

https://dspace.org/

Silent communications - embodied between the lines : a study describing nonverbal behaviour patterns within the South African multicultural HIV treatment context.

Smith, Samantha Meghan Coralie

2009-02-11T07:51:42Z
http://hdl.handle.net/10539/6037

Downloaded from a DSpace repository. https://dspace.org/

Contents

Abstract

Declaration i

Dedication ii

Acknowledgements iii

List of Tables iv

List of Figures vi

1. Introduction 3

2. A Review of the Research Constructs and Context 13

2.1. HIV and Aids within the South African Context 13

2.2. Health Communication as an Area of Research 24

2.3. Nonverbal Behaviours 35

2.4. The Speech Language Pathologist's Role within this Research Context 51

3. Research Methodology 56

3.1. Qualitative research 56

3.2. Conversational Analysis 60

3.3. Ethnography 64

3.4. Interviews 68

3.5. Triangulation in Qualitative Research 68

4. Research Methods Used in Study 74

4.1. Aim of this Research 74

4.2. Research Design 75

4.3. Study Participants 77

4.4. The Research Context 82

4.5. Procedure 85

5. Results 98

5.1. Analysis of Transcripts 98

5.2. Analysis of Coupling Behaviours 215

6. Discussion 225

6.1. Discussion of Nonverbal Behaviours in Relation to Identified Trends 225

6.2. Triangulation 247

7. Conclusion 271

7.1. Core Findings of this Study 271

7.2. Value of the Study for Current and Further Research and Medical Practice 272

7.3. Strengths and Limitations of the Study 278

7.4 Recommendations for Future Research 280

7.4. Conclusion 285

Appendices 289

References 336

Chapter 1

Introduction.

"Knowledge is a social product. Its function is not to interpret but to change society"

Anand Maklik

This chapter will provide a broad background to the rationale for this dissertation. It will introduce core aspects to be discussed in the literature review whilst also providing the reader with a basic outline in terms of the dissertation report's overall format and structure.

1.1 The South African Multicultural Interaction and HIV.

South African healthcare interactions most commonly occur across cross-cultural and cross-linguistic lines. It is estimated that as much as 80% of South African healthcare interactions possess multicultural and multilingual barriers which are still predominantly misunderstood (Penn, 2007). According to Penn (2003) and Delbene (2003) the efficacy of the treatment session and both short and long term patient outcomes are threatened by the various factors that impact upon and shape these interactions. In particular health communication research, which explores intercultural interactions within international and national contexts, has identified that such encounters are frequently influenced by the

differences in experience that both doctor and patient bring to the interaction (Penn, 2003; Delbene, 2003).

South African society is characterised by imbalances in the country's social structures, which are products of the policies and practices of the apartheid regime. These social imbalances have resulted in the unequal distribution of economic and social resources amongst various groups of the population (Nattrass, 2006). The consequence of these diverse demographics is thus that doctors and the patients they treat are often separated by divides not only related to culture and language but financial status, social background, educational level, and life experience as well. Research has identified that intercultural interactions where such differences exist can often result in mismatched participant agendas, poor patient understanding and strained interactional dynamics. These factors often coexist with high levels of patient dissatisfaction, poor treatment adherence and low prognostic outcome (Butcher, Urbina, Cohen & Flannigan, 2001).It is these challenges related to difference that place the South African health care interaction at such great risk for adverse interactional and communicative dynamics and poor treatment outcome (Penn, 2003).

Despite these high levels of susceptibility, however, limited published information into this subject within the South African healthcare context is available (Levin, 2005). Further research into health communication is thus highly valid and urgently required in order to ensure challenges within the South African healthcare interaction are identified, understood and addressed. This need to understand such interactional barriers and address

these is vital if optimal patient care and benefit within the South African treatment context is to be ensured.

The HIV multicultural and multilinguistic interaction is a particular area of concern within the subject of health communication due to the complex characteristics of the disease which place patients at higher levels of risk for poor treatment outcome, dissatisfaction and adherence (Friedland & Soloway, 2000). Unlike the majority of modern day illnesses, HIV globally and nationally is shrouded in public opinion and cultural belief (Frohlich, 2006:354). HIV in South Africa has been developed and shaped by cultural idiosyncrasies and practices related to gender, disclosure and medicine as well as by political response and opinion regarding the illness and individuals affected by it. The past infrastructures and social imbalances established by apartheid, coupled with the avoidance tactics displayed by the present day South African government pre and post-2004, have created significant challenges to effective treatment provision (Nattrass, 2006; Knight, 2006). These challenges are further complicated by disease specific factors such as disclosure, community influence and cultural belief (Frohlich, 2006).

These HIV medical interactions are, however not exclusively affected by participant experience, opinion and access. The environments where these interactions take place are also under great pressure due to lack of resources, staff and funds (Nattrass, 2006; Michaels, 2005). Doctors (the majority of which are English or Afrikaans speaking) frequently struggle with high numbers of patient case loads contrasted with limited resources and support staff such as cultural and linguistic brokers (Schwartz, 2004). The

result, which has been illustrated in previous HIV research within the South African context, is thus a healthcare situation where interactions are often strained and communicative transfer poor (Smith, 2004; Watermeyer, 2004). The success of such interactions and long-term treatment outcomes within this current national situation is thus greatly threatened.

In light of the challenges facing South African healthcare and HIV medical interactions, coupled with the limited information available regarding the nature of these interactions; this dissertation aims to bridge this information gap and explore and describe the multicultural HIV medical interaction so that it is more comprehensively understood. It is felt that through the effective analysis and description of such interactions, positive changes will be able to be made through the development of policy, and shaping of professional practice. This study the researcher thus believes will have positive effects upon researcher understanding of certain characteristics of cross-cultural and cross-linguistic medical interactions whilst also improving the quality of such interactions.

1.2 Nonverbal Behaviours.

Although nonverbal behaviour patterns account for the majority of observed behaviours within communicative interactions (approximately 65%), it is still an area of research, which is substantially neglected and lacking in terms of current, published literature (Burgoon, 2005). Despite the existence of some research which explores newly identified aspects of nonverbal behaviour, the majority of this published information is limited to

studies conducted within first world interactions. Older research which has explored core aspects to nonverbal behaviour have identified that these communicative patterns can be linked to aspects of communicative efficacy, emotional states and interpersonal relations. Distinct variations across cultures in terms of nonverbal interactions have also been broadly identified and described (Argyle, 1975:230-275). The existence of such literature, its potential and limited nature therefore motivate for the exploration of this specific communicative phenomenon. The fact that nonverbal behaviours are sensitive to culture, emotional state and understanding further suggests that examining these behaviours within multicultural interactions will provide interesting insight into the nature of these communicative encounters whilst further extending current knowledge of nonverbal behaviour patterning (Mast, 2007).

Nonverbal behaviour research within the context of health communication is significantly limited. This is despite the perceived benefit and central role such behaviours are assumed to possess in terms of understanding and identifying themes related to medical interactions and their associated dynamics (Burgoon, 2005). Mast (2007) highlights that nonverbal behaviours are pivotal aspects to consider within the medical interaction due to their close relationship with levels of patient satisfaction and treatment outcome. Through past studies such behaviours have been linked to levels of patient complaint as well as malpractice claims. The need for and possible value of nonverbal behaviour analysis within medical contexts such as the context of South African health communication, and the possibility for such behaviours to inform effective clinical practice is therefore emphasised.

This dissertation topic was primarily motivated by a pilot study conducted by the researcher at Chris Hani Baragwanath Hospital, in Soweto 2004 (Smith, 2004). This past research project focused on facilitators and barriers within cross-cultural interactions using nonverbal methods. It identified the valuable information, which nonverbal behaviours can provide in terms of communication transfer and interactional dynamics within the South African multicultural HIV medical interaction. Findings of this study also identified the need for further research into the area of nonverbal behaviour patterns within South African healthcare across all types of medical interactions and contexts including that of the HIV medical encounter.

The potential value of nonverbal behaviour analysis in enabling the researcher to describe and understand complex aspects of communicative behaviour in health communication is therefore highlighted by this project.

1.3 Summary of Chapter and Research Rationale.

This chapter has described core aspects related to challenges in the South African multicultural interaction with specific focus pertaining to that of HIV healthcare interactions. In particular the chapter has identified that multicultural HIV healthcare interactions are at great risk for adverse interactional and communicative dynamics which it is felt will have negative effects on patient satisfaction levels and overall treatment outcomes (Penn, 2003; Butcher et al., 2001). Despite this point, current research into this area of health communication is limited (Levin, 2005; Smith, 2004).

The chapter has also identified the potential value of nonverbal behaviours in terms of enabling the researcher to understand communicative interactions within the context of HIV healthcare. It has suggested the potential of such behaviours in providing insight into influential aspects within such sessions due to their sensitivity to emotion, culture, relationship dynamics and understanding. These assumptions have been supported by previous research conducted by the researcher in 2004, which demonstrated the valuable insight nonverbal behaviours can provide in terms of multicultural HIV healthcare interactions.

In light of the challenges facing current South African HIV healthcare and the potential of nonverbal behaviour analysis in understanding communicative interactions, the researcher wishes to explore HIV healthcare interactions from a nonverbal standpoint. More specifically the researcher wishes to investigate the nature of these patterns within the HIV multicultural interaction and establish what insight these patterns are able to provide regarding interpersonal interactions, communicative competence and culture.

This topic of investigation is thus felt to be of value within clinical and research contexts as it is anticipated that the results and findings of this dissertation will broaden current knowledge and improve medical practice within the context of multicultural and multilingual healthcare interactions. More specifically it is felt that this research through the use of nonverbal behaviour analysis will:

- extend knowledge regarding nonverbal behaviour patterns, their nature and current theories related to these;
- provide valuable insight into the interactional and communicative dynamics of the HIV multicultural interaction;
- allow for recommendations to be made regarding policy and practice within state healthcare as well as the HIV medical interaction; and
- provide a framework from which health professional training programmes can be successfully developed.

The research project is therefore anticipated as having the potential to fill a niche within the research context whilst also providing real-life benefits by facilitating improved treatment responses to highly active antiretroviral therapy (HAART) through the provision of appropriate research recommendations. All of these above-mentioned factors coupled with the concrete benefits of this study thus motivate and provide rationale for this dissertation.

1.4 Outline of Dissertation.

This dissertation will consist of seven chapters.

i. Chapter 1 will introduce the rationale for this study whilst also outlining the core format of this dissertation.

ii. Chapter 2 will review core concepts associated with the study topic in accordance with the relevant literature. In particular the chapter will explore topics which include:

- HIV/Aids within the medical and multicultural setting in South Africa:
- Health communication as an area of research.
- Core concepts and research related to nonverbal behaviour patterns
- The role of the Speech and language therapist within this area of research
- Summary and conclusion of this section.

iii. Chapter 3 will extend this literature review further to include methods of analysis. The three principle methodological tools to be used within this study will be introduced and described in this section. Subject matter in this section will thus include:

- Qualitative analysis.
- Conversational analysis.
- Ethnography.
- The use of participant interviews in qualitative research.
- Methods of triangulation.
- Summary and conclusion.

iv. Chapter 4 will discuss the research aims, paradigm, transcription and analysis processes used within the study. A comprehensive description of the research

situation and participants used within the study will also be included in this section.

v. Chapter 5 will discuss the results of each individual interaction in terms of nonverbal behaviours and behaviours of symmetry. Summary tables of individual interactions in terms of behaviours and thematic content can be found at the end of each individually observed session.

vi. Chapter 6 will discuss observed behaviours in conjunction with the relevant literature. The chapter will also review these observations in relation to health communication study findings done on similar and dissimilar study sites. Aspects of dependability, credibility and transferability will be reviewed in this section.

vii. Chapter 7 will provide the conclusion to this dissertation and will highlight the strengths and limitations as well as implications of this study for future research, policy and practice.

Chapter 2

A Review of the Research Context and Constructs.

"Our knowledge is the massed thought and experience of innumerable minds."

Ralph Waldo Emerson

This chapter will review various theoretical aspects related to the context in which this study took place. Constructs that are the primary focus of this study will also be discussed in detail in this section. The chapter will then close with an overall summary of the crucial issues leading to the research question as well as a discussion of its importance within research and clinical contexts.

2.1 HIV and Aids within the South African Context and its Relation to Health Care.

2.1.1. HIV and Aids as a World and South African Phenomenon.

In 2006 the estimated figures of the HIV/Aids pandemic reached 39.5 million individuals world-wide (UNAIDS, 2006). The uneven distribution of this figure amongst the world's population sees the predominant number of recorded HIV/Aids cases and deaths being concentrated within undeveloped and poverty stricken nations. According to the UNAIDS' December paper on global facts and figures of HIV/Aids (2006) approximately 100 000 new infections were within high income countries such as central

Europe and North America whilst the majority of new infection statistics – approximately 2.8 million - were located within Sub-Saharan Africa (UNAIDS, 2006). The irony of such figures is that, due to a lack of funding, insufficient infrastructures in place and limited numbers of medical professionals available to provide treatment, the most heavily afflicted nations are those the least equipped and able to deal with the associated pressures of the disease (UNAIDS, 2006). The UNAIDS' (2006) December paper on the global facts and figures related to HIV/Aids states that Africa will need approximately US$ 10 billion of the projected US$22 billion required for adequate prevention and treatment of HIV/Aids in 2008. The implications of such figures thus suggest that as the demands of the HIV epidemic increase, so third-world nations such as those located in Sub-Saharan Africa are progressively being crippled by the financial and resource requirements of this disease.

Within the South African context the number of confirmed HIV positive cases in 2006 was estimated as comprising 29% of the country's population (South African Department of Health, 2006). Thus with an estimated 5 million patients currently either receiving or requiring medical treatment and medication, the country's social and health care sectors are under significant pressures to meet the demands of the disease - both in terms of man-power and budgetary constraints. Research suggests that the HIV epidemic is reaching maturity in the South African context with incidence falling, prevalence stabilising and morbidity rising (Gouws, 2006:67). Current statistics indicate that the highest prevalence figures are those of young adult females. It is estimated that 25% of women between the

ages of 20-24 are HIV positive making this population group at highest risk for HIV infection (Gouws, 2006; Harrison, 2006).

