EXPLORING COMMUNICATION BETWEEN FIRST LANGUAGE ENGLISH SPEAKING AUDIOLOGISTS AND ISIZULU PATIENTS AT PUBLIC SECTOR HOSPITALS IN KWA- ZULU NATAL

BY

SHADETTE GOPAUL

SUBMITTED IN FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE OF

MASTER IN AUDIOLOGY

IN THE DISCIPLINE OF AUDIOLOGY

SCHOOL OF HEALTH SCIENCES

UNIVERSITY OF KWAZULU-NATAL

WESTVILLE CAMPUS

January 2018

For my parents & my husband, Shekaar

DECLARATION

I, Shadette Gopaul, hereby declare that this dissertation, which is submitted to the University of KwaZulu Natal for the degree of Master of Audiology, represents my own work in conception and execution, and that all sources and quotes used have been acknowledged.

Signed _____ at _____ on _____ day of _____ 2018.

ACKNOWLEDGEMENTS

This dissertation represents my dedication and commitment towards not only an academic achievement but my desire to contribute to improving service delivery. My efforts would not be realized without the assistance of the following people whom I wish to offer my sincerest gratitude.

First and foremost, to Lord Shiva for the strength and vision that propelled me to complete this daunting task. I am eternally grateful for the absolution that I find within you.

To my mother (Simmie), father (Indran) and sister (Kelisha), thank you for being my biggest motivators. You inspire me to push myself to great heights with unyielding belief that I will succeed. I dedicate this dissertation to you.

To my fiancée Shekaar, thank you for being my voice of reason throughout this process. Your patience, tolerance and support have been instrumental in completing this dissertation. I am highly indebted to you.

To my supervisor, Seema Panday, thank you for your dedication to this study. I would further like to express my immense gratitude for your guidance and knowledge that has been influential in my growth and learning.

To Harsha Kathard, thank you for your support and contribution. You have really helped me tackle qualitative aspects, which was once such unfamiliar territory to me.

To Carrin Martin, thank you for your meticulous editing and insight that helped shape this dissertation.

To Gregory Moodley and Mr Maharaj, thank you for your assistance with the statistical analysis of this research study.

To the participants of this study for their input and knowledge shared.

To colleagues: Dr. E. M Kekana, Sashika Gayasingh and Ndumiso Gumede for their assistance and support.

To the post graduate programme coordinators and the staff of the UKZN Audiology Department, thank you for your well wishes.

ABSTRACT

Effective communication between health professionals and patients is central in providing quality health care. A cultural and linguistic mismatch between audiologists and their patients may create a barrier in communication. Therefore, the aim of the present study was to explore communication between First Language English speaking (FLES) audiologists and isiZulu patients, based on isiZulu being dominant in KZN. A concurrent triangulation mixed design was used. The study consisted of three phases. The first phase included a survey of 31 FLES audiologists. The second phase included the Photovoice narratives and interviews with two FLES audiologists. The final phase included a survey of 98 isiZulu patients. The results revealed that overall FLES audiologists showed poor cultural (71%) and linguistic (97%) competency in isiZulu. Inferential statistics revealed significant associations between cultural competency and FLES audiologists years of experience (p value=0,021), gender (p value=0.042) and type of institution based in terms of rural or urban (p value=0.038).The above competency levels of FLES audiologists coincided with the perspectives of isiZulu patients. Furthermore, it was revealed that factors such as consent, trust, collaboration, empathy, attitude and professional superiority influenced cross cultural and cross linguistic communication between FLES audiologists and isiZulu patients. The use of informal interpreters emerged as the most common communication strategy employed by FLES audiologists. The implementation of isiZulu courses, formally-trained interpreters and isiZulu audiology resources emerged as strong recommendations. In addition, FLES audiologists identified initiative as important to improving cross cultural/linguistic communication. The results from this study may inform changes to University curricular as well as policy at public sector hospitals.

TABLE OF CONTENTS

DECLARATION	i
ACKNOWLEDGEMENTS	ii
ABSTRACT	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF APPENDICES	xi
TERMINOLOGY	xii
CHAPTER 1. INTRODUCTION	1
1.1 Introduction	1
1.2 Rationale for the study	1
1.3 Outline of chapters	7
1.4 Conclusion	8
CHAPTER 2: THEORETICAL FRAMEWORK AND LITERATURE REVIEW	9
2.1 Introduction	9
2.2 Communication in the healthcare setting	9
2.3 Understanding healthcare in the South African context	12
2.3.1 Geographical location	13
2.3.2 Cultural diversity	14
2.3.2.1 Cultural Awareness	16
2.3.2.2 Cultural Knowledge	16
2.3.2.3 Cultural Skills	17
2.3.2.4 Cultural Encounters	19
2.3.2.5 Cultural Desire	19
2.3.3 Linguistic diversity	24
2.3.3.1 The isiZulu language	27
2.4 Audiologists and their role in communication	29
2.5 Patient and clinician related factors	33
2.5.1 Informed consent	33
2.5.2 Trust	33

2.5.3 Collaboration 34
2.5.4 Empathy 35
2.5.5 Professional superiority 36
2.5.6 Attitude 36
2.6 Communication strategies 37
2.7 The perspectives of patients during cross cultural/ cross linguistic communication 41
2.8 Conclusion 43

CHAPTER 3. METHODOLOGY 44
3.1 Introduction 44
3.2 Aim and objectives 44
3.3 Study design 44
3.3.1 Phases of the study 46
3.4 Study population 47
3.5 Sample selection criteria 47
3.6 Sample size and sampling method 50
3.7 Description of the study sample 51
3.8 Recruitment of participants 53
3.9 Data collection method 54
3.10 Data collection instruments 57
3.11 Pilot study 63
3.12 Data collection procedure 65
3.12.1 Permission and informed consent 65
3.12.2 Data collection phases 65
3.13 Data analysis 68
3.13.1 Triangulation of data 71
3.14 Validity and Reliability 72
3.15 Ethical and Legal considerations 73
3.16 Conclusion 74

CHAPTER 4. RESULTS 76
4.1 Introduction 76
4.2 **Objective 1** 76
4.2.1 Cultural competency in isiZulu 75

4.2.1.1 Cultural awareness 77
4.2.1.2 Cultural knowledge 77
4.2.1.3 Cultural skills 79
4.2.1.4 Cultural encounters 80
4.2.1.5 Cultural desire 81
4.2.2 Linguistic competency in isiZulu 82
4.3 **Objective 2** 90
4.3.1 Informed consent 91
4.3.2 Trust 92
4.3.3 Collaboration 93
4.3.4 Empathy 94
4.3.5 Professional superiority 95
4.3.6 Attitude 96
4.4 **Objective 3** 99
4.4.1 Interpreters 99
4.4.1.1 Type of interpreter 100
4.4.1.2 Audiologist-Interpreter interaction 102
4.4.2 Written handouts and Google Translate 104
4.5 **Objective 4** 105
4.6 Conclusion 110

CHAPTER 5. DISCUSSION 111
5.1 Introduction 111
5.2 **Objective 1** 111
5.2.1 Cultural competency in isiZulu 111
5.2.1.1 Cultural awareness 111
5.2.1.2 Cultural knowledge 112
5.2.1.3 Cultural skills 114
5.2.1.4 Cultural encounters 117
5. 2.1.5 Cultural desire 117
5.2.2 Linguistic competency in isiZulu 118
5.2.2.1 Case history taking 118
5.2.2.2 Test instructions 120
5.2.2.3 Speech testing 121

5.2.2.4 Feedback of test results 121
5.2.2.5 Counselling and aural rehabilitation 122
5.2.2.6 Prior exposure 123
5.2.2.7 Duration of exposure 124
5.2.2.8 Frequency of exposure 125
5.2.2.9 Relevance of content 125
5.3 **Objective 2** 129
5.3.1 Informed consent 130
5.3.2 Trust 133
5.3.3 Collaboration 134
5.3.4 Empathy 135
5.3.5 Professional superiority 137
5.3.6 Attitude 137
5.4 Objective 3 139
5.4.1Types of communication strategies 139
5.4.2 Types of interpreters 139
5.4.3 Written handouts 147
5.4.4 Google Translate 150
5.5 **Objective 4** 152
5.6 Conclusion 154

CHAPTER 6- CONCLUSION AND CRITICAL IMPLICATIONS 155
6.1 Introduction 155
6.2 Summary of the main findings 155
6.3 Strengths of the study 157
6.4 Limitations of the study 158
6.5 Clinical implications 159
6.6. Research implications 159
6.7 Conclusion 160

REFERENCES 161

APPENDICES 195

LIST OF TABLES

Table 2.1	Linguistic profile of newly qualified audiologist graduates in KZN	29
Table 3.1	Inclusion criteria	48
Table 3.2	Exclusion criteria	49
Table 3.3	Description of participants' profile	51
Table 3.4	Motivation for the areas included in the questionnaire (Appendix G)	60
Table 3.5	Areas included in the Photovoice Interview (Appendix H)	62
Table 3.6	Areas included in the questionnaire (Appendix I)	63
Table 3.7	Data analysis methods for phase one	70
Table 3.8	Data analysis methods for phase two	70
Table 3.9	Data analysis methods for phase three	71

LIST OF FIGURES

Figure 2.1	An illustration of the communication process	10
Figure 2.2	A summary of the factors that affect communication in healthcare service delivery in South Africa	11
Figure 2.3	Model of Cultural Competence in the Delivery of Healthcare Services	16
Figure 3.1	Concurrent data collection design for the three phases of the study	46
Figure 4.1	Percentage of FLES audiologist's overall cultural competency in IsiZulu	76
Figure 4.2	Perspectives of FLES audiologists and isiZulu patients regarding cultural awareness	77
Figure 4.3	FLES audiologists perspectives on their cultural knowledge of isiZulu	78
Figure 4.4	isiZulu patient's perspectives on traditional methods of treating hearing loss	78
Figure 4.5	Photovoice Exhibit A- *Roots of Knowledge*	79
Figure 4.6	Perspectives of FLES audiologists and isiZulu patients regarding isiZulu cultural skills	80
Figure 4.7	FLES audiologists and isiZulu patient's perspectives on isiZulu cultural encounters	81
Figure 4.8	FLES audiologists perceived linguistic competency in isiZulu	82
Figure 4.9	FLES audiologists' actual linguistic competency in isiZulu	82
Figure 4.10	Areas of FLES audiologists' linguistic competence in isiZulu during audiological service delivery	83
Figure 4.11	isiZulu patients perspectives regarding areas of FLES audiologist's linguistic competency	84
Figure 4.12	Mode utilized by FLES audiologists to obtain the most information about isiZulu patients	86
Figure 4.13	FLES audiologists perspectives on aspects of the isiZulu language that are considered challenging	86
Figure 4.14	FLES audiologists perspectives regarding factors that affect linguistic competency in isiZulu	87
Figure 4.15	Photovoice Exhibit B-*The Illusion of Communication*	88
Figure 4.16	Photovoice Exhibit C- *Building walls*	89

Figure 4.17	Photovoice Exhibit D-*Sinking into Obscurity*	90
Figure 4.18	FLES audiologists and isiZulu patients perspectives on providing informed consent for audiological procedures	91
Figure 4.19	FLES audiologists and isiZulu patients perspectives on establishing trust	92
Figure 4.20	FLES audiologists and isiZulu patients perspectives on willingness to participate and collaborate	93
Figure 4.21	isiZulu patients perspectives on being included by FLES audiologists in decision making	94
Figure 4.22	FLES audiologists and isiZulu patients perspectives on empathy	94
Figure 4.23	FLES audiologists and isiZulu patients perspectives on superiority	95
Figure 4.24	FLES audiologists overall attitude towards the isiZulu language and culture as well as the perspectives of isiZulu patients	96
Figure 4.25	Areas of FLES audiologists' attitudes toward the isiZulu language	97
Figure 4.26	FLES audiologist's feelings when encountering isiZulu patients	99
Figure 4.27	FLES audiologists and isiZulu patient's perspectives on type of interpreter	100
Figure 4.28	isiZulu patients and FLES audiologists perspectives on concerns of confidentiality and satisfaction during the use of informal interpreters	101
Figure 4.29	Percentage of FLES audiologists who use the different staff members as interpreters when interacting with isiZulu patients	102
Figure 4.30	isiZulu patients perspectives on the audiologist-interpreter interaction	102
Figure 4.31	isiZulu patients perspectives on the audiologist-patient interaction	103
Figure 4.32	FLES audiologists perspectives on written handouts and Google Translate as communication strategies	104
Figure 4.33	FLES audiologists recommendations to improve cross cultural and cross linguistic communication	105
Figure 4.34	FLES audiologist's exposure to post graduate isiZulu courses	105
Figure 4.35	FLES audiologist's recommendations from open-ended question	106
Figure 4.36	Photovoice Exhibit E- *A little goes a long way*	108
Figure 4.37	Photovoice Exhibit F- *Plant a seed and a tree will grow*	109

LIST OF APPENDICES

Appendix A	Ethics certificate	195
Appendix B	Ethical clearance letter from UKZN	196
Appendix C	Approval from the Department of Health	197
Appendix D	Permission letter: Public hospital 1	198
Appendix E	Permission letter: Public hospital 2	199
Appendix F	Information letter for medical managers	200
Appendix G	First Language English speaking (FLES) audiologists Questionnaire (phase 1)	203
Appendix G1	Information document (phase 1)	212
Appendix G2	Consent form (phase 1)	214
Appendix G3	Information for participation in phase two of the study	215
Appendix G4	Suggestion letter for First Language English speaking (FLES) audiologists Questionnaire (phase 1)	216
Appendix H	First Language English speaking (FLES) audiologists Photovoice Interview Schedule (phase 2)	218
Appendix H1	Information document for Photovoice (phase 2)	223
Appendix H2	Consent form for Photovoice (phase 2)	225
Appendix H3	Photovoice Camera quality Screening Tool	226
Appendix H4	Photovoice Training Manual	227
Appendix H5	Photo Release Form	236
Appendix H6	Suggestion letter for Photovoice (phase 2)	237
Appendix I	Patients Questionnaire (English) (phase 3)	239
Appendix I1	Patients Questionnaire (isiZulu) (phase 3)	243
Appendix I2	Information document (English) (phase 3)	249
Appendix I3	Information document (isiZulu) (phase 3)	251
Appendix I4	Consent form (isiZulu) (phase 3)	253
Appendix J	Inferential statistics: Significant associations from the ANOVA and t-test	254
Appendix K	Fischers Exact test	256
Appendix L	Data analysis of Photovoice Photographs	258
Appendix M	Correlation test	259
Appendix N	Multiple regression analysis	260

TERMINOLOGY AND DEFINITIONS

The following definitions apply in this study.

Audiologist: A healthcare professional that aims to promote hearing healthcare, communication competency and improved quality of life through diagnosis, assessment and management of hearing loss and ear related conditions (Lubinski & Hudson, 2013).

Communication: In the context of healthcare, the exchange of information between healthcare professionals and patients (Nemeth, 2008). Effective communication refers to the interplay of various factors to enable understanding of the message conveyed (Johnston, Wolfie, Yoder, & deMarco, 2014).

Concurrent triangulation: A mixed methods design that involves the collection of quantitative and qualitative data during the same stage with the purpose of examining the data for similarities and differences to support a perspective (Creswell, 2008).

Cross-cultural and cross-linguistic communication: Interaction between individuals of different cultural and language backgrounds (Zhang, 2016).

Cultural competency: The ability of healthcare professionals to acquire awareness, knowledge and skills to communicate and engage with patients of diverse cultural backgrounds (Buttriss, Welch, Kearney & Langham-New, 2017).

Functional proficiency: Functional proficiency refers to healthcare professionals having sufficient adequacy in a second language within specific circumstances (Bhatia & Ritchie, 2006). For the context of this study, participants have also used the word "bilingual" to imply functional proficiency in a second language.

Linguistic competency: The ability of healthcare professionals to communicate efficiently and convey information that can be easily comprehended by patients of diverse language backgrounds (Rose, 2017).

Patient-Centered Care: An organizational and professional approach that focuses on the needs of the patient by ensuring that the patient is actively involved in decisions about their healthcare (Kendall & Lissauer, 2003).

Medical Model: An approach to healthcare that views illness as pathogenic in nature and is built on the premise of symptom, diagnosis, treatment and cure (Woodside & McClam, 2011), with little consideration for socio-cultural dynamics (Porter, 2014).

CHAPTER 1. INTRODUCTION

1.1 INTRODUCTION

This chapter provides the rationale and overview of this study. The chapter concludes with providing an outline of subsequent chapters.

The researcher of this study is currently employed as an audiologist in the public sector. Her experiences and observations, as a First Language English speaker communicating with isiZulu patients, have propelled the undertaking of this study, to make a difference in service delivery.

1.2 RATIONALE FOR THE STUDY

Communication refers to the exchange of information between at least two parties through verbal or non-verbal modalities (Videbeck, 2006). Effective communication that enables understanding between patients and practitioners is imperative in meeting healthcare outcomes. Furthermore, effective communication remains the anchor for patient-centered care, often referred to as the gold standard approach to healthcare (Mucic & Hilty, 2015). Epstein and Street, as cited in King & Hoppe (2013) define patient-centered care as "eliciting and understanding patient's views, understanding the patient within their unique psychosocial and cultural constructs, developing a shared understanding of the patient's problem and aligning treatment with the patient's values" (p. 386).

Several studies have attributed effective communication, within a patient-centered care approach, to establishing meaningful rapport with patients, correct documentation of symptoms, accurate diagnoses and compliance of recommended treatment regimes (Zolnierek & DiMatteo, 2009; Pinto et al., 2012; Raingruber, 2016). In addition, apart from clinical-related positive outcomes, effective communication has been linked to several psychosocial aspects such as low levels of frustration among healthcare providers, enhanced patient satisfaction and increased likelihood of patients returning to health institutions (Jolly, Fry & Chaudhry, 2016). Therefore, in an era that encourages patients to be pro-active about their health and accessing much needed services, effective communication between healthcare providers and patients remains a prerequisite.

Despite the pivotal link between effective communication and the delivery of healthcare, poor patient-provider communication is a growing concern worldwide. In a review of the state of healthcare in the 21st century, Wright, Sparks and O' Hair (2013) reported that although the United States of America allocates millions of dollars on healthcare to prevent and manage illness, the severity of such epidemics could be potentially minimized by improving communication between healthcare providers and patients. Similar challenges have been identified in the South African context with the Health Professionals Council of South Africa (2010) reporting that of the 2700 complaints submitted to their medical board by patients and clients, 70% were due to poor communication. The implications of poor communication between healthcare providers and patients are far reaching, influencing the degree of patients' prognosis, the burden of disease on the economy as well as an influx of malpractice claims (King & Hoppe, 2013). These studies indicate the need to explore and understand the factors that impose on patient-provider communication, in order to encourage change in the healthcare system.

Within the healthcare system, the importance of effective communication is evident in the profession of Audiology. Audiologists are healthcare professionals who identify, diagnose and manage hearing loss as well as ear related conditions. Audiologists are concerned with improving quality of life in the presence of hearing impairment, as hearing is a fundamental element in the human communication system (Kidd, Cox & Matthies, 2003). Thus, communication forms the base of the audiology profession and is required throughout the assessment and management process. Audiology, however is a fairly new profession (Pascoe, 2011) and to the researchers best knowledge, there are no studies that have explored communicative competence in the field of audiology in the South African context.

Internationally, a study conducted by Grenness, Hickson, Laplante- Levesque, Meyer and Davidson (2015) investigated communication between audiologists and patients across the duration of diagnosis, treatment and initial consultation. The results revealed that patient-centered communication was lacking during their interaction, with audiologists assuming a dominating role throughout consultations. Although the results from the reviewed study indicated insufficient communication between audiologists and patients, the study lacked information regarding the factors that contributed to poor patient-centered communication. This has implications for the present study, as it prompts an investigation of the factors that influence effective communication, with specific consideration for the South African context.

There are various factors that influence effective healthcare communication in the South African context, the first being geographical location (Wegner & Rhoda, 2014; Southwood & Ondene, 2015). Health institutions across South Africa range from urban to rural, which impacts on resources available, access to services as well as the quality of care received. A local study by Khan, Knight and Esterhuizen (2009), who in exploring the experiences of community service officers, reported that language barriers diminished the ability of First Language English speaking therapists to provide effective services. The above findings support the need to explore FLES audiologists' communication in both the urban and rural healthcare settings across KZN in order to advocate for solutions to improve and allow for equality equitable service delivery.

The second factor that can influence effective communication in the healthcare setting is cultural diversity (Wegner & Rhoda, 2014; Southwood & Ondene, 2015). Culture provides the context for communication and patient-centered care (Arnold & Boggs, 2015); and a lack of knowledge, awareness and understanding of diverse cultural groups may result in the development of stereotypes and prejudice. Statistics South Africa (2011) revealed that isiZulu is the most dominant culture in KwaZulu-Natal (KZN), accounting for 77% of the population. However, Brown, Ham-Baloyi, Van Rooyen, Aldous and Marais (2016) reported that South African patients accessing healthcare at public hospitals frequently encounter cultural barriers as healthcare providers often do not share the same cultural background as the patient. Penn (2007) agrees, adding that there is a discrepancy between the ratio of qualified English speaking audiologists and the number of culturally diverse patients accessing services. Brown et al. (2016) further stated that healthcare providers are often trained in English or Afrikaans and thus implement urban, western approaches to healthcare. In contrast, the isiZulu culture perceives illness within a framework of spiritual beliefs, in which hearing loss may be associated with supernatural/ancestral origin (Dowson & Devenish, 2010). It is therefore important to determine whether FLES audiologists have knowledge of such beliefs and are culturally competent in understanding their isiZulu patients' explanatory model of disease to enable individualised holistic care.

In light of the above, cultural competence has been identified as a strategy to improve cross-cultural communication and reduce health disparities (Surbone & Baider, 2013). Cultural competence refers to the ability of healthcare providers to effectively negotiate mutual assessment and rehabilitation goals with patients of diverse cultural backgrounds (Buttriss et

al., 2017). The Model of Cultural Competence in the delivery of healthcare Services (Campinha-Bacote, 2007) includes constructs such as: cultural awareness, cultural knowledge, cultural skills, cultural encounters and cultural desires, and thereby provides a reliable framework to examine FLES audiologists' cultural competency in isiZulu.

The third factor that can influence effective communication in the healthcare setting is linguistic diversity. Although South Africa is denoted for having 11 official languages, isiZulu is the most dominant language, spoken by approximately 11.6 million people (Statistics South Africa, 2011). Furthermore, isiZulu is a regional language dominating in KZN, being the first language of a staggering 77% of the provincial population. Upon analysis of the isiZulu language, it is realized that isiZulu differs from English in all aspects of language, including: morphology, phonetics, lexicon as well as dialect (Classe, 2000; Niesler, Louw & Roux, 2005; Gleimius, Mthimunye & Subanyoni, 2003). These differences have implications for FLES audiologists attempting to utilize the isiZulu language. Pascoe (2011) added that the above language differences between audiologists and the patients they serve can result in impenetrable barriers in service provision.

In a local study, Schlemmer and Mash (2006) examined the effect of language barriers in a district hospital in the Western Cape of South Africa, in which majority of the healthcare providers were first language English or Afrikaans speaking and majority of the patients were first language Xhosa speakers. The author concluded that the presence of language barriers was substantial, adversely affecting performance efficiency, accuracy of medical interpretation, overall satisfaction, the quality of services as well as the attitudes of both healthcare providers and patients alike. Deumert (2010) concluded that the public health system of South Africa has failed to make progress in the last 10 years regarding equitable service delivery, and the manifestation of language barriers bears testament to that. Presently, there is little known regarding FLES audiologists linguistic competency in isiZulu. Bhattacharyya (2011) adds that by evaluating competency levels, individuals become aware of their level of skills in relation to the communicative competency requirements of the organization. However, it is presently unknown whether FLES audiologists are satisfying competency criteria needed for effective communication in the healthcare setting. Therefore, the present study aims to address this gap by evaluating FLES audiologist's level of linguistic competency in isiZulu.

Furthermore, despite the importance of communication in the healthcare setting, international studies have shown that clinical training lacks role modeling of linguistic competencies (Brown & Byland, 2008; & Levinson, Lessor & Epstein, 2010). The authors described insufficient content on communication skills being covered as well as the positioning of content being too early in the curricular with limited reinforcement. These findings highlight the need to explore the influence of education on FLES audiologists' ability to communicate with isiZulu patients.

In view of cultural diversity and linguistic diversity, the following additional factors have been identified as influential on effective communication with diverse patient populations: informed consent, trust, collaboration, empathy, professional superiority and attitude (Gordon, Street, Sharf & Souchek, 2006; Virnig, Lurie, Huang, Musgrave, McBean & Dowd, 2002). An overview of these factors will be discussed below with particular focus on its relevance to the profession of audiology.

Informed consent is a mandatory component during invasive audiological procedures such as earmould impression taking and Auditory Brainstem Response (ABR) testing. Despite this, Hunt and deVoogd (2007) reported that the presence of language barriers resulted in patients not receiving sufficient information that would warrant being genuinely informed. With regard to trust, the ability of audiologists to establish trust with their patients is key to establishing good rapport. Good rapport with patients has been linked to disclosure of pertinent information (Ha & Longnecker, 2010), which can be an important determinant in early identification of hearing loss. Despite this, Betancourt, Green, Carillo and Ananeh-Firempong (2003) reported that the presence of cultural and language barriers adversely affected patients ability to trust their healthcare provider. Furthermore, Cartwright and Shingles (2011) expanded that trust and self-disclosure can be difficult for isiZulu patients, who may be unfamiliar with western clinical approaches.

With regard to collaboration, one of the areas in which audiologists rely on patient involvement is during hearing aid use. Audiologists provide information on the function and use of the assistive device and patient involvement is required to ensure that maximum benefit is received (Valente, Hosford-Dunn & Roeser, 2008). However, Angelelli (2004) reported that healthcare providers are less likely to encourage patients, who have low levels of English proficiency, to actively participate during the treatment process as healthcare

professionals may want to avoid a potential breakdown in communication due to their own lack of competency in the patient's home language.

With regard to empathy, an imperative counselling role of the audiologist is to express empathy to the patient and significant others, particularly during the diagnosis of hearing loss (Brooks, 2013). However, Krebs, as cited in Burges, Van Ryn and Dovidio (2007), reported that individuals may tend to display less empathy towards those who they do not identify with in terms of race, culture or language. With regard to superiority, patient-centered care asserts that healthcare providers should not assume a dominating role when communicating with patients (Aliotta, 2015). However, Saha, Arbelaez and Cooper (2003) reported that culturally and linguistically diverse patients reported inferior quality interactions in the healthcare setting. These findings imply the need to investigate the type of role that FLES audiologists assume when encountering isiZulu patients. Furthermore, in terms of attitude, Van Ryn and Burke (2000) reported that healthcare providers negatively stereotyped African American patients who do not comply with healthcare advice. The author added that such stereotypes are reflected in the healthcare provider's attitude during interaction. These findings deem it necessary to explore FLES audiologists' attitudes toward isiZulu patients. It is clearly evident from the literature that the above factors are of relevance to the profession of audiology and therefore requires exploring communication between FLES audiologists and isiZulu patients.

Despite the vast body of literature documenting cultural and linguistic challenges encountered by healthcare professionals, there is little known about the communication strategies that are used when faced with such challenges. Thus, there is a need to explore the current communication strategies that are being employed by FLES Audiologists when encountering isiZulu patients. International studies often recommend interpreters as a communication strategy and solution to accommodate culturally and linguistically diverse patients (Sleptsova, Hofer, Morina & Langewitz, 2014; Kale & Syed, 2009). However, there is a paucity of information regarding the feasibility of employing interpreters at health care institutions in the rural South African context, the findings of the present study may be useful in creating awareness and influencing policy regarding the importance of interpreter services at public hospitals in KZN.

Lastly, in order to obtain a holistic picture of the nature of communication that transpires between FLES audiologists and isiZulu patients, there is a need to also understand such communication from the perspective of the patients. Tongue, Epps and Forese (2005) reported that healthcare providers tend to overestimate their communicative competence, the findings of their study revealed that while 75% of orthopaedic surgeons perceived that they communicated effectively with their patients, only 21% of their patients agreed. These divergent views have implications for the present study by illustrating the importance of evaluating communication from both end users. Furthermore, to the researcher's best knowledge there are no studies that have considered the perspectives of culturally and linguistically diverse patients in the field of audiological service delivery in the South African context, therefore supporting the inclusion of this important component in the present study.

1.3 OUTLINE OF CHAPTERS

The present dissertation consists of six chapters, below is a summary of each chapter.

Chapter 1. Introduction: This chapter introduces the researcher and provides a rationale for the study, with reference to the current context of KZN. The chapter discusses the importance of effective communication between FLES audiologists and isiZulu patients. The influence of factors, such as geographical location, cultural diversity, linguistic diversity, informed consent, trust, collaboration, empathy, superiority and attitude, on effective communication are highlighted. Furthermore, the need to explore the current communication practices of FLES audiologists when encountering isiZulu patients is discussed. In view of the two-fold concept of communication, the need to include the perspectives of isiZulu patients regarding their communication with FLES audiologists is presented.

Chapter 2. Theoretical Framework and Literature Review: This chapter focuses on the theoretical aspects and corresponding literature related to understanding healthcare communication in the South African context. In addition, the theoretical framework for the study is presented. The chapter examines cultural and linguistic diversity and further provides a description of the isiZulu language. Thereafter, audiologists' role in communication is highlighted followed by a discussion of factors that can impose on cross cultural and cross linguistic communication, with specific reference to the profession of audiology. Subsequently, communication strategies are discussed with

focus on the use of interpreters. Lastly, discussion surrounding the patient's perspective is provided.

Chapter 3. Methodology: This chapter outlines the methodology for the study. The aims, objectives and design of the study are presented. The study consists of three concurrent phases and this is clearly explained and illustrated. A comprehensive description of each phase is provided by detailing sample size, sampling method sample selection criteria, instrumentation, data collection procedures and analytical measures, for each phase. Lastly, the ethical and legal considerations for the study are presented.

Chapter 4. Results: This chapter presents the results of the study, which have been analyzed through quantitative and qualitative methods of analysis. The results are presented using the interwoven approach (Fretters, Curry & Creswell, 2013) and are structured according to the objectives of the study.

Chapter 5. Discussion: This chapter explains the results obtained in the study with reference to relevant literature. The discussion of results is presented according to the objectives of the study.

Chapter 6. Conclusion, Limitations and Recommendations: This chapter provides the main findings of the study and their clinical implications. Furthermore, the strengths, and limitations of the study as well as recommendations for future research, are presented.

1.4 CONCLUSION

This chapter provides an overview of the study. Exploring communication between FLES audiologists and isiZulu patients is important to ensure that a high level of care in services is provided. Presently, there is a paucity of information in this area, which poses challenges in monitoring or implementing effective communication mechanisms needed for cross cultural/linguistic interaction. Failure to refine this context can result in detrimental assessment and therapy outcomes in isiZulu audiology patients and thus necessitate closer examination in this area of interest.

CHAPTER 2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 INTRODUCTION

This chapter presents the theoretical framework for the study and the literature review, which considers both international and local research. The chapter is presented in relation to the objectives of the study and begins by describing the broad concept of communication in the health setting. This is followed by the variables that influence effective communication in healthcare in South Africa. In doing so, the issues surrounding cultural and linguistic diversity are brought to the forefront, thereby, highlighting the importance of cultural and linguistic competency in healthcare. Thereafter, audiologists' important role in communication is discussed followed by the various communication strategies available. Lastly, the perspectives of patients during cross cultural and cross linguistic communication are reviewed.

2.2 COMMUNICATION IN THE HEALTHCARE SETTING

Effective communication between health professionals and patients is an important factor in providing quality health care. Communication refers to as "the exchange of information or messages from one point to another" (Vonkeman, 2013, p.92) as illustrated in Figure 2.1.

Central to the process of communication is interpretation of the message by the receiver, which refers to the evaluation and conception of the information conveyed. Effective communication promoting accurate interpretation is essential in the health care setting and requires the healthcare professional to comprehend and assimilate the information conveyed by patients, as well as the ability of the patient to accurately understand the content expressed (The Joint Commission, 2010). Although Figure 2.1 refers to two way communication between the individual patient and healthcare provider, communication in the healthcare setting is much more diverse. Arnold and Boggs (2015) recognized group communication, in the form of support groups and counselling, as one of the most common methods of exchanging information in the healthcare setting. Viswananth, as cited in Donsbach (2015), identified several health-related aspects dependant on successful communication, including documenting and elaborating symptoms, explaining and counselling the diagnosis as well as disseminating information regarding rehabilitation options and treatment regimes.

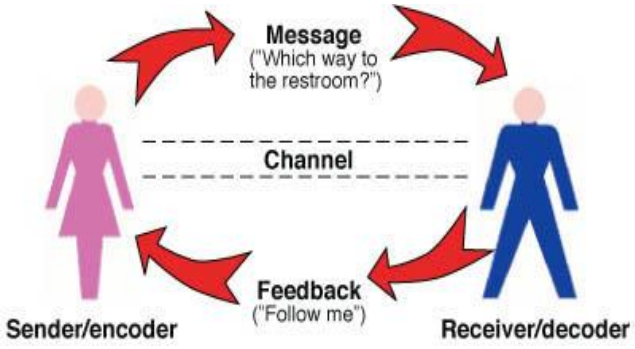


Figure 2.1 An illustration of the communication process (Hayes, Barnes-Holmes, Roche, 2001).

The association between patient-practitioner communication and patient contentment, compliance and quality of life is also well supported in the literature (Donsbach, 2015; Jin, Sklar, Oh & Li, 2008; Ha & Longnecker, 2010). Patients' desire effective, clear communication with their health care professional that enables appropriate management of their illness, provides supportive counsel and establishes caring rapport (Ha & Longnecker, 2010). Ha and Longnecker (2010) further added that patients no longer view themselves as submissive recipients of care and expect to engage about their illness, diagnosis and treatment. Effective communication therefore allows for patient needs, perceptions, goals and expectations to be met successfully.

Moore, Vargas, Nunez and Macchiavello (2011) added that patient's expectations toward health care have increased over time with an up rise in formal complaints and malpractice proceedings reported. Their findings revealed the patient-health practitioner relationship as predominant to patient dissatisfaction. Moore et al. (2011) identified the most frequent complaint to be "dysfunctional delivery of information" (p. 880) emphasizing the need for improving the communication skills of health care professionals in service delivery. To delve further with specific reference to the South African context, the Health Professionals Council of South Africa (2010) reported 2700 complaints submitted to their medical board by patients and clients, of which 70% were due to poor communication. HPCSA (2010) elaborated that many patients reported feeling misunderstood. While effective communication during health care service delivery is enlisted as a priority by the World Health Organisation (WHO, 2009), communication is a complex phenomenon that is influenced by various factors (Keyton, 2011). These factors will be discussed in the subsequent section, with particular reference to the South African context.

2.3 UNDERSTANDING HEALTHCARE IN THE SOUTH AFRICAN CONTEXT

South Africa consists of nine provinces that are further subdivided into districts. KwaZulu-Natal (KZN) is the third largest province in South Africa, consisting of 11 districts. Across the 11 districts are 42 public sector health institutions situated in both urban and rural areas. Although communication is influenced by an infinite number of variables and dynamics, the scope of this study will focus on the following factors illustrated in Figure 2.2. These factors were selected upon review of the literature, with particular reference to healthcare in the South African context. Furthermore, these factors will provide the theoretical framework for this study. It is important to note that within this framework, certain factors such as cultural diversity have been described in the literature using specific Models. These Models will be integrated accordingly in the broad theoretical framework, which will be used to explore First Language English speaking (FLES) audiologist's communication with isiZulu patients.

