and representations will be written. De Lauwe sees the representations as a central mechanism, an expression of the human mind and a social mechanism in so far as they are cultural products. The
representations are located at the interface between the psychological and the sociological - facilitating communication by suggesting to children how they should interpret symbols, objects and living things.

The first thing that people do when they are feeling sick is to try and fit their illness into an existing category. It is probably the lack of fit with known illnesses which tells people that the illness is new and could be more serious (Lau & Hartman, 1983). The architecture of the new illness will be based on preexisting common illness labels.

Colour of medication is traditionally significant. It seems that this symbolism is applied by some members of the population, to Western medicine as well. Findings of the studies reported here suggest that it is people with a traditional orientation who believe that colour of medication is significant in the treatment of disease. These beliefs show a decline as people move away from rural areas to urban areas. Modernisation makes it possible for people to start questioning issues that they accepted unquestioningly in the past. When asked if colour of medication is important, they ask, “which one, the colour on the outside or the one on the inside, how can colour be important then?”

It seems that even if "anchoring" had occurred, there comes a time when the unfamiliar becomes too familiar, people begin to analyze and question their representations.
9.11.3 COINCIDENTAL REINFORCEMENT

An alternative explanation for the reasons why people tend to believe that certain coloured tablets could be used effectively to treat certain diseases is Skinner's theory of reinforcement.

Classical conditioning refers to a type of learning that is incidental in nature. Behaviourists believe that learning depends upon the connections between a stimulus and a response. Skinner's behavioral theory can be used to explain the reasons behind people's associations of colour with the treatment of specific illnesses. People who have been on treatment for a specific illness over a long period of time may come to associate the colour of a particular tablet with the effective control of the disease (positive reinforcement), whereas if the treatment causes unpleasant side effects and thus results in drug defaulting this could be attributed to negative reinforcement. Hence the association of that specific colour with perceived side-effects.

Israel (1972) cautions, however, that Skinner's philosophy of science emphasizes the desirability of explaining behaviour in terms of environmental factors which have an influence on the individual. He maintains that this theory seems to imply that the subject is a passive recipient of mainly external stimuli. Deschamps (1983) argues also that contrary to the claims of reinforcement and conditioning theories, people actively organise their goals.
Stringer (1982) maintains that participation facilitates the necessary natural adjustment of an individual.

He believes that the behavioral framework is inappropriate for explaining human behaviour because of its undue attention to the passive individual and the theory's static conditions of equilibrium. He believes that the social orientation of the role theory, to the exclusion of the individual's active interests is equally antipathetic. The individual cannot be expected to submit himself or herself passively to the influence of social institutions as the role theory tend to assume that they will. The relational theory assumes that a self arises only where there is a social process. Stringer maintains that the self is continuously undergoing change through interaction with other selves. Neither the individual nor the social processes are given priority because the interaction is fully reciprocal. Stimson (1974) and Steffersen & Colker (1982) say that there is an assumption that patients who are on treatment take their medication unquestioningly. Any treatment that does not make sense to the patient according to their explanatory models may not be taken.

It would be inaccurate to say that all informants thought colour was significant in treatment just because they responded to the questions on illness colour associations. The exercise was not to force them into deciding that colour was important, but rather to know what colours came to mind when certain illnesses were mentioned. It was also to establish their reactions to the colour of medication.
9.12. COLOUR IN TREATMENT OF DISEASE

Luscher & Baser (1984) say that patients have certain expectations about the colour of medications, and pharmaceutical companies should try and address these expectations. This would be difficult to achieve as the expectations could differ for different societies, cultures and ethnic groups. Although Bledsoe and Gouband (1985) found that colours were used as a criterion for deciding what medication to purchase, it would however be wrong to encourage these beliefs because in Sierra Leone the drugs to which the authors refer are bought on the open market without any professional advice. Colour coding of medication would only encourage drug misuse. Bledsoe and Gouband (1985) believe that colour coding medications would create the following problems:

a) enormous packaging and marketing difficulties in tailoring the drugs to many different cultural areas.

b) the vulnerability to counterfeiting of the drugs by salesmen who sought to boost sales by presenting a drug of a particular colour as efficacious for a disease for which it has no relevance.

There is also the problem of pharmaceutical companies doing the same.

An attempt to satisfy the needs and expectations of all people would obviously be costly to the pharmaceutical companies. Sallis and Buckalew (1984) report
that there are some racial differences as well. In their study they found that white subjects seemed more colour oriented than the Black sample. These beliefs contradict popular belief that Africans attach great significance to colour. They also contradict Edgerton’s (1977) findings that the African is highly suggestible. It would be interesting to conduct a similar study among White South Africans to find out if they thought colour was important in the treatment of disease.

It appears that pharmaceutical companies consider it important to conduct research on the colour acceptability of a new drug before the drug is launched on the market. This is probably because the companies adopt the attitude that when a person is ill it is their responsibility or that of those around them to make sure they get better, by taking the prescribed treatment. They also see colour as irrelevant; it is the pharmacological properties of the drug which are critical.

The move to have all new drugs in one colour, white, may solve some of these problems as white is perceived as being the most familiar colour. On the other hand white is associated with analgesics. This may create problems particularly among illiterate populations where colour is used for identification purposes. One could perhaps understand one doctor’s dilemma (Chapter Six) if all drugs are white and she decided to change the colour of the drugs she dispenses.
In the study on colour of medication (with a sample size of 783) significant relationships were found between level of education and belief that colour is significant in the treatment of disease. The implication of this is that the beliefs about colour and efficacy are not age related.

9.12.1. RED AND YELLOW MEDICATION

Red medicines are associated with blood (Nichter, 1980) and are thus used in cleansing the blood and to treat fertility problems. Similar associations were revealed in this study. For example, the informants thought that TB could be treated effectively with yellow tablets. This was probably because of the association of TB with sputum which the informants said was yellow. It is important to note that for the associations only first mentions were recorded. Furthermore because the question on tablet colour and illness associations did not follow immediately after the informant had given the colour association for the illness it is unlikely that they would have remembered what their earlier responses were.

A red tablet is said to be effective in the treatment of blood-related disorders - blood symbolises health, if the blood is weak, the body is automatically not healthy. This could stem from the fact that red, usually symbolises 'natural creative potential, the fertile ground of human kind' (Comaroff 1985, Buckley 1976) when abakhwetha male initiates leave usuthu the lodge, at the end of their seclusion period, their bodies are painted red with ochre. Circumcision,
in traditional societies, forms the rite de passage to adulthood. The red ochre, therefore, symbolises sexual potential - they have now reached manhood and are ready for parenthood (Comaroff 1985).

9.12.2. BLACK MEDICATION.

Black, on the other hand, signifies depressed activity and coolness - the colour of beasts offered in rain rites to the gods to 'cool the community overheated by promiscuity, lightening and general disorders' (Comaroff 1985). Traditionally medication is used to remove a person from a state of darkness into good health. Although cancer was associated with green, red and yellow by the patient sample, they nonetheless did not think that any of the tablets in these colours could treat the illness effectively. Black was the colour associated with the treatment of cancer. There is reason to believe that the size of the black tablet could have influenced this response. As cancer is perceived as being a serious chronic illness then the patients could have been influenced by this view as well.

The other explanation could be that because of the association of black medication with drastic action and potency, the patients' responses could have been biased toward attributing black tablets with the effective treatment of cancer. Again black tablets are not common. This could bias respondents toward thinking that the tablet is new so it could be for some of the 'relatively
new' illnesses. In this research black tablets were associated with chronic and probably unpopular illnesses eg idliso or Kaffir Poison, TB or cancer.