2.1.2 The Roll-out of Antiretroviral Treatment within South Africa.

This study's data was collected at a pivotal point within the history of the public healthcare sector in South Africa. In particular the data collection process occurred just before the official state implementation of antiretroviral roll-out in the country in 2004. This crucial change in South African policy is thus important to note when understanding the studied HIV healthcare interactions of the study's data set, due to the assumed influence this progressive build up to healthcare change would have had on the interactions observed within this study. A comprehensive description of antiretroviral roll out within South Africa is therefore included below.

Public healthcare within South Africa and the topic of HIV and Aids has been an area of great debate which is regarded with high levels of suspicion by the general South African public as well as national and international stakeholders and non-profit organisations. By the end of October 2003 it was estimated that less than 2000 people within the public health care sector were receiving antiretroviral treatment within Southern Africa (Nattrass, 2006). Despite the formation of various stakeholders aimed at improving global objectives with regards to HIV and Aids management such as, The Global Fund to Fight Aids, The World Bank's Multi-country HIV Programme as well as the World Health Organisation's 3 for 5 campaign, limited effort had been made on the part of the

South African government to implement an operational programme allowing for effective treatment and management of the HIV patient (Nattrass, 2006; Knight, 2006).

It was only in late 2003 and early 2004 through large amounts of cabinet, public and international pressure that a concerted effort was made by the country's president and health minister to develop and implement both policy and operational initiatives. Such initiatives focused on the prevention of mother to child transmission as well as the provision of highly active antiretroviral therapy (HAART) to those patients living with Aids (Nattrass, 2006; Knight, 2006).

Since this landmark development within South African public health care, the roll out of HAART has progressively gained momentum with an estimated 200 000 patients receiving treatment by 2006 (Nattrass, 2006; Knight, 2006). Although figures appear to support the claims by members of state regarding the efficacy of HAART roll out within Southern Africa, there are areas of concern, which centre on the uneven distribution and levels of access across provinces and public healthcare. Coupled with this fact is that government statistics related to HAART are below projected levels by approximately 30% and will only reach 50% coverage of the target population by 2008 (Nattrass, 2006; Knight, 2006). This according to Nattrass (2006) is a poor reflection on the South African public healthcare service due to its epidemiological, institutional and economic characteristics when compared to better performing nations within the African continent.

The predominant reasons for these poor levels of performance relate to the uneven distribution of funds, staff, patient numbers, geographical considerations, resources, and provincial gross domestic product figures - to name but a few (Nattrass, 2006; Michaels, 2005). Limited levels of support by members within higher positions of state have further consolidated these challenges and their negative consequences on the HAART roll out programme (Knight, 2006).

Challenges related to provincial and state influences in terms of antiretroviral roll out are not the only challenges effecting the development of a successful framework, protocol and infrastructure for the care and treatment of Aids patients. Gaps within public referral systems for HIV positive patients are still evident whilst limitations in terms of the level of service able to be provided by primary and secondary institutions restrict patient access to this specific facet of healthcare (Nattrass, 2006). Michaels (2005) has identified that large numbers of children infected with HIV do not receive HAART due to financial and transport limitations. Access to antiretrovirals post ARV roll-out is even further restricted for vulnerable populations such as Aids orphans due to limited funding for and existence of community based organisations and home-based care groups (Michaels, 2005). Stigma related to the disease at cultural, family and community levels has placed further strain on the efficacy of the national antiretroviral roll out programme having direct influences upon patient adherence to treatment regimes and medical schedules (Gouws, 2006; Gray, 2006).

Thus although headway has been made in terms of national HIV action plan objectives, significant barriers and stressors still exist and complicate the successful provision of medication to all patients afflicted with this disease. In order for South Africa to achieve global targets related to HAART roll out further effort needs to be made at state, institutional and public levels so that all patients are aware of, and able to access treatments aimed at increasing life span and reducing morbidity levels. Contemporary facts, figures and existing challenges, however make such goals currently an intangible reality.

2.1.3. Cultural Aspects Related to HIV and Life with the Disease.

HIV within developing nations such as South Africa afflicts the young and disempowered. Gender imbalances and hierarchical structures within certain cultures combined with the self-exploration and psychosocial changes that occur in adolescence, place specific groups of the South African population at risk. Past and current research is identifying that prevention campaigns, which do not recognise and assimilate these challenges within such initiatives fail to have any substantial impact upon the disease (Lidell, Barrett & Bydawell, 2005). In numerous African cultures, gender is identified as the dominant force within adolescent and young adult relationships. Frequently within such cultures adolescent and adult males gain autonomy, mobility, opportunity and power in life and sexual domains. These aspects are most commonly denied to the adolescent or adult female. Young women within African cultures thus often experience difficulties negotiating the terms of sexual experiences with their male counterparts making their

ability to practice safe sex or abstinence increasingly difficult. Combined with such influences are the aspects of sexual coercion (financial and emotional) and gender-based violence – which are heavily involved in shaping the progression of the disease (Harrison, 2006).

At-risk populations as well as individuals infected by HIV find themselves confronted with a host of cultural dynamics frequently related to the disease. The spread of HIV and reduced access to treatment of afflicted populations is heavily influenced by social and community views of the disease. Within previously disadvantaged and lower socio-economic population groups HIV is often a topic of silence that is not fully understood (Frohlich, 2006: 351-371; Harrison, 2006: 262-280). Healthcare workers and prevention campaigns often have to deal with misconceptions related to the disease. In particular blaming strategies frequently complicate community understanding and outlook regarding the virus and are often used by communities as mechanisms of explanation and rationalisation for a somewhat irrational and tragic phenomenon. In such communities it is common for the disease to be attributed to witch craft, unclean behaviours, a loss of strength, punishment from the ancestors, evil, apartheid, a means of defaming black people or homosexuality. Further misconceptions related to the disease often centre upon the disease's ability to be cured through performing certain rituals, taking certain traditional medication or doing specific types of acts e.g. sleeping with a virgin. Community understanding of the nature, progression and characteristics of HIV is thus poor amongst the population sector most heavily afflicted by it (Frohlich, 2006; Farmer, 1992).

As the disease matures, and levels of morbidity within communities increase, so social structures within Southern Africa such as the family unit are progressively being eroded away. Extended families and the support they provide are increasingly limited with large gaps becoming evident amongst certain generation groups. Households headed by young children and older caregivers are frequently becoming more common whilst the attrition of socio-economic conditions and social structures occur. Emotive reactions towards the disease are high as families of victims are often denied the opportunity to traditionally mourn the loss of loved ones - a result of the aura of secrecy, which HIV prescribes. It is all of the above aspects of the disease, which are direct consequences of the cultural and social stigmas attached to HIV. These influences have seen HIV and Aids become an illness that cannot be described as a medical phenomenon in isolation from cultural and social domains (Harrison, 2006; Farmer, 1992).

2.1.4. HIV within the South African Treatment Context.

In the public healthcare sector HIV has further profound impacts. According to current societal health data it is indicated that HIV is the leading cause of death in South Africa (Adjuik, Smith, Clark, Todd, Garrib, Kinfu, Kahn, Mola, Ashraf, Masanja, Adazu, Sacaral, Alam, Marra, Gbangou, Mwageni & Binka, 2006). Lack of resources, beds in wards and professionals, often result in patients being denied care, which in turn increases societal mortality and morbidity rates (Gray, 2006:526). In 2006 it was estimated that 5.3 million people were living with HIV in South Africa of which 25% were said to be symptomatic or had full-blown Aids (Frohlich, 2006; 370-375; South

African Department of Health, 2006). Although HIV is said to have had impacts on public health care since the early 1990's, and despite the gradual increase in patient loads, available facilities have not increased with the same reciprocity. In Sub-Saharan Africa it is said that children living with the disease have statistically more contact with hospitals than their HIV negative counterparts whilst up to 63% of paediatric patients are HIV positive. Hospital stays for HIV positive patients are often significantly longer in comparison to others due to the changes in patterns of diagnosis and complications created by the disease, such as in cases of TB meningitis, neurological conditions and other opportunistic infections (Corbett, Tsitsi, Cheung, Munyati, Godfrey-Faussett, Hayes, Churchyard, Butterworth, Mason, 2007). Unfortunately hospital capacity, staff, budgets and resources have not been appropriately managed and planned to successfully deal with the present-day financial, resource and personnel demands created by HIV (Nattrass, 2006).

Within this financially strained and under-resourced healthcare setting health professionals from differing cultures as well as linguistic groups to the patients they treat are often provided with minimal support in terms of trained cultural and linguistic brokers (Penn, 2003). To add to such challenges, currently, medical professionals dealing with direct and indirect effects of HIV are thinly spread amongst an increasing patient need for treatment as well as counselling and education regarding the nature of the disease and its management (UNAIDS, 2006; Nattrass, 2006). Further complicating an already precarious health care situation, are the social issues and agendas brought to the treatment centre by patients, issues that doctors from differing cultural and life

experience backgrounds are often unable to conceptualise and integrate within their treatment plans (Penn, 2003; Delbene, 2003).

These highly strained cross-cultural and linguistic interactions are thus what characterise the South African HIV healthcare environment. They create a medical context where differing perceptions and expectations culminate in communication breakdowns between patient and practitioner - a factor which can affect patient adherence to treatment regimes as well as patient levels of satisfaction (Lochman, 1983; Friedland & Williams, 1997; Meeuwesen, Harmsen, Bernsen & Bruijnzeels, 2006). Although research is surfacing which suggests that cultural and linguistic brokers can improve these medical treatment barriers, information still suggests that such mediators can distort up to 40% of communicated information within these interactions (Penn, 2003). This in turn has further implications in terms of treatment outcomes and patient satisfaction (Baker, Hayes & Puebla, 1998).

It is these factors that are suspected as affecting the quality of the South African HIV multicultural healthcare interaction as well as the success of treatment outcomes in this regard. In particular an adverse treatment environment within the context of HIV healthcare interactions creates concern as to the levels of patient adherence to treatment regimes.

In the context of healthcare, treatment adherence success is felt to be influenced by the practitioner-patient dyad where sufficient counselling, education and a strong, consistent

practitioner-patient relationship, is able to be achieved (Friedland & Soloway, 2000; Friedland & Williams, 1997). Successful patient-practitioner dyads are felt to enhance patient understanding of treatment protocols and their importance, and improve patient satisfaction with services rendered. This is anticipated as increasing attendance and treatment outcomes (Friedland & Williams, 1997; Lochman, 1983).

Non-adherence to medical regimes is a common problem within the area of healthcare, which occurs across chronic and acute illnesses as well as across populations and age groups. Within the context of HIV however non-adherence to HAART is of concern as this can result in serious consequences, which include symptomatic HIV disease and/or drug resistance to HIV medication (Wrubel, Moskowitz, Richards, Prakke, Acree & Folkman, 2005). Current HAART treatment protocols require that patients need to achieve adherence levels of 95% to prevent drug resistance (Battaglioli-DeNero, 2007). This implies that healthcare systems and treatment processes need to be carefully and appropriately structured to ensure these levels are achieved. Although current research indicates that levels of treatment adherence within developing nations are much better than originally suspected, health communication studies which focus on multicultural interactions still strongly suggest that the South African HIV medical interaction is at greater risk for adverse treatment outcomes due to the inherent characteristics such interactions possess (Laniěce, Ciss, Declaux, Diop, Mbodj, Ndiaye, Sylla, Delaporte & Ndoye, 2003; Penn, 2003; Smith, 2004; Meeuwesen et al., 2006).

This assumption appears to be supported by the findings of Butcher et al. (2001) who identified lower levels of patient adherence to antiretroviral treatment as well as poorer patient attendance at clinics within cross-cultural treatment contexts compared to matched cultural ones. The susceptibility of the multicultural HIV healthcare interaction in the South African context is thus highlighted.

Current literature thus suggests that linguistic, cultural and social aspects of these treatment interactions need to be documented in order to identify the facilitators and barriers to more effective interactions and healthcare. Moreover, this literature implies that through compiling accurate and comprehensive descriptions of HIV healthcare interactions, the underlying causes for observed behaviours will be able to be identified thereby allowing for the establishment of more effective training programmes for healthcare professionals and the cultural brokers they work with. It is felt that through the creation and implementation of such programmes; message transfer and client satisfaction will be improved thereby allowing for risks relating to reduced levels of treatment adherence to be negated. The research and real-life benefits of this study are thus emphasised.

2.2 Health Communication as an Area of Research.

This specific study forms part of a larger funded research project reviewing health communication within the South African health care context since 2000. The project, which is currently based at the University of the Witwatersrand under the directorship of

Professor Claire Penn, aims to analyse the characteristics of the multicultural and multilingual healthcare interaction. More specifically this project aims to describe such interactions within the South African healthcare context – across a range of diseases, environments and interactions.

2.2.1 Core Concepts Related to Health Communication.

Health communication aims to document patient and healthcare worker interactions within social and linguistic frameworks (Penn, 2003). By achieving this specific objective health communication research intends to improve the nature and efficacy of the healthcare experience through education and clinical training of professionals as well as through changing policies at ground, institutional and governmental levels.

Due to the significant importance patient-practitioner interaction plays within the context of health communication, the majority of such studies investigate and explore the theoretical and practical aspects related to this concept (Kiesler & Auerbach, 2005). Booth (2007) states that the study of patient-practitioner interactions is a relevant area for research particularly due to the fact that the patient-practitioner interaction is one of the four most statistically complained about areas within public healthcare systems. According to Moral, Rodriguez, de Torres and de la Torre (2006), focusing on and improving the interactions between doctor and patient is of vital importance due to its influence upon a number of specific clinical dimensions. Addressing these areas of

concern it is felt will have benefits for not only the patient and the practitioner, but also the public healthcare system itself. Such anticipated benefits include:

- improved accuracy of diagnosis;
- reduction in malpractice claims;
- improved patient-satisfaction;
- improved patient adherence to treatment regimes;
- improved use of health resources; and
- better health outcomes in a wide range of clinical problems.