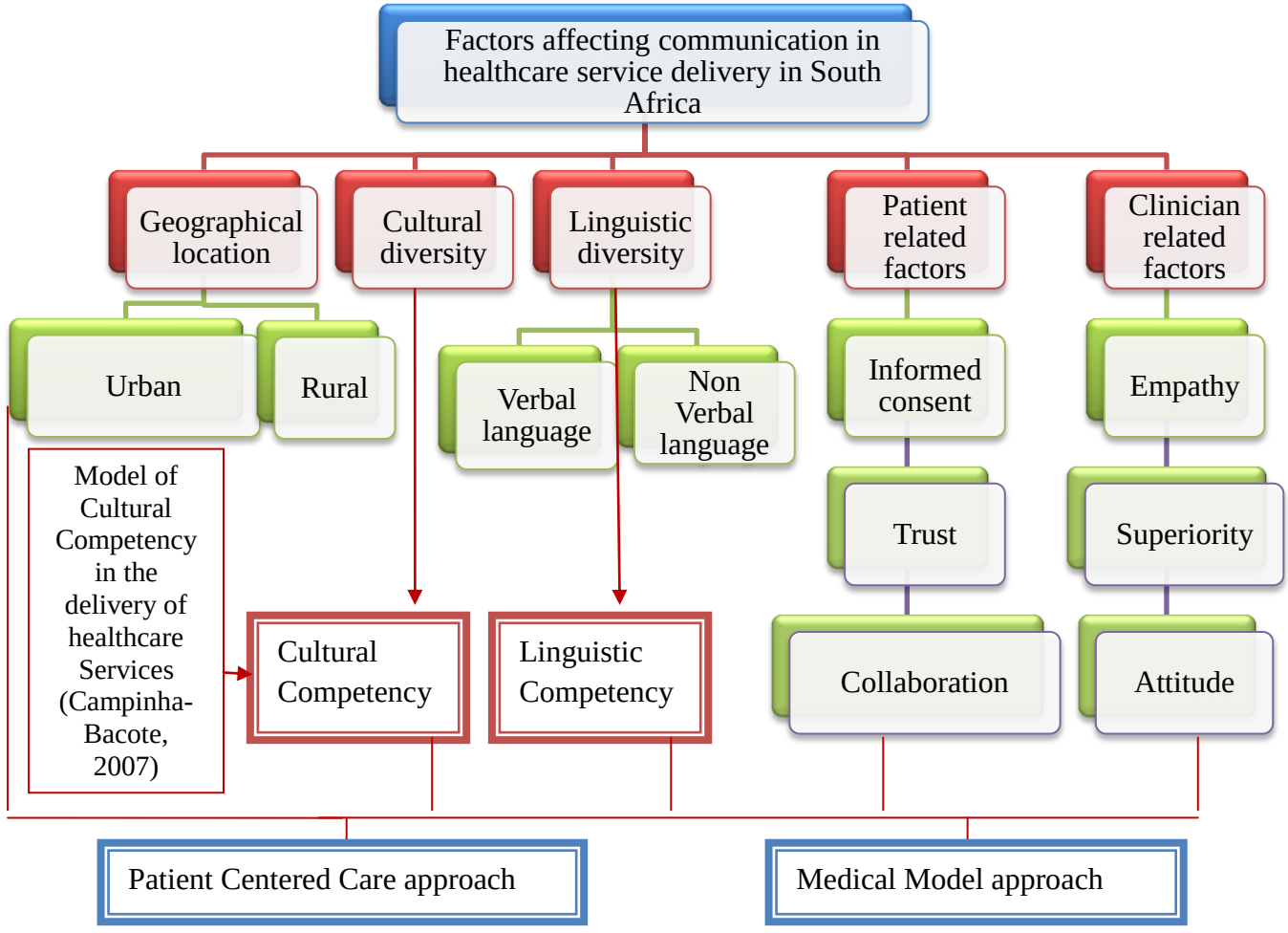


Figure 2.2 A summary of the factors that affect communication in healthcare service delivery in South Africa (Wegner & Rhoda, 2014; Southwood & Van Dulm, 2015; Wanjau, Muiruri & Ayodo, 2012).

The importance of exploring communication in the profession of audiology can be realised by understanding its line of work (refer to section *2.4 Audiologists and their role in communication*, for further discussion). Audiologists are healthcare professionals who identify, diagnose and manage hearing loss as well as ear related conditions (Gelfand, 2009). The ability to hear is essential in being able to communicate and thus hearing impaired patients struggle to converse with others in their everyday lives (Donna, Ignatavicius & Workman, 2013). The role of the audiologist is to therefore, enable hearing impaired patients to achieve communicative competence (Kidd et al., 2003). However, the ability of audiologists to enable hearing impaired patients to communicate with others can be compromised if the audiologist is unable to communicate with the patient itself, due to cultural or language barriers. This has implications for the patient's prognosis and ultimately the burden of disease on the economy. Figure 2.2 therefore provides the theoretical framework to explore FLES audiologists' communication with isiZulu patients.

There are two types of communicative approaches that FLES audiologists can adopt when interacting with their patients, namely the Medical Model approach or Patient-Centered Care approach (Sheppard, 2004). The Medical Model refers to a biological approach that centers on the belief that pathology derives from an organic source (McLeod, 2008). The Medical Model utilizes diagnostic criteria and is therefore viewed as an objective approach in assessing and treating patients (McLeod, 2008). However, the most notable weakness of the Medical Model is the lack of consideration toward psychosocial patient factors in the process of diagnosis (Waddell & Burton, 2004). In contrast, Patient-Centered Care is defined as an approach that emphasizes understanding of the patient as an individual and modifying assessment/treatment to ensure that their specific needs are met, including their cultural and linguistic needs (Institute of Medicine, 2001).

Furthermore, Burney (2017) foregrounds effective communication as key to Patient-Centered Care. As illustrated in the theoretical framework of the study (refer to Figure 2.2), there are several factors that influence healthcare communication in the South African context, however the manifestation of these factors will provide an indication whether the Medical Model or Patient-Centered Care is being practised by FLES audiologists.

2.3.1 Geographical location

South Africa is denoted by diversity with regard to "differential access to health services" (Kersey-Matusiak, 2006, p.1). Much of this diversity stems from the wide spectrum of health care institutions that exist within the South African context, specifically within KZN, which ranges from urban to rural. Although the term "rural" is ambiguous in its classification criteria, Lundy and Janes (2009) identified key defining characteristics such as: insufficient access to basic health services, decreased population density, as well as lack of resources such as water and electricity due to being located on the outskirts of cities and towns. According to Baernholdt (2010), the quality of health care differs between urban and rural institutions

Rural areas in third world countries, such as South Africa, are often the most neglected in terms of service delivery (World Health Organisation, WHO, 2009). This resulted in National community service programmes being initiated in an attempt to enlist health care professionals, such as audiologists, speech therapists, occupational therapists, physiotherapists, pharmacists and doctors, to rural areas to provide much needed health services. The Health Professionals Council of South Africa (2005) asserts that qualified audiologists should be able to offer assessment and rehabilitation for communication disorders within a spectrum of contexts that range from underprivileged rural to refined urban institutions. South Africa therefore implemented relevant legislature declaring it compulsory for health care professionals to undertake a year of community service prior to being allowed to practice independently (National Department of Health, Act, 1998).

A study conducted by Khan et al. (2009) investigated the perceptions and attitudes toward the mandatory community service programme in KZN. One of the central findings revealed that language barriers, which resulted in poor communication, diminished the ability of First Language English community service health professionals to provide an effective service in rural areas. In addition, they reported that a lack of contextually specific assessment and intervention resources impeded service delivery to isiZulu speaking patients (Khan et al., 2009). Therefore, despite the deployment of human resource to under-serviced geographical areas to address the healthcare needs of South Africans, language and cultural differences may be one of the factors influencing the quality of services provided. The above findings support the need to explore communication in both urban and rural healthcare settings in

order to advocate for solutions to improve and allow for equality equitable service delivery that enables Patient-Centered Care.

Furthermore, within urban and rural landscapes are the differences of private and public healthcare. These sectors differ on the basis of their funding, with the private sector relying on medical aid schemes and the public sector dependant on government funding (Wemmer, 2007). The state of healthcare is deeply rooted to the history of South Africa, with public healthcare only becoming priority post apartheid in an attempt to provide fair service delivery. Despite efforts by the government to endorse equality, OECD (2010) described public healthcare as cheap and of inferior quality compared to private healthcare, which is superior in quality but too expensive for the majority of South Africans. Burger and Grobler (2007) identified poor communication between healthcare providers and patients as one of the primary challenges in public healthcare, along with inaccurate diagnoses, long waiting periods and untrained staff. Despite the above challenges, Karim and Karim (2010) reported that 80% of South Africans rely on public healthcare and therefore reiterates the importance of understanding and improving communication in such a context. It was for those reasons that government hospitals were selected as research sites in this study.

2.3.2 Cultural diversity

Battle (2012) defines culture as the "the behavior, beliefs and ideals of a group of people that are united by their commonalty" (p.2). There are different cultures within South Africa; however isiZulu is identified as the most dominant culture in KZN (Statistics South Africa, 2011). The most notable characteristic of the isiZulu culture is its explanatory model of disease, in which illness is often explained with beliefs relating to the presence of ancestral spirits (Dowson & Devenish, 2010). The influence of the isiZulu culture on communication will emerge throughout this chapter.

The relationship between culture and communication remains interconnected. It is reasonable to deduce that knowledge and understanding of an individual, denoted by their cultural identity, will influence the communication process. An important concept in achieving effective communication for equitable service delivery, whilst considering the South African context, is therefore cultural competence. Cultural competency is defined as the capability of healthcare providers to provide efficient services to patients with diverse ethnic and cultural backgrounds (Fernandez et al., 2004). Edwards and Irwin, as cited in Grice-Dyer (2010),

further elaborated that cultural competence is framed by the health professional's attitude, expertise and behaviour.

In contrast, some authors have contested the effectiveness of cultural competence, with Thackrah and Thompson (2013) arguing that a lack of clarity exists regarding the association of culture with medicine. An additional limitation identified with the notion of cultural competence is based on the concept of culture continuously changing over time (Inglebly, 2011). Therefore, the dynamic concept of culture can be challenging to view under a static framework. Nonetheless, Carillo, Green and Betancourt, as cited in Grice- Dyer (2010), assert that every culture has underpinning philosophies regarding disability, illness, interventions as well as coping mechanisms and thus there is an important need to achieve cultural competence in the healthcare setting.

In order to understand the concept of cultural competence, the underlying Models of cultural competence were reviewed. Giger and Davidhizar (2002) developed the Transcultural Assessment Model, which concentrated on six aspects, namely: communication, space, time, social organization, environmental control, and biological variation. The model was developed specifically for nurses to utilize when assessing culturally diverse patients (Cartwright & Shingles, 2011). The Purnell Model for Cultural Competence (Purnell & Paulanka, 2003) focused on a visual representation regarding the interaction of culture in four different spheres, namely: global, community, family and the individual. This model differed from the Transcultural Assessment Model in that it included an additional assessment for healthcare professionals with regard to cultural consciousness.

More recently, the Model of Cultural Competence in the Delivery of Healthcare Services was developed by Campinha-Bacote (2007). The model puts forward that that cultural competence is not a state, instead it is a process that consists of five interconnected constructs (Cartwright & Shingles, 2011), namely: "cultural awareness, cultural knowledge, cultural skill, cultural encounters and cultural desire" (Campinha- Bacote, as cited in Grice- Dyer, 2010, p. 10). According to Cartwright and Shingles (2011), this model is the broadest and takes into account the majority of the aspects encompassed in the previous models. It is for these reasons that the Model of Cultural Competence in the Delivery of Healthcare Services (Campinha- Bacote, 2007) was selected to evaluate FLES audiologists cultural competency in isiZulu, and was embedded in the in theoretical framework of the study (refer to Figure 2.2).

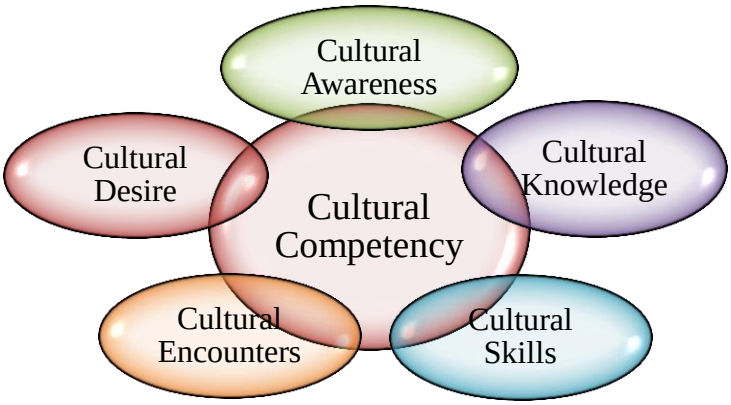


Figure 2.3 Model of Cultural Competence in the Delivery of Healthcare Services (Campinha-Bacote, 2007).

2.3.2.1 Cultural awareness

Cultural awareness refers to acknowledgement of different cultures from one's own (Grice-dyer, 2010). According to Purnell and Paulanka (2003) cultural awareness is the initial step in achieving cultural competence. It can refer to the ability of the audiologist to self examine their own cultural framework and identify individual assumptions and predispositions toward different cultures (Yoder-wise, 2015). Cultural awareness is an important component because it suggests that if FLES audiologists lack awareness of the uniqueness of the isiZulu culture, this may affect their ability to establish rapport and be open to isiZulu cultural behaviours and beliefs. The present study therefore intends to explore FLES audiologists' awareness of the isiZulu culture when interacting with isiZulu patients.

2.3.2.2 Cultural knowledge

The second construct of cultural competence is cultural knowledge, which refers to an understanding of cultural beliefs, values and behaviours (Campinha- Bacote, as cited in Grice-Dyer, 2010). Rogers (2015) identified that cultural knowledge can be attained through experience, education and additional sources, such as courses. Apart from the above three avenues, immersing oneself with patients of a different culture can also assist in acquiring cultural knowledge. This will be discussed further under *Cultural Encounters*. Cultural knowledge of patients health related beliefs is essential to understanding how patients interpret their illness as well as to guide the selection of treatment regimes (Yoder-wise, 2015).

One of the most common forms of applicability in this regard is cause of illness and classification of disease. Patients from an isiZulu culture often believe that illness, such as hearing loss, can be derived from supernatural causes associated with ancestral spirits/curses (Dowson & Devenish, 2010). According to Van Wyk (2009) supernatural causes can manifest in adversity or physical illness and therefore any condition that results in disharmony between the patient and his/her environment can be considered as a possible supernatural cause. Consequently, if FLES audiologists do not have cultural knowledge of such isiZulu beliefs, enforcing conventional audiological treatment may be ineffective.

Van Wyk (2009) adds that cultural beliefs regarding unconventional causes of illness are "only diagnosed and treated by traditional healthcare practitioners" (p.33). The World Health Organization (WHO) recognizes traditional healthcare practitioners as individuals who belong to a community and are competent to render healthcare services utilising various methods that align with the community's cultural belief system. It is therefore important to determine if FLES audiologists have knowledge of isiZulu cultural beliefs and behaviours that are needed to facilitate appropriate referrals and holistic treatment.

2.3.2.3 Cultural skills

The third construct of cultural competence is cultural skills, which refers to the ability to conduct an assessment that is culturally appropriate (Grice-Dyer, 2010). Cultural skills are thus influenced by cultural knowledge acquired and the ability to apply the knowledge accordingly. In addition, cultural skills can be reflected by the ability of FLES audiologists to obtain relevant cultural information from isiZulu patients (Cartwright & Shingles, 2011). This would include the ability of FLES audiologists to adapt and modify their assessment resources for isiZulu patients in order to extract information that would address the patient's cultural needs. The application of skills regarding the appropriate selection of culturally and linguistically suitable resources plays an important role in both audiology assessment and rehabilitation. With regard to assessments, much focus in this aspect has centered on speech audiometry testing, which forms an important part of a comprehensive audiological evaluation. It involves measuring speech perception using speech stimuli in a controlled environment (Lawson & Peterson, 2011). In terms of clinical use, speech audiometry can be used to validate results from pure-tone audiometry. Furthermore, in the event of hearing impairment being present, speech audiometry measures the patient's ability to detect and

discriminate speech (Welling & Ukstins, 2015). Speech audiometry is therefore important to understand the impact of hearing loss on communication.

Several standardized speech audiometry word lists have been developed in English and are extensively used in the audiological test battery. However, there are limited speech materials to address the cultural and linguistic needs of other worldwide languages (Dias, Devdas & Rajashekhar, 2015). To improve the accuracy of speech audiometry, "speech stimuli should be developed and standardized in the Native language of the patient" (Dias et al., 2015, p.268). The above plight has propelled researchers (Farjardo & Kim, 2015; Durankaya, Serbetcioglu, Dalkilic, Gurkan & Kirkim, 2014; Veispak, Jansen, Ghesquiere & Wouters, 2015) toward developing speech audiometry word lists in indigenous languages such as Filipino, Turkish and Estonia to name a few. Relevant to the South African context and KZN, in particular, Panday (2006) developed speech audiometry word lists in IsiZulu. The second phase of the study involved implementing the isiZulu speech materials on First Language Zulu speaking individuals. The results revealed a stronger correlation between the puretone average and scores using the isiZulu speech word lists (r=0.76) compared to scores obtained through standardized English speech word lists (r=0.62). The findings of the study support the need to determine whether FLES audiologists are skilled in selecting culturally and linguistically appropriate assessment materials that accurately reflect the abilities of their patients.

It is reasonable to infer that in addition to the ability to select culturally and linguistically appropriate resources, necessary skill is needed to utilize and implement such resources. With regard to speech audiometry, FLES audiologists require adequate skill to correctly articulate and pronounce the words in the isiZulu speech lists. The isiZulu language markedly differs from English in aspects such as stress and tone (Francis, Mahlomaholo & Nkoane, 2010), these differences being further discussed in this chapter under the section of *Linguistic Diversity*. Assessment is the foundation on which intervention is built with Carter, Lees, Murira, Gona, Neville and Newton (2004) asserting that if assessment is culturally inappropriate and neglects to consider cultural variation, inaccurate assessment findings will result in subsequent intervention being unsuitable or bordering on harmful.

It is evident from the above discussion that cultural skills are important in audiology. Despite this, no studies have investigated the emergence and application of such skills in this

profession. Negligence and the exclusion of a culturally infused assessment and rehabilitation programme can adversely affect the reliability of results and hinder therapy outcomes. It is thus important to determine whether FLES audiologists have the necessary cultural skills needed to provide Patient-Centered Care services to the largest demographic in KZN, namely isiZulu patients.

2.3.2.4 Cultural encounters

The fourth construct of cultural competence is cultural encounters, which refers to the direct involvement of FLES audiologists in culturally diverse interactions (Grice-Dyer, 2010). Internationally, Hsieh (2016) identified the use of interpreters as integral to cross-cultural and cross-linguistic encounters. For the purpose of this chapter, the use of interpreters are explored further under the section *Communication strategies*. This section will instead focus on the exposure of FLES audiologists interactions with isiZulu patients, which may or may not involve the use of an interpreter as a mediator.

Immersing oneself in cross-cultural encounters provides the opportunity for FLES audiologists to continuously adjust their existing knowledge on cultural diversity (Yoder-Wise, 2015). Taking into consideration that isiZulu is the dominant culture and language in KZN; one may assume that cross-cultural encounters between FLES audiologists and isiZulu patients occur regularly. Leendertz (2012) investigated the perception of South African trained occupational therapists regarding their cultural competency and cultural encounters, with several therapists indicating that they did not have sufficient opportunities to assess and manage patients from diverse cultures. The author attributed this finding to a few recognized occupational therapy training centres in South Africa, which could have adversely impacted on both the number of patients seen and the heterogeneity of the population serviced (Leendertz, 2012). Based on the above finding and the fact that both urban and rural hospital institutions will be included in the present study, there is a need to explore cross-cultural encounters in the audiological setting across KZN in order to determine the overall cultural competence of FLES audiologists.

2.3.2.5 Cultural desire

The fifth construct of cultural competence is cultural desire, which refers to the ongoing intrinsic drive of FLES audiologists toward becoming culturally competent (Yoder-Wise, 2015). Harbouring the authentic desire to work with culturally diverse patients will result in

actions that are congruent to the intentions (Grice-Dyer, 2010). Cultural desire can be measured by FLES audiologist's motivation to understand and acquire isiZulu cultural knowledge (Weber & Kelly, 2013). This can be achieved through immersion with individuals belonging to the isiZulu culture as well as attending cultural courses, workshops and seminars. However, there is a paucity regarding whether isiZulu culture courses are available and the extent that they are being attended by FLES audiologists.

It is evident from the above discussion that the components of cultural competency bear relevance to several pertinent facets of audiological service delivery, thus supporting the integration of the Model of Cultural Competence in the Delivery of Healthcare Services (Campinha- Bacote, 2007) in the broad theoretical framework of the study (refer to Figure 2.2). It is also apparent that the above components do not exist in isolated boxes, but rather overlap in achieving overall cultural competency. Cultural knowledge can similarly influence cultural skill; cultural desire can increase the number of cultural encounters. Equipped with the framework of cultural competency, the literature surrounding cultural competency will now be discussed.

Pollozhani, Kosevska, Petkovski, Memeti, Limani and Kasapinov (2013) examined the current practices of intercultural communication in health institutions across the Republic of Macedonia. The aim of the study was to determine the existing state of multicultural communication in the country that would enable development of a training model to improve communication. Participants of the study included 302 physicians, 511 allied medical professionals as well as 1016 patients. With regard to allied medical professionals, the study described the inclusion of nurses, radiologists and physiotherapists, but not audiologists. The results of the study revealed that every third patient examined indicated that their healthcare professional had lacked understanding of their emotions and did not address all their questions (Pollozhani et al., 2013). In contrast, 60% of the healthcare professionals believed that they provided good communication to patients of diverse cultures (Pollozhani et al., 2013). The authors of the study indicated that in reality, a very small percentage of the healthcare professionals possessed understanding of the surrounding ethnic communities. The study concluded that communication in the healthcare sector is negatively influenced by healthcare professionals' lack of knowledge in the culture of their patients (Pollozhani et al., 2013). The authors recommended using a communication training model in the healthcare setting, and support the notion that for it to be used in South Africa, a baseline of the current

intercultural communication circumstances is required. Thereby, reiterating the need to determine the cultural competency of audiologists, a profession that remains fairly overlooked.

A key finding that emerged from the Pollozhani et al. (2013) study relates to the divergent views on communication between the patients interviewed versus the practitioners. It is evident that practitioner's outlook on the type of communication provided did not meet the expectations based on their patient's opinions. Although the study did not provide reasons regarding the contradictory perception of practitioners, it can be assumed that practitioners may feel scrutinized in their abilities to provide a service. Fear of scrutiny in their communication skills, or lack thereof, may be a reason as to why practitioners attested to being competent during communication. The results from the Pollozhani et al. (2013) study emphasize that in order to obtain a complete picture of cross-cultural communication, the perceptions of both healthcare professionals and patients need to be considered. This will be discussed further in this chapter under *Patients Perspectives.*

Majority of the literature regarding cross cultural communication has been formulated internationally. However, there is a need to understand the role of diverse cultural communication in the South African healthcare context in order to provide appropriate services to the diverse patient populations. De Beer and Chipps (2014) investigated the self-rated cultural competence of critical care nurses in KZN. The study was purely quantitative using the Inventory to Access the Process of Cultural Competency- Revised (IAPCC-R) questionnaire on 105 nurses from 8 critical care units in a public hospital. The results obtained revealed that although majority (74%) of the nurses possessed cultural awareness, they were not yet considered culturally competent (de Beer & Chipps, 2014). Of the 105 participants, only 26% were considered culturally competent (de Beer & Chipps, 2014). Furthermore, English speaking nurses scored significantly lower in overall cultural competence compared to the nurses from non-English speaking backgrounds (de Beer & Chipps, 2014). The authors attributed this finding to the majority of patients seeking services at the surveyed institution being non-English speaking, and thus the challenge of providing culturally competent care is exacerbated by the existence of language barriers.

The results in the above study may have also been influenced by an unequal participant demographic distribution i.e. 74.7% African critical care nurses, 22.1% Indian, 3.9% White

and 2.9% Coloured. Borrego and Johnson (2011) put forward that multicultural employees can play an important role in assisting their colleagues to learn about their culture (Borrego & Johnson, 2011). This implies that African healthcare professionals are in a position to enable English speaking healthcare colleagues toward becoming culturally competent in isiZulu. This notion has relevance to the present study when comparing the Nursing profession to that of Audiology. Timofeeva (2003) identified that registered nurses are the "largest group of health care providers" (p.73). This statement is clearly illustrated in the above study which comprised of 168 critical care nurses based in merely one hospital. In contrast, the number of professional audiologists in South Africa is fairly small (Pascoe, 2011), with Swanepoel (2006) reporting that 2461 speech language therapists and audiologists were registered with Health Professional Council of South Africa in 2005 (HPCSA, 2005). The combined qualification allowed the 2461 professionals to practice either as a speech therapist or an audiologist, which further reduced the number of audiologists available in South Africa. Subsequent to implementing a single qualification, only 88 audiologists were registered with the HPCSA (2005). However, Swanepoel (2006) argues that majority of audiologists are employed in the private sector and render services to a minority of South Africa. Thus, there is a shortage of audiologists in the public sector, often resulting in one to five audiologists being based per public hospital, this being well below the number required.

To further exacerbate the circumstances that exist in the South African context, Swanepoel (2006) described audiology in South Africa as a "culturally and linguistically underrepresented profession" (p.265). The ratio of qualified audiologists remains inadequate for servicing the linguistic needs of South Africa due to only a small number who speak an African language (Uys & Hugo, as cited in Swanepoel, 2006). This is the second difference when compared to the study by de Beer and Chipps (2014), which involved 74.7% of nurses denoted as African. The demographics in the above study infer that the nursing profession can be considered a closer representation to the dominant IsiZulu culture and language domain of patients in KZN. Drennan and Swartz as well as Levin, as cited in Deumert (2010), attested to this stating that nurses are one of the few professions that can speak the African languages of their patients. Language is a leading challenge associated with cross-cultural communication (Llyod & Bor, 2009). The present study therefore aims to determine if the cultural and linguistic competency of FLES audiologists correlate with the cultural and linguistic competency of FLES nurses despite the differences between both professions.

The second limitation that emerges pertains to cultural competence being investigated in one hospital location. The findings from de Beer and Chipps (2014) may have been confounded by several factors eg. the hospital may not have implemented cultural training as opposed to other public hospitals. To improve on the generalizability of results, the present study aims to determine the cultural and linguistic competency of FLES audiologists across all public hospitals in KZN.

The third limitation of the de Beer and Chipps (2014) study relates to the nature of self-rated cultural competency. This method allowed the nurses to reflect on their cross-cultural knowledge, skills and behaviour (de Beer & Chips, 2014). However, the method of self assessment has been criticized in the literature. Breidert and Fite (2009) reviewed the prospect of self assessment for the purpose of training, and noted that dental students overestimated their competence levels when compared to the evaluated performance marks from instructors. Zeidner, Mathews and Roberts (2009) agreed, stating that self-rated competencies weakly resemble the objective measures and ratings provided by other individuals. Although the IAPCC-R has been regarded a reliable tool in the realm of cultural competency and has been utilized in several studies (Poirier, Butler, Devraj, Gunchup & Santanello, 2009; Aragaw, Yizsaw, Tetemke & Amlak, 2015; Govere, Fioravanti, & Tuite, 2016), a secondary source of comparison for cultural competence may prove to be beneficial in obtaining an accurate representation of competency levels. Martella, Nelson, Morgan and Marchand-Martella (2013) define triangulation as the gathering of data from multiple sources to increase the reliability of results. This suggests that in the present study, the triangulation of FLES audiologists' narratives as well as the perspectives of isiZulu patients will provide a more in-depth understanding of the phenomenon of cultural competency during communication.

While the concept of cultural competency is essential to providing quality healthcare, there is a need to also understand the recommendations documented in the literature regarding achieving it. Betancourt et al. (2003) conducted a study in the United States of America (USA) that focused on incorporating cultural competency to address ethnic inequalities in the health sector. The recommendations from their study emphasized the need for employing diverse cultural groups in the healthcare setting as well as introducing relevant language resources (Betancourt et al., 2003). The issue regarding employment of diverse cultural groups and cultural matching are discussed later in this chapter under the section *Audiologists*

and their role in communication. However, the implementation of language resources is of relevance and will be explored further. The above reviewed studies (Pollozhani et al., 2013; de Beer & Chipps, 2014) have drawn attention to the interconnected concepts of cultural and linguistic competency during communication. Flores (2000) supports the notion by identifying language as a key component of culture that is fundamental to clinical healthcare.

According to Taveras and Flores (2004), language and culture cannot be viewed independently. Elmes (2014) states that individuals belonging to a set culture use language that indicates their cultural beliefs and principles. Wiang (2000) added that individuals of diverse cultures can refer to disparate and unrelated concepts while using the same lexicon, which emphasizes the importance of considering culture in interpreting language. Concurring, Wardhaugh (2002) put forward that with regard to culture and language that "it is not possible to understand or appreciate one without knowledge of the other" (p.220).

The review of selected literature provides a rationale for cultural competence to be achieved in the healthcare setting dominated by cultural diversity, with communication being the central factor in providing cross-cultural care. Appraisal of the body of literature further revealed that there have been no studies that have considered the influence of cultural competency in the field of Audiology, despite communication forming the base of the Audiology profession. The reviewed studies also introduce the interrelated relationship between culture and language.

2.3.3 LINGUISTIC DIVERSITY

Reagen (2002) asserts that language is the primary medium of communication and the highest manifestation of social unity, being the inherent right of each group of people to use its language without restriction" (Mandela, 2001, p. 48). South Africa has 11 official languages, thus highlighting the diversity that exists with regard to its citizens and the need to provide opportunities for its expression in the healthcare setting.

Arguably, communication consists of more than just use of verbal language, with nonverbal language, involving facial expression, adequate eye contact, distance employed, posture and gesture, all contributing to the wider process (Bradford, 2009). There are various critical views regarding the influence of nonverbal language in communication, with Sprecher (2015) noting that it is equally, if not more important, than verbal language. Therefore, the

association between nonverbal language and underlying cultural aspects cannot be overlooked. According to Toomey (2012), people exemplify different nuances of nonverbal language that are influenced by their culture. Cooper and Gosnell (2014) elaborated that in Western culture, eye contact represents attentiveness and honesty. In contrast, Asian, Middle Eastern as well as the IsiZulu culture considers direct eye contact as disrespectful (Rudwick, 2008). It can therefore be postulated that a lack of knowledge regarding the associated nonverbal language of a culture can adversely influence communication in establishing a therapeutic relationship, and ultimately result in poor interaction between the patient and health care professional.

In contrast, Lucas (2014) argued that the above aspects of nonverbal language merely accentuate or compliment use of verbal language in achieving favourable communication but remain secondary in importance to verbal language. Roman (2006) concluded that despite verbal language being the basis needed to convey a message, the subjective nuances of facial expression and body language are important building blocks in the process of communication. From the review of studies, it was therefore deduced that the two key aspects that can be linked to poor communication are: lack of acknowledgement of patient's culture influenced nonverbal language and the inability to converse in patient's first language.

Highlighting the influence of language on healthcare communication, Deumert (2010) conducted a study, using a case study approach, to analyse the language practices that transpire at three hospitals in the Western Cape Province of South Africa. Three data collection tools were utilized namely: staff interviews, interviews with patients and healthcare providers, as well as observation during consultation. The study pertained to the majority of isiXhosa speaking patients accessing healthcare services. isiXhosa is recognised as the second largest language spoken across South Africa, after isiZulu (Statistics South Africa, 2011). The results reported that in the first two hospitals, 98% of English and Afrikaans speaking healthcare providers encounter IsiXhosa patients on a daily basis (Deumert, 2010). This clearly illustrates the linguistic mismatch between healthcare providers and patients. During staff interviews, concerns regarding their ability to provide equitable services in the presence of a language barriers were strongly raised (Deumert, 2010).

Although cross cultural and cross linguistic communication remains a challenge internationally, Deumert (2010) concluded that the public health system of South Africa has

failed to make progress in the last 10 years regarding equitable service delivery. Barriers to communication resulting in inequality are however, more visible in the South African context against our history of apartheid and oppression. Deumert (2010) adds that addressing concerns around the language barrier should be considered as an important factor to improving service delivery. Determining the linguistic competency of FLES audiologists in the public sector will be a step forward in addressing the existing language barriers. Bhattacharya, Hyde and Tyde (2013) agreed that by evaluating competency levels, individuals become aware of their level of skills in relation to the competency requirements of the institution. In public hospitals, the Patients Rights Charter serves as such a competency requirement guide, which all healthcare professionals must abide by. It states that patients have the right to healthcare and health information in a language that they understand (National Department of Health: Patients Rights Charter, 2007). However, it is presently unknown whether FLES audiologists are meeting the required competency level needed to provide services. Therefore, evaluating the level of IsiZulu linguistic competency in FLES audiologists will allow for gaps to be identified or strengths to be acknowledged from which viable recommendations can be made. Evaluation followed by constructive feedback can result in "professional self-awareness which is the precursor to encouraging change" (Rogers, 2015, p.289).

The prospect of encouraging change is essential in light of the consequences of poor communication during healthcare, the consequences of which, between patients and healthcare providers, are well documented in the literature (Ha & Longnecker, 2010). Van den Berg (2016) further identified patient-centered care being compromised due to the presence of language barriers, therefore, substantiating the need to delve further into the linguistic diversity of South Africa. Despite the existence of 11 official languages, data obtained from the 2011 Census revealed that isiZulu is the most dominant language of South Africans, being spoken by 22.4% of the total population, which is equivalent to 11.6 million people (Statistics South Africa, 2011). Furthermore, isiZulu is a regional language dominating in KZN, being the first language of a staggering 77% of the provincial population. Therefore, considering the study context of KZN and the widespread use of IsiZulu, there is a need to explore further regarding the formation and characteristics of the language.

2.3.3.1 The isiZulu language

Zulu is one of five Nguni languages, belonging to the Southern Eastern Bantu languages, concentrated largely in KZN, Gauteng, Mpumalanga and the Free State Provinces (Statistics South Africa, 2011). "The Zulus are the single largest African group in South Africa" (Minahan, 2002, p. 2115). The Nguni prefix isi- indicates both language and culture (Strazny, 2013), further emphasizing the inter-relationship between the two. Xhosa is a sister language of Zulu and is widely spoken in the Eastern and Western Cape region (Statistics South Africa, 2011). According to Niesler et al. (2005), Zulu and Xhosa present with many similarities regarding morphological and phonemic structure.

Gleimius et al. (2003) describe isiZulu as a tonal language; hence pitch plays an important role in deriving the lexical meaning of words. Classe (2000) elaborates that words presenting with identical phonetic structure can significantly differ in meaning depending on the tone utilized, this being similar for verb tenses and nouns (Classe, 2000). Therefore, one of the primary differences between isiZulu and English is that the former is tonal and the latter is stress-timed (Classe, 2000).

In addition, isiZulu noun classes are bound by a complex system that is based on the prefix used and grammatical class-gender (Classe, 2000). This implies that the sentence containing the noun will employ the prefix of the noun class throughout the sentence (Classe, 2000). The system of noun classes and grammatical class-gender does not occur in English. Furthermore, isiZulu often utilizes conjunctive orthography, which refers to whole sentences in English being presented as a single word in IsiZulu (Niesler et al., 2005), thus denoting a significant difference in grammar. Classe (2000) adds that the word order in isiZulu is much less rigid in structure than English.

With regard to phonetic differences, isiZulu consists of three click sounds that are dental, lateral and palatal (Niesler et al., 2005), which correspond to the letters "c", "q" and "x" (Gleimius et al., 2003). These click sounds are not found in English. Moreover, the ejection of stop sounds are evident in isiZulu but do not occur in English (Niesler et al., 2005). Voiced and voiceless alveolar lateral fricatives are exclusive to isiZulu, whereas voiced and voiceless dental fricatives are limited to English (Niesler et al., 2005). Furthermore, the syllabic bilabial nasal [m] only occurs in isiZulu and not in English (Niesler et al., 2005). Moreover,

lax vowels, which refers to vowels that are succinct and more centralized, frequently arise in English but are non-existent in isiZulu (Niesler et al., 2005).

With regard to lexicon, Francis, Mahlomahola and Nkoane (2010) stated that the translation of isiZulu words into English, and vice versa, resulted in different meanings from that of the original word. It is reasonable to deduce that the lack of congruency in translated concepts can have adverse effects on communication. Furthermore, not every English word has an equivalent in isiZulu, which can pose a challenge for a First Language English speaker. As an example, the isiZulu lexicon does not have a term for the colour "blue", as known in English (Francis et al., 2010). Moreover, certain terminology in IsiZulu is considered taboo and is forbidden in public conversation. Consequently, "Hlonipha language" is employed, which refers to the replacement of the prohibited word with an alternative euphuism as a mark of respect (Francis et al., 2010). For a First Language English speaker who is not aware when to employ Hlonipha language, communication may come across as offensive, which is particularly unwanted and detrimental in the healthcare setting.