White, often signifies concentrated activating power (Comaroff 1985). White tablets were associated with relief from pain or high temperatures during a cold. White tablets would therefore help release the concentrated power which is relatively inactive during an illness. Again, abakhwetha paint their face and body white during this period of seclusion. This could be said to symbolise the concentrated active power that cannot be released until the gate keeper in the society, in this case the ikhankatha - the guardian (Soga 1931) opens the gate and admits them into adulthood.

Respondents associated green tablets with 'inyongo' - bile and gall disorders and also with the process of 'burning urine'. The latter does not refer to a symptom of urinary tract infections, but to a belief that when a laxative turns the colour of urine green it is because the bile which has been flooding the body is now excreted together with the urine, and because of its strength it burns the urine and changes it into a green colour.

If the theory that a patient goes into a consultation with certain expectations is accepted as true, then if the patient is brought up believing that colour symbolism is important in treatment, he is likely to have certain expectations about the nature of treatment he should be given. If the treatment dispensed does not make sense to him he may not take it (Stimson 1974).
Pharmaceutical companies use shape, size and coding as other means of identifying their products. This is not known to most people. If the person cannot read, cannot make out what the code is or if the instructions for the administration of the treatment are not properly labelled then unfinished medications which according to Shindell et al (1976) are typically found among the poor, could be misused.

Stimson (1974) believes that an impression is created that patients passively obey doctor's orders. Health professionals tend to ignore the fact that patients have their own expectations which they bring to the consultation and if what the doctor tells them does not make sense to the patient then non-compliance may set in. Claridge (1970) maintains that the total drug effect includes attributes of the drug (eg taste, colour, shape, name, attributes of the person administering the drug and the setting in which the drug is administered). If the colour is perceived as being inappropriate this may lessen the drug effect and could even result in drug defaulting.

In the study on compliance no significant differences were found between the respondents who thought that colour was significant and those who thought that it was not.
The respondents in the study were divided into two groups according to their belief systems. No significant associations were found between health beliefs and compliance. Respondents with a modern orientation were slightly more non compliant than those with a traditional orientation. This finding contradicts that of an earlier study (Mkumatela, 1986), where respondents with a traditional orientation tended to non compliance (45.1% and 50.0%).

The sample comprised all patients visiting the clinics for various health related problems. Unterhalter (1979) found high non compliance rates among hypertensives. Research has shown that hypertensives who often appear to be asymptomatic at times often stop taking treatment. There is a possibility that there could have been more respondents who are chronically ill in one of the group. This could affect results. Presenting to the clinic for medication replenishment is no guarantee of compliance. When the follow-up interviews were done, it was not uncommon for patients to take out all their tablet containers and admit that they did not know which ones the researcher was looking for.

Although no significant relationships were found between the groups on their level of compliance, it is clear that compliance is a problem in both groups. The differences are not substantial.
The high incidence of non-compliance seems to reflect the same pattern of non-compliance reported by Unterhalter 1979 in a study she conducted in Soweto South Africa. Over sixty percent (62%) of the hypertensive patients in her study were non-compliant, 60% of the diabetic patients were also non-compliant.

A number of factors could be contributory to these high rates of non-compliance.

1) Patients who use hospital outpatients facilities which charge cheaper rates compared to doctors in private practice (hospitals charge R8.00 about £2.00, while doctors in private practice charge R30.00 about £6.00 for adults) see different doctors every time they are ill. It is therefore not possible to have an understanding relationship with the doctor. Such a relationship could help build confidence in the doctor.

2) Patients need to be educated about the type of illness they suffer from. There is a need for doctors or other health professionals to inform patients what the diagnosis is, what the implications of the illness are, as this could lead to a better understanding of the type of complications that may set in if treatment is not taken regularly.

3) There is a need for doctors to understand such factors about the patients background, as how many meals the patient has per day. It is often taken for granted that people have three meals a day - hence the tendency to prescribe treatment thrice a day with meals or after meals. Some families cannot
afford to have three meals a day, so this, inevitably leads to non-compliance, as the patient may not take the treatment because she has not had a meal or may double the dose at the time of having the meal. A patient is more likely to remember taking treatment, with or after a meal, than if there is no meal that has been taken.

4) Respondents in this study were non compliant regardless of their orientation. Western oriented respondents were more non compliant than the traditionally oriented.

A study conducted in the Transkei at Canzibe Hospital (1984) to measure the effectiveness of two TB regimens that were being introduced recorded low non-compliance rates of 27%. This study was, however, designed to measure the effectiveness of the particular treatment, it does not reflect the rate of non-compliance among all TB patients in the area. Besides, the definition of non-compliance used allows a lot of deviation during the course of the month, as long as the patient presents himself at the hospital to collect the treatment, then he will be defined as regular or compliant.

A problem which was found among some patients, albeit a few was the tendency to take more than the prescribed dose. Reasons for this could either be, a sharing of medication with friend or relative or a belief that an overdose would bring more immediate relief from pain. Unterhalter 1979 reported similar incidents of non-compliance as well.
Non compliance was not related to perceptions about whether colour was important in the treatment of disease or not. Area of residence, marital status, age and health beliefs were not determinants of non compliance.

The findings of the study on compliance point to the seriousness of the problem of non compliance. Respondents who had a traditional orientation were expected to be less compliant but they were slightly more compliant.
CHAPTER TEN: CONCLUSION

10.1. INTRODUCTION

The aim of this study was to explore the attitudes held by the Xhosa, Zulu and Sotho of South Africa to the colour of Western medication in the treatment of disease and whether this affected compliance. The sample comprised patients (from three hospitals and three clinics) and urban and rural informants from the three major ethnic groups in South Africa. Sotho speaking patients were not included in the sample due to the researcher's limited knowledge of the Sotho language. Trained researchers were used for the rural and urban Sotho samples. Interviews with patients need to be conducted with considerable sensitivity so they could not be readily assigned to other people to undertake.

A total of six studies were conducted:

Study 1 comprised case studies that were used to establish the social representations of becoming ill.

The second study was aimed at finding out whether Xhosas, Zulus and Sothos thought that colour was important in the treatment of disease. This was also aimed at establishing health care behaviour patterns. A total of 783 respondents were interviewed.

230
The third study was conducted among modern doctors to establish their attitudes regarding colour as a placebo variable.

Traditional healers were interviewed in the fourth study to see if they thought colour was significant in the treatment of disease.

Pharmaceutical company representatives were interviewed to establish what factors were taken into consideration when a new drug was to be launched.

These studies led to further research on compliance among a group of patients resident in Soweto.

10.2 DATA COLLECTION IN DEVELOPING COUNTRIES

Research in developing countries presents one with problems that are not common for developed countries. The violence and high crime rates in townships like Soweto makes data collection problematic.

Sampling is also a problem, particularly in the villages. The conventional methods of data collection are often not applicable as houses do not have any site numbers. The researcher has to keep modifying the sampling method as it may not be applicable to other villages within the same district.
The researcher is sometimes regarded with suspicion and is sometimes seen as an authority who respondents may want to try to please. The opposite of that is an unwillingness to give information.

Despite all the problems mentioned, sampling methods used in the studies gave one a cross section of the populations that were of interest to the researcher. The samples should be taken to be representative of the samples from which they were drawn.