The quality and success of the healthcare interaction is directly influenced by a number of variables (Meeuwesen et al., 2006). Although these variables include factors related to the medical situation Kaba and Sooriakumaran (2007) state the most dominant factors are those, which relate to participant variables and the "social scene". Healthcare interactions are thus predominantly influenced by the socio-political and intellectual scientific climate at the time. They are however also influenced by the individual experiences and personal factors, which doctors and patients often transpose upon the treatment setting. Individual variables often can include aspects of age gender, personality, attitude, education and experience of which there has been research (Meeuwesen et al., 2006).

The nature of the doctor-patient interaction has evolved significantly over the past two millennia from the processes of naturalistic observation and humanism employed by the Greeks to the development of biomedical and biopsychosocial approaches of modern day

medical science. Although current research supports the need and value of incorporating patient-centred models of care within the medical encounter, methods of medical training and culture still frequently prescribe a biomedical-based approach. The medical session of present day thus frequently operates under guidance co-operation perspectives, as opposed to methods of mutual participation (Kaba & Sooriakumaran, 2007). This point is most true in lower-socioeconomic environments where poor levels of education create a view which sees the doctor as a figure of authority with whom patients are required to comply (Khan, Walley, Newell & Imdad, 2000).

The nature of the doctor-patient interaction and the roles of the participants within these are substantially influenced by the differences in experience between doctor and patient. These differences in participant experience also affect the doctor's ability to successfully achieve a process of shared decision-making. As students, doctors undergo a process of "enculturation" whereby their personal views regarding health and illness are shaped. Through this process doctors obtain a higher level of social status and authority and most frequently develop a manner of thinking, which is embedded within the biomedical approach to healthcare and the medical interaction. Thus doctors view illness as a disease which is required to be treated and measured through scientific means and principles where limited emphasis is placed on community, social and emotional variables (Helman, 1997).

This view often conflicts with the experiences and perspectives of the ill patient. Patients generally view illness in relation to how it impacts on their daily life functioning and

activity whilst frequently explaining phenomena related to illness through cultural mechanisms. The result is thus, that the ability to establish a mutual medical partnership where joint medical decisions related to treatment care are made, is often threatened due to the differences in explanatory models for disease that doctors and patients use. This challenge is further complicated by differences in power, ethnicity and society which create further disparity in opinion regarding personal issues of importance related to health and treatment processes (Helman, 1997).

The ability for doctors to achieve shared decision-making and a joint medical partnership within the healthcare interaction is also influenced by other dimensions of the medical session. Rapley, Heaven, Murtagh, Graham, Kaner and Thomson (2005) state that the doctor's ability to achieve shared decision making and effective information transfer is frequently threatened by practical, real-life challenges which doctors encounter on a daily basis, these include;

- how to co-ordinate the best available clinical evidence on risk factors;
- how to calculate an individual patient's risks and benefits;
- how to present this information so as to best inform the patient;
- how to incorporate the individual patient's treatment decisions and opinions within this decision; and
- time constraints.

These medical challenges are further compounded by barriers frequently present within medical interactions which relate to culture and language (Suurmond & Seelman, 2005; Meeuwesen et al., 2006). As the process of globalisation reaches its peak, so contemporary doctors are required to treat an increasing number of minority populations from differing linguistic and cultural groups to their own (Van der Geest & Finkler, 2004). Studies performed in countries such as South Africa, Holland and America have identified greater levels of communication breakdown and reduced levels of treatment compliance, satisfaction and overall outcome in cross-cultural and linguistic medical encounters (Penn, 2003; Smith, 2004; Meeuwesen et al., 2006; Reimann, Talavera, Nuňez & Velasquez, 2004). Such interactions have heightened challenges and risks impeding effective medical management due to the fact that successful information information transfer and patient satisfaction are highly sensitive to cultural and linguistic effects (Suurmond & Seelman, 2005). Coupled with this point is the fact that interethnic interactions often possess reduced levels of social talk, increased mismatched agendas as well as increased neutral to adverse interactional dynamics. These interactions when compared to cultural and linguistic concordant encounters do differ significantly in the perceived efficacy and outcome of the encounter (Meeuwesen et al., 2006). Despite the definite differences between culturally matched and unmatched medical encounters and the treatment implications thereof, investigation and description of multicultural and linguistic encounters within the context of health communication is still substantially limited (Suurmond & Seelman, 2005; Schouten, Tromp, Meeuwesen & Harmsen, 2005). The need for further research into the area of intercultural communication is thus pivotal

in understanding the multicultural medical encounter and addressing its inherent weaknesses (Meeuwesen et al., 2006).

Because of the significant challenges related to healthcare and the doctor-patient interaction; certain health care interactions have been explored and broad recommendations aimed at improving gross aspects of such interactions made. Kiesler and Auerbach (2005) have identified that within all practitioner-patient interactions increased effective health communication is largely dependant upon the practitioner's behaviour within such sessions. In particular it is generally believed that practitioner behaviours which foster better patient responses appear to be related to a practitioner, who is; friendly, non-dominant, engages the patient within the treatment process and allows for open and transparent provision of information. However, it is generally felt that such a belief and approach is not always conducive to the individual variations, needs and preferences within society. In such cases it is felt that practitioners need to be more engaged in reading patient needs and requirements so that their interactions and behaviours can be tailored to best suite these. Thus there is a need for a patient-preference match approach in the medical session, which it is felt, will improve the medical encounter through reducing the negative effects of multiple factors related to participant difference.

The notion of doctor-patient interactions and thus health communication research is a complex multidimensional one. It is an area of research, which although possessing

increasing information within certain facets of study has areas, which are equally sparse and not fully understood. Epstein, Franks, Fiscella Shields, Meldrum, Kravitz and

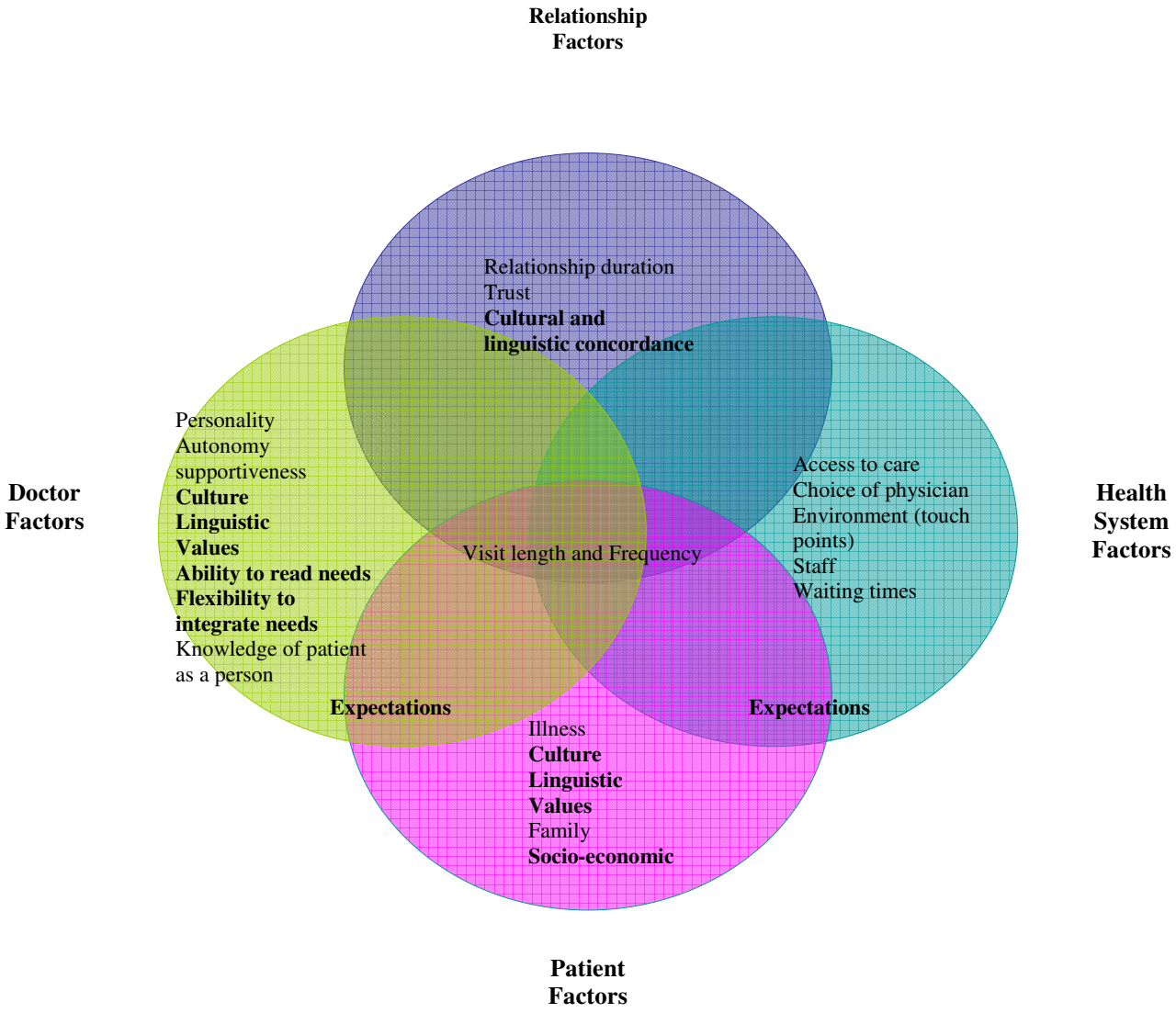


Figure 1: A Model of the Influences Upon the Healthcare Interaction.

Duberstein (2005) in figure 1 have suggested a valuable model, which summarises the distinct factors that influence the doctor-patient interaction whilst also highlighting specific areas (emboldened in the diagram) requiring further research. This model further

highlights assumptions regarding the limited amount of information and research available in terms of the multicultural medical encounter – a point which supports researcher arguments regarding the need for and exploration of this specific topic. Another important aspect to note in terms of this model is its emphasis of the fact that influences within such interfaces are not solitary but multifactorial in nature. Thus in order to achieve validity of research and efficacy of service, this model suggests that research and programmes of up-liftment incorporate the above multiple aspects as core concepts for individual frameworks.

2.2.2 Health Communication Analysis and Nonverbal Behaviours.

When analysing the various influential factors effecting healthcare interactions differing tools are required to observe and document these. Thus aspects such as linguistic factors or personality, e.g. dominance, may be analysed through verbal means whilst other aspects such as relational factors, cultural factors or socioeconomic factors are best observed using nonverbal tools (Gallagher, Hartung, Gerzina, Stanford & Merolla, 2005).

Nonverbal tools are believed to possess high levels of value in allowing the researcher to analyse, understand and quantify doctor-patient interactions (Gallagher et al., 2005). However, limited research exists which explores doctor-patient interactions from a nonverbal standpoint. Burgoon (1996) states that a possible reason for the sparsity of nonverbal research within the area of health communication is due to the generalised assumption that nonverbal behaviours supplement verbal output, in contrast however the

opposite appears to be true. Nonverbal behaviours rather play a central role in understanding specific themes and trends within healthcare interactions. These patterns thus provide insight into specific influences, behaviours and outcomes which verbal analyses are unable to provide. The pivotal influence of nonverbal behaviours within healthcare interactions and the sparsity of research in this regard thus identify the need for further research within this specific area of health communication investigation.

2.2.3 Health Communication Research Internationally and Nationally.

This dissertation has already established that health communication research is unequally spread amongst a variety of topics related to the doctor-patient interaction. Despite this imbalance in terms of topic investigation, the value of health communication research has been emphasised through specific studies.

Particular studies such as the work of Clarke, Evans, Shook and Johansson (2005) have emphasised how health communication investigation is able to isolate and identify the strengths and weaknesses of healthcare methods such as counselling and discussion. It has also highlighted how health communication research is valuable in identifying the roles such medical processes play in determining patient adherence to treatment regimes. The value and need for this specific area of study within the South African context has also been highlighted; through Muturi's (2005) study of HIV in Kenya. This study identified and explored the need for culturally appropriate treatment approaches to HIV prevention and management within multicultural medical contexts – a point which is able

to be clearly understood within the South African healthcare situation. Henrick and Stephenson (2005) further emphasise the value of health communication research in being able to implement strategies and policies that are capable of overcoming the various treatment barriers such as age, gender culture and language – aspects that are frequently encountered in healthcare interactions.

Through the examples of these previously-mentioned studies it thus appears that health communication research is increasing and starting to permeate into third world contexts and more challenging, complex diseases. There is still, however limited research and application of this field of study within the South African context other than those studies, which form part of the University of Witwatersrand's health communication project.

Completed studies relating to this large-scale project have identified the important need for further health communication research within the South African context. These studies have also highlighted the value health communication research plays in improving the medical experience and treatment outcome within the South African clinical environment (Penn, 2003; Smith, 2004; Watermeyer, 2004).

Studies conducted on the same data and research context of this specific study have identified that medical interactions are highly influenced by contextual factors and contain a mixture of conversational features which facilitate and hinder the treatment process for patient and practitioner alike (Cilliers, 2005; Schwartz, 2004). These

particular studies, coupled with others described within the health communication project have identified the value such research contains in terms of recognising and manipulating barriers to effective patient care. More specifically these studies have been able to identify specific training requirements and practical solutions to highlighted problem areas within observed interactions, thus providing them with a valuable practical as opposed to purely theoretical benefit (Penn, 2003; Penn, 2007; Smith, 2004).

The findings within these studies and the emerging value health communication research provides in terms of identifying and meeting the needs of the South African medical situation, coupled with the sparsity of research in this regard; have thus identified the need for further exploration into specific sub-elements of health communication in the Southern Africa context.