In addition, there are several variations in isiZulu with regard to dialect, based on region occupancy. Four of the primary isiZulu dialects include: Zulu of Zululand, Lala, Qabe and Zulu of Natal (Minahan, 2002). However, Purnell (2012) argued that despite the existence of different dialects of the same language, communication is often not affected. The author goes on to state that accent however can cause misunderstanding (Purnell, 2012). An accent is defined as an array of speech characteristics that an individual transmits from one language into a different language (Bleile, 2015). It is rational to then assume that the accent of First Language English speakers can impact on communication with isiZulu patients. Bleile (2015) supports this notion stating that the lasting established pronunciation patterns of English have a high probability of assertion when utilizing a second language. Bista and Foster (2016) adds that using a new language is more than just use of vocabulary and grammar but that accent can adversely impinge on communication and reduce the confidence to embrace a different language.

In view of the discussion surrounding the complexity of the isiZulu language, it is evident that there are many differences between isiZulu and English. Such differences emerge across all aspects of language, including: morphology, phonetics, lexicon as well as dialect. These differences have implications for a First Language English speaker attempting to utilize the

isiZulu language. It can further be reasonably deduced that these differences may pose as a challenge for a First Language English audiologists during communication with isiZulu patients. Nonetheless, the Constitution of South Africa Bill of Rights, as cited in Currie and Waal (2013) certifies patients with the irrevocable constitutional right to receive healthcare services in their first language.

2.4 AUDIOLOGISTS AND THEIR ROLE IN COMMUNICATION

The importance of effective language use during communication relates specifically to the profession of Audiology. Audiologists evaluate, diagnose and manage hearing loss and balance disorders in adults and the paediatric population (Gelfand, 2009). Clinical audiology refers to studying hearing as an element in the human communication system (Kidd et al., 2003). Despite the direct correlation between communication and the field of Audiology, Penn (2007) reported that there is a discrepancy between the ratio of qualified audiologists to the number of linguistically diverse patients. The University of KwaZulu-Natal (UKZN) is the only tertiary institution in the Province that offers a 4 year degree in Audiology. Table 2.1 below highlights the linguistic profile of Audiology graduates over the last three years from the KZN Health Database. The table clearly indicates that despite isiZulu being the dominant language spoken in the province, the majority of qualified audiologists in KZN are First Language English speakers. These statistics therefore support the statement made by Penn (2007).

Table 2.1 Linguistic profile of newly qualified audiologist graduates in KZN

Percentage of newly qualified Audiologists in KZN	**Year**		
	2014	**2015**	**2016**
who are isiZulu speaking	27%	41%	38%
who are First Language English speaking (FLES)	73%	59%	62%

Several studies have focused on the influence of language barriers relating to the provision of services for specific professions (Bischoff et al., 2003). From this review, it was evident that there is a scarcity of research that considers the linguistic barriers faced in the profession of Audiology. It may be debated that all health disciplines encounter linguistic mismatch between themselves and their patients, however, the type of communication management provided by audiologists is essentially linguistically based. Therefore, audiologists are uniquely influenced by the multilingual diversity in South Africa (Wemmer, 2007).

A fairly innovative solution implemented internationally describes the use of "language and ethnic matching" to combat the presence of language and cultural barriers in an increasingly diverse era. Language and ethnic matching refers to assigning a healthcare provider with a similar language and culture to that of the patient (Srivastava, 2007). With regard to ethnic/cultural matching, several controversies have been noted in terms of its usefulness. Gunaratnam, as cited in Fontes (2012) stated that ethnic matching does not necessarily guarantee a quality consultation and that power imbalances may still occur. Good, Willen, Hannah, Vickery and Park (2011) identified that patients may feel anxious about being judged by healthcare providers of the same culture. Such anxiety can therefore inhibit willingness to disclose information and ultimately affect accurate and diagnosis as well as appropriate treatment.

In comparison to the uncertainties surrounding ethnic/cultural matching, research on language matching is more coherent (Shally-Jensen, 2014). Meyer and Zane (2013) stated that positive treatment outcomes are derived from language matching. Furthermore, Griner and Smith (2006) conducted a meta-analysis of 76 studies, with the findings revealing that the effectiveness of intervention was enhanced and two times greater in language matched therapist-patient dynamics as opposed to unmatched. The results from Griner and Smith (2006) undoubtedly advocate for the notion of language matching in the healthcare system. However, applying language matching in a third world country such as South Africa can be challenging.

According to George, Atujuna and Gow (2013) there is an estimated shortage of 80000 healthcare professionals in the public sector in South Africa. Exacerbate by the lack of human resources in healthcare, remains the issue of linguistically diverse healthcare graduates (as illustrated in Table 1.1.). It is reasonable to deduce that language matching in the South African public sector would thus be unrealistic. The argument above strengthens the need for the present study based on the premise that majority of graduating audiologists in KZN are FLES and therefore language matching to the dominant isiZulu public sector patients would be impractical. This study however suggests that despite FLES audiologists not sharing the primary language of KZN, there is a need to ensure that their cultural and linguistic competency in isiZulu is adequate to delivering equitable, quality services. The study therefore aims to capitalize on the human resources that are available, having considered the

South African context, by advocating for cross-linguistic and cross-cultural communication opposed to language matching.

Pascoe, Rogers and Norman (2013) concurred that the profession of Audiology is a fairly new and despite communication forming the basis of the profession, there is often a disparity between audiologists and patients with regard to language, which can result in impenetrable barriers in service provision. The above findings support the need to investigate communication between FLES audiologists and culturally and linguistically diverse patients. Contrary to these findings, Khan et al. (2009) highlighted that in comparison to other professions, community service audiologists were the least debilitated by language barriers, the reasons for which were not provided. In comparison to the other disciplines, the profession of Audiology requires mandatory equipment in service provision. Therefore, a potential reason may be that audiologists possibly perceive that utilization of equipment diminishes the need for patient communication. Levinson and Pizzo (2011) support this notion by acknowledging that despite living in an era in which health care professionals theoretically oppose conforming to the Medical Model, advancements in technology for diagnosis and treatment can easily take precedence over the basic skill of patient communication. Hence, there is a shift toward rigid medically influenced treatment as opposed to holistic patient care.

Luterman (2006) confirmed consenting to the Medical Model in audiological assessment and treatment, which as earlier described, centers on illness deriving from a pathogenic origin (McLeod, 2008). The Medical Model approach is known for utilization of diagnostic criteria with lack of consideration toward psychosocial patient factors in the process of diagnosis (Waddell & Burton, 2004). Luterman (2006) has since changed his approach, having realized the importance of communication in audiology. Crandall, as cited in Luterman (2006), stated that counseling is not evident in the training and practice of many Audiologists and although equipment is used to perform core duties, this should not be a substitute for adequate patient communication. This is supported by the scope of practice of Audiologists, which clearly expands on the role of providing counseling with regard to the psychosocial elements of hearing impairment to develop communicative competence (ASHA, 2011).

The findings revealed by Khan et al. (2009) must therefore be considered carefully because although community service audiologists reported being least affected by language barriers,

there was limited information regarding the communication strategies employed by FLES audiologists in addressing the needs of culturally and linguistically diverse patients. Moreover, the above study was quantitative and thus may have been limited in gathering an in-depth picture of such practices. The present study will therefore consider a mixed methods design that incorporates both a quantitative as well as qualitative component. The qualitative component will allow for the expansion of FLES audiologists narratives to further investigate and address the gap of knowledge regarding the communication mechanisms of audiologists in a multicultural and multilingual context.

Internationally, Grenness et al. (2015) investigated verbal communication that occurred between audiologists and patients across the duration of diagnosis, treatment and initial consultation. The study focused specifically on the quantity, ratio and type of verbal statements between audiologists and patients. The results revealed that patient-centered communication was seldom evident in the 62 audiological consultations observed. This study emphasized that establishing rapport with patients was frequently overlooked, with little consideration for the patient's psychosocial needs. It was further reported that the majority of communication was asymmetrical in favour of the audiologist. Therefore, referring to the findings from Khan et al. (2009), it can be argued that audiologists felt least affected by language barriers, possibly due to a lack of encouraging patient expression. Secondly, the results revealed that for patients diagnosed with hearing loss, hearing aids were advocated for in 83% of the consultations, with additional options, such as communication modes and schooling options, seldom provided with limited patient involvement (Grenness et al., 2015). The authors recommended future research to investigate the nature of audiologist's communication on patient outcomes, therefore supporting the present study.

Although the results from the reviewed study indicated insufficient communication between audiologists and patients, the study lacked information regarding the factors that contributed to poor patient-centered communication. This has implications for the present study, as it prompts an investigation of the factors that affect effective communication, with specific consideration for the South African multicultural and multilingual context.

2.5 PATIENT AND CLINICIAN RELATED FACTORS

Several international studies (Gordon et al., 2006; Virnig et al., 2002) have explored the factors that affect and influence equitable heath care communication involving diverse patient populations. This includes three patient related factors (informed consent, trust and collaboration) as well as three clinician factors (empathy, superiority and attitude); further emphasizing that effective communication in the healthcare setting is twofold.

2.5.1 Informed consent

Informed consent is the first aspect of initiating assessment and treatment, and refers to the ability of the patient to understand the nature of the service to be provided and thereby provide permission to commence. Sedation during Auditory Brainstem Response (ABR) testing as well as during invasive audiological procedures, such as ear mould impression taking, requires written informed consent from the patient (Stach, 2010). Furthermore, ASHA (2011) stipulates that obtaining informed consent during cerumen management and ear syringing is a legislative requirement. This is to ensure that the patient is knowledgeable regarding the benefits, hazards and potential complications of such procedures. The importance of informed consent no longer forms a polite gesture offered by the healthcare professional, and instead is a mandatory procedure as reflected in the Patients' Rights Charter (National Department of Health, 2007). An international study in Texas investigated the procedure of informed consent at clinics in the absence of formal interpreters. The results revealed that linguistically diverse patients were consistently deprived with regard to the aspects of informed consent, namely: voluntariness, alternative options provided and sufficient information (Hunt & deVoogd, 2007). The authors concluded that diverse patient populations, specifically in the presence of language barriers, are often neglected in the value and wealth of information required to be "genuinely informed" (Hunt & deVoogd, 2007, p. 599). Taking into account the invasiveness of the audiological procedures outlined above, the findings from Hunt and deVoogd (2007) warrant it necessary to determine the process of informed consent between FLES audiologists and isiZulu patients.

2.5.2 Trust

Related to the willingness to provide informed consent to healthcare services is trust that the clinician will perform the duty, which the patient has agreed to, to the best of their ability. Trust is therefore the extent of belief and dependability one person has in another individual, which is an important factor in healthcare communication. Rowe and Calnan (2006) explain

that interpersonal trust is a prerequisite when dealing with sensitive disability issues. Patients rely on the health care professional's competency to deal with and understand the complexity related to disability. Specifically in the rehabilitation process, trust is placed on the audiologist to provide the best options to manage hearing loss. This may include: communication mode and options, type of assistive device, school placement and support services (Tye-Murray, 2014). However, Cartwright and Shingles (2011) identify that self-disclosure and trust can be difficult for culturally diverse individuals, such as isiZulu patients, who are often unfamiliar with Western clinical approaches.

Betancourt et al. (2002) conducted a systematic review regarding the socio-cultural factors that present as barriers to healthcare. The authors concluded that the presence of linguistic barriers during clinical interactions adversely affected patients' ability to trust the healthcare professional rendering the service. Purnell (2012) concurred stating that ineffective communication due to the presence of language barriers hinders the ability to develop rapport with the patient, which is a crucial component in establishing trust. The ability of a FLES audiologist to gain the trust of an isiZulu speaking mother during routine hearing screening may prove fundamental to the early identification and intervention of hearing loss in her child. Linguistically diverse patients often wait until a medical problem becomes serious rather than attempt to describe their symptoms to a healthcare professional who speaks another language (Rivadeneyra, Elderkin Thompson, Silver & Waitzkin, 2000). The importance of FLES audiologists developing trust with linguistically diverse patients is clearly evident in order to avoid delayed management of hearing loss. Furthermore, specific to the South African context, the aftermath of apartheid may still influence the levels of trust that isiZulu patients have with their FLES audiologist. Mor-Barak (2015) supports this, identifying Africans as one of the marginalised groups during apartheid. It can therefore be realised that trust is an essential factor that needs to be explored during cross-cultural and cross-linguistic communication in the provision of audiology services.

2.5.3 Collaboration

Stemming from trust is willingness to collaborate, which can be referred to FLES audiologists and isiZulu patents working towards a common goal. Shared decision-making has been associated with increased levels of knowledge gain by patients, increased confidence regarding the decisions taken and enhanced patient participation (Stacey et al., as cited in Elwyn et al., 2012). Despite this, Angelelli (2004) identified that healthcare

professionals are less likely to encourage patients, who have low levels of English proficiency, to assist in decision-making. A possible reason for this may be due to healthcare professionals avoiding communication breakdown that may inevitably occur with linguistically diverse patients.

Patients' participation is crucial in the management of hearing loss, which has been identified as the "third most common chronic health problem" (Hales, 2010, p. 459). Hearing aids are assistive devices that aim to provide amplification and improve audibility of sounds (Bluestone, Stool, Casselbrant, & Dohar, 2003), therefore one of the primary roles of the audiologists is to provide information on the function and use of the assistive device (Valente et al., 2008). However, patient involvement in the hearing aid process is key to ensuring that maximum benefit is received. Martin, Williams, Haskard and DiMatteo (2005) concur stating that a strong association exists between patient participation and rate of adherence. An international study by Street, Gordon and Haidet (2007) reported that the presence of ethnic and cultural differences often resulted in poor patient participation. Consequently, this could lead to poor compliance in the use of the assistive device, poor patient satisfaction and ultimately an increase in burden of disease. It is clearly evident that the components of shared decision-making and patient participation needed in a collaborative approach are essential audiological service delivery. This makes it necessary to determine the degree of collaboration that occurs between FLES audiologists and isiZulu patients.

2.5.4 Empathy

The fourth important factor in the patient-health care professional relationship is empathy. According to Hirsch (2007), empathy refers to the ability to identify and understand other individual's feelings. A review of literature revealed several opposing views regarding the role of clinical empathy. Zinn, as cited in Hirsch (2007), stated that it is impractical for health care professionals to legitimately empathize with each individual patient, arguing that to do so would be emotionally exhausting and hinder objective decision-making. This view has been disregarded, with recent evidence indicating that the presence of clinical empathy has been positively linked to enhanced therapeutic outcomes (Jani, Blane & Mecer, 2012). According to Mueller, Bentler and Ricketts (2014), acceptance of hearing loss often follows the five stages of grieving, as put forward by Kubler Ross. Mothers who have been informed that their neonate has been diagnosed with deafness can have periods of denial, anger,

bargaining and depression (Eisenberg, 2016). Hearing loss can evoke overwhelming fears regarding the uncertainty of the impairment and the steps in rehabilitation (Vliet, 2005).

Brooks (2013) asserts that one of the most imperative counselling roles of the audiologist is to express empathy to the patient and significant others. However, Krebs, as cited in Burges et al. (2007) stated that individuals tend to display less empathy towards those who they perceive to be dissimilar, which may result in unconscious prejudice and stereotypes. These findings suggest the need to explore whether FLES audiologists unintentionally display reduced empathy toward isiZulu patients. The results derived from the present study may prove useful in strengthening cross-cultural and cross-linguistic communication in the audiological setting.

2.5.5 Professional superiority

The fifth factor focuses on healthcare professional superiority. Aliotta (2015) describes the term professional superiority on the premise that healthcare providers are learned and experienced in areas of health whereas patients often possess reduced knowledge in comparison. Consequently, the healthcare provider tends to be superior, which creates "hierarchies of power" (p.1). May (2013) agrees that it is undeniable that healthcare professionals appear authoritative in knowledge and expertise, however Virnig et al. (2002) reported that this gap tends to substantially broaden in the presence of diverse patient populations. Saha et al. (2003) investigated the patient-healthcare professional relationship and the racial disparities in service delivery. The results revealed that culturally and linguistically diverse groups reported inferior quality interactions (Saha et al., 2003), which imply the need to investigate the type of role that FLES audiologists assume when encountering isiZulu patients.

2.5.6 Attitude

Lastly, attitude is a factor that influences the healthcare professional's stance on empathy and superiority, and can be described as the manner or approach to an entity (Wright, 2004). Maesschalck, Willems, Maeseneer and Deveugele (2012) reported attitudes of healthcare professionals towards diverse patients, based on perceptions, as a leading attributer to communication breakdown in many consultation settings. It can therefore be deduced that attitude is directed by perceptions and perceived expectations. Guirdham (2011) agreed

stating that the expectations regarding how diverse individuals will respond to a person will influence their communicative behavior and attitude toward the interaction.

Keeton (2013) explored the expectations of audiology clinical tutors in supervising culturally and linguistically diverse students. The results revealed that clinical tutors maintained a positive attitude with higher expectations and positive attributes for white students (Keeton, 2013). In contrast, African students were thought to have the "least strengths and the most weaknesses" (Keeton, 2013, p. 54), which inferred a negative attitude. These results are of relevance as African isiZulu patients remain the focus in cross-cultural and cross-linguistic communication in the present study. The context of audiology clinical tutors runs parallel with audiology healthcare clinicians, as both professions are actively involved in the communicative process of imparting information in order to achieve prioritized outcomes, namely education and health respectively. The findings from this study suggest that FLES audiologists may also experience a negative attitude, with lowered expectations of isiZulu patients, which can impede equitable service delivery. Based on this argument, it is necessary to determine the attitudes of FLES audiologists in servicing isiZulu patients.

While, several international studies have demarcated the factors that impose on equitable healthcare communication involving diverse patient populations, there is limited research pertaining to the South African context, hence the need to establish the interaction of such factors in our multicultural and multilingual context. Furthermore, the profession of audiology resonates with assisting patients in improving communication in the presence of hearing impairment. Therefore, as professionals central to enabling communication, it is of importance that effective communication is first achieved between the audiologist and the patient, thereby further supporting the present study.

2.6 COMMUNICATION STRATEGIES

In conjunction with identifying the factors that may affect communication between FLES audiologists and isiZulu speaking patients, there is a need for in-depth understanding of what transpires in hospitals across KZN with regard to communication strategies in addressing such factors. This need has been recognised internationally as The Health Research and Educational Trust, allied with the American Hospital Association, conducted a national survey across hospitals to obtain information regarding service delivery to multicultural and

multilingual patients (Hasnain- Wynia et al., 2006). Their objective was to gain insight into the procedures and resources needed to treat culturally and linguistically diverse patients, and utilize such information to engineer change with policy makers, health service providers and hospital management. Despite South Africa being denoted for having a kaleidoscope of patient populations, there is scarcity of information pertaining to the communication strategies being used.

The concept of communication strategies is closely related to the Compensation Theory of Problem Solving. According to Hayes, as cited in Riding and Rayner (2000), the theory involves an individual encountering a challenging external situation. The challenge arises due to deficiency in the individual's skill, knowledge or competency. As a result, the individual utilises compensatory strategies in attempt to resolve the challenge (Riding & Rayner, 2000). this can be applied to healthcare. This can be applied to healthcare, however despite the vast body of literature documenting cultural and linguistic challenges encountered by healthcare professionals, there is little known about the communication strategies that are used when faced with such challenges. In light of the above, there is a need to explore the current communication strategies that are being employed by FLES audiologists when encountering isiZulu patients. The argument for this is strengthened by the unique challenges that hearing impaired patients face, particularly regarding communication. Patients with hearing loss are characterized as a population mostly likely to experience communication breakdown due to the nature of their hearing impairment (Montano & Spitzer, 2013). The ability to hear is "fundamental to communication, socialization and language" (Berger, 2003, p.6). The complexity of hearing loss coupled with the presence of language barriers can be detrimental to assessing and managing the hearing impaired patient. The above rationale supports the need to explore the communication mechanisms that are being employed by FLES audiologists, in terms of their practicality and effectiveness, in addressing the needs of isiZulu patients.

On a superficial level, interpreters are often recommended as a communication strategy and solution to accommodate culturally and linguistically diverse patients. Kale and Syed (2009) investigated the use of interpreters in public health services in Norway, using a quantitative study that involved distribution of a survey to medical staff. The findings revealed that interpreter use was irregular and dependant on the healthcare professional's preference (Kale & Syed, 2009). Concerns regarding the interactions and qualifications of interpreters also

emerged in the results (Kale & Syed, 2009). The authors recommended creating awareness in public health care regarding the importance of interpreters during cross-cultural and cross-linguistic communication. Based on the above, the present study aims to investigate the use of interpreters by FLES audiologists. Although there is a paucity of information regarding the feasibility of employing interpreters at health care institutions in the rural South African context, the findings of the present study may be useful in creating awareness and influencing policy regarding the importance of interpreter services at public hospitals in KZN.

In contrast, Jacobs, Chen, Karliner, Agger-Gupta and Mutha (2006) argued that studies investigating the influence of interpreters in the health care system often neglect to overtly define the type of interpreter being used. The level of interpretation differs when provided by a professional interpreter as opposed to an informal interpreter, such as a family member or another patient. The lack of consensus in the type of interpreter used at institutions will result in varying standards in the provision of information. In addition to challenges associated with the type of interpreter used, ambiguity also exists regarding the role of the interpreter. Sleptsova et al. (2014) conducted a widespread literature review on the role of the Health Care Interpreter in the clinical environment, and concluded that there was a general lack of understanding regarding the role of the interpreter. Sleptsoya et al. (2014) recommend that for cross-cultural and cross-linguistic interactions to improve, the function of the interpreter must be explicit in order for goals to be achieved. Hence, there is a need to explicitly define such challenges in the audiological setting in order to implement alternative solutions. Furthermore, despite the implementation and utilisation of interpreters appearing theoretically ideal, there is a paucity of information regarding the feasibility of employing interpreters at health care institutions in the rural South African context.

Kilian, Swartz and Joska (2010) evaluated the competence of six ad-hoc interpreters in a psychiatric hospital in South Africa, who translated English psychiatric terminology into Xhosa. The results revealed that none of the interpreters had received formal training, which adversely affected their familiarity with psychiatric terminology and therefore the accuracy of the translations may have been compromised (Kilian et al., 2010). The authors declared that the interpreters may be incompetent in their ability to serve as the mediator in cross-linguistic interactions. However, the focus on only linguistic translation, as a measure of the interpreter's competence, can be regarded as a limitation in this study. WHO (2007) emphasize that the complex process of interpreting should not only consider language but

also incorporate cultural and contextual factors, which was not evident in the above study. The theoretical framework for the current study clearly depicts the intertwined relationship between culture and language in the broad concept of communication. The use of interpreters as a communication strategy for FLES audiologists will therefore be investigated using the parameters of both culture and language.

Although the consideration of both culture language remains crucial during interpreting in healthcare, the above elements are distinct, more so to the profession of Audiology. Patients with hearing loss can also belong to what is known as a Deaf Culture. Haynes, Moran and Pindzola (2012) describe Deaf Culture as individuals who use sign language as their primary form of communication and who hold a set of united beliefs that do not constitute their hearing loss as a disability. Quereshi, Khan and Quereshi (2015) conducted a cross-sectional study that focused on hearing impaired children from both the private and public sector in Pakistan. The results from the study revealed that 93% of participants reported that their healthcare professionals did not understand sign language (Quereshi et al., 2015). Furthermore, all participants (100%) indicated that sign language interpreters where not available or provided during consultation (Quereshi et al., 2015), and although the study did not provide reasons for this, it may have been due to lack of resources as Pakistan is considered one of the poorest countries in the world (Saideman & Ayers, 2012). Developing countries often experience a shortage of human resources (Budhwar & Debrah, 2013), which can be applied to South Africa in terms of the availability of qualified sign language interpreters. However, the gap in literature regarding the availability of sign language interpreters in public hospitals in South Africa, makes it difficult to comment on the local situation.

With the focus being on the isiZulu language and culture, the researcher is aware that sign language is beyond the scope of this study. However, it can be argued that the above findings do bare relevance to the present study. Many Deaf children are accompanied by normal hearing parents/ caregivers, who in the KZN context, are isiZulu speakers. Mestherie (2002) supports this stating that “only 10% of Deaf children are born to Deaf parents” (p.28). Managing a child with hearing loss, irrespective of their communication modality, also requires collaboration with the parents. Parents of children, who present with severe to profound hearing loss, often require counselling and training regarding the nature of involvement that is needed to benefit the child (Marschark et al., as cited in Haynes, Moran &

Pindzola, 2012). Taking the above into account, the study will investigate the availability of formally trained isiZulu interpreters at public sector hospitals in KZN.

Apart from interpreters, the use of written handouts and Google Translate has also been proposed as a means of overcoming linguistic barriers in the healthcare setting. A written handout is referred to as a document that contains written information or key words about a specific topic. An example of such a document is a pamphlet, which may provide information on a specific conditions, such as red flags for ear infections or how to cope with hearing loss. Furthermore, in keeping with the recent uptake of technology, Google Translate is an application that offers translation of text and speech from one language into another. Presently, there is limited information available regarding FLES audiologists use of written handouts and Google Translate, which warrant it necessary to evaluate the above communication strategies.

2.7 THE PERSPECTIVES OF PATIENTS DURING CROSS CULTURAL/CROSS LINGUISTIC COMMUNICATION

In order to effectively investigate communication between FLES audiologists and isiZulu patients in the provision of service delivery, it is necessary for the patients' perspectives to be considered. This resonates with the model of communication, which places emphasis on the act of communication being a two way process (Pilkington, 2016). Several studies have investigated diverse patients' views regarding specific healthcare disciplines (Courtenay, Carey, Stenner, Lawton & Peters, 2011). However, there is a paucity of studies that consider the perspectives of culturally and linguistically diverse patients in the field of audiological service delivery, therefore supporting the inclusion of this component in the present study.

An international study focused on understanding language barriers from the perspective of Hispanic patients, with the results revealing themes of dread and frustration, as well as concerns regarding the quality of interpreters (Sanchez-Campos, 2004). Negative emotions experienced by patients can adversely influence their desire to access healthcare, which can result in increase in an increase in the burden of disease. The above study highlights the need to gain information regarding the feelings of isiZulu patients when communicating with FLES audiologists.

Apart from psychosocial factors, Jacobs et al. (2006) recognized that patients desire their healthcare professional to enquire and acknowledge their cultural beliefs. Richard, Street and Haidet (2010) conducted a study that considered the perspectives of both patients and physicians. Their study investigated the physician's levels of awareness regarding their patient's health related beliefs. Emphasis was placed on the communicative relationship between physicians and patients that would enable an understanding of patient's perspectives towards illness. The cross-sectional, observational study was conducted on 207 patients as well as 29 physicians from 10 outpatient clinics in USA. The results revealed that physicians assumptions of patients health related beliefs significantly differed ($p<0.001$) from the patients actual beliefs (Street & Haidet, 2011). The physicians also believed that their patient's health related beliefs were congruent with their own, which was not the case, particularly for patients who differed in race (Street & Haidet, 2011). The beliefs of African-American ($p=0.013$) and Hispanic patients ($p= 0.075$) were significantly mismatched from their physicians (Street & Haidet, 2011). These findings support the notion that different cultures influence the way in which healthcare is viewed, thereby supporting the need to investigate the beliefs of isiZulu patients regarding audiological services.

The patients who participated in Street and Haidet's (2011) study, as well as in several studies reviewed, comprised only of out-patients. An out-patient is classified as an individual who attends a health institution for diagnosis and treatment without staying overnight, often receiving a single once-off consultation (Bhattacharaya, Hyde & Tyde, 2013). In contrast, in-patients are those who require ongoing healthcare and therefore occupy a bed in a health institution (Bhattacharaya, Hyde & Tyde, 2013). In-patients are thus confined to a ward and often receive treatment daily over a period of time. It can therefore be deduced that the communication that transpires between a healthcare professional and an out-patient may differ from that of an in-patient, in terms of length, frequency and possibly quality of communication. The present study aims to further investigate this by including the perspectives of both out and in-patients regarding communication during audiological service delivery.

Further to this, Claramita, Nugraheni, Dalen and Vleuten (2013) evaluated doctor-patient communication in South East Asia. Twenty doctors and 20 patients were interviewed at out-patient clinics and two out-patient hospitals in Indonesia. The findings from the study revealed that patients were overall dissatisfied with the communication that transpired with

their healthcare professional. The communication style employed by doctors was considered to be "one-way communication", which refers to the dominancy of the healthcare professional during consultation (Claramita et al., 2013, p.15). According to Claramita et al. (2013), a high volume of patients and poor communication skills were some of the reasons cited for the use of the one way communication style. Having previously discussed the importance of communication in the profession of audiology, there is a need to determine the perspectives of isiZulu patients regarding the type of communication style encountered during audiological service delivery.

2.8 CONCLUSION

Chapter two provided a theoretical framework for the present study supported by relevant literature. The importance of effective communication within a patient-centered care approach was discussed. Furthermore, the importance of effective communication in the profession of audiology was brought to the forefront. The chapter discussed the various factors that influence effective communication in the South African context, namely: geographical location, cultural diversity and linguistic diversity. Furthermore, the influence of patient related factors (informed consent, trust and collaboration) as well as clinician related factors (empathy, superiority and attitude) on communication were reviewed. Thereafter, discussion of communication strategies ensued. The chapter concluded by delving into patients perspectives on cross-cultural and cross-linguistic communication. The following chapter will highlight the methodology of the study.

CHAPTER 3. METHODOLOGY

3.1 INTRODUCTION

Abrahams (2011) defined research as a structured and purposeful investigation, aimed at discovering, interpreting and revising knowledge on diverse aspects of the world. Cooper and Schindler (2003) state that in order to implement effective solutions to a problem, researchers are required to utilize appropriate methodologies. This chapter describes the methodology used in the current research study.

3.2 AIM AND OBJECTIVES

The aim of the study was to explore communication between First Language English speaking (FLES) audiologists and their isiZulu speaking patients, at public sector hospitals in the KwaZulu-Natal (KZN) Province, South Africa.

In order to achieve the above aim of the study, the following objectives were carried out:

3.2.1 To describe FLES audiologist's perceived cultural and linguistic competency in isiZulu during the provision of audiology services.

3.2.2 To determine the factors that influence effective communication between FLES audiologists and their isiZulu patients

3.2.3 To describe specific communication strategies used by FLES audiologists when providing services to isiZulu patients.

3.2.4 To describe FLES audiologists' recommendations regarding communication in addressing isiZulu patients' needs.

3.2.5 To describe isiZulu patients' perspectives regarding communication with their FLES audiologists.

3.3 STUDY DESIGN

Tshuma (2010) defines a research design as a master plan specifying the methods and procedures for collecting and analysing information. A concurrent triangulation mixed design (Creswell, 2003) with both quantitative and qualitative methods for data collection and analysis was used to achieve the above aim and objectives.

Mixed methods are often implemented in attempt to counteract the perceived limitations of discrete methods (Barbour, 2008). “Social experience and lived realities are diverse; consequently our understandings are impoverished and inadequate if we view these occurrences only with a single continuum” (Mason, as cited in Barbour, 2008, p.155). As a result, a mixed methods design allowed for collecting several forms of data from various data sources that aided in fully understanding the research problem.

According to Terrell (2012) a concurrent triangulation mixed design involves concurrent quantitative and qualitative data collection phases with the option of priority placed on either approach. Data from the phases are integrated at the level of analysis or interpretation to fully answer the research question (Terrell, 2012). Concurrent triangulation designs are often implemented for the purpose of cross validation within a study (Terrell, 2012). Figure 3.1 provides an illustration of the concurrent triangulation design that was used in this study.

The study aims to explore communication, which is a complex, multidimensional phenomenon (Margaret, Kirubaker & Kumutha, 2012). Hence a mixed method design was well suited offering both quantitative and qualitative data that aided in providing a comprehensive understanding of the multifaceted research question (Creswell, 2008). According to Bennett (2003) quantitative research involves the use of statistical techniques to analyse data. The rationale for including quantitative research in the present study was based on the principle of obtaining data through structured methods such as a questionnaire (Thakur, 2005). According to Henning, Van Rensburg and Smit (2005) qualitative research refers to the type of investigation in which the characteristics of a phenomenon are explored for enhanced understanding and clarification. Thakur (2005) added that qualitative research utilises the comparative method that delves into the origin and system of development of a society and its counterparts. Furthermore, qualitative research is context bound (Creswell, 2003). Qualitative methods were included in this study because there was a need to have an in-depth understanding of the aspects that influence effective communication. This included the attitudes and perceptions of FLES audiologists regarding cross-cultural and cross-linguistic practices, which were best explored through qualitative methods.

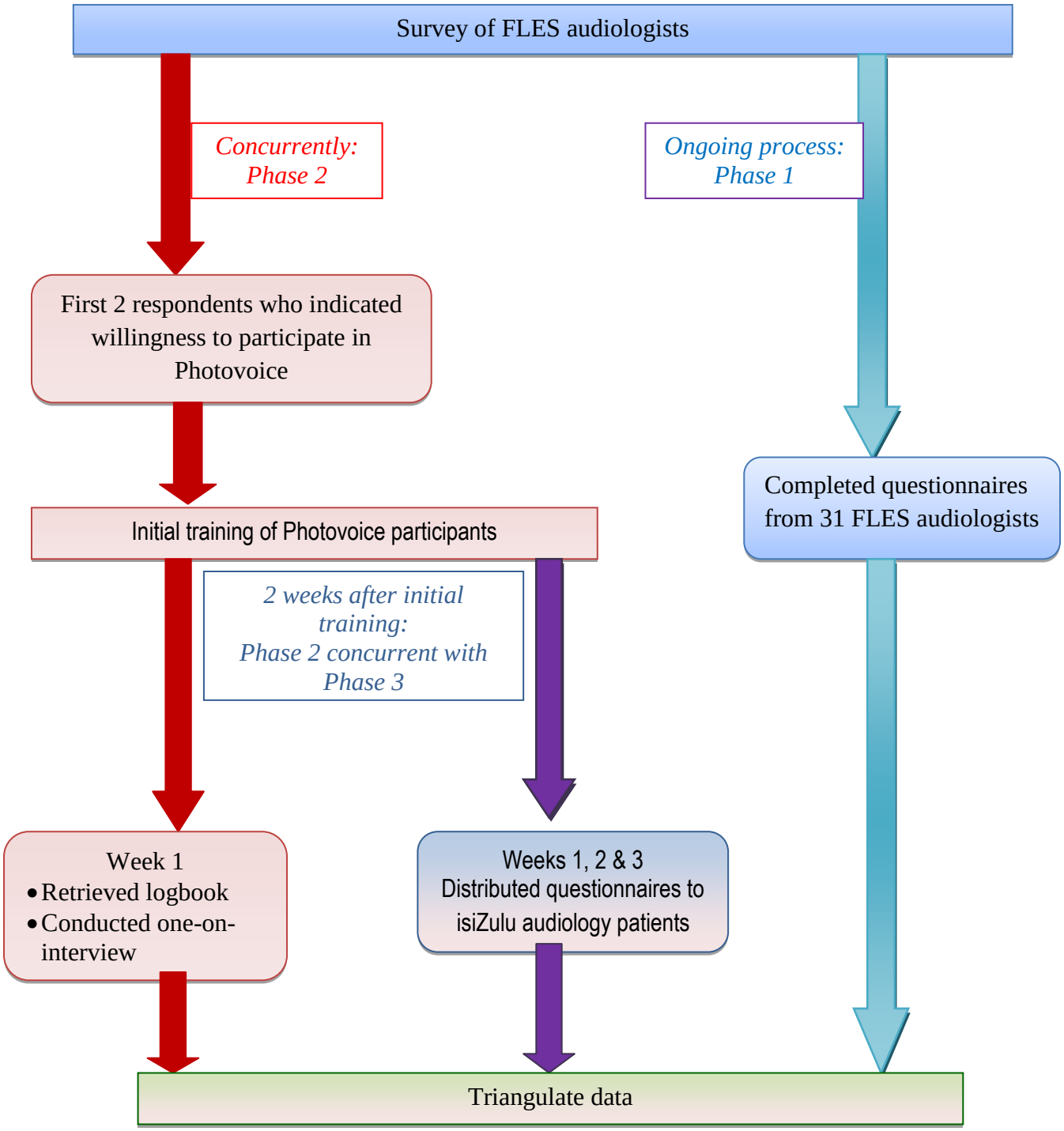


Figure 3.1 Concurrent data collection design for the three phases of the study

3.3.1 Phases of the study

This study consisted of three concurrent phases, as supported by the concurrent triangulation mixed design (Creswell, 2003). This entailed concurrent quantitative and qualitative data collection followed by separate data analysis. The integration of data from the three phases occurred at the level of interpretation and reporting (Terrell, 2012).

PHASE ONE: This phase entailed exploring communication FLES audiologists and isiZulu patients using a questionnaire (Objective 1-4). All 38 FLES audiologists employed at public sector hospitals in KZN were considered for the first phase of the study in order to obtain an accurate representation of the surveyed population.