10.3. MAJOR FINDINGS OF STUDY.

10.3.1. AGE AND TRADITION

It had been hypothesised that older respondents were likely to be more traditional in their orientation than the Westernised group. In the study it was the younger respondents who were found to have a strong traditional orientation. This suggests a tendency by the younger generation to maintain traditional methods of doing things.

10.3.2. TRADITION AND LEVEL OF EDUCATION.

The level of education recorded significant interactions, both with ethnic groups and with age. Older respondents with low levels of education were more traditional in their orientation. The pattern changed, however, at
secondary school level. The younger respondents were more traditional in their orientation. The same pattern was maintained for incomplete matric and post matric qualification.

10.3.3. COMPLIANCE AND ETHNICITY

The Zulu respondents were the most traditionally oriented. They were followed very closely by the Xhosa group. When the level of education of the respondents was higher, the Xhosa became less traditionally oriented. The Zulu were the only group that had a strong traditional orientation.

10.3.4. COLOUR OF MEDICATION AND COMPLIANCE

Although colour was believed to be important in the treatment of disease, these beliefs were not a determinant for non compliance.

The studies on importance of colour and the compliance study established that colour was significant in the treatment of disease for some respondents. This was true for the traditionally oriented respondents. Education, sex and marital status were not found to be determinants also.
10.3.5. COMPLIANCE, RURAL AND URBAN RESIDENCE

The findings of the study contradict those of an earlier study conducted in the Transkei on compliance (Mkumatela, 1986). Slightly more respondents with a modern orientation were found to be non compliant in this study.

The results of the study on compliance support those of many studies in the area in stressing the universality of the problem of non compliance. They also point out the need for health care workers to understand the patient’s belief systems.

10.3.6. COLOUR AND TRADITIONAL HEALING.

Findings of the study conducted among traditional healers contradict those of Ngubane (1977). Ngubane maintains that traditional healers believe that it is the colour of medication rather than the pharmacological properties of medication that are important in the treatment of disease.

There was no consensus among the traditional healers interviewed in the study about the role of colour in treatment. Some traditional healers felt this was an insult not only to their integrity but to their practice as well.
10.3.7. USE OF COLOUR BY PHARMACEUTICAL COMPANIES

Research among pharmaceutical companies in Britain revealed that research was not conducted by most companies on the acceptability or appropriateness of colour of new drugs before they were launched, despite the companies’ acknowledgement of the role of colour as a placebo variable in the treatment of disease.

This suggests that pharmaceutical companies feel that once a person is sick they should take the medicine irrespective of its superficial qualities or appearance.

10.4. EXPLANATORY MODELS OF ILLNESS

The explanatory models of illness given by the respondents in the study were, Western, traditional and spiritual. Western medicine was often the treatment of choice. If the patient and the family saw no improvement in the condition of the patient then alternative methods would be considered. Doctor shopping often followed the pattern shown in Fig 10.1.

Figure 10.1 shows that the pattern of health care seeking, although not rigid tends to be from a Western orientation to faith healing through traditional healing. The figure also shows that traditional and Western systems, faith healing and Western medicine can be used together
but not traditional medicine and faith healing. This creates the impression therefore that when all else fails then faith healing is the answer.

It also appears that traditional medicine and faith healing are not seen as being equal. Western medicine is equal to traditional medicine and also to faith healing.

EXPLANATORY MODELS OF ILLNESS AND TYPE OF TREATMENT

RECEIVED

The three belief systems can be seen as forming a triangle with Western medicine occupying a more superior position. Traditional medicine is often the
first option and faith healing the last option. Some patients do not seek help from traditional healers, so they move from Western medicine to faith healing. This suggests that faith healing and traditional medicine may actually be seen as being in competition with each other, hence they are reportedly not used simultaneously. Usually people who use faith healing do not go back to traditional healers if faith healing does not help. Faith healing becomes the last treatment of choice because when illnesses are not treatable with Western medicine and traditional medicine then they are attributed to God.

10.5. METHODOLOGICAL ISSUES

It is regrettable that although research on the colour of medication and the efficacy of the placebo may be essential, such studies are difficult to replicate or to conduct in different countries because of the diversity of colours available. One way of solving the problem of diversity of colours would perhaps be for all research undertaken to indicate which colour codes (Pantone colour blocks or Munsell chips) were used. This would make it easy for researchers to replicate the study in the same or other countries using the same colours.

Studies reported in this thesis highlight the importance of having data collection methods that are suitable for developing countries. One way of overcoming this problem is for researchers to limit themselves to studying
smaller populations. Knowledge gained from those studies can be used for designing methods that can be used in other populations.

It is important that researchers admit the shortcomings of their studies. This helps readers appreciate the unusual conditions under which research in developing countries is done.

Some control measures need to be introduced when questions such as the colour associations are asked. There is a need for the researcher to find out first what colours first come to mind when people are asked for colour names.

10.6 IMPLICATIONS OF THE STUDY

10.6.1 HEALTH CARE PROFESSIONALS

1) The findings of this study suggest that there is a need to encourage the involvement of all health care professionals in studies of this nature. Lack of cooperation from doctors makes it difficult for the findings of such studies to be made generalizable.

2) Health professionals have to accept that a Western medical paradigm is not always the only explanatory model people use when they seek medical care. Many (four fifths) informants in the study believed, to
varying degrees, in traditional medicine. These beliefs are a reality and they should not be ignored.

3) If health beliefs are to be explored several popular beliefs should be included in the scale. Although people believe in traditional medicine, they do so to varying degrees.

4) People believe that colour of medication in some way does play a role in the treatment of disease. This calls for a health education message that explains the role of placebos in treatment. This would help reduce any drug defaulting that is attributable to the colour of the medication.

10.6.2. RESEARCHERS

1, Research of this nature can help health care professionals:
   a, provide a better health care service to people in developing countries.
   b, design health education programmes designed at improving compliance

2, Other researchers could benefit from studies of this nature:
   a) The methodology can help those researchers wishing to conduct studies in developing countries.
   b) Other researchers interested in doing cross comparison studies could use the study and compare their findings with it.
   c) Other researchers can begin to understand the problems of conducting research in developing countries
d) Researchers can be motivated to work on finding ways of overcoming some of the problems of doing research in developing countries.

10.6.3. PHARMACEUTICAL COMPANIES

1. Pharmaceutical companies could become aware of the problems that are likely to be caused by having all new drugs in one colour.

10.7. RECOMMENDATIONS FOR FURTHER RESEARCH

1) The study raises issues regarding the application of research methodology used regularly in Western countries for collecting data in developing countries. The findings should be taken as suggestive of leads for further research in this area.

2) Respondents in the study showed high levels of beliefs in a traditional medical paradigm. It is suggested by authors like Dressler (1985) that an exposure to a Western lifestyle without any active participation within that milieu results in beliefs in traditional medicine. There is a need to examine the effect of the political situation in South Africa on people's locus of control and their attributions of illness.
3) There is need for more research into methodology that is relevant for developing countries. Suitable and reliable sampling methods need to be standardised for these countries.

4) Health beliefs were not found to be a determining factor of non compliance. There is a need for more research to be conducted in the area of compliance.

5) In the study respondents with a traditional orientation were more compliant than the patients with a Western orientation. Issues such as these need to be explored further. This study is one of the few studies that have been conducted in South Africa on compliance.
BIBLIOGRAPHY


BALINT M  The Doctor, his Patient and Illness. Pitman, Turnbridge Wells. 1957.

242


243


BUCKALEW L W & ROSS S  Relationship of perceptual characteristics to efficacy of placebos. Psychological Reports. 49, 955-961. 1981.