2.3 Nonverbal Behaviours.

2.3.1 Core Concepts Related to Nonverbal Behaviours.

Nonverbal behaviours are described as being "signals" which form an integral part of the human communication system (Argyle & Kendon, 1967; Knapp, 1975:182). Nonverbal communication is reported as functioning in various ways within human society namely; to support the verbal aspects of language, replace language, express emotion and interpersonal attitudes and convey information regarding the communication partner (Argyle, 1975:212; Argyle, 1972:252-253; Mehrabian, 1972). These behaviours are

primarily driven by social intent and can thus be simplistically described as social tools, which allow for individuals within communicative interactions to communicate social motives and influence the interaction (Triosi, Pompili, Binello & Sterpone, 2007). Nonverbal behaviours can be grossly separated into specific types of bodily "signals" – each of which it is felt can be linked to specific social functions. These include; gaze, proximity and spatial position, bodily contact, prosody, posture, facial expression, bodily adornment, gesture and head movement (Argyle, 1972; Mehrabian, 2007).

Although reliable and well-documented research related to specific types of nonverbal behaviour is somewhat sparse, there is information available which broadly defines and describes specific patterns of this area of communicative behaviour. According to Argyle (1975) there are five predominant bodily signals which are said to be the principal patterns of behaviour able to provide the researcher with the most valuable insight into underlying themes related to interpersonal dynamics and communicative transfer within the social interaction. These five bodily signals, which have been selected for analysis within this specific study, are; body and head posture, facial expression, eye gaze and gesture.

Gestural Behaviour:

The principle function of gestural behaviour according to Özyűrek and Kelly (2007) is similar to that of speech i.e. gesture has a communicative function. According to Nespoulous, Perron and Lecours (1986) gestures can be broadly divided into various

categorical systems. In particular one can view gestures as falling simplistically within a number of dichotomies; act-symbol, opacity-transparency, centrifugal-centripetal and autonomous semniotic-multisemiotic. Act from the act-symbol dichotomy refers to an active gesture with no communicative intent e.g. counting money. Symbol gestures are those that have shared social meaning within a community or society e.g. thumbs up to mean one is "okay" (Nespoulous et al., 1986:51-53). Co-speech gestures, where a clear-cut semantic relationship is established between gesture and communicative intent, are closely linked to the communicative message. These aim to improve communicative transfer through evoking semantic processing (Özyűrek & Kelly, 2007). In application this specific group of gesture would be classified according to this dichotomy as being symbolic. Conversely gestural behaviours that serve no direct communicative function but are purely active motor movements e.g. hand rotation whilst speaking, would be classified as act gestures.

Gestures may also be described in terms of an opacity-transparency dichotomy. Transparency relates to gestures that are universal across cultures, language and geographical areas whereas opacity refers to gestures that are purely bound by specific aspects some of which include context, individual and time (Nespoulous et al., 1986:52). In reality it is almost impossible to identify gestures that are transparent across all cultures and thus transparent gestures may be best described along a continuum. Thus in reality gestures may fall at varying points upon this spectrum with increases in transparency implying improved partner understanding of a newly introduced communicative gesture (Birdwhistell, 1970).

Autonomous semniotic gestures on the other hand are those gestures that fall within a formalised gesture based language system such as that of South African Sign Language. Multisemiotic gestural activity - the final aspect to this dichotomy - are those gestures which accompany the spoken word (Özyűrek & Kelly, 2007).

The final classification dichotomy (centrifugal-centripetal) refers to the intentionality of gesture. Thus centrifugal gestures are gestures directed towards specific objects centripetal gestures, in contrast, are not (Nespoulous et al., 1986).

A principle function of gesture is thus to enhance communicative transfer (Kendon, 2004:1; Willems & Hagoort, 2007). However, the effectiveness of this communicative transfer is much dependent upon where specific gestures fall within each dichotomy. In the majority of communicative situations "higher quality" gestures that optimise information transfer are said to be those that are symbollic, transparent and multisemiotic. It is important to note, however that opaque gestures can also be regarded as being successful facilitators of information transfer, if the gestural representation is mutually understood and shared between communicative participants (Özyűrek & Kelly, 2007; Nespoulous et al., 1986).

Although gesture plays a pivotal role in communicative transfer, it is important to note that this is not the sole function of gestural behaviours. Gesture also appears to be sensitive to speaker states such as emotion and personality and is thus able to provide

information in terms of partner responses towards discussed material. In particular feelings of anxiety within a communicative interaction often result in increased gestures of hand to face contact (Argyle, 1972:253; Verbitskaya, Krupitsky, Burakov, Tsoy-Podosenina, Bushara, & Vekovischeva, 2007). Brisk and flick type gestural behaviours are felt to correlate with feelings of frustration and anger whilst fast expansive and spontaneous gestures are felt to relate to elation and positive affect towards content information. An increase in the frequency of such behaviours is felt to further confirm these communicative partner attitudes (Argyle, 1975).

Gesture is also closely linked to and affected by culture and thus such behaviours can provide further insight into the underlying nature of observed interactions. Gesture according to Birdwhistell (1970) is almost never universal across cultures and contexts and thus is very much specific to time, person and environment. Differences in gesture have been identified between cultures and geographical areas as close as Italy and the United Kingdom – Italian gesture is often more flamboyant with increased levels of bodily contact in comparison to the muted, distant gestural behaviours seen in Britain. Differences between cultures such as these also exhibit variation in terms of gestural behaviours between members of different genders and age groups (Argyle, 1975).

Head and Body Posturing Behaviour:

Head posturing behaviour –in the form of head nods and head shakes - primarily performs a feedback or response function within conversation. This allows for the listener

to indicate to the speaker his/her attention towards the conversational topic as well as allowing for the speaker to identify successful information transfer (Koole, 2004).

Head posturing behaviours can be described according to sequentiality as well as in terms of degree and frequency of movement. Sequential head posturing behaviour is best described as head posturing behaviour, which occurs at expected and predictable intervals within a communicative sequence. Non-sequential head posturing behaviour on the other hand is unpredicted, unexpected head posturing behaviour that occurs in inappropriate localities of an observed interaction (Koole, 2004). Sequential head posturing behaviours are said to form a discourse function within conversation by providing nonverbal responses to close ended questions (Argyle, 1972: 255). Non-sequential head posturing behaviour on the other hand can often be seen as indicating a breakdown in communication transfer between speaker and listener, where listener understanding of a specific topic being discussed is compromised (Koole, 2004).

Emphatic or increased degree in head posture is felt to often indicate feelings of conviction, excitement or positive affiliation with what the speaker is discussing. Reduced degree and brisk head posturing behaviour conversely is often indicative of negative emotional response on the part of the listener or disinterest in the topic being discussed (Argyle, 1996).

In contrast, body posture relates to posturing behaviours involving the entire body. These behaviours often provide the observer with information as to speaker involvement within

conversation, speaker-listener relations and listener interest in topic content being discussed (Argyle, 1975:272; Argyle, 1972: 252-255; Argyle & Kendon, 1967). Argyle (1996) states that backward body postures generally indicate a listener's lack of interest in the topic being discussed, or possibly illustrate uncomfortable and strained listener-speaker relationship dynamics. Forward body posturing on the other hand is felt to be indicative of increased listener interest and willingness to interact with the speaker at a more active level. This specific type of body posturing is also often indicative of comfortable speaker listener relations as well as a positive listener response to discussed topics within interactions (Verbitskaya et al., 2007).

Eye Gaze Behaviour:

Novick, Hansen and Ward (1998) state that eye gaze is one of the most important aspects in face to face interaction which plays a powerful role within conversation. Eye gaze behaviour as with other nonverbal behaviours provides the speaker in communicative interactions with indications as to the listener's attitudes, interest and social motives. Specifically eye gaze behaviour is said to indicate listener involvement within, interest in, as well as understanding and acceptance of a specific topic being discussed (Argyle & Kendon, 1967; Verbitskaya et al., 2007). It is also felt that eye gaze as with head posturing behaviour provides a feedback and monitoring function whereby the listener indicates he or she is attending to the speaker's output and the speaker indicates his or her monitoring of the listener's interest and attention through gaze maintenance patterns (Novick et al., 1998). Verbitskaya et al. (2007) and Argyle (1975) state that a lack of eye

contact is most often indicative of a communication partner's unwillingness to interact within the communicative interaction or can be due to embarrassment, anxiety, shame or pre-occupation with a simultaneously occurring activity e.g. writing in a file as would be seen within doctor-patient interactions. Eye gaze behaviour patterns also occur within specific patterns during turn taking. In particular mutual eye gaze is held and then broken when speaker and listener change roles within the communicative interaction.

Eye gaze, as with all nonverbal behaviours, has also been identified as having patterns specific to social status and dominance as well as culture. Numerous research studies have identified definite eye gaze imbalances between communicative parties where there are differences in participant social status. In such cases the individual whose status is perceived as being higher than his communicative partner/s is gazed upon significantly more than the lower ranking individual (Argyle, 1975:232-235). Eye gaze duration has also been identified as having discrete differences between individuals from varying contexts and cultural groups. According to Argyle (1996) although the biological basis of gaze and predominant gaze patterns are universal, definite variations have been identified within certain studied cultural groupings. In particular studies of Arabian culture have identified higher levels of gaze in comparison to European and American participants. Japanese conversation participants on the other hand have been identified as having lowered gaze patterns, particularly focusing on the neck area whilst Greek individuals exhibit greater amounts of eye gaze behaviour patterns when interacting with new conversation party members (Argyle, 1975:247). As with gesture, gender differences, power and status all have influences upon these cultural nuances therefore having direct

effects upon interpersonal interactions. Despite this point information which comprehensively tabulates and discusses cultural nuances related to nonverbal behaviour patterns, is sparse. Existing literature, which emphasises this need for future research is also still substantially limited in terms of the South African and third world situation.

Facial Expression Behaviour:

Facial expression behaviours demonstrate both personality characteristics of speaker and listener whilst supporting and supplementing spoken communicative content (Argyle, 1972:249). Due to the conscious control individuals often implement in order to mask certain personality traits (through the process of self presentation) facial expression behaviours are often less accurate in predicting interpersonal attitudes and comprehension of discussed topic content. Argyle (1975) states that facial expressions are the least accurate nonverbal behaviour pattern that can be analysed due to the high level of voluntary control involved in the concealment of negative affect. Initially researchers believed that specific emotions and attitudes related to certain facial localities; however it is now generally accepted that multiple areas of the face are involved in differing emotions. Broadly it is felt that a lack of facial animation can be indicative of a lack of understanding of communicative content as well as disinterest in or opposition towards information being discussed. In contrast increases in positive facial animation – in terms of smiling behaviours etc. are believed to be indicative of positive reactions to content material, pro-social behaviour and increased involvement within the communicative interaction (Thayer & Schiff, 1969).

2.3.2 The Biology and Neuropsychology of Nonverbal Behaviour.

Neuropsychological testing reveals that nonverbal behaviour and its processing are located within a number of cortical and sub cortical areas in the brain. This diffuse neurological distribution of function appears to be related to the differing hierarchies and components involved within nonverbal behaviour. In particular the majority of such research identifies three major components to nonverbal behaviours, which include:

- The cognitive, conscious and voluntary aspects related to nonverbal behaviour. These nonverbal behaviour processes involve the interpretation, internalisation, self-regulation, metalinguitsic and metacognitive awareness as well as theory of mind aspects of this specific phenomenon. Nonverbal aspects closely linked to social intention and motive would fall within this category (Shames, Wiig & Secord, 1998; Argyle, 1975; Kim, Kim, Jeong, Ki, Im, Lee & Lee, 2005; Özyűrek & Kelly, 2007);
- The involuntary aspects related to nonverbal behaviour. These would include more reflexive patterns of behaviour where sufficient awareness or voluntary control over specific nonverbal behaviours is not always present; and
- The emotional influence upon and response to nonverbal behaviour (Gazzaniga, Mangun & Ivry, 2006).

Neuropsychological studies attempting to chart the locality of nonverbal behaviour processing and control have identified that the primary neurological region for such function is within the right hemisphere of the brain. In a study by Cutica, Bucciarelli and

Bara (2006) nonverbal gestural behaviours of an experimental group of left-hemisphere brain damaged patients were compared to that of a group of right hemisphere damaged individuals as well as a neurologically normal control group. It was identified that although both groups performed poorly in comparison to the corresponding control group, the right hemisphere damaged patients performed significantly worse than the left hemisphere group in nonverbal tasks. This leads researchers to believe that the right hemisphere of the brain may play a more dominant role in nonverbal behaviour function.

Studies looking at functional magnetic resonance (fMRI) imaging of experimental groups using "co-speech" gestures identified increased neural activity within the frontal lobe as well as at junctures between frontal and parietal areas of the brain during this specific nonverbal activity. The findings of this study it is thus felt support hypotheses that this neurological region is involved in both motor control and self regulatory aspects related to the conscious implementation of gestural patterns in discourse interaction (McNamara & Durro, 2003; Triosi, et al., 2007). These postulations are further supported by a number of studies documenting disorders of Parkinson's disease and schizophrenia. Such patients – who are known to have frontal lobe lesions - often, exhibit specific nonverbal behaviour dysfunction particularly in the areas of control and self-regulation of gesture and facial expression. Studies exploring the relationship between patient depression and nonverbal dysfunction have also found frontal lobe involvement within the emotional processing and execution of nonverbal behaviours (McNamara & Durro, 2003). These findings thus suggest multiple functions located within single cortical areas.

Nonverbal functional areas of the brain have also been identified through fMRI studies looking at cortically primed areas of the autistic child. One such study focused specifically on the processing of facial expression and eye gaze patterning and compared the higher functioning autistic child with a normally functioning control of similar age. FMRI findings in this study identified distinct differences in areas of activation between the autistic child and normal control. In particular it was identified that temporal lobe structures, specifically that of the amygdala appear to have substantial involvement within the successful implementation, internalisation and processing of affect as well as execution of specific eye gaze behaviours (Sweeten, Posey, Shekhar, & McDougle, 2002). Research within this area has also shown the amygdala's close link between nonverbal behaviour and emotion. This close involvement of the amygdala is therefore thought to be related to the processing and expressive function of nonverbal behaviour (Sweeten et al., 2002). Argyle (1996) however states that although facial expression is closely linked to emotion and personality (and thus the amygdala), due to the processes of self-presentation and concealment there is as with other nonverbal behaviours a regulatory aspect to this patterning. Such regulatory controls it is felt are closely linked to the language areas of the cortex and thus these areas of the brain also form a locus of control for this specific cortical function (Özyűrek & Kelly, 2007).