PHASE TWO: This phase entailed obtaining in-depth narratives from 2 FLES audiologists, from two different public sector hospitals, regarding their communication with isiZulu patients (Objective 1-4). This was facilitated through Photovoice and the data obtained offered comprehensive understanding of the FLES audiologist's cross-cultural/linguistic experiences, which was used to supplement the information obtained in phase 1.

PHASE THREE: This phase entailed describing the perspectives of isiZulu patients, with regard to cross-cultural and cross-linguistic communication during the provision of audiological services, using a questionnaire (Objective 5). IsiZulu patients were recruited from the two public sector hospitals that were utilised in phase two of the study.

The data obtained in all three phases was triangulated, in keeping with the design of the study.

3.4 STUDY POPULATION

According to Bryman (2008), the sample population is defined as the source population from which a sample can be selected. Two population groups were considered for the present study, specifically audiologists and isiZulu speaking patients accessing audiological public health sector services. The first population that was investigated were audiologists' at public sector hospitals across KZN. According to the 2015 KZN Audiologist Forum Database, there are 79 audiologists employed in the public health sector of whom 41 (52%), distributed in 28 public sector hospitals, are First Language English speaking.

The second population that was investigated was isiZulu patients accessing audiology public health sector services. The total population of patients accessing audiology public health sector services across KZN was unknown.

3.5 SAMPLE SELECTION CRITERIA

Criteria for eligibility of participants were implemented to other factors influenced the outcome of the study. The sample selection criteria for each phase are tabulated overleaf.

Table 3.1 Inclusion criteria

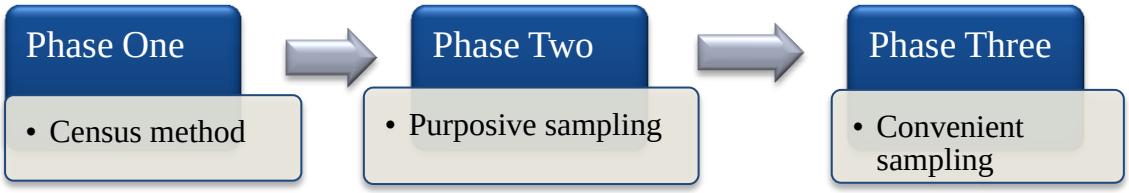
PHASE	SAMPLE GROUP	INCLUSION CRITERIA	MOTIVATION
1 and 2	Audiologists	*Participants must be employed in the Public Health Sector and registered with HPCSA as a qualified Audiologist or as a dual registered Audiologist and Speech therapist.*	The study focused on the profession of Audiology in the public health sector. To ensure authenticity with regard to the population and type of service delivery being targeted, participants needed to be suitable accredited and registered audiology practitioners.
		Participants must be first language English speaking.	Penn (2007) reported that there is a discrepancy between the ratio of qualified English speaking audiologists to the number of linguistically diverse patients served As, isiZulu is the dominant culture and language in KZN (Statistics South Africa, 2011), the study focused on exploring how FLES audiologists communicate with their isiZulu patients.
		Both males and females of all age groups.	The study was not biased toward gender and age, which increased the generalization of findings.
2	Audiologists	*Participants who indicated a particular interest with the research topic and were willing to share their experiences regarding communication with isiZulu patients.*	The second phase focused on the experiences of FLES audiologists regarding communication with isiZulu patients. Gill, Stewart, Treasure and Chadwick (2008) recommend selecting participants with interest in the topic to allow for rich, meaningful qualitative data to be obtained.
3	Culturally and linguistically diverse patients	*First language isiZulu speaking patients.*	As the statistics indicate that isiZulu is the dominant language and culture in KZN (Statistics South Africa, 2011), participants were only isiZulu speaking.
		Both female and male patients.	The study was not gender biased, which increased the generalization of findings.

Table 3.2 Exclusion criteria

PHASE	SAMPLE GROUP	EXCLUSION CRITERIA	MOTIVATION
1 and 2	Audiologists	*Audiologists employed in the private sector.*	80-85% of the South African population rely on Public healthcare (National Treasury Department, Republic of South Africa, as cited in Bernstien, 2011), hence audiologists based at public sector hospitals were only considered.
		Audiologists employed in other settings (e.g. school based audiologists etc.)	The scope of this study focused on service delivery in the healthcare setting, therefore audiologists employed outside the public health sector were excluded.
2	Audiologists	*Audiologists who had received additional postgraduate training in isiZulu*	Attendance of additional isiZulu courses did not represent the majority of the profession and would therefore impact on the overall understanding of the research problem.
3	Culturally and linguistically diverse patients	*isiZulu patients under the age of 18.*	According to the Strode, Slack and Essack (2010) children under the age of 18 are considered legal minors and are therefore not completely competent to act in isolation without support from a parent or an authorized guardian. Due to circumstances in which parents do not always accompany their child when accessing health services and in order to adhere to the Children's Act of South Africa (2006) as cited in Strode, Slack and Essack (2010) isiZulu patients under the age of 18 were excluded from the study.
		isiZulu patients over the age of 60.	Munoz, Morraga and Piattini (2008) define cognition as the ability to comprehend and sequence information. Individuals with cognitive impairment often present with difficulties in making relations and conveying themselves through verbal or written modality (Munoz, Morraga & Piattini, 2008). According to Pollitt (2012) cognitive impairment, dementia and loss of memory is a common problem in individuals over the age of 60 (Pollitt, 2012). Therefore, isiZulu patients over the age of 60 were excluded from the study

3. 6 SAMPLE SIZE AND SAMPLING METHOD

Calculation of a favorable sample size allows sufficient power to identify statistical significance (Suresh & Chandrashekara, 2012). Furthermore, the sampling method should consider logistics and costs for efficient purposes (Srivastava, Shenay & Sharma, 2007). The sample size and sampling method for the three phases are described below:



PHASE ONE: The total population of 41 FLES audiologists, working in KZN's public health sector, were considered for the first phase of the study. Three FLES audiologists were excluded for the pilot study, which resulted in a possible 38 FLES audiologists being included. Although census sampling was employed for the first phase of the study, Saunders, Lewis and Thornhill (2003) highlighted the relevance in selecting a representative sample from the study population, as it is not always possible or practical to include the entire study population based on factors such as financial and time constraints. Therefore, as per statistician, a minimum response of 26 FLES audiologists was required to estimate a proportion to within +/- 10% for the FLES audiologists, with a 95% probability and assuming an estimate of 50%. 2016). A response rate of 82% was achieved as a sample size of 31 FLES audiologists was obtained.

PHASE TWO: A sample size of two FLES audiologists was required for Photovoice to ensure in-depth qualitative analysis of the multiples narratives per audiologist to be obtained. According to Mason (2010), the sample size for qualitative data is small because the emphasis is on meaning opposed to generalising findings. Ritchie and Lewis (2013) further added that qualitative data is extensive in detail and requires rigorous and time-consuming analysis. Of the many participants who indicated a willingness to participate in phase 2, purposive sampling was used to select the first two FLES audiologists who responded from two different public sector hospitals.

PHASE THREE: A minimum sample size of 98 isiZulu audiology patients was calculated with a confidence level of 95% and margin error of +/- 10% for a response distribution of

50%. A 100% response rate was achieved as 98 isiZulu patients participated in the study. Convenient sampling was used to select isiZulu patients from the two public hospitals that were used in phase two of the study. This allowed for data from phase two to be corroborated with data from phase three. Hulley, Cummings, Browner, Grady & Newman (2007) described convenient sampling as a technique that is commonly used as it favours easy accessibility in gathering the data required as well as a willingness of participants to respond. Conversely, convenience sampling is limiting in its representativeness of the sample and may be considered biased (Gravetter & Orzano, 2011).Gravetter and Forzano (2011) suggested that to minimize the limitations associated with convenience sampling a concise description of how the sample will be obtained as well as who the participants are should be provided.

3.7 DESCRIPTION OF THE STUDY SAMPLE

The sample is referred to as the segment of the population that has been selected (Bryman, 2008). The current study consisted of two sample groups, namely FLES audiologists working in public sector hospitals in KZN and their isiZulu patients. Below is a description of the participants in the study sample:

Table 3.3 Description of participants' profile

Variable	FLES Audiologists			isiZulu Patients		
	Category	n	%	Category	n	%
Age Groups (years)	22-25	19	61%	18-25	15	15%
	26-29	5	16%	26-29	14	14%
	30-35	3	10%	30-35	26	27%
	36-39	0	0%	36-39	17	17%
	40-49	4	13%	40-49	21	21%
	>50	0	0%	50-59	6	6%
Gender	Male	5	16%	Male	53	54%
	Female	26	84%	Female	45	46%
Race groups	Indian	24	77%			
	White	6	20%			
	Other	1	3%			
Undergraduate training	UKZN	27	87%			
	UCT	3	10%			
	Other		3%			

Number of years practising as an audiologist	Less than 1 year	13	42%		
	1-2 years	1	3%		
	2-3 years	4	13%		
	3-4 years	1	3%		
	4-5 years	3	10%		
	>5 years	9	29%		
Description of institution	Urban	12	39%		
	Rural	19	61%		
Position held	Community Service	12	39%		
	Junior	5	16%		
	Senior	9	29%		
	Chief	5	16%		

Table 3.3 indicates that majority (61%, *n*= 19) of FLES audiologists belonged to the age group 22-25 years. This may be explained by the community service programme, in which newly graduated audiologists are placed at public sector hospitals. In contrast, none of the participants belonged to the over 50 year's age group. This may be attributed to early retirement packages or may suggest that FLES audiologists do not consider being employed by the government as a long term career and may have resorted to private practice instead. This can be evidenced by the reduced number (13%, *n*=4) of FLES audiologists who are in the 40-49yr age group. In contrast, the more evenly spread age group distribution amongst isiZulu patients could be attributed to the larger sample size obtained.

With regard to gender, Table 3.3 illustrates that the majority (84%, *n*=26) of FLES audiologists were female with only 16% (*n*=5) being male. This gender distribution is coherent with the population of audiologists based in South Africa (Wemmer, 2007). In contrast, the sample of isiZulu patients represented more equality in gender, with (54%, *n*=53) of isiZulu patients being male and (46%, *n*=45) being female. With regard to race, the sample composition of FLES audiologists consisted of majority (77%, *n*=24) of Indians, followed by 20% (*n*= 6) of Whites. Lastly 3% (*n*=1) constituted "other", consisting of one Mauritian.

Furthermore, Table 3.3 revealed that majority (87%, *n*=27) of FLES audiologists practicing in public sector hospitals across KZN received their undergraduate Audiology degree from

the University of KwaZulu Natal (UKZN). 10% (*n*=3) of FLES audiologists had studied at the University of Cape Town. Lastly 3% (*n*=1) constituted "other" which was the University of Pretoria. With regard to years of experience, Table 3.3 revealed majority (42%, *n*=13) of FLES audiologists in the sample have less than 1 year of experience followed by 29% (*n*=9) possessing greater than 5 years of experience. The reduced number of junior level staff may be attributed to the Department of Health recently experiencing financial constraints, which may have affected the ability to retain community service audiologists.

With regard to type of institution, Table 3.3 indicated that the majority (61%, *n*=19) of FLES audiologists classified their institution as rural, with only 39% (*n*=12) considering the type of their institution to be urban. In terms of position held, Table 3.3 demonstrated that the sample consisted of majority (39%, *n*=12) community service audiologists, followed by 29% (*n*=9) senior FLES audiologists and 16% (*n*=5) of junior as well as chief FLES audiologists. The chief participants were also dually qualified as Audiologist/Speech Therapist.

3.8 RECRUITMENT OF PARTICIPANTS

Recruitment of participants is an important research procedure (Hulley et al, 2007). The recruitment strategies used for each phase are described below.

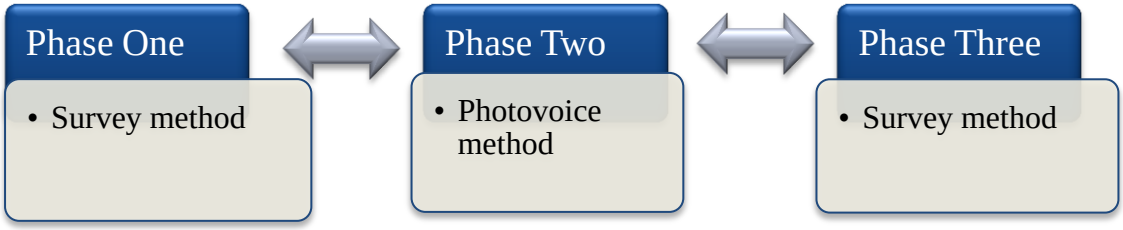
PHASE ONE: Due to phase one being census based, it was important to ensure that a maximum response rate was obtained. Initially during the pilot study (refer to section 3.11), an online survey was used to recruit participants. However, due to the poor response rate, the primary recruitment strategy for the main study was changed to the physical distribution of questionnaires. The researcher utilized the platform of three different audiology meetings to discuss the purpose of the study. Questionnaires (Appendix G), information booklets (Appendix G1) and consent forms (Appendix G2) were distributed to the attendees. They were informed that participation in the study is completely voluntary and were requested to read the information document and provide informed consent prior to completing the questionnaire. The researcher in no way influenced the participant's responses to the questionnaire. The bulk returning of questionnaires at the end of the day into a designated file allowed for anonymity as no identifying information was indicated on the completed questionnaire. This recruitment strategy accounted for 94% of the surveys received. To target the remaining audiologists, a reminder email regarding the availability of an electronic survey was used, with only two responses being obtained with this strategy.

PHASE TWO: An information document, explaining the second phase of the study, was attached to the survey distributed in phase one. The preamble (Appendix G3) was used to recruit participants for phase two of the study.

PHASE THREE: Silverman and Patterson (2014) recommend the use of flyers or advertising materials to be placed in clinical venues where participants access services. A notice to isiZulu patients was placed in the Audiology department of the two public sector hospitals involved in the third phase of the study. The notice detailed the purpose and objective of the study as well as the dates for data collection.

3.9 DATA COLLECTION METHOD:

The data collection methods for each of the three phases are described below:



PHASE ONE: The survey method was utilised to obtain data regarding the communication competencies, factors, strategies and recommendations of FLES audiologists about service delivery to isiZulu patients (objectives 1-4). A survey method allows for the measurement of a population's behaviour, views and characteristics and can be constructive in developing and assessing government policies and procedures (Queensland Government Statistics, 2015). Trochim, Donnelly and Arora (2015) regarded selecting the type of survey method as an important decision that was based on the information required as well as availability of resources. The factors that were considered when selecting the survey type are described below.

- Identification of population units: the target population for phase one comprised of an inclusive list of participants to be sampled, thus lending applicability to physical distribution and electronic access to the survey (Trochim et al., 2015).
- Literacy: the survey method requires a degree of literacy from participants (Trochim et al., 2015). The target population comprised of qualified Audiologists hence literacy did

not pose as an inhibiting factor in employing the survey method for phase one of the present study.

- Geographical constraints: the geographical location of the target population can determine the type of survey method employed (Trochim et al., 2015). Dispersion of participants over a wide region can pose as a challenge regarding physically distributed surveys (Trochim et al., 2015). Due to participants being based at public sector hospitals across KZN, the physical distribution of surveys at common meetings that are attended by all FLES audiologists, proved to be a feasible option.

PHASE TWO: The second phase entailed obtaining a deeper understanding of FLES audiologist's communication with isiZulu patients (objectives 1-4), which was facilitated through the Photovoice method. Photovoice involves the use of photographs with accompanying narratives in relation to the topic identified. It was therefore selected as the preferred data collection method because it endorses ground level expertise and intervention with solutions (Wang & Li, 2008). Amos, Read, Cobb and Pabani (2012) stated that Photovoice provides individuals with the opportunity to describe areas of interest most pertinent to them. Palibroda, Krieg, Murdock and Havelock (2009) further added that Photovoice derives from the ability of photographs to create change and influence policymakers. Photography enhances awareness and comprehension regarding circumstances that may be of variance to one's own experiences (Palibroda et al., 2009). Improved clarity and understanding, provided by the photographs, lends itself to informed decisions that can facilitate transformation to improve service delivery in various settings. The disadvantages associated with Photovoice are discussed below in conjunction with the solutions that were implemented to address the identified limitations.

- Training of participants: Photovoice requires thorough training on the Photovoice procedure, which can be time consuming (Altschuld, 2014). The researcher conducted comprehensive training sessions with the two participants involved, which included practice activities and was guided by a training manual (refer to section 2.10 data collection instruments). The small number of participants in phase two of the study reduced the limitation associated with several time consuming training sessions.
- Several data collection sources: Altschuld (2014) stated the need to support the data obtained from Photovoice (photographs, logbooks and interviews) with other information sources. The present study utilized a concurrent triangulation design in

which the data obtained from Photovoice was used to supplement the data obtained from the questionnaire surveys.

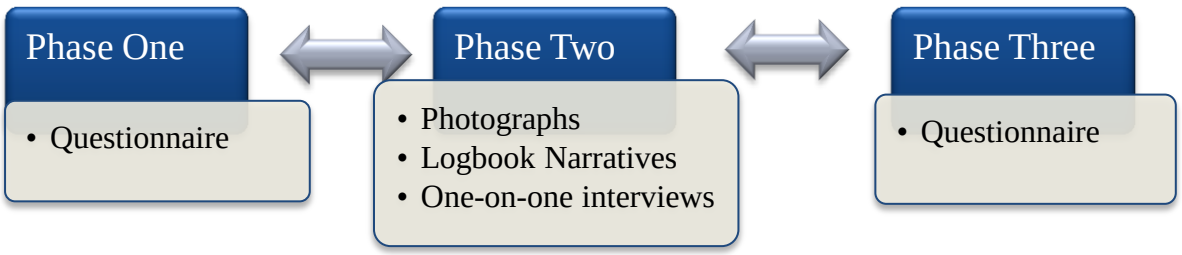
- Applicability to certain contexts: Altschuld (2014) identified Photovoice as being suited to certain contexts, specifically rural situations in the health field. Due to the present study focusing specifically on healthcare service delivery with consideration to the both the urban and rural context, Photovoice was thus considered an appropriate method.

PHASE THREE: The survey method was utilised to obtain the perspectives of isiZulu patients regarding communication with their FLES audiologists (Objective 5). Coon and Mitterer (2007) stated that a survey method is able to attain a representative sample of a small group that indicates the notions of a larger population. The following factors were considered in selecting the survey type.

- Identification of population units: The total population of participants for phase three of the study was unknown thus preventing an electronic or mail based survey (Trochim et al., 2015). Hence, the Physical distribution of surveys was selected as the most feasible option.
- Literacy: To address possible literacy difficulties that patients may have, the researcher was available to administer the survey face-to-face with the assistance of a qualified translator. Thus, further supporting the physical distribution survey method.
- Geographical location: Participants for phase three of the study were located from two public sector hospitals, which made physical distribution possible.

3.10 DATA COLLECTION INSTRUMENTS

The present study utilized five data collection instruments, as illustrated below. The advantages and disadvantages of each instrument are also outlined.



PHASE ONE: The survey method was facilitated through a questionnaire (Appendix G). A questionnaire is "a document containing questions and other types of items designed to solicit

information for analysis" (Babbie, 2010, p.255). The advantage of utilizing a questionnaire is its flexibility to be custom designed to meet the objectives of the present research project. Eiselen, Uys and Potgieter (2005) have identified the following advantages associated with self-administered structured questionnaires: they are more cost effective to administer in comparison to personal face-to-face interviews, thus applicable for the nature of phase one which is census based. In addition, questionnaires have been found to be less intrusive than telephone or face-to-face surveys, consequently, the respondents will be more comfortable and respond truthfully to sensitive questions (Eiselen et al., 2005). Furthermore, questionnaires are easy to administer and analyze. Most individuals are familiar with the notion of a questionnaire and how to answer it (Eiselen et al., 2005). Based on the above rationale, questionnaires were included in the present study.

The most notable disadvantage of a self-administered structured online questionnaire, is that the response rate tends to be fairly low, especially if the questionnaire is too long or is complicated to complete (Eiselen et al., 2005). The participant may feel that the subject matter is either not interesting or it could be perceived as being of a sensitive nature. Furthermore, the researcher will have no control over the manner in which the questionnaire is filled in.

However, based on the following disadvantages identified, the researcher introduced mechanisms to minimize the above limitations associated with questionnaires. Several recruitment strategies were employed to increase response rate. The purpose of the study was clearly outlined to ensure that audiologists have introductory knowledge of what is expected from them as well as the implications of participating. The clear instructions on the questionnaire guided the manner in which it was to be filled. Furthermore, the suggestion letter (Appendix G4) in the pilot study assisted in improving the questionnaire for the main study based on participants input.

The questionnaire (Appendix G) utilized was self developed and was guided by the literature, surrounding the issue of multicultural and multilingual service delivery (Purnell & Paulanka, 2008; Grice-Dyer, 2010; Lubinski & Hudson, 2013; ASHA, 2004; Gordon et al., 2006). The section below highlights several considerations that were taken into account when designing the questionnaire.

- Self development of the questionnaire: Leung (2001) identified two primary objectives in designing a questionnaire, namely: ensuring a high response rate and acquiring accurate, pertinent information. The first objective regarding maximising response rate has been previously discussed in section 3.8. The second objective regarding obtaining accurate, pertinent information can be achieved through construction of the questionnaire.
- Content: Leung (2001) recommended including contradictory questions to determine the consistency of the participant's responses, and was thus included. Wording of the questions adhered to short, simple sentences that requested one piece of information per question (Leung, 2001). Ambiguous terms were avoided. The length of the questionnaire was considered as participants are less likely to complete lengthy questionnaires (Leung, 2001). With regard to sensitive questions, the casual approach was adopted as recommended by Leung (2001). The casual approach places emphasis on phrasing of questions to ensure that participants respond truthfully rather than providing the socially desired response.
- Format of questions: The questionnaire was divided into seven sections and consisted of close ended, open ended as well as multiple choice questions. Babbie (2010) defines open ended questions as questions that require the participant to provide their own answer. In contrast, close end questions require the participant to select an answer from available options. Leung (2001) suggested the use of different types of close end question formats to maintain the participant's interest. Therefore, the questionnaire consisted of Yes and No options, choice of categories, checklists and the 5 point Likert scale. The 5 point Likert scale consists of strongly agree forming one end of the continuum and strongly disagree on the opposite end. Maree (2008) stated that the Likert scale is the most commonly used scale and is suitable in measuring a construct, such as communication in the present study.
- Arrangement of questions: Questions were arranged in an order that satisfied the guidelines proposed by Leung (2001). The order progressed from general questions that were easy in nature to more particular, difficult questions. Factual questions were structured first followed by abstract questions. In addition, the researcher included both positive and negative questions to prevent the participant from selecting the same response for all questions (Leung, 2001).

- Reliability and Validty: Due to the questionnaire being a self-developed tool, several factors were considered in ensuring validity and reliability of the data collection instrument (refer to section 3.14). Table 3.4 overleaf outlines the areas included in the questionnaire and the motivation for including the respective areas.

PHASE TWO: Photographs, logbooks and interview schedules were utilised as the data collection tools for phase two of the study. According to Walia and Liepert (2012) Photovoice involves the utilisation of cameras to produce photographs that authenticate thoughts and therefore, served to highlight FLES audiologists perceived notions regarding communicating with isiZulu patients. In addition, logbooks were utilised to document the titles of their photography supplemented by a narrative (refer to Appendix H4 for an illustration of a logbook entry). The logbooks were supplied by the researcher.

Lastly, data was collected from a one-on-one interview with the participants. Conventionally, focus groups are conducted when utilising Photovoice, however one on one interviews allow additional time to stimulate individual, personal dialogue (Walia & Liepert, 2012). Furthermore, Barbour (2008) identified interviews as the most common method choice to extract individuals' narratives. Therefore, interviews were well suited in eliciting FLES audiologist's personal experiences and opinions regarding service delivery to isiZulu patients. The interview was elicited using an interview schedule (Appendix H) and consisted of 12 questions. Questions 7, 8, 9 and 10 were adapted from Palibroda et al. (2009), with consideration to the South African context. Although Barbour (2008) identified interview bias as a potential disadvantage, the present study included several data sources to allow for triangulation of data in order to reduce the limitation identified. The data collected in this phase was particularly useful in further refining the context established in phase one of the study. Table 3.5 overleaf outlines the areas included in the Photovoice interview schedule.

Table 3.4 Motivation for the areas included in the questionnaire (Appendix G)

Section	Area	Variables	Motivation	Objective
1	Biographical information	• Age • Gender • Race • Languages fluent in.	Biographical information will be required for administrative purposes and analysis of categorical variables.	1-4
2	Demographic information	• Type of public hospital • Duration of current employment, • Position held • Number of audiologists employed • Linguistic profile of patients.	Demographical information provides a background context to the participants decisions, actions and experiences, which is further needed for secondary analysis.	1-4
3	Perceived cultural competency in IsiZulu	• Cultural Awareness, • Cultural Knowledge • Cultural Skills, • Cultural Encounters • Cultural Desire.	The Process of Healthcare Competency in the Delivery of Healthcare Services Model (Campinah- Bacote, 2007) provided the theoretical framework for evaluating FLES audiologists cultural competency in isiZulu. This consisted of awareness of the isiZulu language, knowledge of isiZulu cultural beliefs and behaviours, the ability to conduct a culturally based isiZulu assessment, culturally adapt resources and engage in cultural encounters.	1
4	Perceived linguistic competency in IsiZulu	• Formal education in isiZulu • Conducting case history • Documenting symptoms • Test instructions • Probing • Speech testing • Feedback • Aural rehabilitation • Counselling.	Language is the primary channel of communication (Reagen, 2002). Therefore, to establish the communication between FLES audiologists and isiZulu patients, one needs to first ascertain the level of proficiency of audiologists in isiZulu during audiological service delivery. Linguistic competency is the capability of the healthcare professional to communicate efficiently and deliver information to diverse individuals, specifically “those of limited English proficiency” (Chu & Goode. 2009, p.7). **Formal education** Language competency can be evaluated through university curricular programmes (Lubinski & Hudson, 2013). **Linguistic competence in the provision of audiology services** According to ASHA (2004) audiologists must provide linguistically competent services throughout assessment, treatment and management. ASHA (2013) guidelines highlight the scope of practice for audiologists and the audiological components that require linguistic	1

			competency, namely: case history, puretone assessment, speech testing, feedback and counselling.	
5	Factors that influence effective communication between FLES audiologists and isiZulu patients.	• Informed consent • Trust • Collaboration • Empathy • Superiority • Attitude	Several international studies (Gordon et al., 2006) have identified factors that affect communication between health care professionals and culturally and linguistically diverse patient populations. These factors include: informed consent, trust, collaboration, empathy, superiority and attitude. However, there is limited research that investigates the interaction of such factors in the unique South African context.	2
6	Communication strategies of FLES audiologists in assessing and treating isiZulu patients	• Interpreters • Written handouts • Translator applications	There are several proposed strategies for communicating with culturally and linguistically diverse patients across various healthcare disciplines (Rosdahl & Kowalski, 2008; Christian & Batmangelich, 2015). According to Thompson (2014) utilization of interpreters are often considered the standard solution when encountering language barriers. Murakami & Lin (2016) reported on the availability of internet applications, such as Google Translate, as a means to overcome language barriers. However, a lack of knowledge exists regarding the communication strategies employed by FLES audiologists in rendering services to isiZulu patient populations (Pascoe, 2013).	3
7	Recommendations	Open ended	There is limited insight regarding recommendations and possible solutions to improve audiological service delivery to culturally and linguistically diverse patients (Pascoe, 2013).	4

Table 3.5 Areas included in the Photovoice interview (Appendix H)

Question	Area	Objective
1, 2, 3	Demographic information	
4	Linguistic competency in isiZulu during audiological service delivery	1
5	Cultural competency in isiZulu during audiological service delivery	1
6	Influencing factors on cross-cultural and cross-linguistic communication	2
7,8,9,10	Photography • Description • Symbolize • Association • Explanation	1-4
11	Communication strategies when working with isiZulu patients	3
12	Recommendations to improve cross-cultural and cross-linguistic communication	4

PHASE THREE: A self-developed questionnaire survey (Appendix I) was used to determine the perspectives of isiZulu patients regarding communication with FLES audiologists. The design of the questionnaire therefore followed a similar format and included the same areas that featured in the questionnaire issued to audiologists (refer to Table 3.5). It consisted of 27 close-ended and 1 open-ended question. The questionnaire was also accompanied by an information letter (Appendix I2) and consent form (Appendix G2). The questionnaire was translated into isiZulu (Appendix I1) by an IsiZulu Linguist employed at UKZN. The questionnaire was then back translated into English from IsiZulu by Themba Hlongwane (Degree in Education) to increase validity and reliability of the instrument. The information letter (Appendix I3) and consent form (Appendix I4) was also translated into isiZulu by the UKZN linguist and back translated by Themba Hlongwane. Table 3.6 overleaf highlights the areas included in the questionnaire.

Table 3.6 Areas included in the questionnaire (Appendix I)

Question	**Area**	**Motivation**	Objective
	Biographical information	Biographical information will provide the context of the individuals who participated, this being important to understand their responses as well as for analysis of categorical variables.	
1-9 and 25	FLES audiologists cultural and linguistic competency in isiZulu	The conceptual framework for Culturally and Linguistically Competent Care from the Patient's Perspective (Ngo-Metzger, Telfair, Sorkin, Weidmer, Weech-Maldonado, Hurtado & Hays, 2006) was used to formulate questions with a focus on patient-provider communication.	5
10-17	Factors influencing effective communication	Several factors such as: informed consent, trust, collaboration, empathy, superiority and attitude are included in the conceptual framework for Culturally and Linguistically Competent Care from the Patient's Perspective (Ngo-Metzger et al., 2006). However, there is limited research that investigates the interaction of such factors in the South African context.	5
18-22, and 26	Communication strategies	The conceptual framework for Culturally and Linguistically Competent Care from the Patient's Perspective (Ngo-Metzger et al., 2006) emphasizes the use of interpreters, thus questions were formulated to determine isiZulu patients experiences with interpreters in overcoming language barriers.	5
23,24 and 27	Recommendations	There is limited insight regarding recommendations to improve audiological service delivery to isiZulu patients (Pascoe, 2013). Thus, it was necessary to elicit isiZulu patients' suggestions on how to improve cross-cultural and cross-linguistic communication.	5

3.11 PILOT STUDY

A pilot study is a "concise explanatory investigation" (Leedy & Ormrod, 2005, p.95). All three phases of the pilot study were conducted on participants that were not included in the main study. Permission was obtained from the Department of Health (refer to Appendix C) to conduct all three phases of the pilot study as well as survey all FLES audiologists in the KZN public sector. Furthermore, permission was obtained from all participants in all three phases. The aim of the pilot study was to generate a better understanding of the variables being researched, as well as the tools and processes used to obtain them, in preparation for full scale research (Leedy & Ormrod, 2005).

PHASE ONE: The questionnaire was piloted on three FLES speaking audiologists using convenience sampling. The researcher obtained input regarding the structuring and phrasing of the questions, which was facilitated by a suggestion letter (Appendix G4). Participants

were therefore requested to highlighting any difficulties experienced when answering the questionnaire. The responses on the suggestion letter indicated that the questionnaire was too long, thus the number of questions was reduced from 67 to 62. Spelling errors were noted and corrected. Furthermore, the pilot study indicated that the online electronic survey yielded a very poor response rate. Consequently, a second recruitment strategy was implemented that involved the physical distribution of questionnaire surveys. This resulted in a better response rate and thus the physical distribution of questionnaire surveys was selected as the primary recruitment strategy for the main study.

PHASE TWO: Photovoice was piloted on one FLES audiologist, who was selected from the same pool of three audiologists that participated in phase 1 of the study, and had indicated an interest to participate in phase 2. The researcher ascertained whether the Photovoice training was effective in preparing audiologists to capture photography that reflected their experiences. This included establishing if the questions reflected in the interview schedule were adequate to obtaining the data required to answer the research question, which was facilitated by a suggestion letter (Appendix H6). Although the FLES audiologist deemed the questions to be appropriate, the researcher realized that the interview schedule focused solely on the photographs and there was therefore a need to further establish context. Thus, the interview schedule was adapted by including in questions that addressed the participant's type of institution, number of years practicing etc. Furthermore, the pilot interview alerted the researcher to type of probing questions to elicit the FLES audiologist's experiences. Consequently, the probes were added to the interview schedule as a guideline for the main study.

PHASE THREE: The questionnaire was piloted on nine isiZulu patients who were selected through convenient sampling. The researcher used a suggestion letter (Appendix G4) to ascertain whether participants understood the questions and the nature which it was structured. The results indicated the need to simplify terminology eg. "Empathetic" was changed to "able to show that they care and understand". The pilot study further alerted the researcher to patients concerns regarding confidentiality based on the sensitivity of information provided. The cover letter for the questionnaire was therefore adapted by emphasizing the protection of data obtained and reassuring patients that the information provided would in no way adversely affect the services they receive from their FLES

audiologist. The pilot study also provided the researcher with an estimation of time and other resources that a full scale investigation would require.

3.12 DATA COLLECTION PROCEDURE

The data collection procedures for the study are described below.

3.12.1 Permission and informed consent

The following measures were addressed prior to commencing with data collection.

- Permission to conduct the present study was obtained from the University Ethics Committee for Human and Social Sciences (Appendix B).
- Permission was obtained from the KZN Department of Health (Appendix C) to conduct all three phases of the pilot study as well as survey all FLES audiologists working in the public sector in KZN (phase 1).
- Permission was obtained from the medical managers (Appendix D & E) at the two institutions utilized for phase two and three. The medical managers received an information document (Appendix F) that explained the nature and purpose of phase two and three of the study.
- Informed consent was obtained from all participants during all three phases.

3.12.2 Data collection phases

The data collection procedures are described for each phase but were collected concurrently, in keeping with the concurrent triangulation study design (Creswell, 2012). This design refers to the synchronized collection of data. Terrell (2012) stated that a concurrent design is more time efficient than sequential data collection and was deemed appropriate for the present study.

PHASE ONE: The researcher accessed the KZN Audiology database and compiled a list of FLES audiologists practicing in the public sector. As discussed in section 3.8, data was collected at three audiology meetings, which were attended by audiologists from both urban and rural public hospitals across KZN. The researcher introduced the purpose of the study with emphasis that participating in the study was voluntary. Information documents (Appendix G1), consent forms (Appendix G2) and questionnaires (Appendix G) were distributed to the FLES audiologists present. Attached to each questionnaire was an addendum (Appendix G3) that allowed them to indicate willingness to participate in phase

two of the study. Participants were requested to read the information document and provide informed consent prior to completing the questionnaire. Completed consent forms and questionnaires were returned at the end of the day to a designated file to maintain anonymity. At the culmination of the three meetings, 29 completed consent letters and questionnaires was obtained, together with three participants indicating willingness to participate in phase two. The second aspect of phase one involved cross checking the completed consent forms against the initial FLES audiologist list compiled. The remaining FLES audiologists, who had not responded, were emailed access to an electronic survey together with the information document, consent form and gatekeeper letters. Three days later a reminder email was sent. Two responses were obtained, thus concluding a total of 31 responses.

PHASE TWO: Concurrent to phase one, the first two participants, from two public sector hospitals, who indicated an interest to participate in phase two and who met the sample selection criteria, were considered. They were then emailed the information letter (Appendix H1), which further explained the nature and objective of phase two of the study. Informed consent (Appendix H2) was obtained from both participants, after which the researcher met individually with each participant to conduct Photovoice training. The researcher had extensively researched and familiarised herself on the concept of Photovoice and was therefore adequately prepared to orientate and train participants. The training manual (Appendix H4), which was adapted from Briley and Parker (2011), included areas such as: procedure, types of photograph, ethical considerations regarding photographing of subject matter, and circumstances that required consent.

For the purpose of patient-health practitioner confidentiality, the audiologists were advised not to capture photography in which their patients' faces were visible. Furthermore, they were provided with photo release forms (Appendix H5) that were used to obtain permission from their photographed individuals/entities. The Photovoice training also included practice activities to familiarise participants with the concepts covered. For the purpose of this study, disposable cameras were not provided due to cost implications. However, a screening tool (Appendix H3) was used, in which participants indicated the Model of their cell phone as well as rated the quality of the camera on their device. In the event that participants were not satisfied with the quality of their cell phone camera, cell phones were available for loaning for the duration of data collection. The method of utilising cell phone cameras rather than disposable cameras promoted accessibility to capture subject matter, as the digital images

could be easily downloaded and sustained throughout the project. A minimum of two and maximum of five photographs was permitted per participant. Participants were also provided with logbooks, which were used to title their photography, as well as provide a narrative on the thought processes that had resulted in the selection of that particular image and how it related to communication with isiZulu patients. Participants were then advised to email their photography to the researcher within two weeks of the initial training. The researchers contact details was available to all participants in the training manual. The researcher then developed all photographs emailed.