244


BURGESS R  In the Field: an introduction to social research London. 1984.


CANZIBE HOSPITAL REPORT  How Effective is the Short Course TB Regimen. Transkei. 1984.

CARON H S & ROTH H P  Patients' cooperation with a medical regimen; difficulties in identifying the non cooperator. JAMA, Vol 203, (11), 1968.


246


247


MARSTON V. Compliance and Medical Regimens; a review of literature. Nursing Research 19, 312-323, 1970.


254


256

PATTERSON S  Decoding the Keywords of Ethnicity, South African and British. Anthropology Today, Vol 5, No 3, 19 - 23, June, 1989.


SECONDINO M A  Colour Psychology in Pharmaceuticals. Eli Lilly & Co. USA. (undated)


258


SNOW L  Folk Medical Beliefs and their Implications for Care of Patients. Annals of Internal Medicine, 81, 82-96. 1974.


UNTERHALTER B Compliance with Western Medical Treatment in a group of Black Ambulatory Hospital Patients. Soc Sc Med, Vol 13 (a), 621 - 630. 1979.


COMMUNICATION WITH THE ANCESTORS

When a patient seeks a consultation with the traditional healer, the healer has first of all to dress appropriately in their healer's outfit. Rappaport & Rappaport (1981) believe that it is important for the healer to project the right image. The modern doctor wears a white coat and carries a stethoscope. All these go into making the healer appear potent. Rappaport & Rappaport warn that demystification may result if these factors are taken lightly. Demystification is the process in which the effectiveness of the healer is disrupted by the erosion of the critical elements that project his/her image.

Consultations are done in a 'consulting room' which is a hut that is set aside for such.

It is perhaps important at this stage to mention that there are different types of healers, eg some use ichibi- water, others use ikhanda - head, imilozi - whistle or bones for diagnosis.

Before an examination they have to consult with their ancestors to ask for their guidance and support. The following is an extract from an interview with Mrs Mxoxozi. In order not to anger her ancestors for agreeing to the interview she had to ask them to guide her so that she would not reveal information that was considered privileged.
A donation which is a token to the ancestors to make the researcher acceptable, firstly in their room which is usually treated like a shrine, then secondly to ask them to allow Mrs Mxoxozi to grant the interview, was made.

Mrs Mxoxozi took the coins (2 x R1.00) cleaned them with some ash. Snuff was then sprinkled over them and over each of her shoulders. This reminded the researcher of a Catholic or Anglican priest. The similarities create the impression that both are forms of religion, with similar devotion and faith. The church’s healing powers are well known, the only exception is that the Church does not dispense any medication.

Mrs Mxoxozi, now started blowing up a whistle - several short blows whilst shaking a home made rattle made from an insecticide container. It was not possible to establish what the contents of the perforated insecticide container were.

Before the ceremony began she had lit up impepho (Helichrysum Stenopterum) which is used, particularly in Zululand, to free the air of pollution from evil spirits. The prayer went something like this:

We pray you .....(reciting all her clan names)

We ask you, Great ancestors,

Here is a young girl, Great ancestors

She has come to you, Great ancestors

Because she also has her own ancestors,

she has come to you also, Great ancestors.
We ask you then, you ...(reciting her clan names),
that all that we do, Great ancestors,
we do together with you.
Please give us strength, do not tire of us,

Please, Great ancestors.
This child has now entered your house,
to come and obtain knowledge about you, our ancestors.
We are asking you, our great healers that all we do,
we do with your blessings.
On entering your house, we asked properly (by making a contribution)
We ask you, our Great ancestors,
Be good to her.

We ask you, our Great healers,
because without your help and guidance we are nothing
I cannot do anything on my own,
all my strength comes from you.
There is nothing I can do, Great ancestors,
without asking.

When I go out I have to ask your permission,
when I return I have to inform you.
Great White shade, that is as white as the sand
of the big ocean
We ask you therefore to be with this child

I ask you ..... (reciting her clan names)

that you guide us in our conversation.

We thank you, our ancestors.

MAKHOSI (a term denoting respect for the 'shades')

Consultations follow a similar pattern as well, as the healer has to ask for guidance from the ancestors.
Agree Strongly
Agree
Undecided
Disagree
Disagree Strongly
## QUESTIONNAIRE FOR ALL RESPONDENTS

<table>
<thead>
<tr>
<th>SEX</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AGE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 24</td>
<td></td>
</tr>
<tr>
<td>25 - 34</td>
<td></td>
</tr>
<tr>
<td>35 - 44</td>
<td></td>
</tr>
<tr>
<td>45 - 54</td>
<td></td>
</tr>
<tr>
<td>55 +</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EDUCATION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>INCOMPLETE PRIMARY</td>
<td></td>
</tr>
<tr>
<td>COMPLETE PRIMARY</td>
<td></td>
</tr>
<tr>
<td>INCOMPLETE SECONDARY</td>
<td></td>
</tr>
<tr>
<td>COMPLETE SECONDARY</td>
<td></td>
</tr>
<tr>
<td>INCOMPLETE MATRICULATION</td>
<td></td>
</tr>
<tr>
<td>COMPLETE MATRICULATION</td>
<td></td>
</tr>
<tr>
<td>POST MATRICULATION</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOCIO-ECONOMIC STATUS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EMPLOYMENT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td></td>
</tr>
</tbody>
</table>

*IF YES PROCEED TO NEXT QUESTION, IF NO GO ON TO NEXT PAGE*

<table>
<thead>
<tr>
<th>TYPE OF WORK DONE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UNSKILLED</td>
<td></td>
</tr>
<tr>
<td>SKILLED</td>
<td></td>
</tr>
<tr>
<td>PROFESSIONAL</td>
<td></td>
</tr>
<tr>
<td>SEMI-SKILLED</td>
<td></td>
</tr>
</tbody>
</table>
I want you to tell me if you are familiar with these statements - if you believe they are true or false.

1, IMFENE, the baboon is a familiar, peculiar to men and is used frequently for harming cattle. The owner rides on it at night with one foot on the animal's back, the other on the earth and he facing the animal's tail TRUE/FALSE

2, IMPUNDULU is a bird that causes miscarriages, blindness and death to man and stock when it kicks and sucks the victim's blood TRUE/FALSE

3, UMAMLAMBO is a snake of the men that has power to take any guise such as a beautiful woman, a tin, a mirror or charm TRUE/FALSE

4, IGOIRA is a person who knows how to fight evil spirits and treat sicknesses TRUE/FALSE

5, For certain kinds of illnesses it is better to seek the help of the iGOIRA than that of a Modern doctor TRUE/FALSE

6, ABATHAKATHI/AMAGQWIRA are people who know how to work evil TRUE/FALSE

7, TB is caused by eating certain foods and plants TRUE/FALSE

8, UMHLONYANE can be used to treat colds and flu TRUE/FALSE

9, BUSH TEA is good for treating illnesses such as High Blood Pressure TRUE/FALSE

10, Colds are caused by being hot and eating and drinking something cold TRUE/FALSE

11, Eating IMIFUNO is good for treating TB TRUE/FALSE
12, A person will get TB if his blood is weak TRUE/FALSE
13, If a person gets TB, he should see a Modern medical doctor TRUE/FALSE
14, If TB is not treated it will result in death TRUE/FALSE
15, A person suffering from TB must take treatment regularly TRUE/FALSE
16, TB can be cured TRUE/FALSE
Show respondent the relevant artistic representations of the 3 categories, if male show them male models and for females use female models.