The findings of these studies suggest that being able to specifically identify a distinct area responsible for nonverbal control is not realistically possible. As has often been articulated within the area of neuropsychology, functional areas of human behaviour such as nonverbal behaviours are often diffusely spread across the cortical and sub cortical

areas of the brain. Such behaviours often also frequently overlap with other areas of neurological function (Sweeten et al., 2002). Being able to identify all areas of involvement within nonverbal behaviour is still somewhat difficult due to the limited knowledge and studies the academic world possesses on this and other areas of neurobiology and behaviour. Current literature does, however allow for one to gain a broad understanding of some of the many neurological mechanisms at work within this specific aspect of human behaviour.

2.3.4 Nonverbal Behaviour Research and Medical Interactions.

Although limited, there is research available which identifies the value of nonverbal behaviours within the medical communicative context. This literature however is noticeably restricted within the context of South African health communication.

According to Smoyak (1963) the analysis and training of nonverbal behaviours within the healthcare context is a viable and valuable tool, which has been found to have much benefit in terms of improving nursing care. This is further emphasised by Koole (2004) who states that through using such behaviour analysis within a conversational analytic framework one is able to isolate, target and improve inhibitive behaviours within health professional contexts. This is specifically important within the nursing context as a nurse's ability to read and integrate patient nonverbal behaviours enhances the patient-nurse dyad, in turn impacting directly on treatment and patient outcomes (Smoyak, 1963).

The existence of research paradigms which incorporate procedures such as double-blind trials according to Mast (2007) indicates the inherent awareness within the research community as to the potential influence of nonverbal behaviour (in this case the clinician's) on medical interactions. Within real-life treatment contexts, physician nonverbal behaviours have been noted as having direct effects on patient health and treatment outcomes. Correlations in terms of nonverbal quality, type and frequency have also been drawn in terms of accuracy of diagnosis, levels of patient satisfaction and associated outcomes such as number of malpractice claims and morbidity rates.

Research into the usability of nonverbal behaviour analysis in the description, assessment and treatment of the psychiatric patient is also starting to emerge and confirms the value nonverbal behaviours possess in ensuring effective patient care within ethological behavioural psychiatric frameworks. This research has also enhanced understanding as to the mechanisms of such behaviour and the nature of their links to social and emotional functioning and well being (Triosi et al., 2007). Studies such as this and those documenting and describing non-manuals within the context of Sign Language are also valuable, as they highlight the fact that although the majority of research regarding nonverbal behaviour is dated, it is a topic, which is still relevant to contemporary research and society (Newport, 2000).

Despite the value of nonverbal behaviour research within the context of health communication, nonverbal behaviour research in the South African health care context is extremely limited and difficult to source. Smith (2004) highlighted the value of nonverbal

behaviours within the context of HIV vaccine trials and their ability to provide comprehensive insight into the interactional variables that effect treatment success and efficacy. Nonverbal behaviours were also found to foster the generation of more meaningful, effective recommendations regarding practitioner training and interactional considerations. This and previous studies coupled with the limited research available nationally and medically in terms of nonverbal behaviours, suggest the need for further research which charts such behaviours across a range of medical professions, diseases and geographical locations.

2.3.5 Coupling.

The concept of coupling in relation to nonverbal behaviours is an innovative area of research, which aims to profile the phenomenon of mirror symmetry between individuals within communicative interactions. According to Boker and Rotando (2001) in communicative interactions individuals often tend to mimic nonverbal behaviours of their communicative partner. This according to LaFrance (1985) is most commonly articulated within the domains of gesture, eye gaze and posture where coupling behaviours between communicative partners form what is described as a shared dialogue. Bertenthal aptly describes such behaviours as a social loop, which in real time processing of these bodily signals, is as important as semantic analyses of words and sentences (Wachsmuth & Knoblich, 2005).

Boker and Rotando (2001) as well researchers such as Elisabeth Ahlsen (2003) have attempted to describe and explore the purpose of coupling behaviours within communicative interactions. Currently two predominant suggestions have been made with regards to the purpose of nonverbal behaviours of symmetry. Through coupling behaviours certain theorists believe a communicative partner is able to align his or her internal state with that of his or her partner due to the nonverbal mimicry allowing for physical access to similar somatosensory systems active within one's communicative counterpart. This according to Boker and Rotando (2001) allows for an internalised state of "empathy" to be created between communicative participants which in turn according to Bavelas, Black, Chovil, Lemery and Mullet (1988) is felt to facilitate optimal communicative outcomes.

A secondary theory relates coupling behaviour to providing the interlocutor with feedback relating to the communicative interaction. In particular these theorists postulate that coupling behaviours may allow for the listener to indicate states of empathy, agreement and understanding within the communicative interaction and thus a reduction or break in such behaviours it can be postulated may be indicative of a reduction in or lack of existence of the above mentioned emotional states (Galese & Goldman, 1998).

Due to the novel nature of coupling behaviour in the context of nonverbal research, coupling is still an area which is limited in terms of research documenting and describing such behaviours across differing cultural and social contexts. Through the research of individuals such as Ahlsen, it is assumed that the analysis of coupling will provide further

insight into nonverbal behaviour interactions within these contexts thus implying that research into this area of nonverbal behaviour within the medical interaction is both valuable and of urgent need within the context of nonverbal behaviour research.

2.4 The Speech Language Pathologist's Role within this Research Context.

Speech language pathology is a developing discipline, which has significant opportunities for advances in our methods as professionals and areas of practice. Recently in the context of speech language pathology there has been a significant increase in research that aims to enhance awareness and understanding of the speech language pathologist's skills within the healthcare context. Such research has also aimed to broaden the speech language pathologist's scope of practice within the healthcare sector (Penn, 2004).

Due to the nature of their profession, speech language pathologists possess unique skills in terms of communication facilitation and analysis in comparison to other medical disciplines. As students speech language pathologists are exposed to the natural and irregular patterns of human communication and have an intimate knowledge of the mechanisms involved within this core human behaviour (Shames et al., 1998). These skills are further refined as working communication specialists due to the demands placed upon communication professionals within their daily professional practice. Often speech language pathologists are required to facilitate enhanced capacity for communication whilst also using communication as a conduit to foster enhanced attitudinal and emotive

responses to the self through the process of counselling and interpersonal interaction (Luterman, 2001).

Although current perceptions view the speech language pathologist's professional role as being restricted to the analysis and treatment of disordered speech and language capacity, it is the communication professional's refined knowledge and skills of these processes which are felt can play a valuable role within the context of health communication and its research.

This point is even more valid within the South African context where the unique cultural and linguistic encounters which South African speech and language pathologists experience on a daily basis have equipped the South African communication professional with enhanced skills and knowledge relating to the processes of communication across matched and unmatched cultural and linguistic interactions (Penn, 2004).

It is through the communication professional's assertion and application of these refined areas of knowledge and skill, which will foster the discipline of speech language pathology to extend professional roles beyond the traditional borders of communication disorders. Although this process of role expansion is slow there is an increasing trend, which is seeing speech therapists becoming more important and imperative agents of change within the context of health communication. It is anticipated that their professional involvement within such contexts will create positive improvements within multi-cultural and linguistic medical interactions by restructuring current healthcare

systems and through policy reformation (Penn, 2004). These assumptions are beginning to be confirmed through the success and value of emerging health communication research conducted by speech language pathologists within the South African health care sector.

Thus it is felt that as the individuals who are most able to identify, mobilise and prompt change within these healthcare contexts, there is an ethical obligation for speech language pathology professionals to become involved in the various areas of health communication research.

Although extending these professional barriers is felt to have ethical implications, it also felt that there will be benefits for the discipline of speech language pathology as a whole. It is believed that through asserting their role within health communication, communication specialists are able to extend professional roles and boundaries within the health care context allowing for greater acknowledgement, understanding and respect of a frequently misunderstood and disregarded discipline. The value of becoming involved in such studies, from a professional perspective, is thus evident.

2.5 Summary of Chapter and Conclusion.

This chapter has primarily discussed health care interactions and nonverbal behaviours. In particular it has highlighted that the success of doctor-patient interactions are frequently threatened by the conflicting differences in perception and opinion evident

between doctors and their patients (Helman, 1997:101). Although research has explored the sources and nature of these differences as well as the effect on treatment outcomes, such research has been limited to specific topics of study (Meeuwesen et al., 2006).

In South Africa published literature reviewing such interactions is still sparse. It is also felt that certain interactions in South Africa such as that of the HIV multicultural interaction may be of greater risk for poor doctor-patient interactions, due to the social, linguistic, cultural and political influences, which directly affect the disease and its progression. Barriers to effective doctor-patient interaction and communication can have negative consequences upon patient adherence and care (Friedland & Soloway, 2000; Butcher et al., 2001). This it is anticipated will have serious effects on treatment outcomes and thus mortality and morbidity rates related to HIV in South Africa due to the stringent adherence requirements associated with antiretroviral treatment (Nattrass, 2006) In light of the great risk such interactions possess in contributing to treatment failure, it is important that these interactions be understood and described in detail. This it is felt will allow for appropriate recommendations and changes to be made, so that overall patient and treatment outcomes can be improved.

The lack of literature on health communication in South Africa coupled with the susceptibility for ineffective doctor-patient interactions within the context of HIV thus provide solid motivation for this dissertation.

This chapter has highlighted that current nonverbal behaviour research has identified its value in being able to more comprehensively understand the healthcare interaction (Burgoon, 2004; Smith, 2004). More specifically this research suggests that nonverbal behaviours may be more effective predictors of successful communication transfer when differences such as culture and language exist. As with certain aspects of health communication research, however nonverbal behaviour research within the context of health communication, multicultural interactions and current day research is limited. Exploring this research topic within a nonverbal framework is thus strongly supported by the need for research within this topic area coupled with the perceived benefits and insight it will provide for the researcher's specific research question.

It is therefore felt that through the use of nonverbal methods this study will provide a new perspective on the analysis of health communication, whilst also meeting research needs in the context of cross-cultural and cross linguistic medical interactions. It is anticipated that the nonverbal findings from this study will extend current information available with regards to nonverbal behaviour patterning whilst also fostering more effective and appropriate recommendations in terms of the observed healthcare interactions. Findings of this study are thus also anticipated as having real-life benefits for the HIV patient receiving treatment in the South African medical context. All of these points thus further support the value and need for this specific research topic within global and South African research contexts.

Chapter 3

Research Methodology.

This section will review and provide background in terms of the methodological tools that were used in this study. The section will also provide an argument as to why these specific research tools and methodological approach were felt to be best suited to the needs and objectives of this study.

3.1. Qualitative Research.

3.1.1 Core Concepts of Qualitative Research Methodology.

Qualitative research has been defined as "a variety of analytic procedures designed to systematically collect and describe authentic, contextualised, social phenomena with the goal of interpretative adequacy" (Damico & Simmons-Mackie, 2003:132). It is thus based on the paradigm of understanding (Lukkarinen, 2005). According to Damico and Simmons-Mackie (2003) the multi-method, interpretative and naturalistic approach of qualitative analysis allows for richer and more detailed descriptions of explored phenomena than would be achieved through quantitative constructs. This specific point is felt to relate to the definitive characteristics of qualitative methodological approaches as elaborated by Patton (1990), namely that:

- there is a belief by the researcher in multiple realities;
- the researcher aims to identify an approach to understanding the phenomenon in question;
- the researcher has a commitment to the participant's viewpoint; and
- the researcher acknowledges his or her own participation within the research process.

Coupled with this last point is the fact that qualitative analysis processes are significantly flexible. They thus allow for methodological choice to be driven by the inquiry process, and therefore permit alterations in terms of specific methodological procedures where required.

According to Curtise and White (2005) medical research in the past has principally been dominated by quantitative methodological approaches to research practice. This it is felt is due to quantitative analysis' use of the deductive aspect of the scientific confirmation approach which shares parallels with a core principle of medical practice; namely positivism. However changes in thought processes over the past century - specifically in terms of theories of post-positivists and logical positivists - imply that quantitative research methods are not infallible. These arguments emphasise that reality, and thus the research context, need to be viewed from multiple perspectives to ensure an accurate viewpoint is achieved.

According to Sinuff, Cook and Giacomini (2007) although quantitative methods have proved useful in medical research specifically in the context of informing ICU care, quantitative methods often leave interesting qualitative questions. Qualitative research thus is felt to be a valuable complement to quantitative investigation, which allows for the evaluation and interpretation of complex social phenomena that do not lend themselves to hypothesis testing (Curtise & White, 2005; Sinuff et al., 2007). Thus qualitative paradigms within the context of healthcare allow for improved insights into organisational and cultural issues whilst also improving researcher understanding of social interaction, healthcare processes and communication.

Unlike quantitative research, qualitative paradigms are still subjected to misconceptions regarding the rigour and quality of such methodology. This according to Curtise and White (2005) is related to poor understanding in the research community as to how the quality of such research should be measured. Whereas reliability and validity serve as methods of evaluating research quality in quantitative constructs, credibility, dependability, confirmability and transferability allow the qualitative researcher to demonstrate the value and strength of a specific research design and method. This is most commonly achieved through the crosscheck principles of multimethod triangulation procedures (Patton, 1990).

3.1.2 Qualitative Research and Health Communication Research.

Qualitative research in the past – most specifically anthropology-based studies – have conventionally been concerned with the description and analysis of health and health practice within "primitive" societies. Thus past qualitative research has frequently focused on the description of traditional ethnic medical beliefs and practices as opposed to the culture, processes and challenges of westernised healthcare institutions (Van der Geest & Finkler, 2004).