After two weeks, the researcher individually visited the two public sector hospitals to retrieve the logbooks and conduct a one-on-one interview with each participant (refer to Figure 3.1), for which an interview schedule was used (Appendix H). Two weeks was considered sufficient time for capturing photography, this duration having also been used in other Photovoice studies (Leipert & Smith, 2009). The interview conducted allowed participants to elucidate the meanings and perspectives associated with their photography as well as expand on the narratives in their logbook. The interviews ranged in duration from 20 to 30 minutes, each being recorded via audio tape, with the participant's knowledge and consent. During the interview, participants were probed for additional elaboration or clarification of responses where necessary.

PHASE THREE: isiZulu patients were targeted from the two public sector hospitals that were involved in phase two of the study. This allowed allow for corroboration of data between both phases by comparing FLES audiologists narratives with their patient's perspectives. Concurrent with conducting the one-on-one interview with FLES audiologists at each of the two public sector hospitals in phase two of the study, the researcher distributed the questionnaires to isiZulu audiology patients at the two facilities on the same day (refer to Figure 3.1). The physical distribution of questionnaires occurred over 3 weeks with an additional two subsequent visits to the public sector hospitals involved (refer to Figure 3.1). Potential participants were briefed on the nature and purpose of the study. Participants also received an information document (Appendix I3), consent form (Appendix I4) and questionnaire (Appendix I). Signed informed consent forms were obtained from each participant prior to completing the questionnaire. In order to address the issue of literacy, the researcher was also available to administer the questionnaire to patients face-to-face with the

assistance of a qualified translator (Siyanda Dlamini). Participants returned the completed questionnaire on the same day issued.

3.13 DATA ANALYSIS

The data from each phase was analysed with reference to the study objectives, with the methods of analysis for each phase being tabulated overleaf.

PHASE ONE: The responses from the coded questionnaires was checked for completeness and entered into SPSS programme (version 22) for analysis, which was done in collaboration with a statistician. The responses from the Likert scale were collapsed with strongly agree and agree constituting "agree" and strongly disagree and disagree constituting disagree, to allow for easy presentation of results (Wright II & Wallace, 2016).In addition, descriptive and inferential data analysis methods were used, with descriptive analysis including percentage counts, bar graphs and pie charts. According to Mendenhall, Beaver and Beaver (2012) descriptive analysis entails procedures that are used to recapitulate and describe the main characteristics in a group of measurements.

Inferential statistics comprises of procedures utilised to make inferences regarding characteristics of the population from the information obtained and includes making predictions and decisions based on the information obtained. It is important that every statistical inference encompasses a measure of reliability (Mendenhall et al., 2012). According to Brink (2002), inferential statistics consisted of two types of tests, namely: parametric and non-parametric tests. Parametric tests included the t- test and analysis of variance (ANOVA). According to Aczel and Sounderpandian (2006) the t- test is used to compare the means of two groups in order to establish if the differences between the groups are significant or if they are due to chance. Moore and McCabe (2005) stated that the analysis of variance (ANOVA) is used to determine whether the difference between two or more means deviate from each other significantly or by chance. Non-parametric tests included the chi-square test, which according to Hanuman (2006) is one of the most frequently used tests that compares groups of data using frequencies. A p value of <0.05 was indicative of a significant association. The inferential analysis can be found in Appendix J.

The cultural and linguistic competency of FLES audiologists was analyzed as percentage scores and classified as "poor", "average" and "good" in accordance to the classification

system put forward by Maharaj (2015). This entails a percentage score between 70-100% being classified as good cultural/linguistic competency, 50-69% being average and 0-49% indicating poor cultural/linguistic competency in isiZulu. FLES audiologists perceived isiZulu linguistic competency in areas of audiology was compared to their overall self-rating of their isiZulu linguistic competency level. This was achieved using the Exact Fisher test. Table 3.7 overleaf expands on the data analysis methods used in phase one of the study.

PHASE TWO: All interviews were transcribed verbatim, with data from the interviews and the Photovoice logbook narratives being analyzed using thematic analysis. Thematic analysis allows for the organization and description of data through the identification of themes (Braun & Clark, 2013). This process followed the phases of thematic analysis, which consisted of: becoming acquainted with the data, generating initial codes and grouping the codes into sub-themes. Thereafter, the sub themes were grouped into themes, which were appropriately aligned with the objectives of the study. These themes were reviewed and lastly reported on. Inter-reliability of data analysis was achieved by review of the codes and themes by an independent third party as well as by being peer reviewed by the researcher's supervisor. Trust worthiness of the data was achieved through evaluating the data and making associations between the findings and the literature (Lennie, 2006). To ensure rigour of data, the researcher conducted member checks with participants, utilized peer review and triangulation of data sources. The analysis of photographs followed three stages of analysis that included: preview, review and compare and contrast (Oliffe, Botterff, Kelly & Halpin, 2008). This analysis can be referred to in Appendix L.

PHASE THREE: The responses from the coded questionnaires were reviewed and documented. The SPSS programme (version 22) was used in collaboration with a statistician to analyze the results. The responses from the Likert scale were collapsed with strongly agree and agree constituting "agree" and strongly disagree and disagree constituting disagree. Descriptive analysis methods, as described in phase one, were used.

Table 3.7 Data analysis methods for phase one

Objective	Questionnaire Section	Variable	Analysis
Inferential analysis	Section 1	Biographical variables (age, gender, race, First Language) against cultural competency, linguistic competency, influencing factors and communication strategies	ANOVA • Race and preference for English speakers/formal education in isiZulu/ collaboration with isiZulu patients.
Inferential analysis	Section 2	Demographical variables (type of institution, number of years practising etc) against cultural competency, linguistic competency, influencing factors and communication strategies.	ANOVA • Number of years practicing as an audiologist and isiZulu cultural beliefs/ the use of written handouts. • Type of institution and the ability to adapt isiZulu resources/the ability to master the isiZulu language.
1	Section 3	Cultural and linguistic competency	• Descriptive analysis of simple frequencies and percentages • Classification as good (scores between 70-100%), average (50%-69%) and poor (0-49%) cultural and linguistic competency.
	Section 3 and 4	Comparison between FLES audiologists perceived isiZulu linguistic competency in isiZulu in areas of audiology and their self rated overall linguistic competency in isiZulu.	Fischers Exact test
2	Section 5	Factors influencing effective communication between FLES audiologists and isiZulu patients	• Descriptive analysis of simple frequencies and percentages
3	Section 6	Communication practices of FLES in the provision of services to isiZulu patients	• Descriptive analysis of simple frequencies and percentages
4	Section 7	Recommendations from FLES audiologists regarding communication with isiZulu patients	• Identification of codes and themes

Table 3.8 Data analysis methods for phase two

Objective	**Type of analysis**	**Description of analysis**
1,2,3,4	Thematic content analysis of interviews and narratives	Thematic analysis is a "method for identifying, analyzing and reporting patterns within data" (Braun & Clark, 2006, p.79).
1,2,3,4	Analysis of the photographs:	• **Stage one: Preview** The photographs will be examined adjacent to the narrative in order to determine the participants intended associations and to understand the participant within the background of their photograph (Walia & Liepert, 2012) • **Stage two: Review** The photographs will be evaluated for congruency when compared to the accompanying narratives (Walia & Liepert, 2012). • **Stage three: Compare and Contrast** The third stage of analysis will involve determining themes that present throughout the photograph compilation.

Table 3.9 Data analysis methods for phase three

Objective	Variable	Analysis
5	Cultural and linguistic competency	• Descriptive analysis of simple frequencies and percentages • Classification as good (scores between 70-100%), average (50%- 69%) and poor (0-49%) cultural and linguistic competency.
5	Factors influencing effective communication between First Language English speaking audiologists and diverse patient populations	• Descriptive analysis of simple frequencies and percentages
5	Communication practices of First Language English speaking audiologists in the provision of services to diverse patient populations	• Descriptive analysis of simple frequencies and percentages
5	Patients recommendations in improving communication during audiological service delivery to diverse patients	• Identification of codes and themes

3.13.1 Triangulation of data

The data from each of the three phases was analysed separately and integrated at the level of interpretation (Terrell, 2012) through data triangulation. Triangulating data obtained through quantitative and qualitative methods can considerably enhance research findings (Fretters, Curry & Creswell, 2013). Therefore, the quantitative data (questionnaires), from phases one and three, was compared to the qualitative data (narratives, photographs and interviews), from phase two. Fretters et al. (2013) recommended the following triangulation strategies for interpretation, which were employed:

- Qualitative data to evaluate the validity of quantitative data.
- Quantitative data to explain information obtained through qualitative measures.
- Comparison and collation of the frequency of themes to the descriptive figures of information.

According to Fretters et al. (2013) reporting on integrated data occurs at three levels, namely: "integrating through narrative, integrating through data transformation and integrating through joint displays" (p. 2142). With regard to integrating through narrative, the weaving approach was selected. This approach refers to the reporting of both quantitative and qualitative data together per each theme (Fretters et al., 2013). The second level pertains to creating uniformity in the type of data by converting either quantitative data to qualitative or qualitative data to quantitative (Fretters et al., 2013). The most common approach is known as content analysis which involves the coding of qualitative data (Krippendoroff, as cited in Fretters et al., 2013). The third level refers to use of a common visual representative, such as

a bar graph, to highlight both quantitative and qualitative data. All three of the above levels were implemented when reporting on the results.

The outcome of triangulated data was reported in terms: confirmation, expansion or discordance. Confirmation of findings refers to the cohesiveness between quantitative and qualitative data (Fretters et al., 2013). Expansion refers to the divergence of findings that provide new insights on the phenomena being investigated (Fretters et al., 2013). Discordance refers to quantitative and qualitative data that are contradict each other (Fretters et al., 2013).

3.14 VALIDITY AND RELIABILTY

"The validity of a measuring instrument is the extent to which the instrument measures what it is supposed to measure" (Leedy & Ormrod, 2005, p. 28). Reliability is the consistency with which a measuring instrument yields a certain result when the entity being measured has not changed" (Leedy & Ormrod, 2005, p. 29). Morrow, Jackson, Disch and Mood (2010) stated that to assess the reliability of a single item, the item is required to be asked on at least two occasions. Therefore, the Cronbach's Coefficient Alpha was employed to measure the internal consistency of the test items. The results revealed the Cronbach Alpha as 0.860 and 0.805 for Appendix G and Appendix I respectively, thus indicating a high level of internal consistency.

Furthermore, the following guidelines directed the design of the questionnaires and Photovoice interview, in order to ensure reliability and validity. An extensive literature review was conducted during the formulation of both tools in order to ensure that relevant questions were included. The consideration of these factors referred to face and content validity. The questionnaire and interview schedule was reviewed by a qualified statistician to ensure validity of the data collection instrument. The length and difficulty of the questions was considered during the formulation of the questionnaire and interview schedule (Leung, 2001). Morrow et al. (2010) further stated that validity is important in questionnaires to ensure that the participants responded truthfully to the items listed on the questionnaire rather than responding based on their own assumptions of what they consider socially acceptable responses.

In addition, conducting a pilot study, and certifying confidentially and anonymity are methods to increase validity (Morrow, et al., 2010). The pilot study assisted in ensuring that the terminology reflected in the tools was unambigous. Modifications were made to the tools to improve the research instrument and reliability. In addition, every effort was made to ensure a high response rate that will allow for the generalisation of the quantitative data.

"Quality, rigour and trustworthiness" of qualitative data was achived by triangulating information from different sources such as the narratives and interviews (Simon, 2011). In addition, internal validty was achieved through member checking, in which results and interpretation was presented to particpants for verfication of information. Furthermore, internal validity was achieved through peer examination, in which coding of qualitative data was reviewed by an external collegue. Lastly, Zohrabi (2013) identified researcher bias as a component that needs to be considered in examining validity. The author attests that every researcher posseses their own beliefs and worldviews (Zohrabi, 2013). However, the researcher of the present study has collected, analyzed and reported on the data impartially. Given the sensitivity of the research topic, the researcher has maintained a non-judgemental stance throughout the research process, that is in line with achieving validity.

3.15 ETHICAL AND LEGAL CONSIDERATIONS

All ethical principles that govern research were maintained throughout the study. The focus of ethical considerations is to protect the rights of all participants and to prevent harm. This involves informed consent, rights to privacy, protection from harm, anonymity, and honesty between professionals (Leedy & Ormrod, 2005). This study took into account the following ethical and legal considerations:

- The researcher has completed a course of Research Ethic Policy and Code of Conduct for Research and Human Subject Research Ethics (Appendix A).
- Permission to conduct this research study was obtained from the University Ethics Committee for Human and Social Sciences for approval (Appendix B).
- Permission to conduct this study was obtained from all relevant stakeholders: the Department of Health and medical managers of public sector hospitals (Appendix C, D and E respectively).
- Consent forms was provided to all participants prior to commencing with the research. Each individual who signed the consent form was provided with a copy.

- For the purpose of patient-health practitioner confidentiality, audiologists were advised not to capture photography in which their patients' faces are visible. The Photovoice training provided participants with further in-depth information regarding the Ethics associated with the use of photography for research.
- There were no known or anticipated risks to participants.
- The researcher was obligated to discuss and explain the nature of the study to the participants.
- Participants were informed and permitted to withdraw from the research study at any given time.
- Codes or research numbers were assigned to participants and their research records to protect their anonymity (Berg & Latin, 2008).
- Participants anonymity was maintained during the presentation of results.
- There were no hidden agendas or misconceptions when obtaining information (Berg & Latin, 2004).
- Research questionnaires and interview schedules will be locked in a cabinet for a period of 5 years and only accessed by the researcher and supervisor involved in this study, and thereafter destroyed.

The researcher obtained additional permission from the participants of phase two that requests consent, in the event that the photography obtained will be used in presentations to influence policy and practice (Appendix H2).

3.16 CONCLUSION

In this chapter, the research methodology for the current study has been outlined. The study entailed conducting concurrent phases with multiple methods to provide both quantiative and qualitative information about the communication that takes place beween FLES audiologists and their isiZulu speaking clients. To ensure that the opinons of both patient and practitioner were canvassed, questionnaire surveys were used to obtain mainly qualitative data, which was triangulated with qualitative thematically analysed data from two audiologists. The use of photographs enables moments to be captured that represented compenents of that interaction, and provided a visual medium to supplment the numbers and text of the written replies. The study design, study population, sample sizes, sampling methods and sample selection criteria have been described. In addition, the data collection instruments, data collection process and data analysis procedures have been discussed. The chapter concluded

by highlighting aspects related to reliability, validity as well as ethical considerations. The results of the respective methods are presented in the following chapter, which triangulates the findings to find common ground.

CHAPTER 4. RESULTS

4.1 INTRODUCTION

The results in this chapter are presented according to the objectives of the study, with objective 5 being integrated with objectives 1-4. Creswell (2008) defines analysis and interpretation as the process of breaking down and organizing data into meaningful groups as well as identifying patterns of relationship among these groups. In keeping with the concurrent triangulation mixed design, the results from First Language English Speaking (FLES) audiologist's perspectives and isiZulu patient's perspectives will be integrated using the weaving approach (Fretters, Curry & Creswell, 2013), which allows for triangulated data to be viewed holistically.

4.2 OBJECTIVE 1. First Language English speaking audiologists cultural and perceived linguistic competency in isiZulu

Objective 1 is divided into cultural and linguistic competency.

4.2.1 Cultural Competency in isiZulu

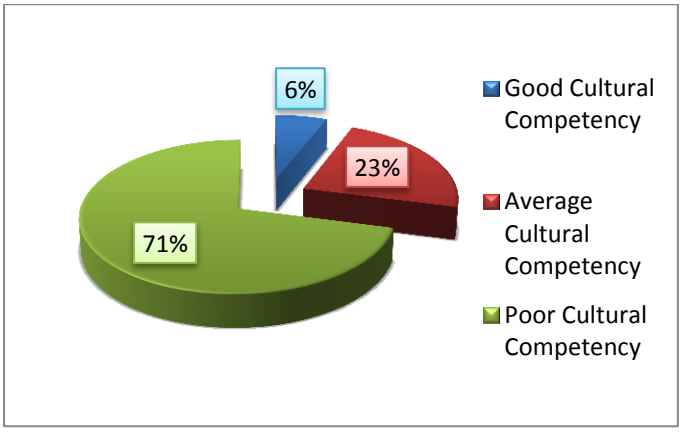


Figure 4.1 Percentage of First Language English speaking audiologist's overall cultural competency in isiZulu

Figure 4.1 revealed that majority (71%) (n=22) of FLES audiologists have poor cultural competency in isiZulu ($\bar{x}$ cultural competency level was 25%), 23% (n=7) have average cultural competency ($\bar{x}$ cultural competency level was 50%) and a mere 6% (n=2) have good cultural competency in isiZulu ($\bar{x}$ cultural competency level was 75%). Cultural competency scores were calculated using 8 questions that covered each of the cultural constructs within the theoretical framework of cultural competency (Campinha-Bacote, 2007). These cultural constructs are further discussed descriptively below**.**

4.2.1.1 Cultural awareness

Figure 4.2 revealed that 100% (*n*=31) of FLES audiologists had awareness of the isiZulu culture by acknowledging that the isiZulu culture is defined by its own unique characteristics. This is supported by the 97% (*n*=95) of isiZulu patients who agreed that FLES audiologists recognized that differences exist between the isiZulu culture and their own respective culture.

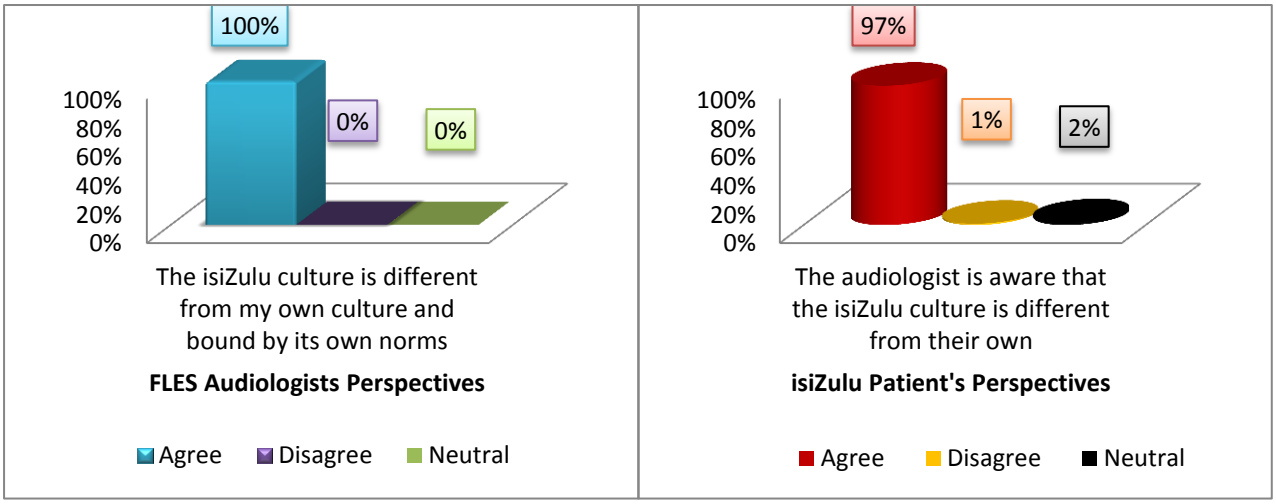


Figure 4.2 Perspectives of FLES audiologists and isiZulu patients regarding cultural awareness

4.2.1.2 Cultural knowledge

Further analysis relating to cultural competency indicated that overall FLES audiologists had inadequate knowledge of the isiZulu culture. The results depicted in Figure 4.3 overleaf indicate that 78% (*n*=24) of FLES audiologists agreed that they had limited knowledge on health-related isiZulu cultural beliefs and values, as well as 81% (*n*=25) of them reported that that they had limited knowledge on health-related isiZulu cultural behaviours. Furthermore, inferential analysis (refer to Annexure J) revealed a significant association between knowledge of isiZulu cultural behaviours and number of years practising as an audiologist (p value=0.021).

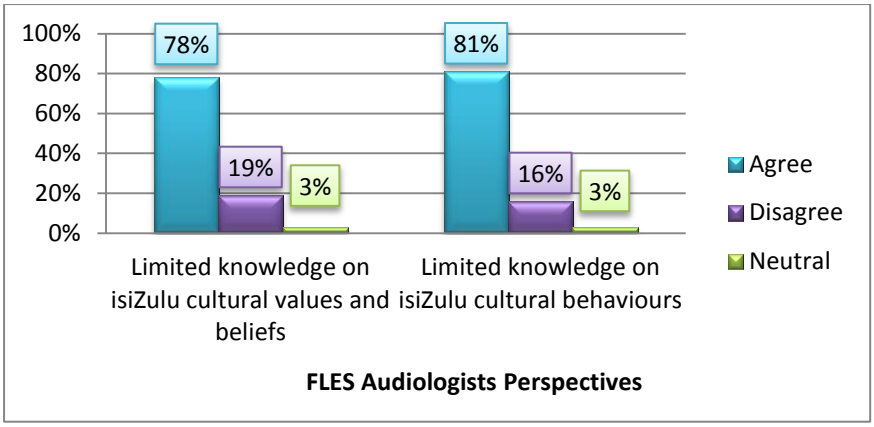


Figure 4.3 FLES audiologists perspectives on their cultural knowledge of isiZulu

In order to investigate the possibility of isiZulu cultural knowledge being acquired through interaction with culturally-learned health sources, FLES audiologists were asked if they have ever worked with a traditional healer in their practice. The results revealed that (100%) (*n*=31) of FLES audiologists had not worked with a traditional healer in their practice. This is supported below in Figure 4.4 below, in which 91% (*n*=89) of isiZulu patients indicated that FLES audiologists need more knowledge on traditional methods of treating hearing loss.

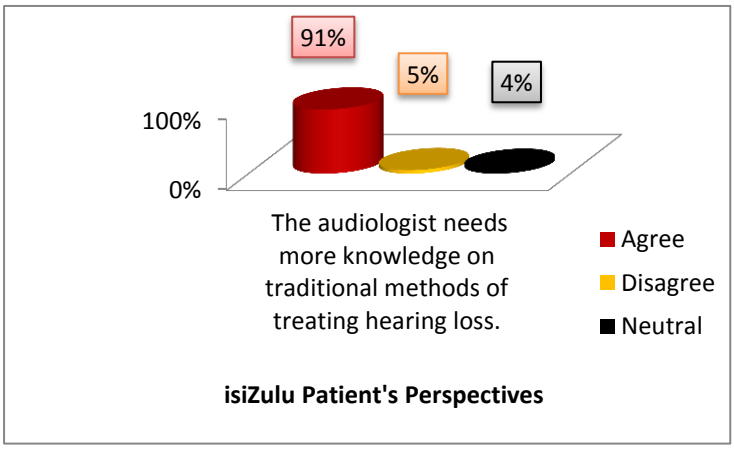


Figure 4.4 isiZulu patient's perspectives on traditional methods of treating hearing loss

In addition to the responses obtained from the quantitative survey above, the Photovoice aspect of the study revealed the strong emergence of *Undergraduate training* affecting all cultural constructs under the cultural competency theme. With regard to cultural knowledge, the dialogue below, from a FLES audiologist, highlights concerns regarding prior exposure to the isiZulu culture.

"Throughout our schooling, teachers consistently bombarded us with information in areas of Mathematics, Sciences and English, which allowed us to have knowledge in these areas. Arriving at university, we were faced with the dilemma of learning an entirely new culture and language namely isiZulu"

Further to this, the notion of incomplete isiZulu knowledge was strongly reinforced during Photovoice photography. The results are presented below

Figure 4.5 Photovoice Exhibit A- *Roots of Knowledge*

One FLES audiologist selected the above photograph to symbolize her lack of isiZulu knowledge during undergraduate training.

> *"The growth of knowledge stems from planting the seed of education. Education has many roots; a complex system that grows stronger and radiates into immense knowledge by consistent nurturing. The more we pay attention to a specific area; the stronger we are. Arriving at university with knowledge in so many other areas, we were faced with a clear lacking in our knowledge of isiZulu, which can be compared to the lack of a single burning light bulb".*

4.2.1.3 Cultural Skills

The third construct evaluated was cultural skills. The results depicted in Figure 4.6 overleaf indicate that 87% (n=27) of FLES audiologists reported experiencing difficulty collecting isiZulu cultural information during consultation. Furthermore, 90% (n=28) of FLES audiologists reported difficulty in conducting a culturally based isiZulu assessment. Similar findings were reported by isiZulu patients (refer to Figure 4.6) in which 93% (n=91) agreed that their FLES audiologist has difficulty conducting a culturally based assessment. Moreover, inferential analysis (refer to Annexure J)

revealed a significant association between FLES audiologists ability to conduct a culturally based assessment and gender (p value=0.042).

Furthermore, Figure 4.6 below indicates that 71% (n=22) of FLES audiologists agreed that it is time consuming to skilfully adapt resources and services when encountering isiZulu patients. In addition, inferential statistics (Annexure J) revealed a significant association between FLES audiologists time taken to adapt resources/services and the description of their institution in terms of urban/rural (p value=0.038).

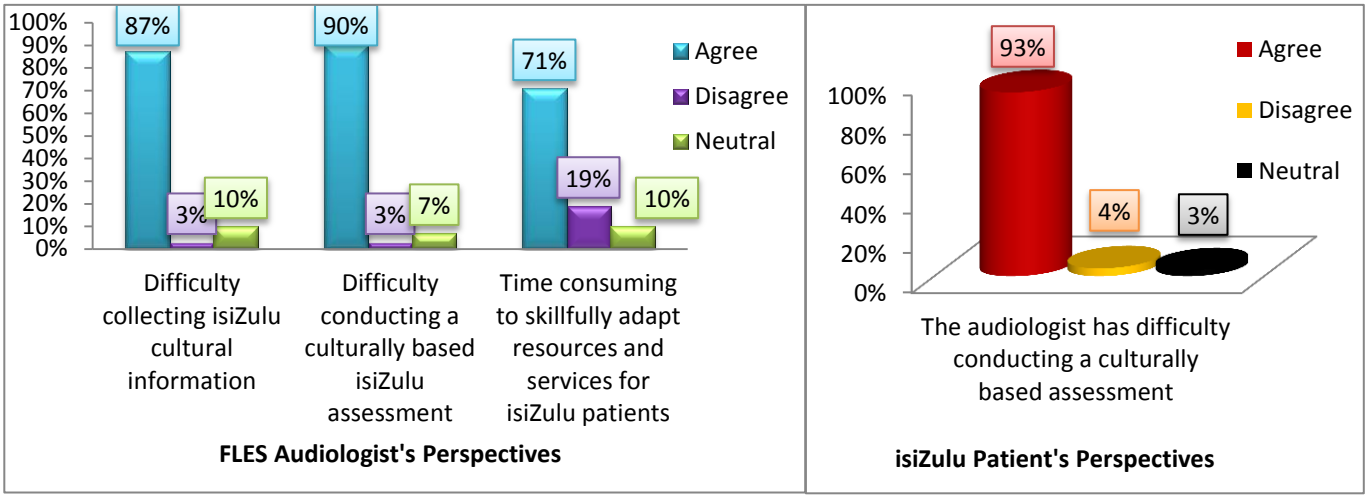


Figure 4.6 Perspectives of FLES audiologists and isiZulu patients regarding isiZulu cultural skills

The Photovoice narrative below provided a possible attributer to lack of cultural skills, by drawing on the lack of isiZulu clientele exposure during undergraduate training.

> *"What would have really helped is more Zulu clients during the audiology degree".*

4.2.1.4 Cultural encounters

The fourth cultural construct investigated was cultural encounters. Figure 4.7 overleaf illustrates a varied response with 55% (*n*=17) of FLES audiologists reporting often dreading cross-cultural encounters with isiZulu patients due to feeling inadequately prepared. Twenty nine percent (29%) (*n*=9) of FLES audiologists disagreed and 16% (*n*=6) remained neutral. In contrast to the varied response from FLES audiologists, a more concentrated response was obtained from isiZulu patients

with majority (*n*=87, 89%) of isiZulu patients indicating the impression that FLES audiologists dread engaging with them due to differences in culture.

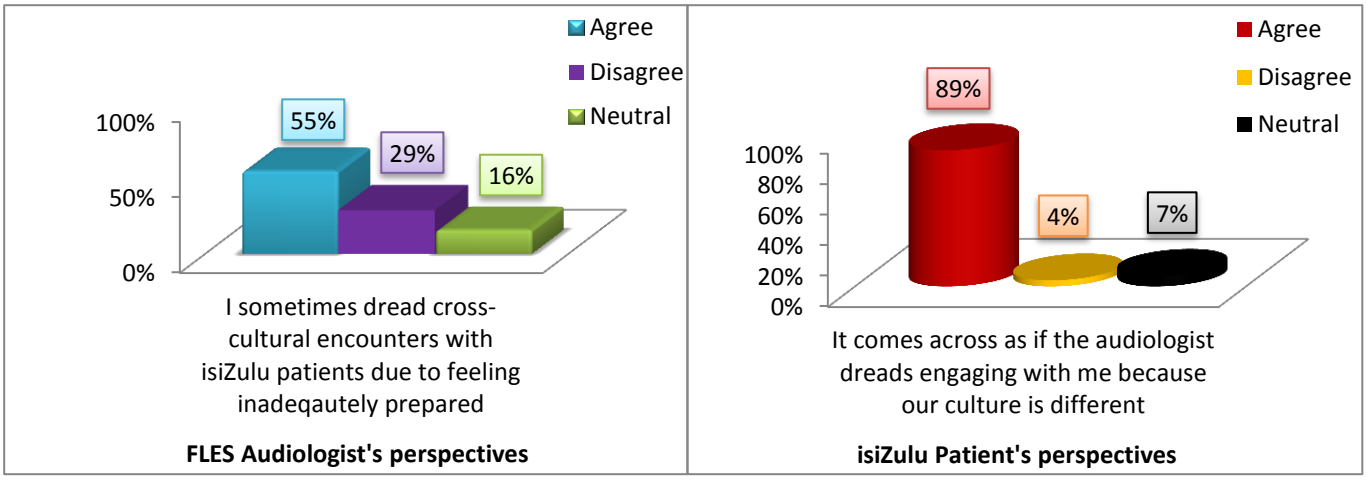


Figure 4.7 FLES audiologists and isiZulu patient's perspectives on isiZulu cultural encounters

The Photovoice narrative from one community service FLES audiologist also concurred with the perspectives of isiZulu patients by specifically drawing on the lack of undergraduate preparedness, refer to the quote below.

"To some extent I feel anxious when a Zulu patient arrives, which can affect the level of engagement. Not knowing if I'm ready and so you never know how it's going to pan out".

4.2.1.5 Cultural desire

The last cultural construct measured pertained to cultural desire. It was positive to note from the results revealed that all (*n*=31) FLES audiologists expressed the desire to benefit from more knowledge and training on how to incorporate cultural sensitivity in their daily audiological practices. In addition, the Photovoice narrative below further reinforced the desire to become more culturally competent by expressing the need to attend isiZulu cultural courses.

"What we need is cultural Zulu courses. Courses specific to audiology that varsity failed to cover. What does their culture believe regarding hearing loss? How do I provide intervention that satisfies their holistic being?"

4.2.2 Linguistic competency in isiZulu

The second part of the first objective of the study involved determining FLES perceived audiologists' linguistic competency in isiZulu during the provision of audiology services. Therefore, FLES audiologists were prompted to self-rate their perceived linguistic ability in isiZulu.

The findings below in Figure 4.8 show that 6% (*n*=2) of FLES audiologists self-rated their linguistic ability in isiZulu to be excellent, 3% (*n*=1) as good, 44% (*n*=14) as average and 47% (*n*=15) of FLES audiologists considered themselves to be have poor linguistic competency in isiZulu.

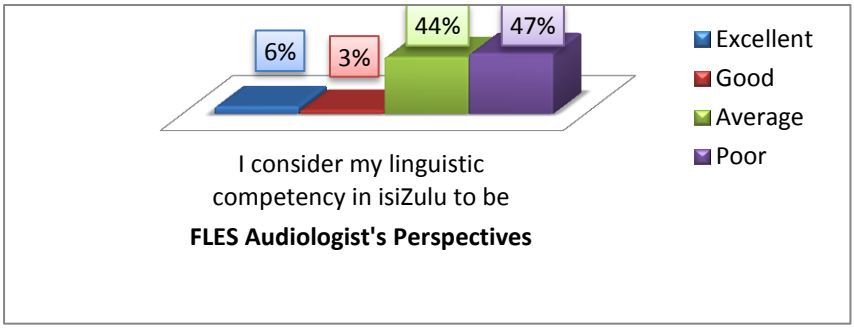


Figure 4.8 FLES audiologists perceived linguistic competency in isiZulu

Having established FLES audiologists overall self-rated linguistic competency levels in isiZulu, it was then necessary to compare the self rated levels to FLES audiologist's perception of their linguistic competency in isiZulu in several specific audiology areas. This was calculated using FLES audiologists self evaluation of their perceived isiZulu linguistic competency in effectively performing specific areas of audiology assessment and management.

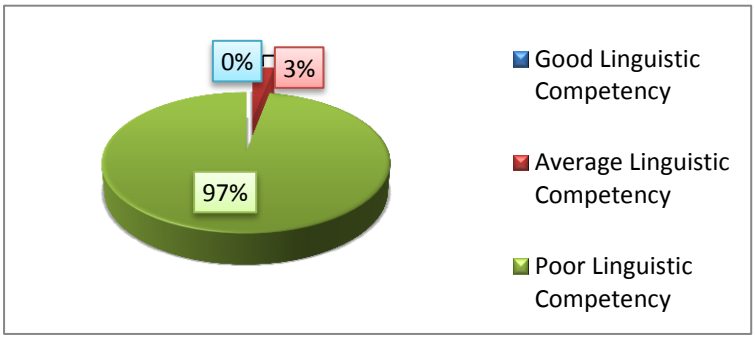


Figure 4.9 FLES audiologists' perceived linguistic competency in isiZulu

Figure 4.9 revealed that the majority (97%) (*n*=30) of FLES audiologists perceived their linguistic competency in isiZulu to be poor (mean linguistic competency level was 11%) during the provision of audiology services. 3% (*n*=1) FLES audiologist perceived their linguistic competency in isiZulu

to be average (mean linguistic competency level was 57%) and none of the FLES audiologists perceived their linguistic competency in isiZulu to be good. These results indicate a distinct difference between self rated linguistic levels (Figure 4.8) and actual linguistic levels (Figure 4.9). The Fischer Exact test results however revealed an insignificant p value of 0.094 (refer to Appendix K). As discussed, actual linguistic competency scores were calculated using nine questions that covered the ability to convey information in isiZulu during specific audiology assessment and intervention services, as guided by the literature. These areas are further discussed descriptively below.