Do you consider yourself

a, a European type African

b, a Traditional person

c, a mixture

-----------------------------

-----------------------------
Do you or other members of your family perform rituals?  Y/N ------

What for?

Illness

Peace in the family

Dreams

To celebrate birth

Other

If other please specify

Do you or members of your family go to a traditional healer?  Y/N ------

What for?

Illness

Peace in the family

Dreams

Other

If other please specify

Are you familiar with traditional medicine?  Y/N ------
How familiar are you with traditional medicine?

<table>
<thead>
<tr>
<th>Familiarity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Very familiar</td>
<td></td>
</tr>
<tr>
<td>Quite familiar</td>
<td></td>
</tr>
<tr>
<td>Not familiar</td>
<td></td>
</tr>
</tbody>
</table>

Are you familiar with Western medicine? Y/N

How familiar are you with Western medicine?

<table>
<thead>
<tr>
<th>Familiarity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Very familiar</td>
<td></td>
</tr>
<tr>
<td>Quite familiar</td>
<td></td>
</tr>
<tr>
<td>Not familiar</td>
<td></td>
</tr>
</tbody>
</table>

What colours are commonly used in traditional medicine?

<table>
<thead>
<tr>
<th>Colour</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td></td>
</tr>
<tr>
<td>BLACK</td>
<td></td>
</tr>
<tr>
<td>WHITE</td>
<td></td>
</tr>
<tr>
<td>YELLOW</td>
<td></td>
</tr>
<tr>
<td>BLUE</td>
<td></td>
</tr>
<tr>
<td>GREEN</td>
<td></td>
</tr>
<tr>
<td>GREY</td>
<td></td>
</tr>
<tr>
<td>BROWN</td>
<td></td>
</tr>
</tbody>
</table>
What colours are commonly used in Western medicine?

RED
BLACK
WHITE
YELLOW
BLUE
GREEN
GREY
BROWN

Is colour important to you in the treatment of disease? Y/N/D.N -----

Why do you think it is important/unimportant?

Can you point out to me on this chart what colours you associate with the following illnesses?

TB
HYPERTENSION
CANCER
STOMACHACHE
RHEUMATIC ACHES
HEADACHES
SORES
DIARRHOEA
KIDNEYS
Colds and flue
Which illnesses do you think can be treated effectively with these coloured pills

<table>
<thead>
<tr>
<th>Colour</th>
<th>Treatment Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td></td>
</tr>
<tr>
<td>BLACK</td>
<td></td>
</tr>
<tr>
<td>WHITE</td>
<td></td>
</tr>
<tr>
<td>YELLOW</td>
<td></td>
</tr>
<tr>
<td>BLUE</td>
<td></td>
</tr>
<tr>
<td>GREEN</td>
<td></td>
</tr>
<tr>
<td>GREY</td>
<td></td>
</tr>
<tr>
<td>BROWN</td>
<td></td>
</tr>
</tbody>
</table>

Which of these coloured tablets do you think is the most potent?

<table>
<thead>
<tr>
<th>Colour</th>
<th>Potency</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td></td>
</tr>
<tr>
<td>BLACK</td>
<td></td>
</tr>
<tr>
<td>WHITE</td>
<td></td>
</tr>
<tr>
<td>YELLOW</td>
<td></td>
</tr>
<tr>
<td>BLUE</td>
<td></td>
</tr>
<tr>
<td>GREEN</td>
<td></td>
</tr>
<tr>
<td>GREY</td>
<td></td>
</tr>
<tr>
<td>BROWN</td>
<td></td>
</tr>
</tbody>
</table>
Which of these coloured tablets do you think is the most active?

RED
BLACK
WHITE
YELLOW
BLUE
GREEN
GREY
BROWN

Which of these colour of tablets is the most familiar?

RED
BLACK
WHITE
YELLOW
BLUE
GREEN
GREY
BROWN
Which of these coloured tablets do you think is likely to cause side effects?

<table>
<thead>
<tr>
<th>Colour</th>
<th>____________</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>____________</td>
</tr>
<tr>
<td>BLACK</td>
<td>____________</td>
</tr>
<tr>
<td>WHITE</td>
<td>____________</td>
</tr>
<tr>
<td>YELLOW</td>
<td>____________</td>
</tr>
<tr>
<td>BLUE</td>
<td>____________</td>
</tr>
<tr>
<td>GREEN</td>
<td>____________</td>
</tr>
<tr>
<td>GREY</td>
<td>____________</td>
</tr>
<tr>
<td>BROWN</td>
<td>____________</td>
</tr>
</tbody>
</table>

Which of these coloured mixtures do you think is the most potent?

<table>
<thead>
<tr>
<th>Colour</th>
<th>____________</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>____________</td>
</tr>
<tr>
<td>BLACK</td>
<td>____________</td>
</tr>
<tr>
<td>WHITE</td>
<td>____________</td>
</tr>
<tr>
<td>YELLOW</td>
<td>____________</td>
</tr>
<tr>
<td>BROWN</td>
<td>____________</td>
</tr>
</tbody>
</table>

Which of these coloured mixtures do you think is the most active?

<table>
<thead>
<tr>
<th>Colour</th>
<th>____________</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>____________</td>
</tr>
<tr>
<td>BLACK</td>
<td>____________</td>
</tr>
<tr>
<td>WHITE</td>
<td>____________</td>
</tr>
<tr>
<td>YELLOW</td>
<td>____________</td>
</tr>
<tr>
<td>BROWN</td>
<td>____________</td>
</tr>
</tbody>
</table>
Which of these colour of mixtures is the most familiar?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td></td>
</tr>
<tr>
<td>BLACK</td>
<td></td>
</tr>
<tr>
<td>WHITE</td>
<td></td>
</tr>
<tr>
<td>YELLOW</td>
<td></td>
</tr>
<tr>
<td>BROWN</td>
<td></td>
</tr>
</tbody>
</table>

Which of these coloured mixtures do you think is likely to cause side effects?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td></td>
</tr>
<tr>
<td>BLACK</td>
<td></td>
</tr>
<tr>
<td>WHITE</td>
<td></td>
</tr>
<tr>
<td>YELLOW</td>
<td></td>
</tr>
<tr>
<td>BROWN</td>
<td></td>
</tr>
</tbody>
</table>

**OINTMENTS**

Which of these coloured ointments do you think is the most potent?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td></td>
</tr>
<tr>
<td>BLACK</td>
<td></td>
</tr>
<tr>
<td>WHITE</td>
<td></td>
</tr>
<tr>
<td>YELLOW</td>
<td></td>
</tr>
<tr>
<td>BROWN</td>
<td></td>
</tr>
<tr>
<td>GREEN</td>
<td></td>
</tr>
</tbody>
</table>
Which of these coloured ointments do you think is the most active?

RED
BLACK
WHITE
YELLOW
BROWN
GREEN

Which of these colour of ointments is the most familiar?