This lack of research in terms of westernised health care is felt to be most likely related to two core factors. The first relates to the previously mentioned overwhelming influence of quantitative research paradigm use within westernised health care studies. Coupled with this point are the previously highlighted misconceptions attributed to qualitative research and its rigour which have in the past identified it as being the least favourable and appropriate means of healthcare investigation (Curtise & White, 2005).

The second factor relates to previous qualitative researcher views perceiving western healthcare research contexts as being too familiar, uniform and thus lacking in "coleur locale". It is only as of late that a growing number of qualitative research in hospital contexts coupled with the increase in globalisation and thus mixed cultural and linguistic environments of these settings, have identified that traditional western healthcare settings are far more complex than previously assumed. In particular western hospital settings have been identified as varying significantly from one another where the core values and

beliefs of differing cultures come into view and shape individualised hospital based practices and "culture" (Van der Geest & Finkler, 2004).

It is thus felt that qualitative analysis methods are highly appropriate for the study of the complex social phenomena, which are now evident in westernised-based healthcare institutions. Coupled with this point is a growing emphasis being placed on the fact that these institutions contain rich, diverse themes that are not fully understood. All of these points thus highlight the value of the qualitative research paradigm in enabling the researcher to accurately and comprehensively describe and understand unfolding social phenomena being explored. It is felt that in light of the objectives of this specific dissertation, qualitative analysis is the most appropriate methodological approach for this study. It is also of value to note that all the methodological tools incorporated within this research process have been identified as having strengths in terms of credibility and authenticity and thus are considered highly dependable qualitative tools.

3.2. Conversational Analysis.

Conversational analysis (CA) is a construct, which grew out of the challenges faced by ethnomethodology. It thus is derived from anthropological and social linguistic frameworks. CA possesses unique methodological features and aims to identify, through detailed observation and transcription, the social organisation of conversation (Ten Have, 2000; Antaki, 2003).

According to Friedland and Penn (2003) CA is data-driven and thus does not rely on perceived notions, theories or checklists. CA theorists thus state that it is a qualitative observation of conversational interactions, which build upon four main principles:

- conversations are structurally organised and based on social conventions. Thus conversations are comprised of repetitive structural components that are rooted in social standards as opposed to being random occurrences within linguistic interaction (Klippi, 1996);
- according to Heritage (1989) conversation is context-shaped and context-reviewed. The initial component of this principle refers to the belief that conversations are often shaped by the surrounding environment both in the present as well as in the preceding conversational contexts e.g. the setting of the conversational interaction, the purpose of the communication context etc. The second aspect of this notion relates to the context renewing aspect of conversation and thereby alludes to the fact that communicative interaction influences subsequent communicative utterances and actions;
- every aspect of communication is important to the analytic process. Thus all features of conversational interaction – verbal and nonverbal – are equally important; and
- data is naturally occurring i.e. everyday interactions are extremely important aspects to the investigative process (Breakwell, Hammond & Fife-Shaw, 1995).

Thus CA is a research tool that is said to be bound to recurrent, specific and sequential patterns within conversation that are independent of context, content and topic

(Schegloff, 1999, Mey, 2001; Schegloff, 1997). Through the study and documentation of such patterns and their deviations it is felt that conversational analysis allows one to describe communicative interactions (Schegloff, 1997).

The stability and credibility of conversational analysis (CA) as a naturalistic and valuable research tool within the speech therapy context has been reviewed. Perkins, Crisp and Walshaw (1999) feel that although CA is often discounted, due to perceptions that this research tool lacks consistency and dependability when compared to formalised testing procedures, CA has exhibited high levels of credibility and dependability (Perkins et al., 1999). Crockford and Lesser (1994) not only support arguments regarding the reliability and consistency of this specific research tool, but also have emphasised its enhanced sensitivity in identifying specific features and characteristics of particular populations' communication patterns. This allows, they feel, for intervention outcomes to be easily and more accurately directed.

Friedland and Penn (2003) as well as Smith (2004) and Watermeyer (2004) have also identified the value and usability of this specific construct within South African healthcare contexts. These studies conducted across cross-cultural and cross-linguistic environments have identified the potential of CA to recognise conversational dynamics, barriers and facilitators within these research contexts. CA, in these research environments, was found to describe specific conversational behaviours more effectively than quantitative constructs through providing more comprehensive and effective descriptions and insight into these behaviours. CA according to Friedland and Penn

(2003) is also far more effective in achieving research outcomes than other qualitative methodological paradigms such as checklists, due to its inherent ability to highlight cultural and linguistic subtleties within these contexts. This specific construct, it has also been reported, is an extremely effective resource when attempting to obtain accurate diet reporting histories and interviews with patients in the healthcare context (Tapsell & Brenninger, 2000). It is thus a tool that is able to not only record but also provide frameworks for the construction of more productive interaction policies within the healthcare system and therefore is of significant use to those individuals wishing to observe, document and improve these contexts (Jones, 2003).

Conversational analysis as an applied linguistic tool also has a number of values that can be used within different professional environments. These uses within the clinical setting include past identifications of CA as a valuable evaluative and diagnostic tool. Recent research has also identified the value of CA as a teaching tool that is able to isolate, target and improve inhibitive behaviours within health professional contexts (Koole, 2004). CA has also been identified as being of value in the speech therapy clinical context. In particular Booth and Perkins (1999) identified that CA is a valuable technique, which is able to guide individualised training and thus promote positive interactions between aphasic patients and their caregivers. This CA guided training was noted as having marked positive effects on overall patient and treatment outcomes and thus highlights the practical application and value of CA within the healthcare context.

Conversational analysis is therefore concluded to be a valuable, usable analytic tool within the research and clinical context and is suggested as having high levels of credibility if used correctly (Perkins, et al., 1999). Due to its reliance on data that is naturally occurring conversational analysis has also proven itself to have high levels of transferability producing data that is extensive and far-reaching (Tawney & Gast, 1984). Although research into CA as well as other qualitative conversational research methods is still somewhat limited, all these papers implicate the value of conversational analysis as a valid and extremely effective analysis and research tool.

3.3 Ethnography.

Ethnography is the oldest qualitative research method developed by anthropologists to study the aspects or way of life of a specific subculture or group of people. It is thus a scientific description of a group of people and the cultural basis of their identity (Curtise & White, 2005). As with conversational analysis, ethnography has been illustrated as being a robust and useful qualitative tool through numerous research studies.

Ethnography is a construct that aims to understand the world from a social viewpoint as well as the behaviours of the individuals within it. It thus uses personal and often intensive researcher experiences of communities to construct descriptions of the individuals, cultures, and beliefs of the population being observed. Ethnography also possesses significant value as a research tool as it can be used in conjunction with other research methodologies to either provide insight into behaviours which appear to conflict

with quantitative research methodological results, or as a means of supporting qualitative findings (Galanti, 1999). In particular Smith (2004) identified the value of ethnography as a triangulation tool in the cross-cultural HIV vaccine trial context. The use of ethnography in this research context was identified as enhancing research design and thus study credibility and dependability. Ethnography within the health communication context has thus been identified as being useful in increasing study rigour.

Ethnography can be divided into two sub-types; micro-ethnography and macro-ethnography. Micro-ethnography refers to ethnographic analyses of a single social situation whilst macro-ethnographic analyses involve the study of all cultural behaviours, knowledge and artefacts of a group of people and the external factors related to these. As an ethnographer one is also presented with an opportunity to take an etic or emic approach to one's analysis. An etic approach implies that one views aspects related to the observed culture and grouping of people as an outsider, whist emic approaches prescribe that the researcher is part of the cultural grouping being studied. A macro-ethnographic, emic approach although being the desired level of analysis in terms of true ethnographic research is frequently time consuming and not always realistic when ethnographic procedures are being used for triangulation purposes. In such cases where time limits are evident (such as in this study) etic, micro-ethnographic analyses are often more suited to the research design (Curtise & White, 2005).

The process of ethnography underlies the three principles of naturalism, understanding and discovery where behaviours within the research context are described and interpreted

in an evidenced-bound, structured manner that is not impinged upon by observer opinion or bias (Kovarsky & Crago, 1990). According to Hammersley (1998) by collecting data within the community's natural environment through various unstructured formats, the researcher is able to interpret meanings underlying reactions and discover these within the context of new theoretical ideas. This is said to be a far more natural and accurate representation of specific influences on behaviour and allows the observer to gain as in-depth a view into personal inner workings as well as individual and environmental dynamics as possible (Kovarsky & Crago, 1990; Willis & Trandman, 2001).

According to Campbell, Pound, Pope, Britton, Pill, Morgan and Donovan (2003) ethnography has been suggested as an effective medium for establishing health and medical policies whereby such policies and management programs are able to be devised in response to problematic social behaviours and cultural issues (Price & Hawkins, 2002). Maher (2002) has further emphasised the usability of this specific research resource by using this tool to gain insight into drug use and the HIV phenomenon. This research construct Maher (2000) emphasises is far more able to provide comprehensive insight into studied topics when compared to other observational paradigms, which often retain a detached component from data being collected. Lambert and Evans (2007) state that ethnographic analyses play a valuable role in the planning and implementation of HIV prevention programmes in third world nations such as India. This it is felt is due to ethnography's ability to identify complex societal issues related to context, practice, agency and power, which are frequently lost in conventional techniques of project reporting. It is thus felt that through ethnography's ability to eliminate detached

components and promote the identification of complex social issues; this research tool allows the researcher to gain valuable insights into the communities being studied and their thought processes. This in turn can allow for the development of useful management policies to reduce specific deconstructive behaviours.

Ethnography's usability within third world health care research environments such as Africa has also been demonstrated (Van der Geest & Finkler, 2004). More specifically the application and value of ethnographic analysis within the context of South African public healthcare has been identified (Smith, 2004; Gibson, 2004). Gibson's (2004) use of ethnographic analysis has provided valuable insight into the imbalances of South African healthcare as a function of political transformation. Through her ethnographic analyses Gibson was able to successfully identify challenges to the effective, equal provision of healthcare within the South African context – a finding which has implications for the planning of future services and policies. Ethnography has also been found to be of further value in the analysis of cultural processes within other third world healthcare environments. This combined with the findings of studies such as Gibson's (2004) thus highlight the value and appropriateness of ethnography as a tool for multicultural healthcare analysis and documentation in research contexts such as the South African medical situation. The value of using ethnographic observations within this study is therefore clearly emphasised.

3.4 Interviews.

The value of interviews as the final facet of the data crosschecking process is noticeably apparent due to this tool's ability to provide beneficial information regarding patient and healthcare practitioner perceptions in terms of treatment quality and procedures within such contexts (Smith, 2004; Simon, Zyzanski, Eder, Raiz, Kodish & Siminoff, 1998).

Interviews have been found to be particularly useful within multicultural and linguistic treatment and research contexts (Simon et al., 1998; Smith, 2004). In particular content information gained using this specific tool in comparison to other methodologies such as checklists was far more effective in identifying pivotal themes and communication breakdowns within these research contexts (Simon et al., 1998; Smith, 2004; Baker et al., 1998). The value of interviews as a means of checking result credibility is thus highlighted.

3.5. Triangulation in Qualitative Research.

Triangulation procedures were incorporated as part of the methodological process in this study due to the fact that the research tools employed in this study are qualitative and thus relied heavily on researcher interpretation of raw data patterns. The implementation of triangulation methods was therefore incorporated within the research design to further support research results. The use of triangulation methods thus aimed to heighten

research rigour and demonstrate high levels of credibility and transferability in terms of research results and conclusions.

The term triangulation arose out of the nautical term used to describe the navigational procedures employed to identify a ship or aircraft's precise position using several reference points. Within the context of research investigation, triangulation therefore refers to the use of multiple sources of research data, theories, observations and investigation in the exploration of the same phenomenon (Ammenswerth, Iller & Mannsman, 2003).

Triangulation is based on the work of Denzin (1970) and has developed over the years to now include four principle types of crosscheck procedures. These four methods of triangulation are:

- data triangulation where various data sources are used;
- investigator triangulation where multiple independent professionals take part in a research study; gathering and analysing specific phenomena together;
- theory triangulation where specific phenomena are analysed using multiple theories; and
- method triangulation where multiple methods are used to confirm and elaborate on specific research trends observed.

Due to its potential in terms of enhancing research rigour and insight into specific phenomena being analysed, the most common method of triangulation used is that of multiple method triangulation (Ammenswerth et al., 2003).

Multiple method triangulation can be divided into two principle categories which are differentiated from one another by the processes used for triangulation procedures namely; between method triangulation and within method triangulation. Between method triangulation refers to the cross-comparison of data of qualitative and quantitative methods, whilst within method triangulation involves the cross-comparison of research findings from a single research tradition most commonly qualitative. Whereas within method triangulation procedures solely aim to improve research rigour, between method triangulation designs also aim to enhance description and understanding of behaviours being analysed. Between method designs thus aim to provide "completeness" to research results (Lukkarinen, 2005).

Because this research project incorporated the use of qualitative methodological procedures where the rigour of research results needed to be ensured, a within method triangulation approach was employed. This research process thus aimed to highlight research transferability and credibility through crosschecking research results of the three research tools namely; CA, ethnography and interviews with one another, to identify whether core trends existed (DePoy & Gitlin, 1994). It is felt that through the implementation of such triangulation methods within a research project the researcher acknowledges the possibility of more than one perspective regarding his or her research

data (DePoy & Gitlin, 1994; Patton, 1990). Thus by implementing multiple method triangulation within any research methodology; quantitative or qualitative it is felt that the researcher is able to eliminate subjective biases often evident in single method research designs (Modell, 2005).

According to Modell (2005) and Patton (1990) triangulation research methods not only allow us to identify different aspects of empirical reality but also allow for the researcher to assess the degree to which results obtained converge and diverge from one another. The incorporation of triangulation methods within research methodologies especially those that are qualitative in nature is therefore highlighted as being highly valuable in terms of allowing the researcher to achieve both broad and discrete research objectives.