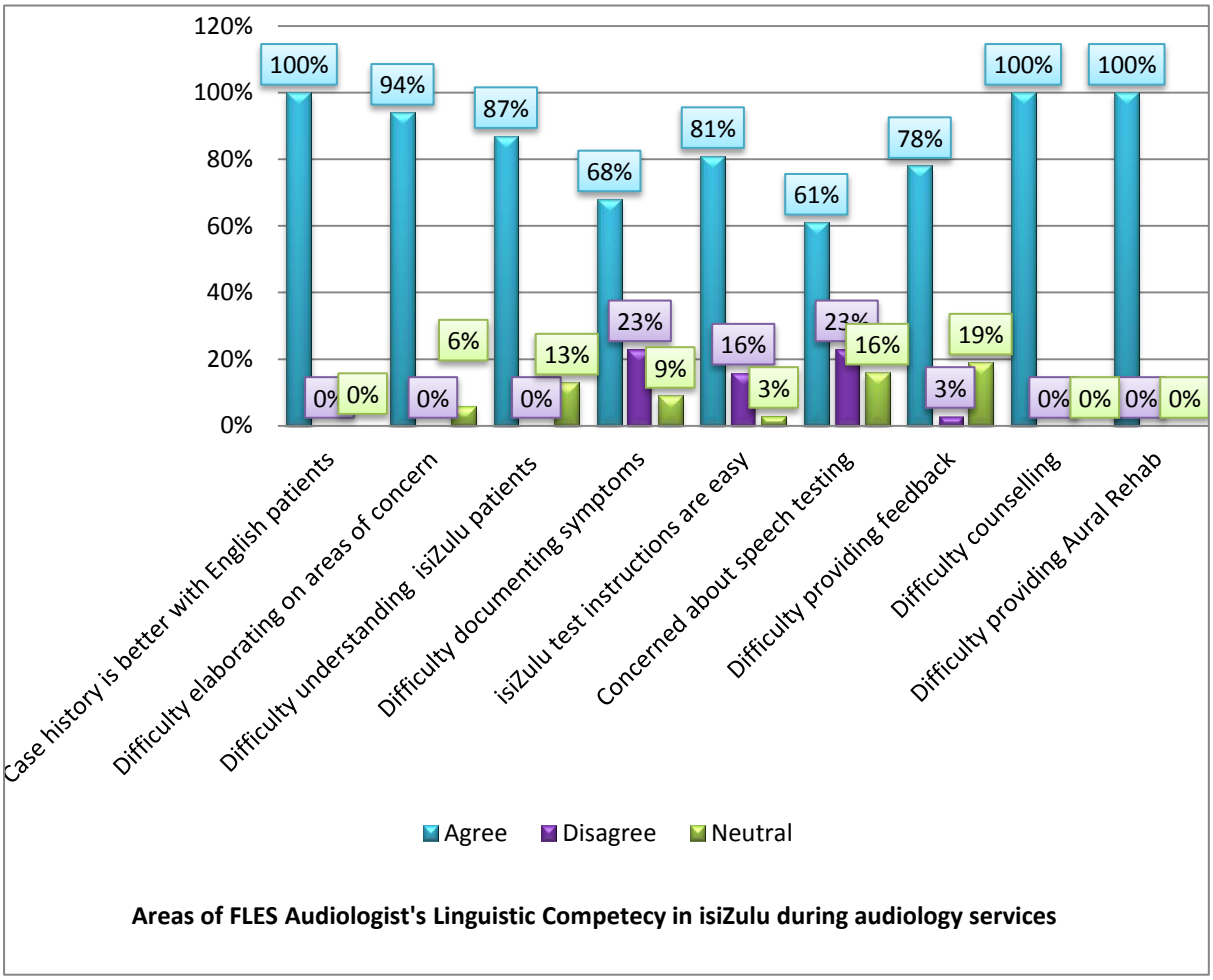


Figure 4.10 Areas of FLES audiologists' perceived linguistic competence in isiZulu during audiological service delivery

In order for FLES audiologists to be considered linguistically competent in isiZulu, it would require them to be able to render several audiological services in the language of their patients. The first area being the initial consultation in which case history is conducted. The results illustrated in Figure 4.10 indicate that all (n=31) of FLES audiologists agreed that the quality of conducting case history is significantly better with First language English speaking patients as opposed to isiZulu

patients. Added to this, 73% (*n*=72) of isiZulu audiology patients felt that not enough time was spent talking to them (Refer to Figure 4.11.).

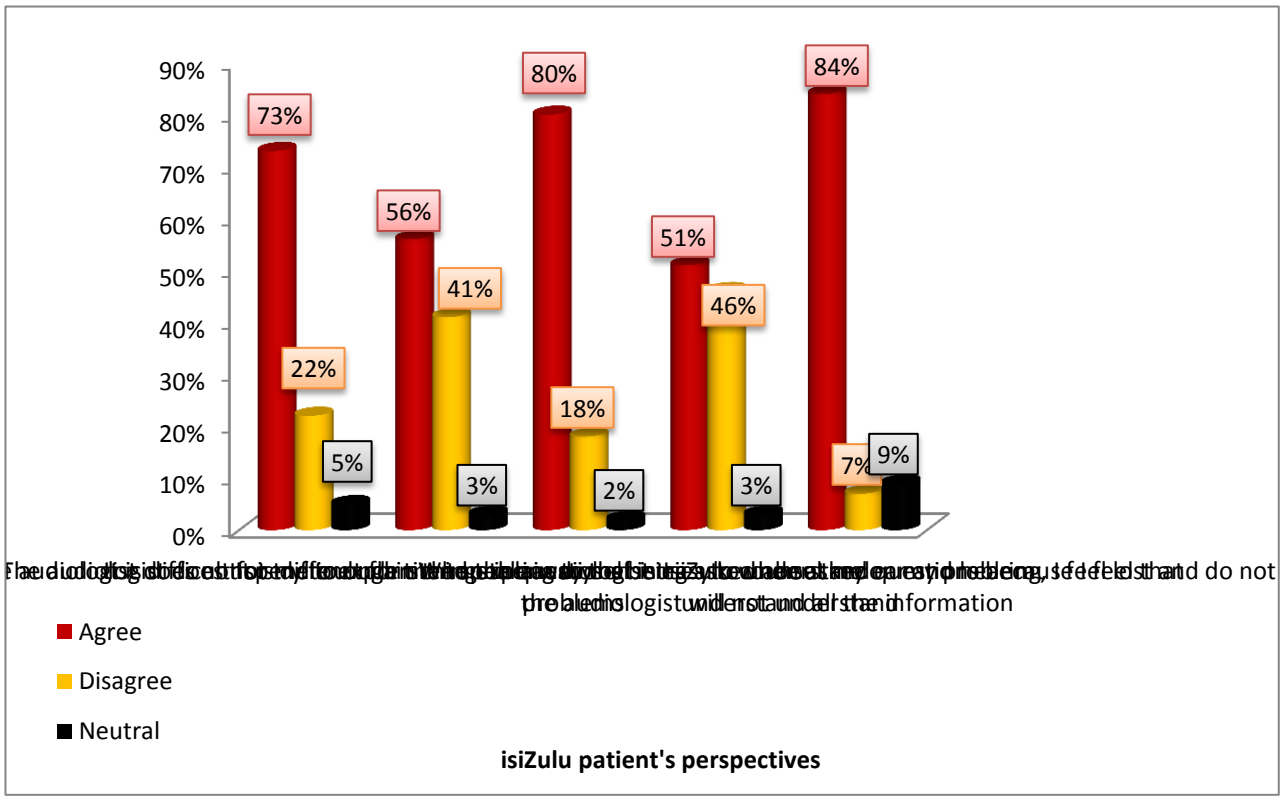


Figure 4.11 isiZulu patients perspectives regarding areas of FLES audiologist's linguistic competency

Furthermore, 80% (*n*=78) isiZulu audiology patients expressed difficulty in understanding questions about their ear or hearing problem (refer to Figure 4.11). While, 94% (*n*=29) of FLES audiologists reported it difficult to elaborate and probe for areas of concern with isiZulu patients (refer to Figure 4.10).

In addition, 87% (*n*=27) of FLES audiologists reported experiencing difficulty in understanding isiZulu patients who speak fluently in their language (refer to Figure 4.10). In contrast, a more mixed response was obtained from isiZulu patients with only 51% (*n*=50) of them who felt that it is indeed difficult to explain themselves in isiZulu because their audiologist will not understand (refer to Figure 4.11).

In terms of documenting isiZulu patients symptoms, a slighting varied response was obtained with 68% (*n*=21) of FLES audiologists agreeing that it is difficult to identify symptoms conveyed by isiZulu patients (refer to Figure 4.10).

In contrast to the relatively consistent challenges with the isiZulu language in delivering audiology services that have been reported on thus far, Figure 4.11 showed that 81% (*n*=25) of FLES audiologists reported that providing test instructions in isiZulu is fairly easy. However, 61% (*n*=19) of FLES audiologists reported being concerned about the accuracy of speech testing (refer to Figure 4.10).

Other important areas in audiology that require good linguistic competency include: the provision of feedback to patients, the provision of counselling as well as the provision of aural rehabilitation to patients with hearing loss. The findings highlighted in Figure 4.10 indicate that 78% (*n*=24) FLES audiologists find it challenging to provide feedback on assessment results to isiZulu patients. In contrast, a slightly more mixed reaction was obtained from the perspective of isiZulu patients, in which only 56% (*n*=55) of them agreed that information was not explained in a way that was easy to understand.

Further to this, all (*n*=31) FLES audiologists agreed that providing aural rehabilitation and providing counselling to isiZulu patients, on how to cope with hearing loss, are areas of challenge (refer to Figure 4.10). These findings concur with 84% (*n*=82) of isiZulu audiology patients who agreed on feeling lost and not understanding all the information conveyed during counselling provided (refer to Figure 4.11).

In line with determining FLES audiologists' linguistic competency in isiZulu during areas of audiological service delivery, it was also important to determine how FLES audiologists acquire information from their isiZulu patients. Figure 4.12 overleaf demonstrates the mode in which FLES audiologists obtain the most information about isiZulu patients.

Although the case history interview is considered the gold standard in gathering information about a patient (Bush, 2014), the results in Figure 4.12 however indicate that only 29% (*n*=9) FLES audiologists consider the method of interviewing isiZulu patients as the most useful in gaining information about the patient. Instead, majority (39%) (*n*=12) of FLES audiologists rely on the patient file and 26% (*n*=8) utilize the person accompanying the patient to elicit information. Lastly, 6% (*n*=2) FLES audiologists resort to other methods of obtaining information, which involved seeking the assistance of ad hoc staff interpreters ie. another therapist or a general orderly cleaner (refer to Figure 4.12 overleaf).

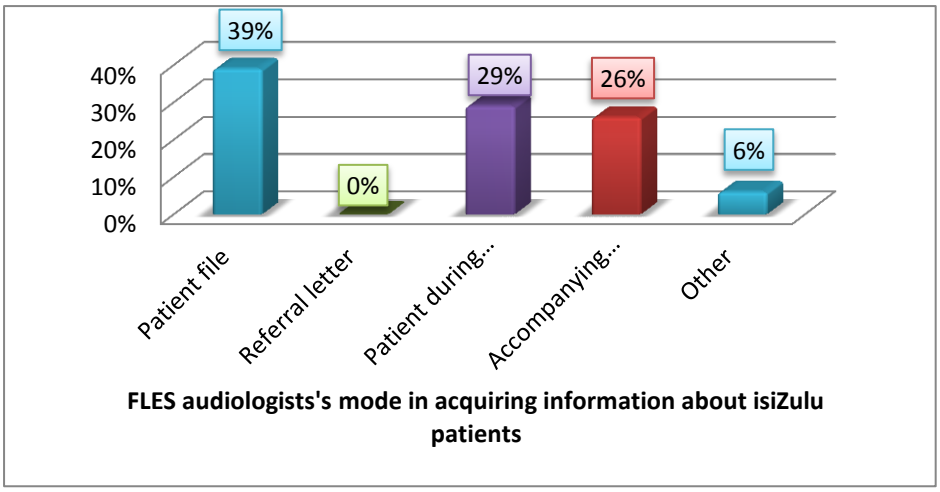


Figure 4.12 Modes utilized by FLES audiologists to obtain the most information about isiZulu patients

Figure 4.13 below delves into which aspects of the isiZulu language are considered challenging by FLES audiologists. The results indicate that 97% (*n*=30) of FLES audiologists cite unknown isiZulu terminology as a challenge, 71% (*n*=22) consider tone and prosody to be difficult, 81% (*n*=25) identify isiZulu dialect as a challenge and a further 77% (*n*=24) of FLES audiologists recognize the isiZulu grammar as an aspect of difficulty. It is therefore evident, that all of the above aspects contribute to FLES audiologists' perceived levels of linguistic competency in isiZulu.

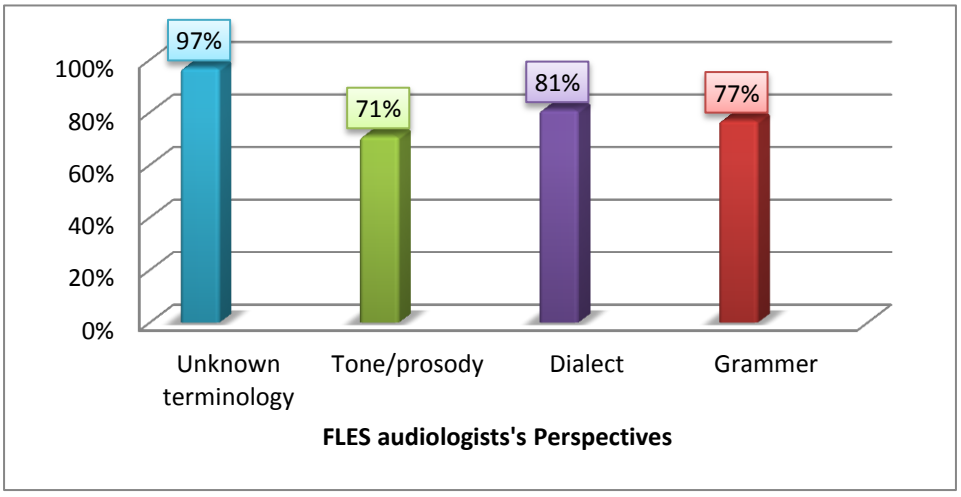


Figure 4.13 FLES audiologists perspectives on aspects of the isiZulu language that is considered challenging

Apart from the linguistic characteristics of the isiZulu language, there are external factors that may have attributed to FLES audiologists linguistic competency in the language. These influences are illustrated in Figure 4.14. The results indicate that FLES audiologists feel strongly about the role of their education on their ability to be linguistically competent in isiZulu. The majority (94%) (*n*=29)

of FLES audiologists disagree that formal education, in terms of both secondary and tertiary, had adequately prepared them to converse in isiZulu in our unique South African context. Furthermore, 84% (*n*=26) FLES audiologists agree that the indigenous language course offered at university level was not specific to the discipline of Audiology and therefore not beneficial. In addition, 42% (*n*=13) FLES audiologists disagree that they were orientated to the isiZulu language during their year of community service. The above results highlight the prospect of education and mentorship as possible factors that influence linguistic competency in isiZulu.

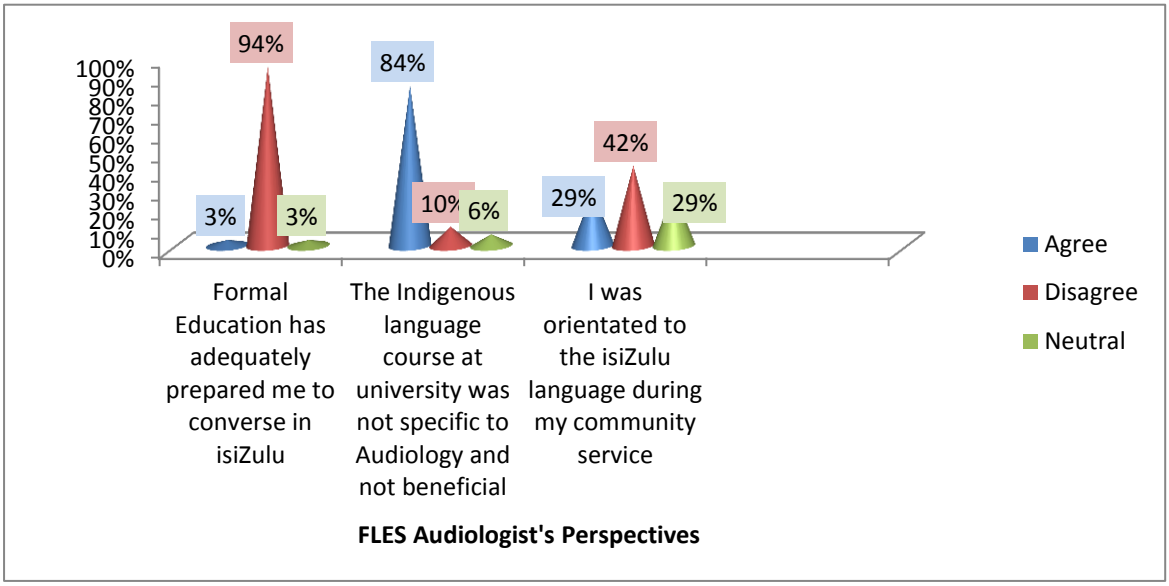


Figure 4.14 FLES audiologists perspectives regarding factors that affect linguistic competency in isiZulu

In addition, the Photovoice aspect of the study revealed the strong emergence of *undergraduate training* on *linguistic competency* as well. The direct quote below highlights lack of prior exposure to the isiZulu language.

> *"Arriving at university, we were faced with the dilemma of learning an entirely new culture and language namely isiZulu".*

Furthermore, concerns regarding the length of isiZulu training at undergraduate level were revealed

> *"Bearing this in mind of it being only a semester long and being faced with immense information as this language may be our only mode of communication once we enter the working world".*

In addition, the following narrative draws attention to the frequency of isiZulu training at undergraduate level.

"The degree of audiology should provide isiZulu lessons throughout the degree. In first year, students should learn basic isiZulu speaking skills. Second, third and fourth year courses should be used to improve proficiency".

Furthermore, the narrative below highlighted concerns regarding the relevance of the undergraduate isiZulu training to the profession of audiology.

"The isiZulu course should be more relevant. Learning how to fill up petrol in isiZulu proved useless when trying to provide an audiology assessment in isiZulu"

Lastly, the narrative below conveys a weak foundation with regard to the undergraduate isiZulu training.

"I came away feeling that the course did not teach me enough about the Zulu language that is needed to carry out an audiology assessment".

Moreover, the isiZulu language barrier was strongly reflected in FLES audiologists Photovoice photography. The results are presented below.

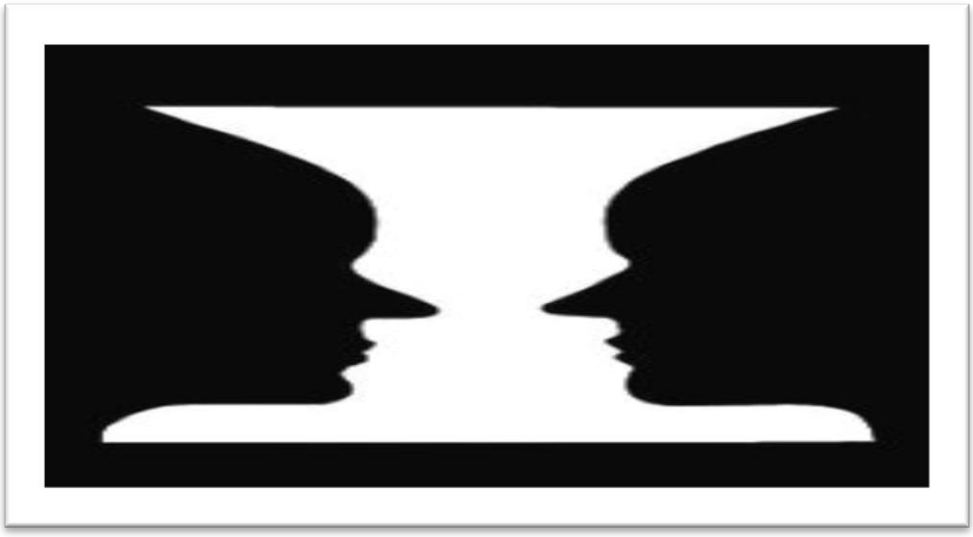


Figure 4.15 Photovoice Exhibit B-*The Illusion of Communication*

A FLES audiologist selected the above photograph to symbolize her progression from university into community service.

"The illusion of English being the dominant language of communication, met the barrier of truth. English is spoken worldwide and so they say until you arrive at a hospital, which is in a rural area, English is not a language used by many. Many in rural areas have not been afforded the opportunity to get an education therefore, they are unable to read and write let alone speak in English. They communicate solely in their mother language, which is isiZulu. Unable to effectively communicate in isiZulu with patients quickly escalated to the realisation of how much this is affecting service delivery and audiological services. Suddenly realising the language barrier to communication is far more complicated that I would have anticipated".

Figure 4.16 Photovoice Exhibit C- Building walls

A FLES audiologist selected the above photograph to symbolize the language barrier between herself and isiZulu patients.

"The picture above was chosen to show that I often felt as if a "wall" had formed between myself and my patient due to the lack of a common language. Due to the frequent misunderstandings and confusion caused by the language difference between myself and my patient, I believe patients begin to 'hold-back' information or 'build a wall' in front of them. The patients are unable to effectively express their concerns and thus become frustrated and anxious and are thus less likely to share and open-up to the practitioner".

Figure 4.17 Photovoice Exhibit D-*Sinking into Obscurity*

"*As a community service Audiologist there were many challenges faced when first entering the big "working world" but one that was consistent and ever daunting was the Zulu language barrier. As a first language English speaker my isiZulu was dismal at best, and this proved to be the greatest challenge when providing treatment for my patients. I have chosen the picture depicted above as I believe it bests describes my feeling whenever I realized that my patient could not speak or understand a single word of English. It felt as if I was drowning. That no matter how hard I tried to reach the top of the water I could never get there. When attempting to communicate with a patient who only spoke/understood isiZulu there was confusion, disorientation, fear and the feeling that the torment would never end, as such with a person drowning I would imagine. Confusion was eminent with both myself and my patient with frequent misunderstandings and communication breakdowns. Disorientation, as I did not know what to do or what to say to make myself better understood. I felt fear that I would not understand the patients concerns/complaints and could misdiagnose or treat their condition, and that the often awkward silent and confused stares between myself and the patient would never end".*

4.3 RESULTS FOR OBJECTIVE 2. Factors that influence communication between First Language English speaking audiologists and isiZulu patients

Although diversity in culture and language remain at the forefront during communication between FLES audiologists and isiZulu patients, the literature has defined several additional factors that impose on equitable heath care interaction for such populations. The second objective of the study

aimed to determine the factors that influence effective cross cultural and cross linguistic communication.

4.3.1 Informed consent

The first factor investigated pertained to the process of informed consent.

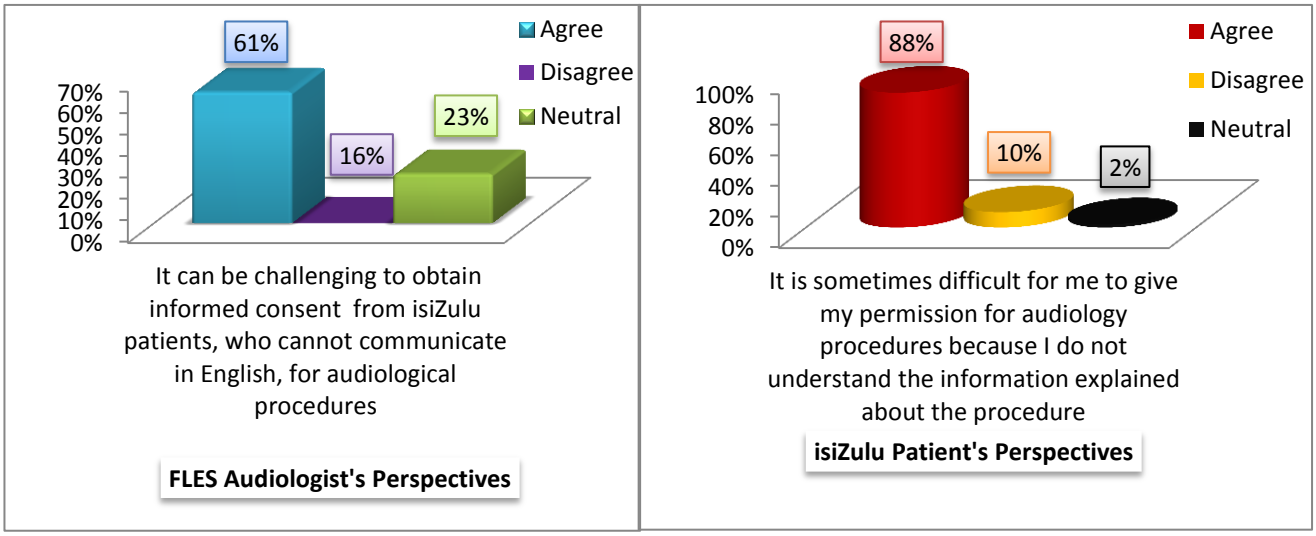


Figure 4.18 FLES audiologists and isiZulu patient's perspectives on providing informed consent for audiological procedures

The results presented in Figure 4.18 indicate a mixed response from FLES audiologists, with 61% (*n*=19) perceiving that obtaining informed consent from isiZulu patients for audiological procedures is challenging. In contrast, a more unified response was obtained from isiZulu audiology patients with the majority 88% (*n*=86) of them reporting difficulty in giving consent/permission for audiological procedures, due to not understanding the information provided by FLES audiologists. The Photovoice narrative below sheds further light on the process of informed consent

"I don't find getting informed consent a particular problem. We have forms in isiZulu that explain the risks of ear mould impression taking. It seems to work well in helping the patient understand what we are doing".

"To be brutally honest, I feel like if you tell a patient too much, then the procedure seems scarier than it actually is. Try explaining the risks for ear irrigation, they would never agree to it. And my Zulu isn't that fluent enough to effectively ease their concerns".

4.3.2 Trust

Branching from informed consent is trust that the FLES audiologist will perform their duties to the best of their ability.

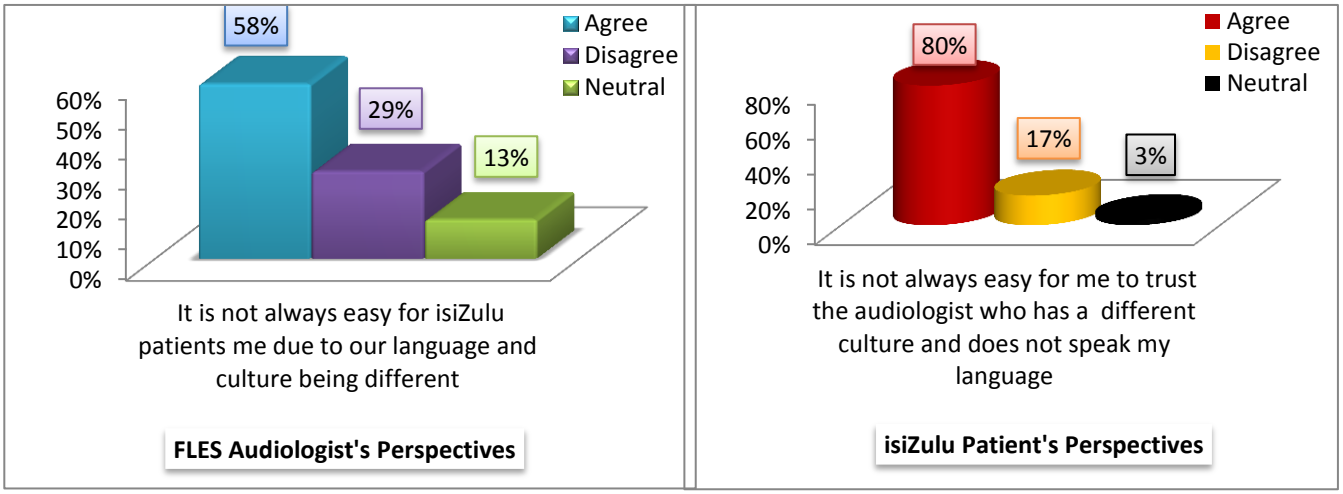


Figure 4.19 FLES audiologists and isiZulu patient's perspectives on establishing trust procedures

The results displayed above in Figure 4.19 portray a varied response with only 58% (*n*=18) of FLES audiologists agreeing that establishing trust with isiZulu patients is difficult due to the differences of language and culture. 29% (*n*=9) of FLES audiologists disagreed and 13% (*n*=4) of them remained neutral. In contrast, a more definitive response was obtained from isiZulu audiology patients, with majority (80%) (*n*=78) of them agreeing that building trust with FLES audiologists is difficult due to differences in language and culture. The Photovoice narrative below expands on the complexities of trust.

"I do feel like trust is an issue, they don't trust me because they don't understand me".

"Sometimes it seems that Zulu patients don't trust my capabilities, maybe because I am White. I could be wrong. It just feels that way sometimes".

4.3.3 Collaboration

Proceeding from trust is willingness to participate and collaborate.

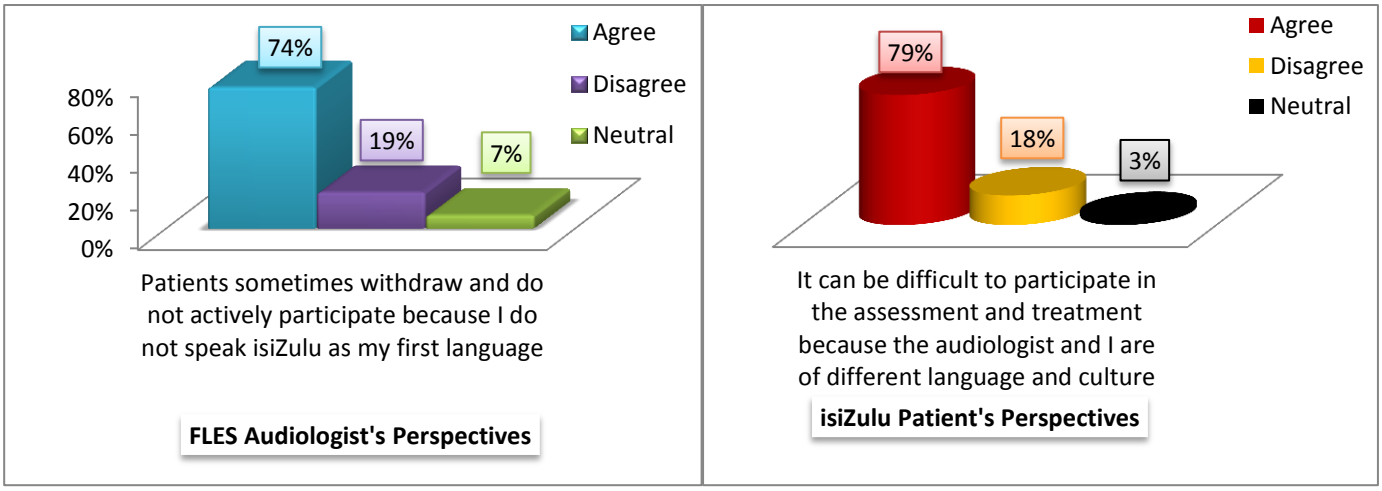


Figure 4.20 FLES audiologists and isiZulu patient's perspectives on willingness to participate and collaborate

The findings in Figure 4.20 signify that majority 74% (*n*=23) of FLES audiologists felt that isiZulu patients sometimes avoid participation during audiology assessment and intervention based on the service provider not being a first language isiZulu speaker. In addition, inferential analysis (Annexure J) revealed a significant association between FLES audiologist's race and their perspective of isiZulu patients withdrawing during assessment/management (p value=0.016).

These results were confirmed by the perspectives of isiZulu patients, of which 79% (*n*=77) agreed that they experience difficulty in participating in their audiology assessment or treatment due to the language and cultural barrier. The Photovoice narrative below from the two FLES audiologists highlights the aspect of patient participation.

"I believe Zulu patients 'hold-back' information or 'build a wall' in front of them because they are unable to effectively express their concerns and thus become frustrated and anxious and are thus less likely to share and open-up to me".

"They withdraw almost as if they settling and saying –you don't speak my language so what are you going to do about it? Establishing rapport with Zulu patients is that much harder".

The reduced participation of isiZulu patients may be explained in Figure 4.21, in which 81% (*n*=79) of isiZulu patients felt that they were not consulted with when decisions were made about their treatment.

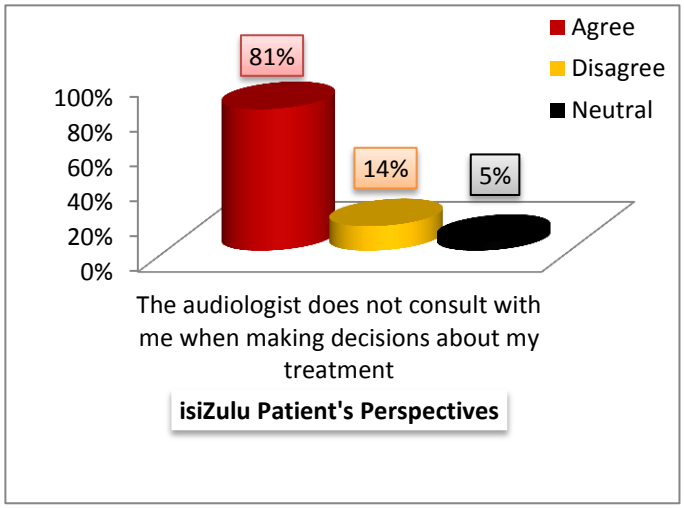


Figure 4.21 isiZulu patients perspectives on being included by FLES audiologists in decision-making

4.3.4 Empathy

Amidst collaboration between patients and healthcare providers, empathy is a key requirement to the interaction.

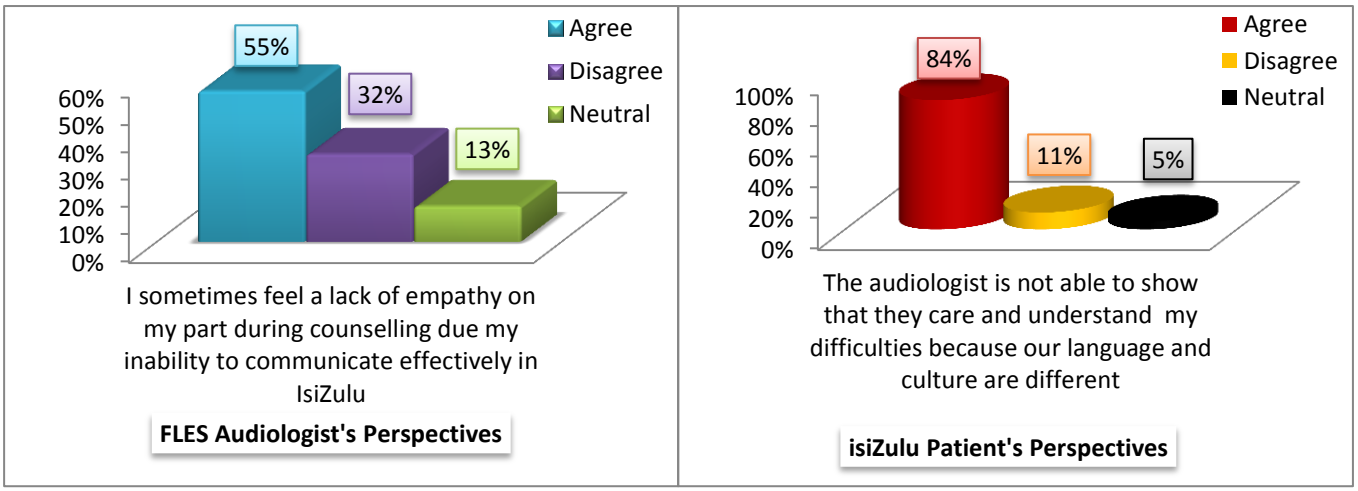


Figure 4.22 FLES audiologists and isiZulu patient's perspectives on empathy

The results in Figure 4.22 indicate a diverse response from FLES audiologists with 55% (*n*=17) of FLES audiologists agreeing that it is difficult to empathize with isiZulu patients in the presence of a language barrier. Thirty-two percent (32%) (*n*=10) of FLES audiologists' disagreed and 7% (*n*=4)

remained neutral. In contrast, a more unified response was obtained from isiZulu patients, with a staggering 84% (*n*=82) agreeing on the inability of their FLES audiologist to convey empathy in the presence of language and cultural barriers. The Photovoice narrative below further explores the concept of empathy during cross-cultural and cross-linguistic communication.

> *"As humans we all empathize with the pain of other humans but I think they might be an ingrained bias that makes us more inclined to identify with our own, not many people will admit that though".*

> *"When diagnosing hearing loss on a daily basis, kids, adults-it can take its toll on you. I prefer to keep a little distance and make my feelings less transparent. For my own sanity".*

4.3.5 Professional superiority

The next factor that can impede the ability to be empathetic to patients is the presence of professional superiority.