RED
BLACK
WHITE
YELLOW
BROWN
GREEN
<table>
<thead>
<tr>
<th></th>
<th>Strong Agree</th>
<th>Agree</th>
<th>Undecid</th>
<th>Disagr</th>
<th>Strong Disagr</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Seeking medical attention means going to see a Traditional doctor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Being ill involves taking prescribed treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Being ill means I am bewitched</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Being ill means I have angered my ancestors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Seeking medical attention means going to see a modern doctor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Before seeking professional medical help I try home remedies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Sometimes I am not happy about the treatment I receive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>When I seek professional help I expect to receive tablets/pills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>When I seek medical help I expect to get a mixture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>When I seek medical help I expect to be given an injection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>I always expect to receive medication whenever I see a doctor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Colour of medication is important to me</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Colours are important to me in everyday life</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Colours affect my mood</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Colour of medication is important in the treatment of disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Medication is prepared with colour in mind</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. I associate certain colours with certain illnesses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. There are colours that I associate with the treatment of certain illnesses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. The most important colours in the treatment of disease are red, black and white</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Black medicines are stronger</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Black medicines are for chronic debilitating diseases</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Black medicines are good for nausea and dizziness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Black pills are appropriate for fever and fits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Black pills are not suitable for treating digestive disorders</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Black medicines are appropriate for treating diseases of the people</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Black medication is strong for children</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Red medicines are used to treat illnesses of the blood</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Red medicines give one strength</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Pain medication is always white</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strong Agr</td>
<td>Agree</td>
<td>Undecid</td>
<td>Disagr</td>
<td>Strong Disagr</td>
</tr>
<tr>
<td>---</td>
<td>------------</td>
<td>-------</td>
<td>---------</td>
<td>--------</td>
<td>---------------</td>
</tr>
<tr>
<td>30</td>
<td>White pills are suitable for restoring lost vitality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>Yellow medicines are heating</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>There are certain colours of medication that are ideal for treating children's illnesses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Differently coloured medication should be used for treating disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Using differently coloured medication helps to balance the treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Modern medicine always takes colour into consideration.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>Traditional doctors always take colour into consideration when preparing treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>Whenever I receive any medication I open the packet/container to see what colour it is.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>Colour of medication is very important to me</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>Sometimes I stop taking my treatment because of the colour of medication</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>Some colours of medication are intolerable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>Traditionally, the colour of medication is important in the treatment of disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>Modern medicine appears in several unusual colours</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strong Agree</td>
<td>Agree</td>
<td>Undecid</td>
<td>Disagr</td>
<td>Strong Disagr</td>
</tr>
<tr>
<td>---</td>
<td>-------------</td>
<td>-------</td>
<td>---------</td>
<td>--------</td>
<td>---------------</td>
</tr>
<tr>
<td>43</td>
<td>I want all my medication to be white in colour</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>White medicine is not strong</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>I believe in rituals for the treatment of diseases</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>Rituals only use three colours, red, black and white</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>Some illnesses cannot be treated with Modern medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>Modern doctors should learn about Traditional medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>It is good to use both Traditional and Modern medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>My health does not improve if I take medication that I do not like</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>It is important to me that I like the colour of the medication I am taking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>Children sometimes refuse to take treatment if the colour is not attractive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>All this about the importance of colours in the treatment of disease is just a fuss</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>Medication, to me is medication whatever colour it is</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>I always finish my medication</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>I would like to see fewer colours of medication on the market.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strong Agree</td>
<td>Agree</td>
<td>Undecid</td>
<td>Disagr</td>
<td>Strong Disagr</td>
</tr>
<tr>
<td>---</td>
<td>--------------</td>
<td>-------</td>
<td>---------</td>
<td>--------</td>
<td>--------------</td>
</tr>
<tr>
<td>57</td>
<td>My parents put a lot of emphasis on colour in the treatment of disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>When you grow up old people teach you about the relevance of colour in the treatment of disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>59</td>
<td>It is just coincidental that certain colours should appear to be effective in the treatment of certain diseases</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>When I buy medicines over the counter colour does influence my decision whether or not to purchase the medication especially if I have never seen it before</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>61</td>
<td>Colours influence my life</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>62</td>
<td>An attractive colour often means that the medication is palatable.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>63</td>
<td>There is no correlation between colour and taste</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>64</td>
<td>I like colourful medication</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65</td>
<td>Multicoloured tablets are for treating a variety of illnesses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66</td>
<td>Blue coloured tablets have got a tranquilising effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67</td>
<td>Yellow ointments are good for sores</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68</td>
<td>Green tablets are suitable for bile disorders</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
INTERVIEW GUIDE FOR CASE STUDIES

1, Definitions and classification of illness - what distinctions people make? How are the different states delimited and by what signs?

2, The principal causes of illness

3, The importance of illness for the individual and for his personality

4, Behaviour found in illness (of subject and of other people)

5, What illnesses are feared?

6, Factors important for health

7, Importance of health for individual and for personality

8, Health care seeking behaviour

9, Treatment

10, Health behaviour
# Questionnaire for Modern Doctors

**SEX**  
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td></td>
</tr>
</tbody>
</table>

**AGE**  
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>25 - 34</td>
<td></td>
</tr>
<tr>
<td>35 - 44</td>
<td></td>
</tr>
<tr>
<td>45 - 54</td>
<td></td>
</tr>
<tr>
<td>55 +</td>
<td></td>
</tr>
</tbody>
</table>

**QUALIFICATIONS**  
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EMPLOYMENT**  
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIVATE PRACTICE</td>
<td></td>
</tr>
<tr>
<td>HOSPITAL PRACTICE</td>
<td></td>
</tr>
<tr>
<td>BOTH</td>
<td></td>
</tr>
</tbody>
</table>

**PLACE OF WORK**  
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RURAL AREA</td>
<td></td>
</tr>
<tr>
<td>URBAN AREA</td>
<td></td>
</tr>
<tr>
<td>BOTH</td>
<td></td>
</tr>
</tbody>
</table>
How many patients do you treat on average per day?

<table>
<thead>
<tr>
<th>Range</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10 - 39</td>
<td></td>
</tr>
<tr>
<td>40 - 69</td>
<td></td>
</tr>
<tr>
<td>70 - 99</td>
<td></td>
</tr>
<tr>
<td>100 - 129</td>
<td></td>
</tr>
<tr>
<td>130 +</td>
<td></td>
</tr>
</tbody>
</table>

How many minutes do you spend on average with a patient?

<table>
<thead>
<tr>
<th>Range</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 4</td>
<td></td>
</tr>
<tr>
<td>5 - 9</td>
<td></td>
</tr>
<tr>
<td>10 - 14</td>
<td></td>
</tr>
<tr>
<td>15+</td>
<td></td>
</tr>
</tbody>
</table>

Do you write any prescriptions?

<table>
<thead>
<tr>
<th>Response</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td></td>
</tr>
</tbody>
</table>

How many?

<table>
<thead>
<tr>
<th>Range</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10 - 39</td>
<td></td>
</tr>
<tr>
<td>40 - 69</td>
<td></td>
</tr>
<tr>
<td>70 - 99</td>
<td></td>
</tr>
<tr>
<td>100 - 129</td>
<td></td>
</tr>
</tbody>
</table>

What sort of medication do you dispense?

<table>
<thead>
<tr>
<th>Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixtures</td>
<td></td>
</tr>
<tr>
<td>Tablets/pills</td>
<td></td>
</tr>
<tr>
<td>Ointments</td>
<td></td>
</tr>
<tr>
<td>Injections</td>
<td></td>
</tr>
</tbody>
</table>
What is the most prevalent illness in your area?

What is your favourite colour R/B1/W/Y/B/G/Gy/Bn/

Do you know what colours the medication you dispense is?

YES

NO

If Yes,

ALL OF THEM

MOST OF THEM

SOME OF THEM

NONE OF THEM

Do you consider colour of medication an important variable in the treatment of disease?

YES

NO

Do your patients consider colour of medication an important variable in the treatment of disease?

YES

NO

Do you ever have any patients who refuse to accept treatment because of its colour?