3.5 Summary of Chapter and Conclusion.

This chapter has described three qualitative research tools within the context of this study. In particular this chapter has identified that quantitative tools are not sufficiently descriptive for this specific research project which aims to explore aspects of social behaviour within the context of health communication (Sinuff et al., 2007). Due to the fact that qualitative analysis is concerned with the documentation and exploration of social phenomena it is therefore felt that this method of analysis is the most appropriate methodological approach for this study (Damico & Simmons-Mackie, 2003).

Findings from previous health care studies that have incorporated qualitative tools such as ethnography and conversational analysis further emphasise this specific point. These studies have identified that whereas quantitative analysis is only able to identify specific patterns of behaviour in a communicative situation wishing to be described, qualitative analysis techniques are able to provide insight into and explain these behaviours. This point has been demonstrated as fostering more adequate recommendations and action plans in this regard (Lambert & Evans, 2007). Because this project wishes to describe HIV healthcare interactions and make recommendations in terms of communicative patterns this characteristic of qualitative analysis solidifies its appropriateness for this research project (Terre Blanche & Derrheim, 1999).

This chapter has also illustrated that all of the methodological tools selected for this study have demonstrated their dependability and value within the context of healthcare research. Conversational analysis and ethnographic approaches to qualitative investigation were specifically highlighted as having demonstrated their usability and potential within cross-cultural healthcare contexts such as those in South Africa (Smith, 2004; Friedland & Penn, 2003). These individual qualitative research tools have also been identified through previous health communication studies as being extremely valuable and dependable in the process of triangulation procedures (Smith, 2004). This, the researcher feels, further confirms their suitability for this specific study and its research objectives.

The appropriateness of triangulation procedures in this study has also been confirmed through this chapter. In particular it has been identified that in order to ensure rigour of research results and to promote credibility and transferability of findings, triangulation methods need to be employed. This point is also vital from a general research perspective to ensure that perceptions of the value and quality of qualitative research are enhanced. Individuals such as Curtise and White (2005) state that this is currently a great challenge in the context of qualitative research analysis which needs to be urgently addressed through the execution of qualitative studies that are of a high quality and standard. The importance of the use of triangulation procedures and its implications for this project and qualitative research as a whole is thus emphasised.

In light of these points and the existing literature available regarding the qualitative constructs being used within this project, coupled with the researcher's previous experience and success in terms of these methodological tools, the researcher feels that the use of qualitative analysis procedures which include conversational analysis, ethnographic observation and interviews is supported.

Chapter 4

Research Methods Used in Study.

"Insight untested and unsupported is an insufficient guarantee of truth."

Bertrand Russell

This section will discuss the research aims, constructs and methodological procedures used within this study. More specifically this section will provide insight into the type of research design and motivation for its selection. Information related to the research context, its participants and sampling procedures will also be provided. A comprehensive description of the transcription process and aspects of data analysis in this study will then be discussed.

4.1 Research Aims.

This study had two primary aims. The first of these aims was to describe specific conversational features – nonverbal behaviour patterns - which occur within cross-cultural HIV/AIDS medical treatment contexts. This research objective thus aimed to identify how specific patterns of conversational behaviour are able to provide valuable information related to factors associated with treatment success and failure. In particular influences and trends which this study wished to explore included:

- communication breakdowns within interactions;

- relationship dynamics between patient and practitioner;
- cultural and environmental themes;
- and doctor and patient attitudes within these clinical contexts.

The second research aim of this study was to identify the most appropriate method for data transcription and analysis of the selected conversational features. This was hoped would be achieved through the exploration of a range of verbal, nonverbal and conversation analysis transcription methods.

Through successfully achieving these aims broader researcher objectives were hoped to be achieved. These broader research objectives included improving current knowledge, understanding and clinical practice in multicultural HIV interactions in the South African healthcare context as well as extending current knowledge and expertise within the domain of nonverbal theory and literature. The study's ultimate objectives were therefore focused on creating positive effects in the areas of research and healthcare.

4.2 Research Design.

Qualitative analysis was selected as the most appropriate methodological approach within this study due to its proven success within the sphere of health communication. (Smith, 2004; Watermeyer, 2004; Friedland & Penn, 2003). The nature of the research question which focused on communication observation (a social phenomenon) further necessitated a methodological approach, which possessed a social orientation (Damico & Simmons-

Mackie, 2003:132). Qualitative analysis thus when compared to quantitative constructs was identified as being the research paradigm which would best ensure researcher objectives were achieved.

Due to the number of participants within this study and the purpose of the research topic, a single case, parallel research design was chosen. During the course of the research period, the investigator thus did not manipulate independent variables, deal with control groups or use randomisation procedures. Instead the research design aimed to evaluate participant treatment sessions as separate entities within context-specific interactions. Participant and practitioner behaviours as well as their interviews and ethnographic observations, were also compared to the researcher's expectations of what constituted a successful treatment session and thus overall treatment outcome (Terre Blanche & Derrheim, 1999).

The study incorporated a previously collected data set, obtained by fellow members of the University of the Witwatersrand's Health Communication Project in February 2004. The project was thus a secondary analysis of the existing data set, which focused on nonverbal conversational aspects that linked to the separate and completed study of Cilliers (2005). Links were also able to be drawn to the analyses and findings of previously conducted research within the same healthcare context by Schwartz in 2004. Due to the time consuming nature of the transcription process four sessions were selected and analysed for the purposes of this study.

4.3 Study Participants.

4.3.1 Profile of Study Participants.

Biographical data related to study participants was based on descriptions obtained from members of the research team who initially collected the above-mentioned data from the Red Cross Children's Hospital in Cape Town (Cilliers, 2005).

Participants observed within the data can be divided into two distinct categories:

i. Medical doctors working at the clinic
ii. Caregivers of children attending the clinic for medical treatment related to HIV infection

4.3.1.1 Biographical Information Related to Caregivers.

A summary of the core biographical information related to the caregivers observed is recorded below in table 1:

Table 1 A Summary of Biographical Details of Caregivers Observed within the Analysed Interactions.

	Caregiver "a"	**Caregiver "b"**	**Caregiver "c"**	**Caregiver "d"**
Relation of caregiver to child	Grandmother	Mother	Mother	Mother
Age of caregiver	49yrs	22 yrs	No information	34yrs
Area of residence	Bonteheuwel	Crossroads	Khayelitsha	Nyanga
Highest level of education	Grade 8	Certificate of information technology	No information	Grade 9
Monthly household income	R160.0 care dependency grant + 2 days wages a char.	R160.00 care dependency grant	Disability grant for mother's arthritis	R160.00 care dependency grant
Other members within the family home	Not mentioned	Mother	No information given	Caregiver's boyfriend
First Language	Xhosa	Xhosa	Xhosa	Xhosa

4.3.1.2 Biographical Information Related to Health Practitioners.

A summary of the core biographical details related to the observed health professionals is recorded in table 2 below.

Table 2. A Summary of Biographical Details of Doctors Observed within Analysed the Interactions.

	Doctor "a"	**Doctor "b"**	**Doctor "c"**	**Doctor "d"**
Status at clinic	Volunteer	Volunteer	Volunteer	Volunteer
First language of doctor	English	English	English	English
Experience at clinic	2 weeks	2 weeks	2 years	2 years
Highest level of education	Doctor without specialisation	Doctor without specialisation	Paediatrician	Paediatrician
Experience with Xhosa	Basic	Basic	Limited, fluent in Afrikaans	Basic

4.3.2 Sample and Sampling Strategy.

Initially the sample population to be used within the study was planned at being approximately 15 participant interactions – the minimal number of subject interactions allowed within a study when generalisation of results across similar contexts is wished to be achieved (Spencer, Ritchie & O'Connor, 2003). However following the onset of data analysis and transcription it became apparent that large portions of time were required for the comprehensive analysis of a single interaction. It was also noted during the analysis process that following the analysis of four interactions, saturation of data was sufficiently achieved. According to Patton (1990), saturation refers to the repetition of a specific theme or pattern amongst qualitatively collected and analysed data. Achieving saturation

as with statistical manipulation in quantitative analysis is the primary aim of the qualitative researcher as it omits the need for large sample population sizes to achieve transferability of research results. Thus it was decided that in light of the time consuming nature of the research tools and analysis processes being used, coupled with data saturation and the time constraints of the masters' research project; the use of four participant interactions would be sufficient in achieving the desired research objectives (Beck, 1992).

These observed participant interactions – between caregivers of HIV positive children and their doctors - consisted of culturally and linguistically unmatched treatment sessions where interactions were analysed on an individual basis. Following this, recurring patterns amongst individual cases were cross-compared and correlated between interactions. Although this specific study design and methodology did not require participants to be matched according to age, gender and other characteristics, it was assumed that due to the nature of the disease and the populations at risk; patients within these sessions would share a similar range of qualities. It was also anticipated that such qualities would include the above-mentioned characteristics as well as others such as socio-economic status, language and culture. This assumption was felt would also apply to practitioners due to the commonalities in terms of background, socioeconomic status and experience which healthcare practitioners within the South African context often share. The sample used within this study can thus best be described as homogenous in nature (Terre Blanche & Derrheim, 1999; Schiavetti & Metz, 2005).

Selection criteria for individual caregivers and practitioners in the study were established through a cross comparison of those criteria used on the same data by Cilliers in 2005. It is important to note that many of these criteria were shared with those documented in Cilliers' (2005) study, as many of the extraneous variables which are anticipated as having effects on nonverbal behaviour patterns, also often influence verbal behaviours (although they may influence these behaviours in different ways). These criteria therefore required that:

- participants were a differing cultural and linguistic background to the healthcare practitioners treating them;
- participants were patients receiving management at the Red Cross HIV/Aids treatment centre in Cape Town. This it was felt would allow for certain patient and contextual variables to be more constant thereby heightening research reliability (Terre Blanche & Derrheim, 1999);
- participants chosen were to not have any cognitive or physical disability or deficit;
- participants chosen did not suffer from any psychological disorders such as schizophrenia. This was a required criterion due to the effects such disorders have on nonverbal and interactional behaviour patterns (McNamara & Durro, 2003); and
- caregivers chosen did not possess any language or pragmatic disorders e.g. autism.

Selection criteria for practitioners required that:

- practitioners were providing medical services either on a part time or full time basis at the Red Cross Children's Hospital HIV outpatient's clinic;
- practitioners were of a differing cultural and linguistic background to the patient being treated. This was in order to ensure cross cultural and linguistic dynamics could be observed;
- practitioners did not possess any physical or psychological deficit which could have interfered with nonverbal behaviour patterns being observed; and
- practitioners did not possess language or pragmatic deficits.

Although this study's research design did not make external validity a huge concern, because interactions were selected with a specific purpose in mind the sampling strategy used within the research project can best be described as purposeful (Schiavetti & Metz, 2005).

4.4. The Research Context.

i. The Red Cross Children's Hospital.

A description of the location where data was collected was compiled through the use of written records and reports of members of the research team; Cilliers (2005) and Schwartz (2004), as well as through hospital information available to the public on the

World Wide Web (Capegateway, 2005). Due to the fact that data analysed for this study was from February 2004, descriptions of the research site will be based on resources compiled during this time period. This is to ensure the reader is able to gain as accurate an insight as possible into the research environment and thus possible impacting variables at the time of data collection.

The research setting for this specific report is that of an HIV/Aids outpatient's clinic at the Red Cross Children's Hospital. The hospital is a tertiary teaching institution, which forms part of the public healthcare system of the Western Cape. It is located within an urban setting, has 1100 staff members and an outpatient load of approximately 155000 children annually. The Red Cross Children's hospital is recognised as a paediatric centre of excellence, whose staff display highly specialised skills in terms of paediatric healthcare (Capegateway, 2005). It is therefore a referral centre for patients within Southern Africa as well as neighbouring African countries. According to hospital statistics approximately 40% of patients treated within the hospital's "in" and "outpatient clinics" are from areas outside of the hospital's immediate catchment area (Cilliers, 2005). Although no formal hospital records exist regarding cross sectional data related to linguistic and culture groupings within the hospital, Schwartz (2004) states that hospital staff estimate the majority of its patients as being Xhosa first language speakers, with an array of language groups being dispersed amongst the remaining patient numbers. Currently the distribution of cultural and linguistic diversity amongst healthcare practitioners working within the hospital shows evidence of the imbalances created out of apartheid, thus the majority of doctors practicing within the hospital are white middle

class English and Afrikaans speaking individuals. This informal diversity analysis thus highlights that there are still a limited number of doctors from African cultural and linguistic groups working in the hospital.

ii. The HIV/Aids Outpatient Clinic.

The Red Cross Children's Hospital's HIV "outpatient clinic" treats approximately 700-800 HIV positive children per annum. It is one of three institutions, which provide such services to children and caregivers infected and affected by HIV within the Western Cape. Although the hospital and thus the clinic provide medical treatment exclusively to children infected by HIV, there is a growing pressure for the clinic to provide treatment within a Family Model of Care. Thus treatment programmes in the future may extend medical care to family members infected with the virus. Currently however, the hospital incorporates these members within programmes that aim to relieve the socio-emotional stressors related to the disease. This is achieved through the implementation of initiatives such as support groups as well as through the provision of counselling services for family members by lay counsellors with basic training in interpretation and HIV/Aids guidance (Capegateway, 2005).

As is reflected in hospital statistics the majority of patients being treated by the doctors in this clinic are of differing cultural and linguistic groups to the medical practitioners treating them.

4.5 Procedure.

4.5.1. Ethical Considerations.

Before collation of data or research analysis procedures could take place ethical clearance was required for this study. Ethical clearance was thus obtained for this study in the form of broader ethical approval, which had been acquired for the University of Witwatersrand's large-scale health communication project (ethical clearance numbers: M02-09-25 and 274/2002). All data selected and used within this specific study adhered strictly to the ethical practices and research principles outlined by the Medical Research Council in terms of data collection, record keeping and analysis (MRC, 2003). Thus informed consent was obtained by members of the research team onsite at data collection through face-to-face interaction with participants that incorporated the use of supplementary written information to ensure effective information processing of aspects related to informed consent (Smith, 2004). This specific method has been identified as the most appropriate and effective means of establishing valid informed consent choices in research studies through ensuring effective communicative transfer of factual information related to specific study aspects (MRC, 2003; Smith, 2004). Informed consent was provided to participants in their language of choice thereby ensuring no ethical issues relating to poor language proficiency and issues of language difference could occur (Smith, 2004; MRC, 2003). All participants within this study were guaranteed anonymity and confidentiality within all transcriptions, data analyses and publications. Although participants within this study were not aware that this data would be used for this specific research topic, all participants did consent to the collected data

being used for future research purposes; making the use of this data ethical and legal (MRC, 2003).