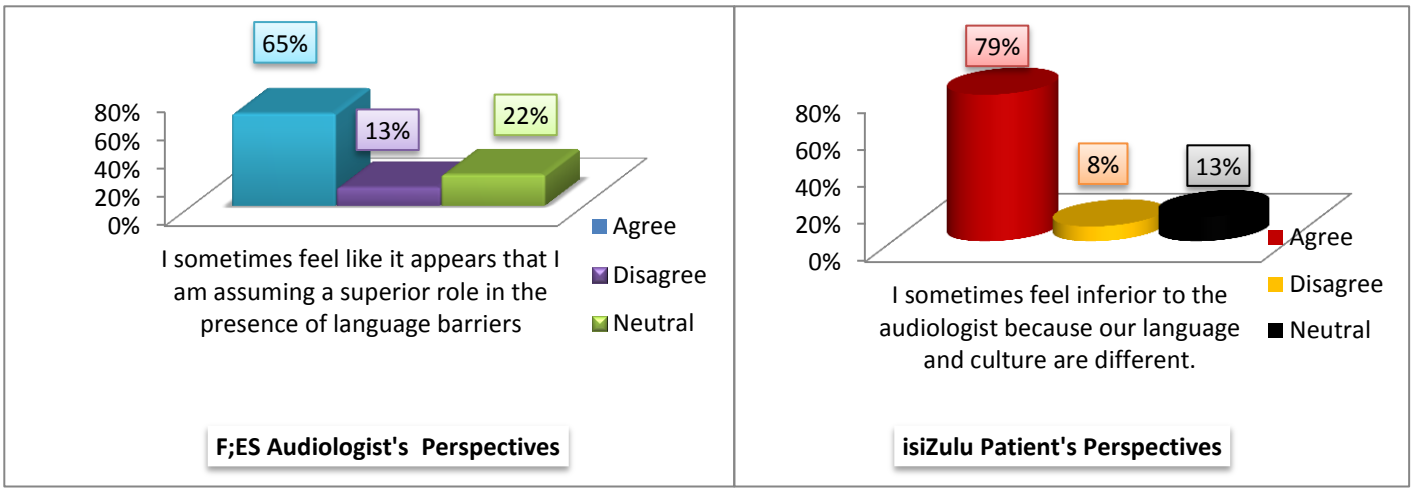


Figure 4.23 FLES audiologists and isiZulu patient's perspectives on superiority

The responses depicted in Figure 4.23 show that 65% (*n*=20) of FLES audiologists felt as though they were assuming a superior stance toward isiZulu patients due to the presence of the language barrier. Thirteen percent (13%) (*n*=4) of FLES audiologists' disagreed and 22% (*n*=7) remained neutral. From the perspective of isiZulu audiology patients, 79% (*n*=77) of them reported sometimes feeling inferior to the FLES audiologist due to differences in language and culture. The

FLES audiologist's Photovoice narratives below further delve into the notion of professional superiority during cross-cultural and cross-linguistic communication.

> *"Medical jargon is intimidating enough, try medical jargon in a language you don't understand. It doesn't make it easy for you and the patient to be on the same level. It's no wonder some patients feel like we above them".*

> *"I never intend to be perceived as superior, but it happens when you have a patient who doesn't understand you then you have to make all the decisions. I wish it didn't have to be that way".*

4.3.6 Attitude

The last factor investigated was attitude, which can influence the healthcare professional's outlook on empathy and superiority.

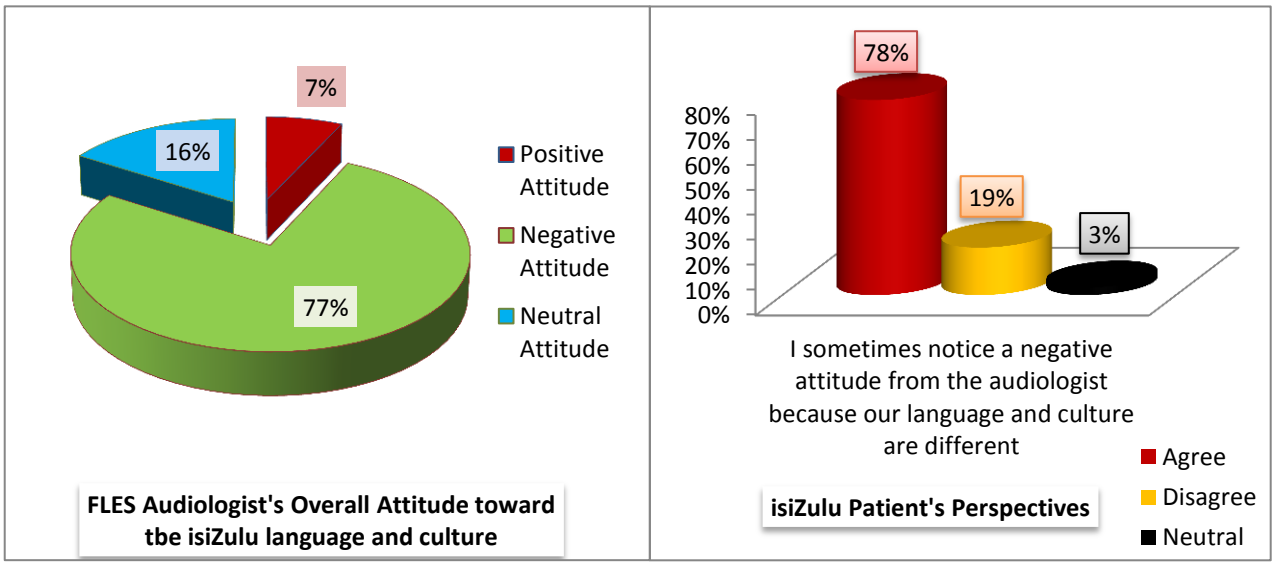


Figure 4.24 FLES audiologists overall attitude towards the isiZulu language/culture as well as the perspectives of isiZulu patients

Figure 4.24 revealed that majority (77%) (n=24) of FLES audiologists have a negative attitude/perception towards the isiZulu language and culture (mean attitude score was 17%). Sixteen percent (16%) (n=5) of FLES audiologists have a neutral attitude (mean attitude score was 50%) and a mere 7% (n=2) possess a positive attitude (mean attitude score was 75%).

The above findings strongly coincide with the perspectives of isiZulu audiology patients, whom which 78% (*n*=76) of them have sometimes noticed a negative attitude from FLES audiologists due to differences in language and culture (refer to Figure 4.24). The dialogues below further examines attitude during cross-cultural and cross-linguistic communication.

"I never have a bad attitude with a patient, that's just unprofessional. But I do get frustrated with being unable to speak the language; it's more like my attitude toward the situation".

"It's ironic because sometimes it's the patients that have a bad attitude towards you. Like you can tell them something in Zulu and they will say they don't understand. Then when you get a Zulu speaking colleague to assist, who will tell them the exact same thing that you did and they will acknowledge it. I don't know why they do that"

FLES audiologist's attitude scores in Figure 4.24 were calculated using 6 self evaluation questions that covered four core aspects. In order to measure attitude, Abidin, Pour-Mohommadi and Alzwari (2012) used the following four aspects ie. behavioural, cognitive, emotional and general. These areas are further discussed descriptively below

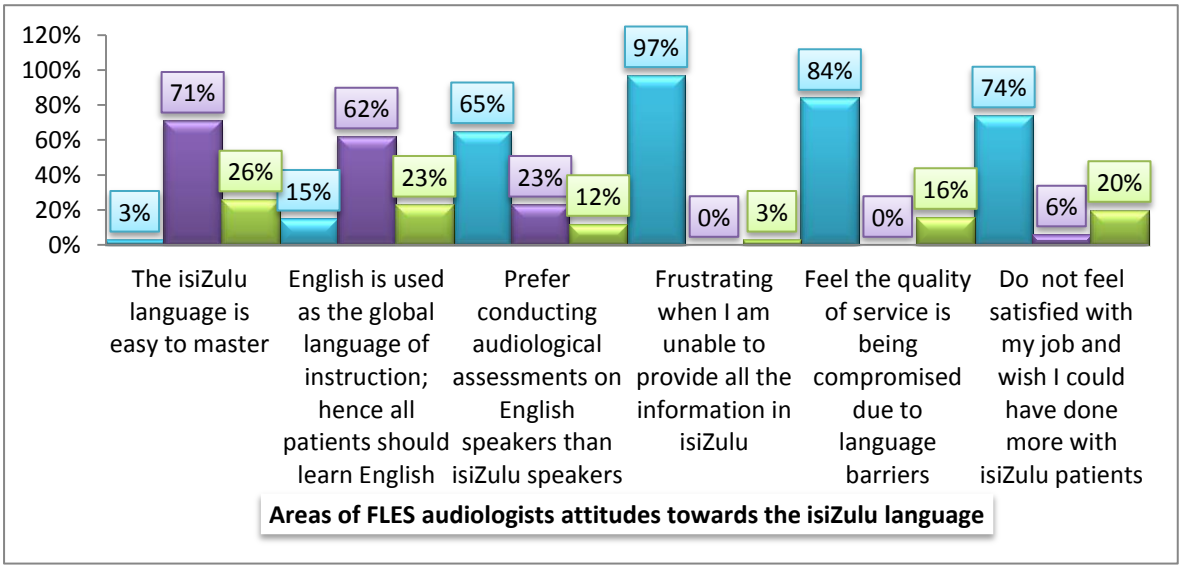


Figure 4.25 Areas of FLES audiologists' attitudes toward the isiZulu language

The first question in Figure 4.25 was cognitive in nature and it involved the perception of difficulty regarding the isiZulu language. The results revealed that 71% (*n*=22) FLES audiologists disagreed that the isiZulu language is easy to master, thus indicating a negative cognitive perception.

Moreover, inferential analysis (Annexure J) revealed a significant association between the type of institution that FLES audiologists are based (rural versus urban) and their ability to master the isiZulu language (p value=0.012).

The second question focused the general aspect and it pertained to overall use and prevalence of the isiZulu language. The majority (62%) (n=19) of FLES audiologists disagreed that all patients should learn and be able to communicate in English, thus indicating a positive attitude.

The third question covered the behavioural aspect by delving into whether FLES audiologists prefer conducting assessments on English speaking patients rather than isiZulu speaking patients. The results revealed that majority (65%) (n=20) of FLES audiologists indicate preference to patients who can communicate in English opposed to isiZulu, thus indicating a negative behavioural attitude toward the isiZulu language. Furthermore, inferential analysis (Annexure J) revealed a significant association between FLES audiologists race and their preference for patients who speak English (p value=0.039).

The fourth question incorporated an emotional aspect by evaluating the feelings of FLES audiologists in delivering information to isiZulu patients. The results revealed that 97% (n=30) of FLES audiologists reported experiencing feelings of frustration when being unable to provide their patients with all the information that they would like to in isiZulu. Thus, indicating a negative emotional attitude.

The fifth question covered the general aspect and pertained to how FLES audiologists ability to communicate with isiZulu patients influenced overall service delivery. The results revealed that 84% (n=26) of FLES audiologists felt the quality of service provided is being compromised due to the presence of the language barrier. Thus, indicating a negative perception.

The fifth question covered the emotional aspect by investigating job satisfaction. The results revealed that 74% (n=23) of FLES audiologists reported not always being satisfied with their job due to their inadequacy to do more for isiZulu patients. Poor job satisfaction and feelings of frustration deemed it necessary to delve further into the aspect of psychosocial feelings. Therefore, FLES audiologists were asked to characterize how they felt when encountering isiZulu patients, with the option to choose more than one emotion/state. The results are visualized below.

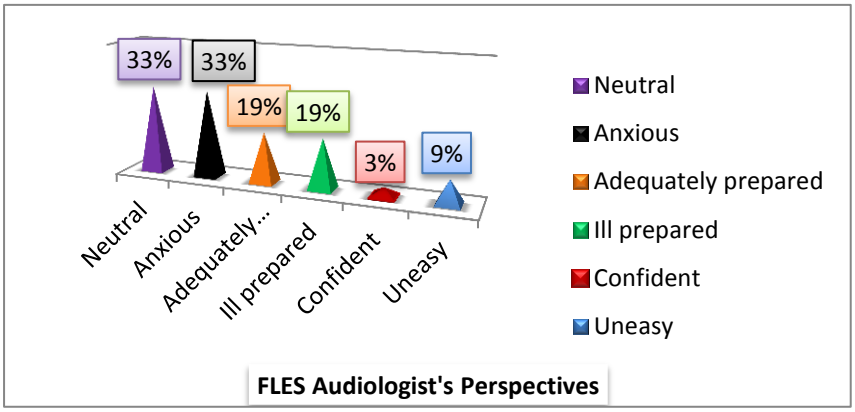


Figure 4.26 FLES audiologist's feelings when encountering isiZulu patients

The results in Figure 4.26 reveal that majority (*n*=10, 33%) of FLES audiologists feel either neutral or anxious when encountering isiZulu patients. 19% (*n*=6) feel adequately prepared, 19% (*n*=6) feel ill prepared, 9% (*n*=3) feel uneasy and only 3% (*n*=1) of FLES audiologists feel confident when encountering isiZulu patients.

4.4 OBJECTIVE 3. Communication strategies used by First Language English speaking audiologists when providing services to isiZulu patients

Objective three will now focus on the communication strategies used by FLES audiologists when providing services to isiZulu patients. Communication strategies can be ether classified as internal or external (Gura, 2015).

4.4.1 Interpreters

The literature identifies use of interpreters as the most common communication strategy employed by healthcare professions when encountering culturally and linguistically diverse patients (Mucic & Hilty, 2015). This can be considered utilization of an external communication strategy. An external strategy refers to use of an entity that originates outside of oneself (Gura, 2015). This is supported by the Photovoice narrative below.

> *"I did not know what to do or what to say to make myself better understood, and spent a great deal of time running around in hope that I would find an isiZulu speaking colleague to aid me". "-the frantic search for who can help with translation".*

Having established that interpreters were the most common communication strategy utilized by FLES audiologists, there was a need to investigate the accuracy of interpretation by determining the type of interpreters used. The Photovoice narratives below further examine the use of interpreters as a communication strategy.

4.4.1.1 Type of interpreters

> *"How can you understand when a patient begins to speak of his or her dizziness with no one to assist with interpretation but their child who sometimes doesn't even understand the true extent of the problem?"*

> *"I often used bilingual cleaners as interpreters and I worry about the accuracy of the translation provided"*

Furthermore, Figure 4.27 overleaf illustrates the types of interpreters used by FLES audiologists when encountering isiZulu patients, with participants given the option to select more than one option if applicable. The purpose of this question was to determine the types of interpreters being used and their utilization rates across public sector hospitals. The results reveal that 0% of FLES audiologists utilize formally trained interpreters. These results coincide with the perspectives of isiZulu patients, whom which 96% (*n*=94) disagreed that trained interpreters are always available when needed. Consequently, ad hoc interpreter is most common with 68% (*n*=21) using patients family members to interpret, the open ended question in the survey carried out in phase one revealed that several FLES audiologists recommended use of isiZulu patient's family members to overcome language barriers.

["..."] *Always ensure a caregiver accompanies the patient*

["..."] *Encourage patient to bring family member who speaks and understands English.*

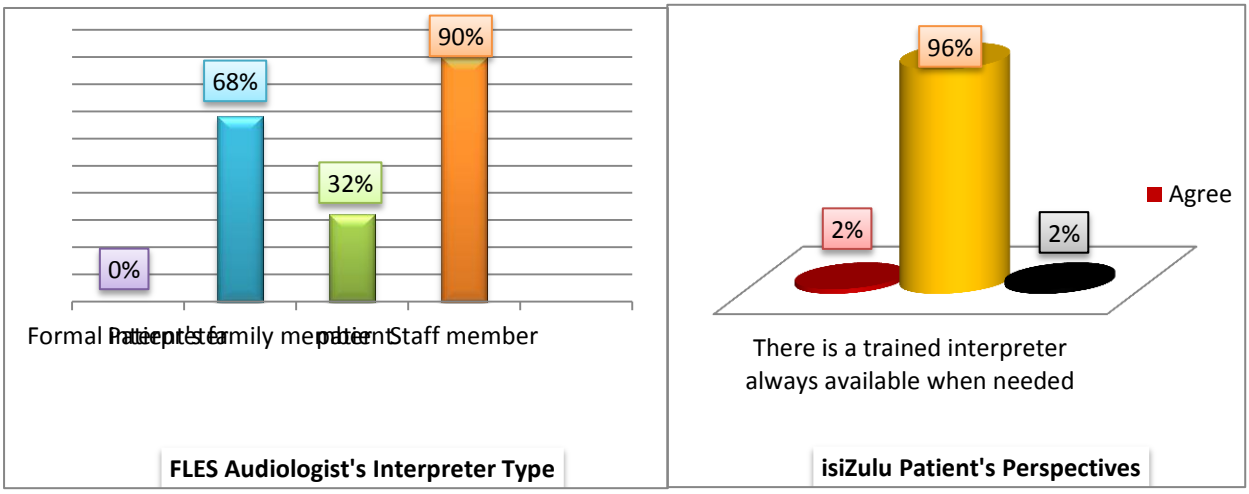


Figure 4.27 FLES audiologists and isiZulu patient's perspectives on type of interpreter

Apart from employing family members, 32% (*n*=10) of FLES audiologists use other isiZulu patients, who have functional proficiency in English, to interpret, which can undeniably result in confidentiality issues. Confidentiality concerns were further validated below in Figure 4.28 in which 88% (*n*=86) of isiZulu patients reported being worried about confidentiality when informal interpreters, such as other patients, are used.

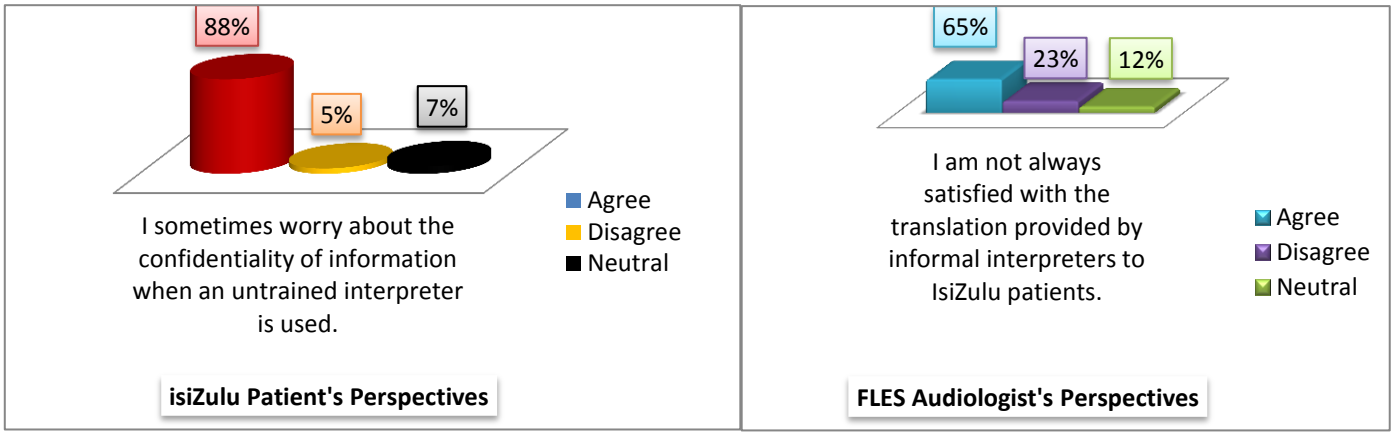


Figure 4.28 isiZulu patient's and FLES audiologist's perspectives on concerns of confidentiality and satisfaction during the use of informal interpreters

Not only can use of ad hoc interpreters, such as bilingual patients, influence confidentiality but it can also impact on degree of satisfaction regarding the service of interpretation. Figure 4.28 shows that 65% (*n*=20) of FLES audiologists reporting not always being satisfied by the interpretation provided by informal interpreters to isiZulu patients.

In addition to the use of family members and bilingual patients, Figure 4.27 demonstrated use of staff members as ad hoc interpreters to be the most common communication strategy. Therefore, there was a need to investigate the type of staff members being utilized by FLES audiologists**.**

The results below in Figure 4.29 indicate diversity in the types of staff members used as ad-hoc interpreters. In the event that FLES audiologists use more than one type of staff member as an interpreter, the questionnaire allowed for more than one choice to be indicated. Of the 28 FLES audiologists who indicated using staff members as ad hoc interpreters, 25% (*n*=7) rely specifically on other rehabilitation staff members ie. speech therapists, physiotherapists and occupational therapists to interpret, 11% (*n*=3) seek the assistance of nurses, 4% (*n*=1) rely on social workers, 4% (*n*=1) rely on security guards to translate and a concerning 43% (*n*=12) of FLES audiologists reported using general orderly (cleaners) as a medium for interpretation.

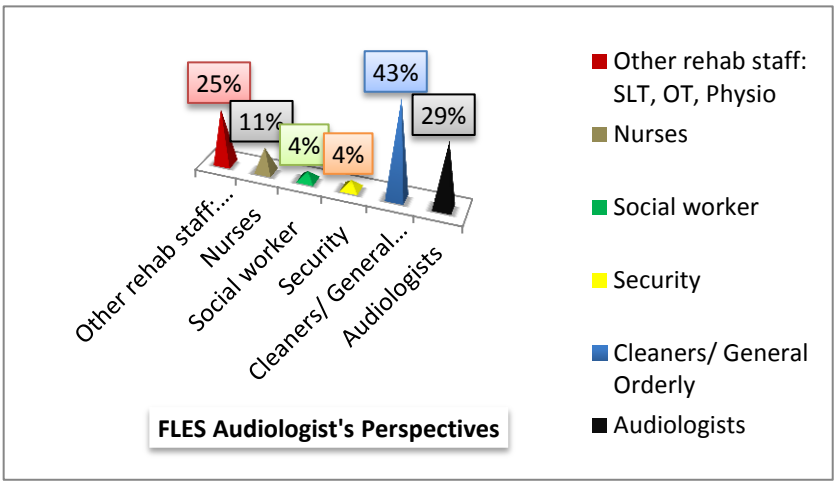


Figure 4.29 Percentage of FLES audiologists who use the different staff members as interpreters when interacting with isiZulu patients

4.4.1.2 Audiologist-Interpreter Interaction

Based on the extensive ad hoc interpreter usage, there was a need to determine how FLES audiologists view their interpreters. The dialogue below sheds light on this area.

"I don't necessarily feel intimidated when I have someone in the room interpreting. Their task is to transfer the message in Zulu. I rarely use the same person twice; I haven't felt daunted thus far".

"When using an interpreter I would often make the mistake of directing all my questions and attention to the interpreter and not the patient, which could have resulted in a breakdown of the patient-practitioner relationship"

The above narrative, regarding incorrect interpreter techniques is supported below from the perspectives of isiZulu patients who further highlight the consequences of such practice.

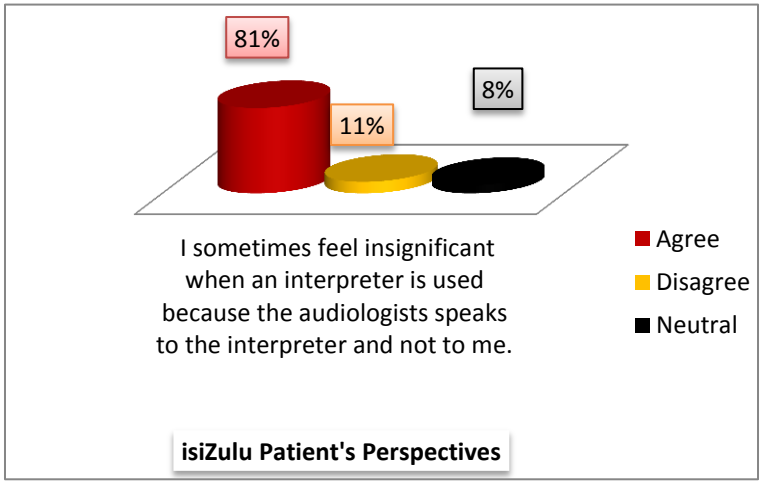


Figure 4.30 isiZulu patients perspectives on the audiologist-interpreter interaction

The results above in Figure 4.30 demonstrate that majority (*n*= 79, 81%) of isiZulu patients felt that the FLES audiologist direct their attention to the interpreter instead of to them. Undoubtedly, incorrect interpreter techniques can influence interaction with the patient. The narratives below explore the audiologist-patient interaction.

> *"I do feel like alot of time is spent engaging with a single patient when I use someone to interpret. The back and forth...it takes up time. Time that I don't always have when there are three other patients in my waiting room. And it's not like the extra time is spent actually attending to the patient, that time is more due to repeated conversation. Or like if I ask a yes or no question and then there's a long-winded discussion between the person translating for me and my patient. It's both confusing and time consuming".*
>
> "*-can also feel like the emotive aspect is less a bit when I use an interpreter because it's not direct".*

> *"I do wish that I was a 100% fluent in Zulu and wouldn't need the help of anyone to translate. How amazing would that be, never having to worrying about whether information is correctly imparted and just being able to build a good relationship with the patient itself. Being able to answer their every question".*

The FLES audiologists concerns above regarding the duration needed when working with an interpreter, it was also therefore important to obtain the views of isiZulu patients regarding time spent during interpreter interactions, refer to Figure 4.31.

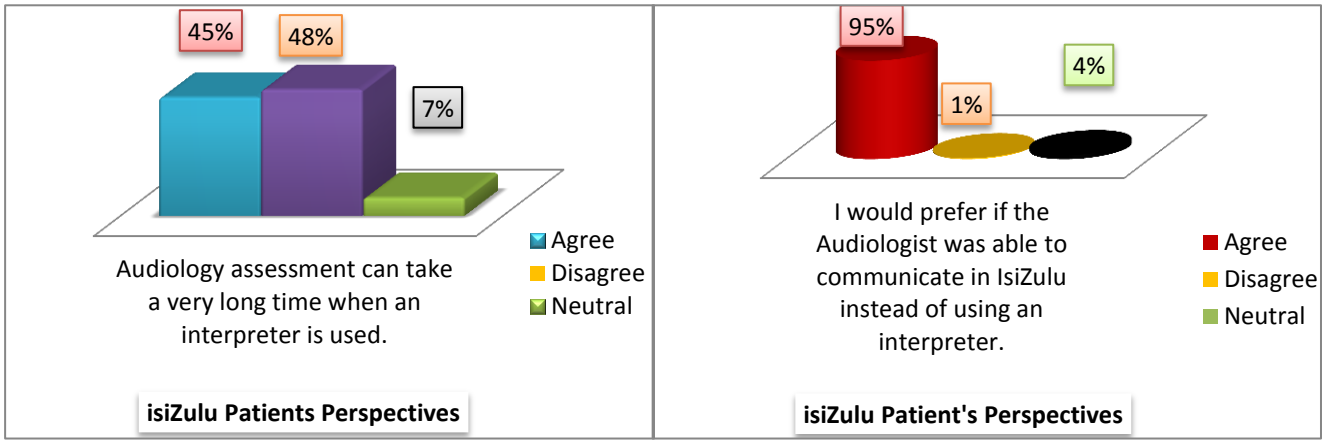


Figure 4.31 isiZulu patients perspectives on the audiologist-patient interaction

The results in Figure 4.31 above differed from the FLES audiologist's perspective as only 45% (*n*=44) of isiZulu patients felt that time was a constraint when FLES audiologists use interpreters. Despite not being concerned about the time spent, 95% (*n*=93) of isiZulu patients indicated preference for FLES audiologists to learn the isiZulu language opposed to using interpreters (refer to Figure 4.31). Having discussed in detail the use of interpreters as an external communication

strategy employed by FLES audiologists, the chapter will now proceed to the discussion of two additional communication strategies: written handouts and Google Translate.

4.4.2 Written Handouts and Google Translate

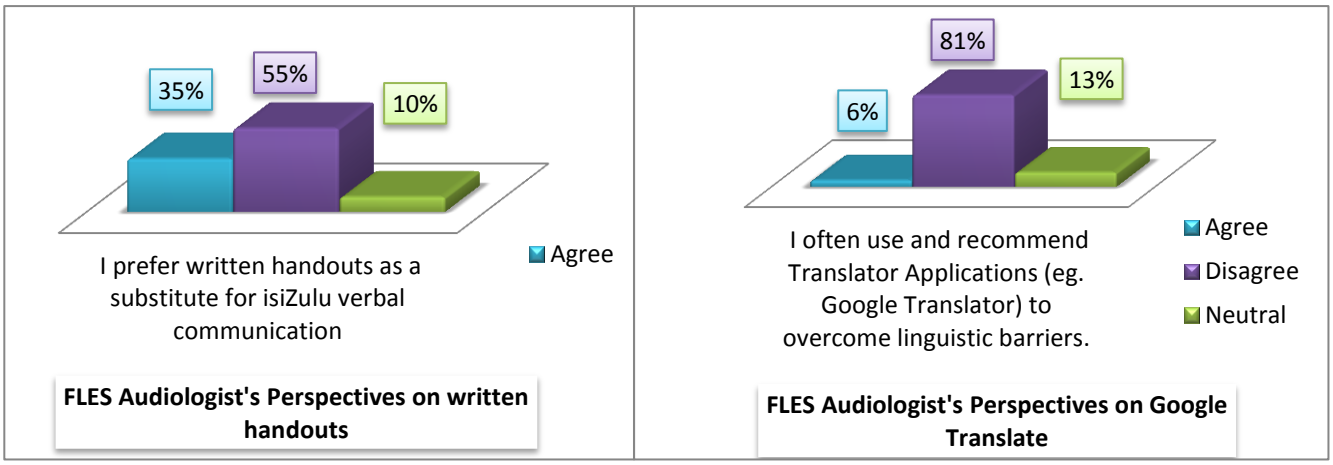


Figure 4.32 FLES Audiologist's perspectives on written handouts and Google Translate as communication strategies

The results depicted in Figure 4.32 indicate that in both cases the majority (55%, *n*=17) and (81%, *n*=25) of FLES audiologists do not prefer written handouts and Google Translate respectively. In addition, inferential analysis (refer to Annexure J) revealed a significant association between FLES audiologists preference for written handouts and their number of years practising as an audiologist (*p* value= 0.035), indicating that older therapists did not prefer the use of written handouts.

To summarize, objective three of this chapter focused on the use communication strategies employed by FLES audiologists to overcome cultural and language barriers with isiZulu patients. The results relating to three primary communication strategies were presented namely: interpreters, written materials and Google Translate. Objective four of this chapter will conclude by providing results relating to recommendations for improving cross-cultural and cross-linguistic communication.

4.5 OBJECTIVE 4. First Language English speaking audiologists recommendations to improve cross-cultural and cross-linguistic communication with isiZulu patients

The results in Figure 4.33 revealed the emergence of three recommendations to improve cross-cultural and cross-linguistic communication. The majority of FLES audiologists (90%, *n*=28), (97%, *n*=30) and (100%, *n*=31) recommend the need for formally trained interpreters, the availability of culturally/linguistically relevant resources and support services (ie. courses) respectively. In addition, isiZulu audiology patients concurred, with 89% (*n*=89) of them also agreeing that isiZulu audiology resources for assessment/management are needed.

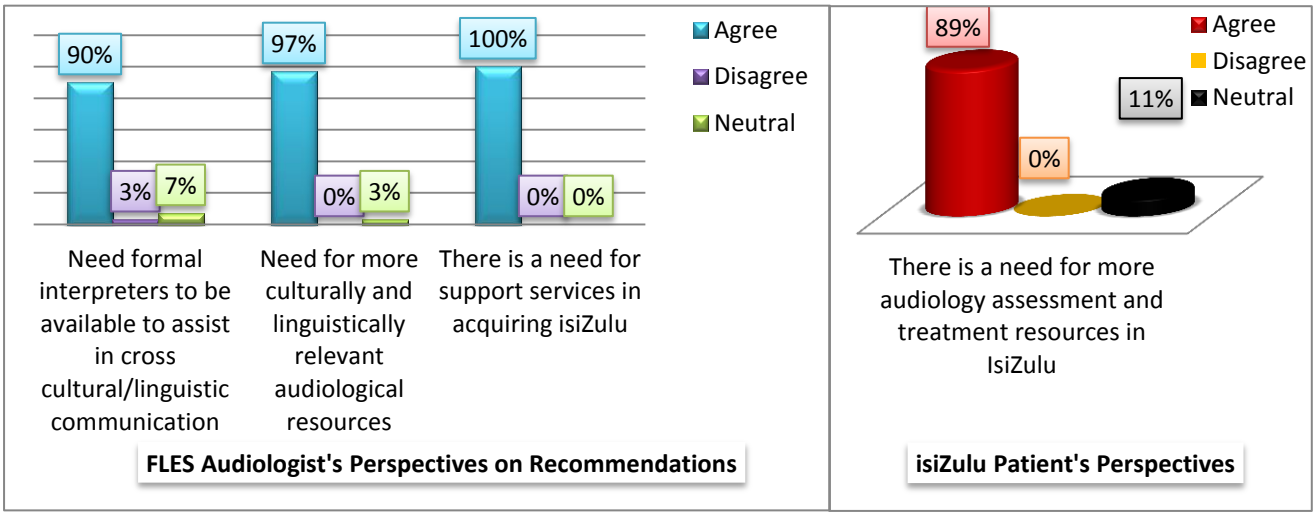


Figure 4.33 FLES audiologists recommendations to improve cross cultural/linguistic communication

Furthermore, the need for isiZulu courses may be explained below in Figure 4.34, in which 90% (*n*=28) of FLES audiologists reported having never attended a post graduate isiZulu course. This question had 1 missing response that was therefore taken into consideration

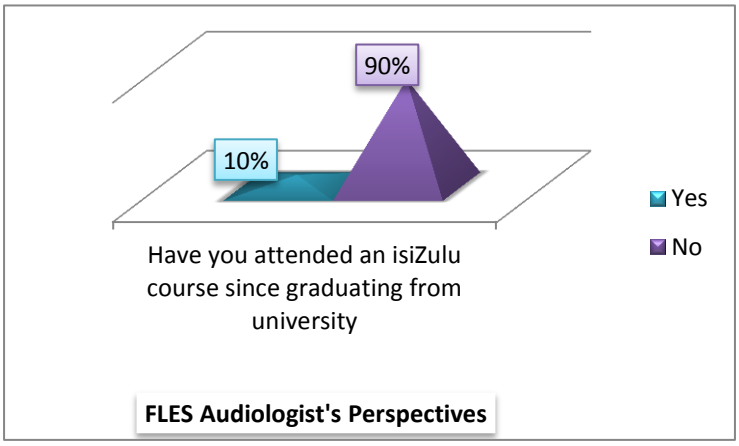


Figure 4.34 FLES Audiologist's exposure to post graduate isiZulu courses

In addition, the need for trained interpreters, culturally/linguistically relevant audiology resources and courses also emerged in the open-ended question of the survey in phase one. FLES audiologist's responses were grouped and summarized below in Figure 4.35.

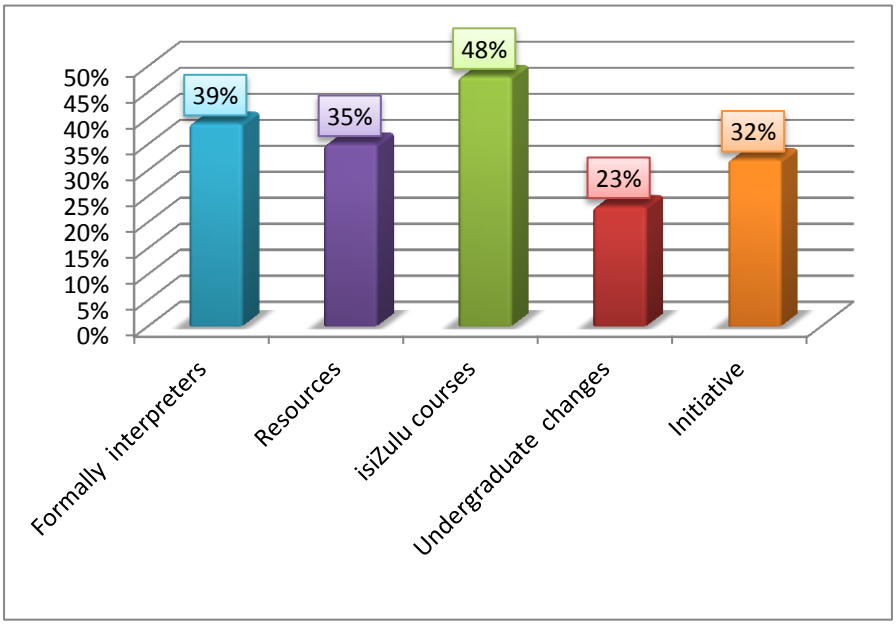


Figure 4.35 FLES audiologists recommendations from open ended question

Figure 4.35 illustrates that 39% (*n*=12) of FLES audiologists cited the need for formally trained interpreters as an overall recommendation. Below are some of the comments provided by FLES audiologists.

["..."] *Employment of trained isiZulu translators*

["..."] *Access to official interpreters to assist during case history with Zulu patients*

["..."] *The need for interpreters to enable accurate communication with our Zulu patients*

The Photovoice narrative below concurs with the above findings.

> *"Need for qualified, competent translators in cases where the therapist is not fluent in isiZulu, particularly has extreme difficulty learning the language despite several attempts".*
>
> *"Employment of trained interpreters would make our job that much easier and have confidence that the information conveyed is correct".*

Figure 4.35 further indicated that 35% (*n*=11) of FLES audiologists cited the need for culturally/linguistically appropriate audiology resources as an overall recommendation. Below are some of the comments provided by FLES audiologists:

["..."] *Audiologists having access to specific key words in areas of assessment and management in Zulu*

["..."] *Dire need for Zulu resources e.g. pamphlets*

["..."] *isiZulu dictionary and audiology Zulu handbook!*

["..."] *Development of more specific Zulu handouts used provincially and standardized*

["..."] *Availability of Zulu picture-word cards*

The Photovoice narrative below concurs with the findings above.