YES

NO

What percentage of your patients refuse to take medication because of its colour?

---
TABLETS/PILLS

Which of these coloured tablets do you think is the most potent?

RED

BLACK

WHITE

YELLOW

BLUE

GREEN

GREY

BROWN

Which of these coloured tablets do you think is the most active?

RED

BLACK

WHITE

YELLOW

BLUE

GREEN

GREY

BROWN
Which of these colours of tablets do you think is the most familiar?

<table>
<thead>
<tr>
<th>Colour</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td></td>
</tr>
<tr>
<td>BLACK</td>
<td></td>
</tr>
<tr>
<td>WHITE</td>
<td></td>
</tr>
<tr>
<td>YELLOW</td>
<td></td>
</tr>
<tr>
<td>BLUE</td>
<td></td>
</tr>
<tr>
<td>GREEN</td>
<td></td>
</tr>
<tr>
<td>GREY</td>
<td></td>
</tr>
<tr>
<td>BROWN</td>
<td></td>
</tr>
</tbody>
</table>

Which of these coloured tablets do you think is likely to cause side effects?

<table>
<thead>
<tr>
<th>Colour</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td></td>
</tr>
<tr>
<td>BLACK</td>
<td></td>
</tr>
<tr>
<td>WHITE</td>
<td></td>
</tr>
<tr>
<td>YELLOW</td>
<td></td>
</tr>
<tr>
<td>BLUE</td>
<td></td>
</tr>
<tr>
<td>GREEN</td>
<td></td>
</tr>
<tr>
<td>GREY</td>
<td></td>
</tr>
<tr>
<td>BROWN</td>
<td></td>
</tr>
</tbody>
</table>
MIXTURES

Which of these coloured mixtures do you think is the most potent?

RED
BLACK
WHITE
YELLOW
BROWN

Which of these coloured mixtures do you think is the most active?

RED
BLACK
WHITE
YELLOW
BROWN

Which of these coloured mixtures do you think is likely to cause side effects?

RED
BLACK
WHITE
YELLOW
BROWN
OINTMENTS

Which of these coloured ointments do you think is the most potent?

<table>
<thead>
<tr>
<th>RED</th>
<th>BLACK</th>
<th>WHITE</th>
<th>YELLOW</th>
<th>BROWN</th>
<th>GREEN</th>
</tr>
</thead>
</table>

Which of these coloured ointments do you think is the most active?

<table>
<thead>
<tr>
<th>RED</th>
<th>BLACK</th>
<th>WHITE</th>
<th>YELLOW</th>
<th>BROWN</th>
<th>GREEN</th>
</tr>
</thead>
</table>

Which of these colours of ointments do you think is the most familiar?

<table>
<thead>
<tr>
<th>RED</th>
<th>BLACK</th>
<th>WHITE</th>
<th>YELLOW</th>
<th>BROWN</th>
<th>GREEN</th>
</tr>
</thead>
</table>
INTERVIEW GUIDE FOR TRADITIONAL HEALERS

1. How many patients do you treat per day?

2. How many patients do you treat per month?

3. How long does the treatment period last?

4. Do your patients live in your household?

5. Do you prepare your own medication?

6. What are the most important things you have to take into consideration when preparing medication?

7. Is colour of medication important in the treatment of disease? If so, why is it important?

8. What role does colour play in the treatment of disease?

9. Are your patients aware of the significance of colour in the treatment of disease?

10. What type of illnesses that you treat mostly?

11. Which colours are used in rituals?

12. What is the significance of these colours?

13. Is the order in which the colours are used important? If so, why?

14. How is this knowledge gained?

15. How did you become a traditional healer?

16. How long was your training?
1. When a new product (drug) is launched, who decides what colour the new product should be?

a, Chemists
b, The production department
c, The marketing department
d, Other

If other, please specify..............................

.............................

2. What is the most important determining factor?

a, Research findings based on market research among doctors
b, Research findings based on market research among patients
c, The product's chemical composition
d, The cost of producing a new product
e, Precedence, product ancestry (eg analgesics must always be white)
f, Other

If other, please specify..............................

.............................

.............................
3. Does the company change the colour of medication in other countries?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

If yes, why?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a, Legal Reasons</td>
<td></td>
</tr>
<tr>
<td>b, Because of market research findings</td>
<td></td>
</tr>
<tr>
<td>c, Other</td>
<td></td>
</tr>
</tbody>
</table>

If other, please specify..........................................................

..........................................................

..........................................................

4. Do you consider the following to be relevant placebo variables?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a, Colour</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Don't know</td>
</tr>
<tr>
<td>b, Taste</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Don't know</td>
</tr>
<tr>
<td>c, Size of pill</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Don't know</td>
</tr>
</tbody>
</table>
d, Route of administration

- Yes
- No
- Don't know

e, Nature of pill (capsule or tablet)

- Yes
- No
- Don't Know

f, Name of drug

- Yes
- No
- Don't Know
<table>
<thead>
<tr>
<th>DATE OF INTERVIEW</th>
<th>AREA</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADDRESS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td>15 - 24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>25 - 34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>35 - 44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>45 - 54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>55 - 64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>65+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEX</td>
<td>F</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MARITAL STATUS</td>
<td>------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MARRIED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SINGLE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DIVORCED/SEPARATED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WIDOWED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUMBER OF CHILDREN</td>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 - 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 - 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 - 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 - 8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEVEL OF EDUCATION</td>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 - 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 - 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 - 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 - 8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECONOMIC STATUS</td>
<td>EMPLOYED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>UNEMPLOYED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NATURE OF EMPLOYMENT</td>
<td>LABOURER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DOMESTIC WORKER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TEACHER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NURSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CLERK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OTHER</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
THE HEALTH BELIEF QUESTIONNAIRE

I want you to tell me if you are familiar with these statements - if you believe they are true or false.

1. IMFENE the baboon is a familiar peculiar to men and is used frequently for harming cattle. The owner rides on it at night with one foot on the animal's back, the other on the earth and he facing the animal's tail TRUE/FALSE

2. IMPUNDULU is a bird that causes miscarriages, blindness and death to man and stock when it kicks and sucks the victim's blood TRUE/FALSE

3. UMAMLAMBO is a snake of the men that has power to take any guise such as a beautiful woman, a tin, a mirror or charm TRUE/FALSE

4. IGQIRA is a person who knows how to fight evil spirits and treat sicknesses TRUE/FALSE

5. For certain kinds of illnesses it is better to seek the help of the iGQIRA than that of a Modern doctor TRUE/FALSE

6. ABATHAKATHI/AMAGQWIRA are people who know how to work evil TRUE/FALSE

7. TB is caused by eating certain foods and plants TRUE/FALSE

8. UMHLONYANE can be used to treat colds and flue TRUE/FALSE

9. BUSH TEA is good for treating illnesses such as High Blood Pressure TRUE/FALSE

10. Colds are caused by being hot and eating and drinking something cold TRUE/FALSE

11. Eating IMIFUNO is good for treating TB TRUE/FALSE

12. A person will get TB if his blood is weak TRUE/FALSE

13. If a person gets TB, he should see a Modern medical doctor TRUE/FALSE
14. If TB is not treated it will result in death TRUE/FALSE

15. A person suffering from TB must take treatment regularly TRUE/FALSE

16. TB can be cured TRUE/FALSE
CONSULTATION:

1, Did you spend a lot of time with the doctor? YES
NO

2, Approximately how many minutes did you spend with the doctor?
- 5 mins -
5 mins -
10 mins -
15 mins -
20 mins -

3, Was the doctor pleasant to you? YES
NO

4, Who gave you instructions on how to take your medication?
Doctor ----
Nurse ----
Other ----

5, Are you supposed to come and see the doctor again soon? YES
NO

6, Will you come? YES
NO

If not, why?