4.5.2. The Data Collection Process.

Data used in this study was a data set previously obtained from the Red Cross HIV/Aids Children's Hospital in Cape Town in February 2004. This data had initially been collected for the purposes of the University of Witwatersrand's Health Communication Project. The data base consisted of a set of video-recordings of interactions between doctors and caregivers of children with HIV. Interactions were varied with certain treatment sessions being conducted in English whilst others were conducted in Afrikaans or a mixture of English and Xhosa. The analysed interactions documented a combination of both dyad interactions and one triad interaction. All of these interactions were cross-cultural. Whereas dyad interactions consisted of a single caregiver and healthcare professional, the triad interaction incorporated the presence of two caregivers and a healthcare practitioner. Thus all observed interactions did not have a cultural or linguistic broker within the healthcare session, which ensured that intercultural dynamics and communication barriers could be more effectively observed.

Video recordings were reviewed by the researcher following which tapes were selected for analysis on the basis of:

- the time period within which they were recorded. Data recorded later within the collection process was analysed as opposed to earlier taped sessions. This aimed to ensure that health practitioners were better conditioned in terms of video taping and researcher presence thus allowing for interactions to be as naturalistic as possible. Through this method of data collection the researcher thus aimed to enhance data accuracy and research reliability whilst still maintaining the highest level of data quality as possible; and
- visual suitability. Thus those tapes, which were the most accessible visually in terms of lighting, and participant positioning, were chosen in order to ensure data analysis was not impeded by poor visual content. This according to Knapp (1978) is a crucial aspect of the data analysis and collection process when observing nonverbal behaviour patterns.

Data in terms of interviews and ethnographies were collated from written documentation and reports available from the health communication project's archive material. These interviews and ethnographies were incorporated by the researcher within the research methodology as part of the study's triangulation process.

According to Cilliers (2005) interviews of observed participants were semi-structured and open-ended. Interviews were conducted in a face-to-face format where highlighted themes that wished to be probed were addressed by data collectors across all interviews. Doctors and patients were interviewed separately within comfortable surroundings to ensure privacy and security, as well to prevent the influence of practitioner or patient

presence on interview answers. Interviews were compiled and conducted in English for health practitioners whilst interviews of caregivers were conducted in the patient's native language. This was to ensure that effective communication transfer occurred and that reliability and validity of the interview process was maintained.

The researcher selected interviews on the basis of those, which corresponded to participants within the analysed interactions, as well as those of individuals working and receiving treatment within the healthcare context at the time of data collection. This was done to obtain insight into differing participant's subjective perceptions regarding communication partner understanding, knowledge and satisfaction within individual treatment interactions. It also however allowed for inter and intra-triangulation methods to be conducted thereby strengthening findings and assumptions of observed trends within the study. Participant perceptions and discussed trends within interviews were compared to identified trends and observations in the videoed raw data of each participant's treatment interaction as well as with ethnographic observations of the research site. Interview content covered a number of topics, which included language difference, culture and the interpreter within medical interactions.

Ethnographic information on the other hand involved the researcher using previously compiled ethnographies, which were analysed according to various themes that had been identified in the content and context of research data. Theme convergence and divergence was then noted and recorded so as to heighten research reliability and accuracy of results (Modell, 2005).

4.5.3. Data Transcription.

Data transcription was a pivotal part of the methodological process and a principal aim of this study. The process of transcription was thus a progressive one which evolved over two years of intensive data analysis and required the researcher to make critical choices in terms of the study's processes and methods.

Transcription is said to be an essential part of the data collection and analysis process where the researcher wishes to accurately and effectively describe observed patterns of communicative behaviour. Transcripts according to Atkinson and Heritage (1984) are a corrective to the limitations of recollection and intuition, enabling repeated and more comprehensive descriptions of observed behaviours to be achieved. It also allows research to be open to public scrutiny and more effectively displaced from personal preconceptions regarding observed interactions. The process of transcription is a sensitive and precarious one where transcriber inferences, biases and theoretical underpinnings are easily able to be transposed upon the data being reviewed. The process of transcription is thus a pivotal part of the methodological process on which the principles of reliability and validity reside (Lancy, 1993).

According to Ehlich (1993) although no nonverbal method of transcription has received universal acceptance within research circles, there are fundamental features required to be captured by an accurate, dependable nonverbal recording system. These core features include movement type and duration of behaviour. The evolving nature of the

methodological process in this project saw the researcher trial a number of transcription methods before an appropriate system was identified. Ultimately the researcher's selection of transcription method was based on the specific needs of the research question. These needs thus not only required to capture basic nonverbal transcriptional features but also required a system which would be able to draw from conversational analysis frameworks, describe nonverbal constructs effectively, and accurately incorporate temporal aspects in transcript information. A detailed commentary of this process and samples of early transcripts can be found within this dissertation's appendix A.

The researcher's first decision involved selecting the most appropriate method of data recording -human effort or computer technology. Research identifies that current speech recognition programmes are limited in accuracy and efficacy when dealing with multicultural and lingual populations where accents and colloquialisms often interfere with software processing. Software capabilities are also still restricted in their ability to record nonverbal communicative aspects (Gregory, Russel & Phillips, 1997). It was felt that human effort would be most appropriate in the context of this project as the demands of the interactional contexts and communicative constructs being studied were anticipated as having substantial effects on transcription software accuracy. It was further decided that to reduce the probability for human error and enhance data reliability, a combination of intraobserver and interobserver methods would be incorporated to cross-check data reliability and ensure human bias was eliminated from transcription records. The researcher felt that these transcription processes coupled with the disadvantages of

software transcription clearly emphasised the appropriateness of using human effort in the recording of data within this study (Lancy 1993).

Transcripts were thus compiled by a number of members of the research team as well as the researcher, herself. Team members used software technology; (Windows Media Player) to view video recordings. This allowed for enhanced accuracy and ease of transcription, due to the availability of enhanced playback and reduction in speed functions. Following this data was individually crosschecked against taped data, fellow colleague's transcripts and by the researcher herself to ensure transcript consistency.

The greatest amount of time, exploration and decision however was spent selecting a transcription system for nonverbal phenomena. Achieving effective transcription of nonverbal constructs was vital to the research method, objective and outcome. The selection of inappropriate nonverbal transcription systems frequently puts research at risk for losing vital subtleties that are pivotal in understanding observed patterns. This according to Knapp (1978) is a crucial consideration to keep within one's mind as nonverbal behaviours incorporate multiple dimensions such as time, movement, distance, depth, degree and repetition. These dimensions are frequently lost if transcription recording methods developed for verbal transcription are solely used.

In selection of an appropriate transcription system the researcher reviewed four methods of nonverbal transcription, each of which presented with its own advantages and limitations. The transcription systems explored by the researcher included those systems

suggested by Knapp (1978), Sign Language diacritic systems, Heath (1986) and Bot (2005). Core limitations amongst these methods included (these limitations are not shared by all the systems discussed above); the inability of methods to effectively incorporate temporal domains in transcriptions, lack of universality of transcription symbols and an inability for some systems to draw from conversational analytic frameworks.

With these limitations and the study's ultimate objectives in mind, the researcher selected a transcription system that combined aspects of conversational analysis methods and nonverbal behaviour transcription described by Heath (1986) and Bot (2005) with that of the temporally based methods of polyphonic transcription. Polyphonic transcription systems (in the anthropological sense) stem from the same concept as polyphonic music scores. Thus multiple co-occurring events - verbal or nonverbal - are able to be transcribed for multiple communicative parties at a single instance in time (Briggs, 1993; Marshall, 2005). This allows for the researcher to more effectively track nonverbal occurrences as a function of time. Current research, in terms of polyphonic transcription methods, appear to focus on verbal phenomena. Briggs (1993) through his study of female wailing and poetic elements in Waroa culture identified the distinct value polyphonic transcription methods posses in capturing cultural tones related to social power and status. This vital information he feels would have been lost if conventional transcription systems were used.

Because the researcher wished to work within a modified conversational analysis framework, she did not limit herself purely to polyphonic transcription. Thus aspects of

conversational analysis were included within the transcription process. The key features of this modified transcription method are described below, and compared with a music score in order to facilitate understanding of this concept. (Please refer to appendix B to view a complete transcript):

- participants within the interaction are given a verbal output for every topic turn regardless of whether or not the individual spoke. Verbal outputs as with Heath's (1986) original transcription system are "mapped" as vertical pairs along the page to indicate co-occurring speaker and listener events as a function of time;
- verbal outputs are provided with a nonverbal "score" – similar in appearance to that of a music score. Each score for each individual participant consists of a selected number of octaves – in this case 5- which represent 5 nonverbal behaviours; head posture, body posture, facial animation, eye gaze and gesture. As with a musical score octaves are consistently organised in the same format throughout the transcript, to ensure the reader is constantly orientated. This aspect of the transcription method also allowed for simultaneous nonverbal and verbal events to be more accurately and clearly visualised whilst also allowing for behaviours of symmetry to be more effectively observed and monitored (Briggs, 1993); and
- nonverbal behaviours for participants are transcribed, using a modified form of Bot's (2005) conversational analysis transcription system as well as aspects from Heath (1986). This allowed for individual communicative parties and their specific behaviours to be clearly indicated to the reader. Certain temporal aspects

such as the duration of or cessation of specific aspects of behaviour are also able to be indicated in the transcript through a combination of dashes and solid lines.

This modified form of polyphonic transcription within a conversational analytic framework was found to be the method of transcription which best promoted the researcher's study objectives. However, due to the limitations in terms of length for this research report coupled with the marked amount of paper required for this system, a condensed version of this transcription system was used for the purposes of the dissertation's results section. Despite this point, it is important to note that full polyphonic transcripts were used in the analysis process of this research project. A complete example of one such transcript can be sourced in appendix B.

4.5.4. Data Analysis.

All sessions were analysed using the principles of conversational analysis for both verbal and nonverbal behaviours (Antaki, 2003). This modified form of conversational analysis thus allowed the researcher to analyse interactions at a microscopic level.

Identified themes and observations were also analysed and cross-compared with thematic content evident in previously collated interviews and ethnographic analyses to confirm theme convergence and thus result dependability (Modell, 2005). To further enhance the transferability and strength of the study, emergent trends and nonverbal observations were also cross-compared by the researcher to generalised trends and behaviours evident

in previous health communication research studies from the South African healthcare context as well as with identified themes from studies conducted in this particular research context.

In terms of research constructs analysed, three principal areas were selected for data analysis within the research project. These areas were:

i. Analysis of nonverbal behaviour patterns
ii. Analysis of coupling behaviours
iii. Analysis of trends present within the interaction

i. Analysis of nonverbal behaviour patterns.

As discussed in chapter 2 there are five predominant areas of nonverbal behaviour, which are felt to provide the most valuable interactional information within the context of nonverbal behaviour analysis. Thus the five nonverbal behaviours selected and analysed for this study were:

- Gesture: For the purpose of this dissertation and its specific aims gesture constituted any bodily movement involving the use of the hands. Due to the research questions and aims of this study, gestures were primarily described according to the opacity -transparency and/or act-symbol dichotomies. Opaque or shared gestural patterns within this dissertation will refer to the same gesture

pattern used by both communicative parties when referring to specific terminology. Individualised gestures on the other hand will refer to a specific gesture correlating to a set linguistic concept which is used by one specific participant within the interaction but is perceived as being universal in nature (and thus understood by the corresponding communicative participant) (Nespoulous et al., 1986: 51-53). Gestures that have a clear-cut relationship with semantic concepts will be referred to as co-speech gestures, whilst gestures that have no semantic link will be termed act gestures. Those gestures that are universally understood across cultures will be termed universal or transparent gestures (Özuyrek & Kelly, 2007). Gestures observed in this study were also described in terms of their emotional connotations e.g. hand flicking indicative of frustration;

- Posture: Posture within this study incorporated the use of head posturing and movement as well as that of generalised body movement and posture. It is important to note that due to the frequent occurrence and interwoven nature of generalised body posture in relation to other nonverbal behaviour patterns, this specific behaviour was not described as a separate entity (as head posture is) but was rather described in conjunction with other observed nonverbal behaviour patterns;
- Eye gaze: Eye gaze behaviour as it was analysed within this study was observed in terms of directionality of gaze as well as in terms of mutual eye gaze and coupling behaviour patterns. Eye gaze behaviours were further analysed in terms of increases in or reductions of eye gaze as well as in terms of general trends with regards to eye gaze initiation patterns; and

- Facial expression: Due to time limitations related to this research project and visual limitations in terms of video taped data, the researcher analysed broad facial expression behaviours. Analyses of facial expression also focused on frequency of facial animation changes, initiation patterns in terms of these behaviours as well as associated instances of symmetry or coupling.

ii. Analysis of coupling behaviours.

Due to the researcher's interest in and aim of extending knowledge and understanding of theoretical concepts related to nonverbal behaviours, time was also spent analysing interactions in terms of coupling behaviours. Analysis of coupling behaviours included analysis of symmetrical and asymmetrical nonverbal behaviours within these interactions, the type of nonverbal behaviour associated with these communicative responses as well as the contexts within which they occurred.

iii. Analysis of trends.

Analysis was also conducted in terms of generalised themes related to social, emotional, interactional and linguistic aspects within observed interactions. These trends, which became evident through nonverbal and verbal behaviours were identified by the researcher and explored in terms of their links with nonverbal behaviours. This was achieved through cross-comparing individual interaction trends with that of other observed interactions within the selected data set.