SYMPTOM EXPERIENCE, DOCTOR SHOPPING BEHAVIOUR AND ATTITUDES TO MEDICATION

I am going to read out certain statements to you. I would like you to tell me if you strongly agree, agree, are unsure, you disagree or strongly disagree with the statements. These pictures correspond with the possible answers. I would like
you to point out to me which face says how you feel about the statement.

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Medical attention means going to see a traditional healer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Being ill means spending some days in bed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Being ill means I am bewitched</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Being ill means I have angered my ancestors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Being ill means something is wrong with my body</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>When I am ill, I hesitate seeking medical attention</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>When I am ill I seek medical attention immediately</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I seek medical attention 2-4 days after detecting symptoms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>I seek medical attention 5-7 days after detecting symptoms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>I usually wait until the disease has really manifested itself</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Medical attention means going to see a modern doctor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>It is a good thing to try all sorts of remedies when you are ill.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statement</td>
<td>Strongly agree</td>
<td>Agree</td>
<td>Not sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>----------------</td>
<td>-------</td>
<td>----------</td>
<td>----------</td>
<td>-------------------</td>
</tr>
<tr>
<td>13, Some diseases cannot be treated by modern means</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14, I don't seek medical attention because I am busy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15, I don't seek medical attention immediately because I try home remedies first</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16, I don't seek medical attention immediately because I don't like medication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17, I came to see the doctor because my family insisted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18, I came to see the doctor because I think he will be able to help me</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19, I came to see the doctor because other methods did not help</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20, I came to see the doctor because I am expected to see a doctor when ill</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21, When I am ill I always see this doctor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22, Getting a second opinion from another doctor is a good thing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23, One should stick to one doctor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24, I often see a modern, then a traditional doctor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25, I often see a traditional then a modern doctor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26, I only see a modern doctor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Not Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>----------------</td>
<td>-------</td>
<td>----------</td>
<td>----------</td>
<td>-------------------</td>
</tr>
<tr>
<td>27, I always go to another doctor if not satisfied with treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28, Some doctors do not tell you what is wrong with you</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29, Modern doctors are not available all the time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30, Doctors should always give you an injection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31, Pills, on their own are not effective</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32, Injections act quicker than tablets and medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33, Modern medicine is always dispensed in small quantities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34, Traditional medicine is always dispensed in large quantities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35, Sweet medicines are not strong</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36, Bitter medicine is more effective than sweet medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37, For some illnesses coloured tablets are more effective than sweet medicines</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38, Doctors should be nice to patients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39, If the doctor is not nice, I tend to forget the instructions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40, I never understand what the doctor says about my illness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
BElief Statements

I believe in Traditional medicine.

<table>
<thead>
<tr>
<th>Very strongly agree</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Very Strongly Disagree</th>
</tr>
</thead>
</table>

I believe in Modern Medicine

<table>
<thead>
<tr>
<th>Very Strongly Agree</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Very Strongly Disagree</th>
</tr>
</thead>
</table>

Compliance Test (on fifth day after initial interview).

Can you please tell me how you have been taking your medication?

Have you been taking your medication regularly? YES/NO

If not, Why?

Pill Counts:

Total Number Dispensed =
Number remaining at 5 days =
Is the remaining number correct? YES NO
ATTITUDES TO COLOUR OF MEDICATION

I am now going to show you some coloured tablets. I want you to tell me which colour you prefer most. I would like you to rank all of them according to your order of preference.

<table>
<thead>
<tr>
<th>RANKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
</tr>
<tr>
<td>BROWN</td>
</tr>
<tr>
<td>GREEN</td>
</tr>
<tr>
<td>YELLOW</td>
</tr>
<tr>
<td>WHITE</td>
</tr>
<tr>
<td>BLUE</td>
</tr>
<tr>
<td>GREY</td>
</tr>
<tr>
<td>BLACK</td>
</tr>
</tbody>
</table>

MEDICATION ATTITUDES:

Instructions: On these pages are the beginnings of sentences and four possible ways you can finish each sentence. They all concern medication you and other patients have been receiving. Please read each sentence carefully and place a check mark next to the one statement that most nearly agrees with the way you feel about medication (In the case of illiterate people, the statement says; I am going to read out four sentences, I want you to listen carefully, then tell me which statement you agree with, most.) Although more than one statement may apply, check only the one that is closest to your feelings about medication.

Complete the following example and then continue:

Medication

-------- A. has something to do with sports
-------- B. means getting medicine
-------- C. is a term used in law
-------- D. is the same as education

1. Since I started taking medication

-------- A. I have been getting pills.
-------- B. I feel sleepy
--- C. I feel worse
--- D. I feel better

2. I take medication because
--- A. I am forced to take it
--- B. I want to get well
--- C. I want to increase weight
--- D. I have paid for it

3. Sometimes medication
--- A. makes me sicker
--- B. needs water to get down
--- C. helps me relax
--- D. makes me dizzy

4. When I take medication
--- A. I have to eat
--- B. I feel better
--- C. I feel drowsy
--- D. I feel worse

5. I feel that medication
--- A. gives me a desire to get well
--- B. is part of clinic treatment
--- C. does me no good
--- D. makes me tired

6. With medication
--- A. I drink water
--- B. I feel worse
--- C. I feel dizzy
--- D. I feel better

7. Because of medication
--- A. I do not feel well
--- B. I feel better
--- C. I go to see the doctor again
--- D. I am drowsy

8. The fact I get medication
--- A. helps me feel better
--- B. means I have to take it
--- C. makes my eyes blurry
--- D. does not help me
9. The main thing about medication is that

-------- A. I take it three times a day
-------- B. It makes me feel worse
-------- C. it makes me thirsty
-------- D. it helps me get well

10. Right after taking my medication

-------- A. I feel groggy
-------- B. I relax
-------- C. I feel sicker than before
-------- D. I feel better

11. Medication

-------- A. is necessary for an illness
-------- B. Is good for me
-------- C. makes me feel sleepy
-------- D. is of no value

12. Without the medication

-------- A. I am nervous and upset
-------- B. I feel fine
-------- C. there are no pills
-------- D. I am not apt to get dizzy or sleepy

13. I take medication because

-------- A. it makes me sleepy
-------- B. I want to get better
-------- C. it is forced on me
-------- D. I am on treatment

14. My own feelings about medication is that I

-------- A. like to take it very much
-------- B. like to take it a little
-------- C. dislike to take it a little
-------- D. dislike to take it very much.
I am now going to show you some coloured tablets. I would like you to tell me which illnesses you think can be treated effectively with each of these coloured tablets.

<table>
<thead>
<tr>
<th>COLOUR</th>
<th>ILLNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td></td>
</tr>
<tr>
<td>BROWN</td>
<td></td>
</tr>
<tr>
<td>GREEN</td>
<td></td>
</tr>
<tr>
<td>YELLOW</td>
<td></td>
</tr>
<tr>
<td>WHITE</td>
<td></td>
</tr>
<tr>
<td>BLUE</td>
<td></td>
</tr>
<tr>
<td>GREY</td>
<td></td>
</tr>
<tr>
<td>BLACK</td>
<td></td>
</tr>
</tbody>
</table>

Is colour significant in the treatment of disease?

YES
NO
DON'T KNOW

10