"Resources in Zulu for all audiology areas will be of value to help us learn"

Figure 4.35 further indicated that 48% (*n*=15) of FLES audiologists cited the need for isiZulu courses as an overall recommendation. Below are some of the FLES audiologist's comments:

["..."] *Profession specific Zulu workshop post grad*

["..."] *CPD accredited Zulu courses, none are available at the moment and I've been in the profession for over 5 years*

["..."] *Zulu courses, no one really understands how hard it is. How are we supposed to be fluent in the language if not trained*?

["..."] *More courses on assessment and management of Zulu patients, would pay for a course like that.*

The Photovoice narrative below concurs with the findings above.

"Annual Zulu refresher courses for audiologists will be extremely useful".

Furthermore, 23% (*n*=7) of FLES audiologists cited undergraduate audiology curriculum changes as an overall recommendation and 32% (*n*=10) provided recommendations relating to initiative. Below are some of the FLES audiologist's comments:

["..."] *Zulu training throughout the audiology degree*

["..."] *We need discipline specific Zulu training at varsity*

["..."] *We need discipline specific Zulu training at varsity*

["..."] *Practice makes perfect*

["..."] *Learn key words*

["..."] *Professionals must make themselves familiar with Zulu*

["..."] *Start a Zulu pocketbook for yourself and write down anything that someone else has translated for you. Next time you will be able to say it yourself.*

The emergence of initiative as a recommendation was also strongly echoed in the Photovoice photography.

"-grown, not only in my ability to speak the isiZulu language, but also in my skills and patience in treating those of different cultural and linguistic backgrounds".

"-listening to colleagues helping with translation, making notes seemed to be a useful tool".

Figure 4.36 Photovoice Exhibit E-*A little goes a long way*

"As the months of community service progressed, listening to colleagues helping with translation and making notes seemed to be a useful tool. As a result, I became able to enquire about the main symptoms experienced, provide basic test instructions in isiZulu as well as provide a brief overview of results, with the limited vocabulary obtained. Definitely, the saying of "A little goes a long way" stood true in my situation".

Figure 4.35 Photovoice Exhibit F-*Plant a Seed and a Tree will grow*

"Throughout my community service year as an Audiologist, I believe that I have grown, not only in my ability to speak the isiZulu language, but also in my skills and patience in treating those of different cultural and linguistic backgrounds. The picture also depicts that progress is not instant, but a gradual process which requires patience and a willingness to improve and that, with the correct nurturing and attitude. I also chose this picture, because as a tree grows it takes on different forms as it begins to change shape. There are bends and scars which shape the tree into its final form and that are permanent. Just as a growing tree, I too have certain scars or permanent marks that have been left by those patients which have touched my heart and helped me to become a better Audiologist and a far more compassionate human being".

To summarise, this chapter presented the results for the four objectives of the study ie. cultural and linguistic competency, factors influencing communication, communication strategies and recommendations. Furthermore, statistical testing was conducted to determine significance between the components of each objective. The results from the correlation test (refer to Appendix M) revealed a significant relationship between all key variables of the study (cultural competency, linguistic competency, factors effecting communication and communication practices). In addition, Multiple Regression analysis (refer to Appendix N) revealed that the variables of cultural

competency, linguistic competency, influencing factors and communication strategies significantly accounted for 99.8% communication.

4.6 CONCLUSION

Chapter four provided the results for the study for objectives 1-4. The results incorporated the survey responses from 31 FLES audiologists, Photovoice data (narratives, interview dialogue and photographs) from 2 FLES audiologists as well as the perspectives from 98 isiZulu audiology patients. The presentation of results followed the interwoven approach that supported the concurrent data collection method. The key findings of the chapter indicate that overall FLES audiologists had poor cultural and linguistic competency in isiZulu. These findings were also supported by the perspectives of isiZulu patients. Furthermore, the results highlight that factors such as informed consent, trust, collaboration, empathy, superiority and attitude have been compromised in the presence of cultural and language barriers. With regard to communication strategies, the results indicate several challenges associated with ad-hoc interpreter use. Furthermore, majority of FLES audiologists do not prefer the use of written handouts and Google Translate as communication strategies. In terms of recommendations to improve cross-cultural/cross-linguistic communication, the need for formally trained isiZulu interpreters, isiZulu courses as well as contextually relevant audiology resources was strongly raised. In addition, the importance of FLES audiologists displaying initiative, to become culturally and linguistically competent in isiZulu, emerged as a key finding of the study. Chapter five of the study will provide the discussion in relation to the results obtained.

CHAPTER 5. DISCUSSION

5.1 INTRODUCTION

This chapter is structured similarly to the previous chapter by using the weaving approach, in which discussion of quantitative and qualitative results are integrated for each objective (Fretters et al., 2013). Furthermore, the results from the present study are compared to findings of other similar studies.

5.2 OBJECTIVE 1. First Language English speaking audiologists cultural and linguistic competency in isiZulu

5.2.1 Cultural competency in isiZulu

The first part of objective one was to determine FLES audiologist's cultural competency in isiZulu by using the several constructs from the Model of Cultural Competence in the Delivery of Healthcare Services (Campinha- Bacote, 2007). The results revealed that overall none of the FLES audiologists were considered culturally competent (refer to Figure 4.1). These findings are similar to those reported by Leendertz (2012), who identified occupational therapists to be "culturally blind" or having "pre-cultural competence", with none being considered "culturally proficient" (p.101). FLES audiologists challenges in providing culturally competent care to isiZulu patients has implications for achieving equitable health outcomes and patient-centered care. The chapter will proceed by further discussing the individual cultural constructs.

5.2.1.1 Cultural awareness

Cultural awareness is referred to as the initial step in achieving cultural competence (Purnell & Paulanka, 2008). The results from the present study indicated that majority of isiZulu patients felt that their FLES audiologists are aware that the isiZulu culture is different from their own. Their views were supported by all FLES audiologists indicating that they possess cultural awareness, which is similar to the findings by de Beer and Chipps (2014) who reported that majority (74%) of nurses' possessed cultural awareness although were not yet considered culturally competent. The ability of FLES audiologists to be aware that the isiZulu culture is different implies acceptance that a different culture will encompass different beliefs and behaviours that may not necessarily be aligned with one's own culture. Dayer-Berensen (2011) adds that cultural awareness further involves self reflection of an individual's own biases towards another culture, which can

subconsciously manifest during audiology assessment and treatment of isiZulu patients. The author adds that the first step to addressing such cultural biases is by acknowledging them, which was positive to note in the present study.

5.2.1.2 Cultural knowledge

The second cultural construct was cultural knowledge. The results revealed that the majority of FLES audiologists had limited knowledge about isiZulu culture beliefs and behaviours. Rogers (2015) identified that cultural knowledge can be acquired through three mediums, namely: experience, education or additional sources that that can enhance thinking, such as courses. These three mediums will be discussed below with respect to the FLES audiologists who participated in the study.

With regard to experience, Taras and Gonzalez-Perez (2016) describe Dewey's Experiential Learning Theory, which proposes that knowledge is enhanced from experiences that provide the scaffold for information. In Kolb's cycle of experiential learning, individuals draw knowledge from their experiences, and this learned knowledge enables them in future communicative encounters (Dewey, as cited in Quay & Seaman 2013). This theory is supported in the present study as a significant association (refer to Annexure J) was revealed between FLES audiologists knowledge of isiZulu cultural behaviours and the number of years practising as an audiologist (*p* value=0.021). The results indicated improved levels of cultural knowledge with greater than 5 years of experience in the audiology profession, confirming that knowledge is influenced by experience.

Based on the above, it is expected that newly graduated FLES audiologists, who have limited working experience or exposure to the isiZulu culture in their everyday lives, will then rely on cultural knowledge attained through education. Although shaping of knowledge is crucial at tertiary level, the Photovoice data revealed more deep rooted concerns relating to primary and secondary level. *"Arriving at university, we were faced with the dilemma of learning an entirely new culture and language namely isiZulu.* This sentiment alerts to the lack of exposure to the isiZulu culture prior to university and the daunting challenge that was faced due to unfamiliarity. The above mentioned gap in exposure infers limited opportunities to understand the facets of the isiZulu culture.

Lastly, if experience and education are deemed insufficient, attending additional courses is the third possible medium to acquire cultural knowledge. The HPCSA enforces all registered audiologists to update their knowledge base, and are therefore required to attend additional courses that allow for

an accumulation of 30 Continuous Education Units (CEU's) in a 12 month cycle (HPCSA, 2012). In addition to HPCSA policy, the Public Service Act (1994) also endorses ongoing knowledge acquisition through the Employment Management and Development System (EPMDS) framework. This framework allows government employed audiologists to list professional areas that they aim to improve on. During their annual performance assessment, the employer establishes if the employee has attended professional courses/seminars to increase knowledge on the listed areas. However, the present study indicates that despite FLES audiologists identifying that they possess limited isiZulu cultural knowledge, 90% of them have never attended additional isiZulu courses post graduating. Not only can this be used to explain FLES audiologists limited cultural knowledge levels but it may also question the availability of isiZulu courses in KZN for health professionals. These findings therefore, indicate the need for the HPCSA and allied CEU course coordinators to provide courses that resonate with FLES audiologist's gaps in isiZulu knowledge in order to improve service delivery.

In terms of the provision of service delivery, knowledge of isiZulu cultural beliefs plays an imperative role in audiological management. Cultural beliefs manifest in the health seeking behaviours of isiZulu patients and their uptake of treatment (Legg & Penn, 2013). Furthermore, some African patients consider various illness, such as hearing loss, to be linked to a spiritual cause (Madge, as cited in Vaughn, Jacquez & Baker, 2009). Therefore, FLES audiologist's limited knowledge of such beliefs may result in it not being accommodated in their management plan. Christensen and Kockrow (2013) noted that rigidly enforcing conventional methods that are not aligned with patients root beliefs can be unproductive and ineffective. With spirituality being highlighted as a strong attributer to isiZulu patients explanatory model of disease, it is concerning that none of the FLES audiologists in the present study have ever worked with a traditional healer in their existence as a practitioner. Similar results were reported by Kaboru et al. (2006) that while 53% of traditional healers have referred patients to healthcare providers, only 4% of health care providers have facilitated referrals to traditional healers. One of the primary inhibitors to fostering a relationship was healthcare provider's lack of trust in traditional healers and belief that conventional causes and management are rejected by traditional healers (Kaboru et al, 2006).
In an attempt to understand the scope of traditional health sources, de Andrade and Ross (2009) interviewed 15 South African traditional healers on the topic of hearing loss. Their findings revealed that although the traditional healers often sought the cause of impairment through a supernatural medium, certain medical causes (ie. ear infections, ototoxicity) were also pointed out (de Andrade & Ross, 2009). However, FLES audiologists may be unaware that conventional causes

of hearing loss are not entirely neglected by traditional healers and knowledge of such information may lower the levels of distrust that were mentioned by Kaboru et al. (2006).

Apart from perceived distrust, the second factor that adversely affected healthcare provider's willingness to refer patients to traditional healers involved fear of losing clientele (Kaboru et al., 2006). However, considering the huge shortage of audiologists available in the public sector in relation to the disease profile of approximately one million hearing impaired individuals in South Africa (Mencher, as cited in Swanepoel, 2006), such concerns regarding centralized care seem unrealistic. Furthermore, Pera and Van Tonder (2011) add that traditional healers are a crucial link in servicing out of reach communities, and highlight the need for FLES audiologists to receive education about the role of traditional healers in isiZulu healthcare. Furthermore, the isiZulu patients' perceptions in this study, regarding FLES audiologists requiring more knowledge about traditional methods of treating hearing loss, highlight the need for traditional healers to also advocate for their involvement in holistic management. This may be achieved through joint public health meetings and discussions in attempt to promote collaboration and strengthen the relationship between FLES audiologists and traditional healers.

It is evident that cultural knowledge is fundamental to culturally competent care, this being further illustrated in a participant's Photovoice image (refer to Exhibit A). The photograph illustrated burning light bulbs that signified the audiologist being well versed and knowledgeable in areas of audiology, however the missing light bulb symbolized her lack of isiZulu knowledge during audiological assessment/management. Furthermore, it can be inferred that similar to the missing light bulb limiting the radiance emitted from the chandelier, the FLES audiologist's lack of isiZulu knowledge limited her ability to provide complete service delivery.

5.2.1.3 Cultural skills

The third cultural construct measured was cultural skills. Cultural skills refer to the ability of FLES audiologists to consult with isiZulu patients and collect appropriate cultural information that enables understanding of the patient's problem (Chipps, Simpson & Brysiewicz, 2008). According to Les and Les (2012) knowledge is the first foundation for the development of skills. It is therefore, inevitable that limited cultural knowledge resulted in the majority of FLES audiologists experiencing difficulty in skilfully obtaining cultural information from their isiZulu patients during the initial case history consultation. The purpose of case history is to gather succinct information about the patient that will influence assessment and rehabilitation. As culture is ingrained in

patients' identities and their engagement with the world around them (Selim and Mohamed, 2014), FLES audiologists' exclusion of cultural information can lead to purely clinical management as opposed to patient-centered management.

Branching from the ability to collect isiZulu cultural information is the ability to utilize such information to conduct a culturally based audiology assessment. Inferential statistical analysis (refer to Appendix J) revealed a significant association between the ability to conduct a culturally based assessment and gender (*p* value= 0.042). Although these results should be viewed cautiously, based on participation distribution, similar findings are documented in the literature. Tanner, as cited in Rabi et al. (2012), examined gender differences in cross-cultural communication. The author reported that females tend to focus on establishing better relationships by being soft spoken with reduced displays of impatience in conveying information. In contrast, males tend to be more authoritative in providing information during such interactions (Tanner, as cited in Rabi et al., 2012). Furthermore, Glen and Glen, as cited in Rabi et al. (2012) reported that males are less successful in cross-cultural communication when compared to females. The ability to skilfully communicate with diverse cultural groups is central to being able to conduct a culturally-based assessment. The above findings can therefore be used to explain how the different gender stances of male and female FLES audiologists have contributed to the different ways in which culturally-based audiology assessments are conducted.

The second factor that can influence the development of cultural skills, apart from gender, is geographical location. Inferential statistics (Annexure J) revealed a significant association between FLES audiologists cultural skill in efficiently adapting test materials/ procedures for isiZulu patients and the description of the institution based (*p* value=0.038). The significant association indicates that FLES audiologists based at rural institutions found it more time consuming to culturally adapt audiology assessment/treatment procedures and materials for their isiZulu patients. As discussed in Chapter two, KZN is demarcated by both urban and rural areas. The first point one may argue is that FLES audiologists based at urban institutions experience less difficulty in culturally adapting resources as they do not encounter as many isiZulu patients as their rural counterparts. However, the demographics from this study reveal the dominance of isiZulu patients across both urban and rural institutions, with audiologists at 50% (6/12) of urban institutions identifying that 70-90% of their patients encountered are isiZulu speaking. Therefore, FLES audiologist's encounters with isiZulu patients are therefore not influential on the development of FLES audiologists' cultural skills in the present study.

Geographical location can however affect the allocation and exposure to resources, which is important for skills development (Li, Ahmed, Khan & Hongwei, 2016). Gaede and Versteeg (2011) highlight unfair resource distribution between urban and rural areas in South Africa. Stuckler, Basu and Mckee (2011) describe the inequality trap in which better functioning urban institutions are allocated more resources to maintain their standard level of care. The Integrated Support Team of South Africa (2009) further confirms the bias towards urban institutions, describing rural hospitals as under-resourced. This is similar to the results from Khan et al. (2009), who revealed that rural based community service audiologists cited lack of resources as one of their primary challenges experienced.

The above suggests that urban institutions may possess an abundance of contextually-relevant resources, which are lacking at rural institutions. As a result, FLES audiologists at rural institutions may be utilizing informal, un-standardized approaches, which can be time consuming to efficiently adapt to and implement with isiZulu patients. In contrast, resource-rich urban institutions will likely be prioritized in receiving contextually relevant materials and FLES audiologists based at such institutions may have improved cultural adaption skills, based on the premise of familiarity (Chu et al., 2016). This notion is further confirmed by Reid as cited in Longman (2011) in which community service audiologists clinicians at rural hospitals reported reduced opportunities for clinical development opposed to colleagues based at urban institutions. In view of the above, it is evident that the inequalities at institutional level can be either instrumental or detrimental to FLES audiologists' cultural skill development. This suggests that there is a need for contextually relevant resources to be developed, standardized and distributed to all FLES audiologists who work with First language isiZulu patients in both urban and rural areas. Furthermore, FLES audiologists at rural hospitals may require training on such resources that enable skilful and time efficient administration.

With regard to cultural skills development, one FLES audiologist commented on the influence of undergraduate training. "W*hat would have really helped is more Zulu clients during the audiology degree".* Balcazar, Suarez- Balcazar and Taylor- Ritzler (2009) agree that clinical experience is necessary to develop skills needed for cultural competence, and lack thereof provides a plausible explanation for the majority of isiZulu patients perceiving that FLES audiologists struggle in areas of cultural skill. Similar findings, relating to lack of cultural exposure, were reported by Leendertz (2012), who in investigating occupational therapists cultural competency at six South African

universities, reported that participants described experiencing "cultural shock" when immersed into the working world. In order to allow for the development of necessary cultural skills, the above findings motivate for improvements to be made to the audiology degree, by increasing exposure to rural placement platforms, in which culturally and linguistically diverse patients can be accessed.

5.2.1.4 Cultural Encounters

The fourth cultural construct measured was cultural encounters. While FLES audiologists attributed their dread in encountering isiZulu patients to their lack of cultural preparedness, isiZulu patients reasoned it was due to cultural differences (refer to Figure 4.7). This misconception can result in FLES audiologists being perceived as "insensitive to cultural differences" which may reduce isiZulu patient's likelihood of seeking audiological services (Reel et al., 2014, p.11).

With regard to FLES audiologists' mention of preparedness, Handley (2012) identified cultural preparedness with being linked to increased immersion in a new culture. Preparedness can allow FLES audiologists to reflect on undergraduate encounters with isiZulu patients and develop knowledge models that will assist in the working world. Furthermore, preparedness builds a mind set to embrace the different culture, which is linked to increased encounters with such patients (Guilding & Hogan, 2011). However, the dialogue from a FLES audiologist revealed a lack of preparedness in encountering isiZulu patients. *"To some extent I feel anxious when a Zulu patient arrives, not knowing if I'm ready and so you never know how it's going to pan out".* Similar findings were reported by Penn (2009), as newly appointed therapists did not feel as though their undergraduate training had prepared them for the language and cultural barrier in community service. As the majority of FLES audiologists placed at public sector hospitals in this study were community service therapists, it is essential that preparedness for newly graduates be considered a priority. This can be achieved by providing increased undergraduate training opportunities that build FLES audiologists cultural preparedness to enable successful engagement with isiZulu patients.

5.2.1.5 Cultural Desire

The last cultural construct measured was cultural desire. The findings from de Beer and Chipps (2014), in which cultural desire was the strongest cultural construct among participants, was mirrored in the present study, as all FLES audiologists expressed the desire to benefit from more knowledge and training on how to incorporate cultural sensitivity into their daily audiological practices. This implies that their keenness to learn more about the isiZulu culture indicates their

desire to be culturally competent. However, a recent study by Isaacs, Raymond, Jacob, Jones, McGrail and Drysdale (2016) revealed contradictive findings, in which cultural desire did not increase with cultural knowledge acquired. Their study involved 220 nurses enrolled in a course relating to the Aboriginal culture. At the end of the course, the findings revealed that nurses had improved knowledge about the Aboriginal culture but little interest and desire in the culture itself beyond what was needed for nursing purposes. This implies that if FLES audiologists attend training and acquire knowledge on the isiZulu culture, there are no significant findings to postulate that their desire to achieve cultural competency in isiZulu will increase beyond what is required to conduct audiological assessments. The new found results from Isaac et al. (2016) further suggest that unlike all the other cultural construct that tend to overlap, perhaps desire is the most intrinsic and may require the interaction of additional humanistic, psychosocial and environmental factors. The chapter will now proceed to discussing the FLES audiologists' linguistic competency in isiZulu, which was the second part of objective 1.

5.2.2 Linguistic competency in isiZulu

Several aspects were investigated in order to determine FLES audiologists' linguistic competency during their provision of audiological services, that being case history taking, test instructions, speech testing, feedback, counselling and aural rehabilitation.

5.2.2.1 Case history taking

The FLES audiologists reporting that the quality of case history is enhanced with English speaking patients and compromised with isiZulu speaking patients, is suggestive of inequitable service delivery. Insufficient case history information minimizes the ability of both isiZulu patients and FLES audiologists to express and understand the underlying condition, as reported in the results (refer to Figure 4.10). This can negatively impact on the diagnosis and case management through misunderstandings, inadequate questions, insufficient information being provided and unresolved outcomes. To illustrate this point, insufficient case history information from patients presenting with otitis media can be detrimental to their well-being. Although management of ear infections often require antibiotics, it is important for audiologists to be linguistically competent to probe further to determine the onset of discharge, frequency, previous episodes as well as previous medication taken. By having access to such information, it may be realized that the patient has become resistant to treatment, resulting in recurrent ear infections. In this case, management of the patient is adjusted and a laboratory swab sample is required to determine alternative treatment. In

light of the recent uptake of antibiotic resistance (Ventola, 2015), the above scenario mimics reality and stresses the importance of thorough case history taking.

Secondly, a comprehensive case history enables the FLES audiologist to identify other secondary concerns that accompany hearing loss. As seen with several syndromes, language and visual impairments often co-exist with auditory deficits (Lang-Roth, 2014). Thus, a limited case history may omit the detection of secondary information and will prevent appropriate referrals that are needed for holistic management of isiZulu patients. Furthermore, a limited case history suggests that the focus of the consultation shifts to the technical aspects of hearing loss and not the person itself, which aligns with the Medical Model approach.

This notion is further reiterated by isiZulu patients' reporting that not enough time was spent talking to them during the case history interview. Therefore, suggesting that the quality and depth of information obtained during case history runs parallel to the amount of time spent engaging with a patient. Similar findings were noted by Brucks et al., as cited in Antia and Bertin (2004) in which German healthcare providers spent less than 5 minutes consulting with linguistically diverse patients. Kaplan et al., as cited in Naidoo (2014) when investigating healthcare provider-patient interactions, found that the amount of information exchanged between both parties as central to achieving health outcomes. Although, it seems unrealistic to quantify a precise time period favourable for case history taking, it is necessary to make FLES audiologists aware of their isiZulu patients concerns. The above findings advocate for FLES audiologists to improve their linguistic competency in isiZulu to allow for probing that is necessary for comprehensive history taking**.**

Although the case history interview is considered the gold standard in obtaining background patient information (Gorske & Smith, 2008), in light of the above challenges experienced, it is unsurprising that the majority of FLES audiologists reported relying on the patient file instead to obtain the most information about their isiZulu patients (refer to Figure 4.12). However, for patients that are new to the audiology department, their patient file will contain biographical information as well as progress notes written by other medical professionals (Klieger, 2013). Therefore, the patient file may not contain all the relevant information needed to guide audiological treatment and should not be relied on as a primary source for information.

Furthermore, it was reported that none (0%) of the FLES audiologists relied on referral letters to obtain information about the patient (refer to Figure 4.12). These findings may suggest a lack of

good referral writing within the public sector. Due to challenges associated with audiology equipment availability, referring audiology patients from rural primary and district hospitals to more urbanized tertiary institutions is common practice in the public sector (Ncana, 2010). According to Hartveit et al. (2013) referral letters are crucial in coordinating patient care between institutions. Furthermore, Jiwa and Satwinder (2012) found that the content in a referral letter determines whether the healthcare provider has sufficient information needed to prioritize the patient. This has significance to the present study as it highlights the need for FLES audiologists to be made aware of the value of the information provided within the referral system. Moreover, in light of the large workloads of audiologists employed in the public sector (Linde & Kritzinger, 2013), a good referral letter can serve as a time effective contribution to managing patients. FLES audiologists are therefore encouraged to improve their linguistic competency in isiZulu, in order to elicit sufficient background information about their isiZulu patients, which can be used to compose comprehensive referral letters to other health practitioners.

5.2.2.2 Test instructions

In comparison to the consistent communication challenges noted with case history taking, the majority of FLES audiologists reported experiencing little difficulty providing test instructions to isiZulu patients. These results concur with Reel et al. (2014), who recommend that English speaking audiologists should learn how to administer instructions in the first language of their patients. The authors rationalize that by FLES audiologists learning how to provide test instructions themselves, this can minimize inaccuracies that may occur with interpreters (Reel et al., 2014).

One of the possible reasons for the results obtained in the current study could be due to the fact that a set of test instructions can be pre-translated and administered by FLES audiologists to isiZulu patients, when needed. This may be considered closed communication, were the FLES audiologists are aware of the information that they want to deliver to isiZulu patients, for which no reply is needed. In contrast, open communication during consultation, in which turn taking occurs between the practitioner and patient, cannot be predicted or pre-translated. This logic may explain why FLES audiologists reported ease in providing isiZulu test instructions, yet experienced difficulty with open communication during case history taking. In keeping with the above logic, the audiologists in this study may need to be aware that providing the same isiZulu test instructions to all patients can result in varying degrees of effectiveness. Reel et al. (2014) agreed that audiologists should constantly modify test instructions to adapt to the needs and cognitive abilities of patients,

by actively engaging with their patients to determine their level of comprehension. This emphasizes the importance of improved linguistic competency to facilitate increasingly open communication.

5.2.2.3 Speech testing

Speech audiometry is a vital component of the audiological test battery by confirming the hearing thresholds, detecting retrocochlear pathology and verifying amplification benefits (Gulya, Minor & Poe, 2010). However, Lerch (2010) identified speech testing as one of the most challenging areas for audiologists administering word lists to linguistically diverse patients. As with many international resources, the speech audiometry word lists were developed in English, with Ramkissoon (2001) asserting that the results from speech testing cannot be considered reliable if the patient is not assessed in their first language. Therefore, in an effort to provide contextually relevant care, speech audiometry world lists are being developed and validated in isiZulu (Panday, 2006). Despite this, more than half of the FLES audiologists indicated that they are concerned about the accuracy of speech testing. This suggests that although isiZulu text is available, the complexities of the isiZulu dialect, tone and prosody may be impacting on FLES audiologist's successful administration of such word lists. This notion is supported by Ramkissoon (2001), who states that it is impractical to assume that FLES audiologists will be accomplished in both the production of words in the native language of their patients, as well as detecting the correct repetition of the word from their patient. Such uncertainties regarding the validity of speech testing can result in obscured diagnostic information, or may result in FLES audiologists omitting the test altogether. The results from the present study indicate the need for FLES audiologists to be further orientated and trained by native isiZulu speakers on the linguistic administration of the isiZulu word lists, which can be facilitated through monitored live testing (MLV). As an alternative solution, in the interim of the above being implemented, it is recommended that FLES audiologists utilize recorded speech materials, that have been validated, or digits during testing. Improving the accuracy, reliability and validity in speech testing is a step towards promoting equitable audiological services for isiZulu patients.

5.2.2.4 Feedback of test results

Schyve (2007) identified feedback of assessment results and recommendations for treatment plans as a crucial step in the rehabilitation process. Healthcare providers disseminate such information to the patient and their family members via oral communication (Schyve, 2007). However, results from the present study show that the delivery of such information is compromised in the presence of language barriers (refer to Figure 4.10). Comparable findings were reported by Morales as cited

in Reel et al. (2014), where Hispanic patients felt that their English speaking health care providers did not adequately explain their results to them. The ability to provide good communication during feedback has been associated with patients' acceptance of diagnosis and treatment regimes (Falvo, 2010). Furthermore, Andrasik, Goodie and Peterson (2015) identified that good feedback has influenced patients to make necessary lifestyle changes. This has relevance to the present study and can be applied to an isiZulu patient diagnosed with Noise Induced Hearing Loss (NIHL), which is common in patients working in occupational settings such as the mining industry (Johansson, Partwardhan, Nakicenovic & Gomez-Echeverri, 2012). However, FLES audiologists limited linguistic competency may compromise the ability to provide feedback to the patient on the nature of the hearing loss and the importance of reducing exposure to the noise source. The FLES audiologist may also struggle to persuade the patient to utilize hearing protection. These challenges warrant the need for FLES audiologists to improve linguistic competency that enable them to provide effective feedback to their isiZulu patients.

5.2.2.5 Counselling and aural rehabilitation

The importance of good communication emerges as FLES audiologists are required to provide hands on counselling to isiZulu patients, most often during hearing aid fitting. Audiologists are expected to adequately provide information and resolve any concerns that may arise regarding the patient's assistive device. The results, however, revealed that all FLES audiologists struggled with providing counselling and aural rehabilitation, with the majority of isiZulu patients feeling lost and not understanding the information provided (refer to Figure 4.11). Similar findings were reported by Sooful (2006), where patients experienced difficulty in obtaining the maximum benefit from their hearing aids due to not receiving orientation in their first language. These results may suggest that if FLES audiologists are unable to provide thorough education, due to linguistic barriers, isiZulu patients will lack knowledge of how to utilize, care for and maintain their hearing aids. Consequently, lack of such knowledge can increase the occurrence of hearing aid repairs, and result in wasted expenditure that could have been prevented through good communication.

Furthermore, fitting patients with a hearing aid requires more than technological counselling, McCormack and Fortnum (2013) cited appearance concerns as one of the primary reasons why patients do not use their hearing aids. It is therefore expected that if FLES audiologists are unable to adequately counsel isiZulu patents on body image issues associated with hearing aid use, this can result in rejection of the assistive device. This is confirmed by Gianopoulos, Stephens and Davis (2002), who reported that out of 116 adult patients, 66 patients were not using their hearing aid due

to reasons such as cosmetic concerns. In light of the long hearing aid waiting lists and limited stock levels available at public sector institutions, it is vital that the issued assistive devices are used for their intended purpose. Brooks (2013) further added that the role of the audiologists is to effectively counsel patients on aspects such as acceptance of hearing loss, fears associated with hearing aid use, manual dexterity issues, school placement options, access to rehabilitation, and the importance of follow up appointments as well as support groups. The results from the present study suggest that audiologists' limited linguistic competency in isiZulu will restrict the provision of such information, which can result in severe consequences that affect their patient's quality of life.

It is evident from the above that FLES audiologists linguistic competency in isiZulu has impacted on several areas of audiological service delivery (refer to Figure 4.10). However, there was a strong consensus about their isiZulu language difficulties being attributed to lack of undergraduate training. Furthermore, the Photovoice aspect of the study provided deeper insight relating to the development of isiZulu linguistic competency at university level.

5.2.2.6 Prior exposure

"Arriving at university, we were faced with the dilemma of learning an entirely new culture and language namely isiZulu. While the issue of prior exposure was briefly addressed under cultural knowledge; this statement also lends itself to the issue of language, and therefore requires discussion under linguistic competency. The FLES audiologist's dialogue draws attention to the lack of exposure to the isiZulu language prior to university. Previously the Department of Basic Education (2012), offered Afrikaans as an Additional First Language at primary and intermediate level due to reasons such as availability of Afrikaans teachers and the perception that African languages are too difficult to learn (Turner, 2012). The above language policy, in which Afrikaans was prioritized, indicates that influences from the apartheid era had manifested in the educational system, as Afrikaans was considered the most powerful, dominant language during oppression (Weber, 2015). However, in recent times, aligned with transformation, the isiZulu language is now being offered at primary and secondary level (Kamwangamula, 2017).

The introduction of isiZulu at primary/secondary level can strongly influence competency in the language. Kohnert, Bates and Hernandez, as cited in Auer and Wei (2007) elaborate that effectiveness in acquiring a second language is affected by age of exposure and that children exposed to a second language from childhood resulted in increased positive attitudes and dominance to the second language. Lambelet and Berthele (2015) concur adding that early

exposure increases the total period of learning thus improving language acquisition. All of the above perspectives support the *critical period of language learning* concept. Birx (2009) states that failure to provide isiZulu language stimuli during the critical, initial years of a child's life can result in lack of full command of the language. Birdsong and Mollis, as cited in Robertson and Joseph (2005) reshape that view, stating that the cut off exposure age needed to produce Native equivalent proficiency in a second language is 15 years of age. Despite varying speculation regarding the precise extent of the critical period of language learning, Robertson and Joseph (2005) summarize that it is clear that early exposure to a second language is advantageous due to the "activation of innate neurofunctional systems" needed to facilitate learning.

The results from the present study, in conjunction with the supporting literature, strongly support the language policy change in the educational system i.e. inclusion of isiZulu as a compulsory additional language at the level of primary and secondary school. However, the current workforce of FLES audiologists practising in public hospitals in KZN has missed the opportunity for early acquisition in isiZulu at primary/secondary level. Therefore, there is a need for support systems to enable FLES audiologists to become linguistically competent in isiZulu. This will be further discussed in the chapter.

5.2.2.7 Duration of exposure

It is reasonable to assume that in addition to age of language exposure, the length of exposure will also influence ability to acquire a second language. Garcia Mayo (2003) investigated the impact of length of exposure on language competency and reported that children with increased language exposure over an extended period resulted in improved performance in grammatical language tasks. However, in the present study, the sentiments from a FLES audiologist highlight concerns regarding duration of language learning during undergraduate isiZulu training. *"Bearing this in mind of it being only a semester long and being faced with immense information as this language may be our only mode of communication once we enter the working world.* Not only does this imply an insufficient period of isiZulu training but it also reveals concerns regarding the magnitude of information provided within the compressed duration. This can be associated with the *Cognitive overload theory* (Soek, Meyen & DaCosta, 2010), which describes being "mentally overwhelmed" due to the provision of excessive information, ultimately inhibiting learning from taking place (Hussain & Coleman, 2015, p.63). The authors cited deficient design measures as one of the attributers to cognitive overload, which is illustrated in the present study, as evidenced by the structure of the isiZulu language course. Furthermore, it is clear from the Photovoice narrative that

the participant feels a sense of urgency to acquire the isiZulu language, having understood the importance of it in an employment setting. However, this can add an extra element of stress in addition to the constraints relating to quantity of information and the short duration in which it is covered.

5.2.2.8 Frequency of exposure

The third factor needed in language learning is frequency of language exposure, and although a local university in KZN declared isiZulu a compulsory module for non-African speaking students who are enrolled in any health sciences degree, it is only offered for one semester during the first year of undergraduate training (Turner, 2012). This was clearly deemed insufficient by FLES audiologists. "*The degree of audiology should provide isiZulu lessons throughout the degree. In first year, students should learn basic isiZulu speaking skills. Second, third and fourth year courses should be used to improve proficiency".* This indicates the need for frequent exposure to the language, and is strongly supported by the literature, the more times isiZulu vocabulary is encountered, the more likely it will be acquired by the second language speaker (Crossley, Salsbury, Titak & McNamara, 2014).

5.2.2.9 Relevance of content

The fourth factor central to second language learning is relevance of content, with the FLES audiologists indicating that the isiZulu course completed did not cover pertinent content. "*The isiZulu course should be more relevant and not only taught for one semester in 1st year"* and *"Learning how to fill up petrol in isiZulu proved useless when trying to provide an audiology assessment in isiZulu".* Turner (2012) explained that the isiZulu course taught to First year Health Sciences students is standardized with all non-African students learning the same content. This was concerning for the FLES audiologist who reported "*Whilst doing this module it dawned on the fact that what we were learning bared no relevance to our field, as we did not cover how to conduct a proper audiological assessment in isiZulu".* It therefore appears as though the above course focuses primarily on learning the isiZulu language rather than creating meaningful links between the isiZulu language and the field of study. Osmond (2008) describes this approach as ineffective, stating that second language acquisition is best achieved through highlighting relevant, applicable content. From a neuroscience point of view, meaningful content enables new information to be compared and connected to old (Brown, 2000). This implies that if professional specific information was included in the isiZulu course, the FLES audiologists would be able to connect the isiZulu word *ubuhlungu indlebe* to the English construct *ear pain*. Furthermore, Moghaddam and

Araghi (2013) add that meaningful content increases the depth of processing, which is important in the degree to which a second language is acquired.

The above findings and supporting literature creates awareness of the challenges associated with the undergraduate isiZulu training and therefore warrant university curricula to be reviewed in order to improve student's linguistic competency in isiZulu. The recommended structural changes include: extending the length and frequency in which isiZulu language course is offered as well as including profession specific information. Consideration of such factors allows for a conducive environment that advocates for effective language learning. That being said, although not highlighted by participants, it is impractical to assume that external learning influences are solely responsible for achieving linguistic competency. Grass, Behney and Plonsky (2013) agree by stating that apart from psycholinguistic factors, there are other variables that can influence the acquisition of isiZulu, such as FLES audiologist's aptitude, attitude and motivation to learn. This will be discussed further in this chapter under the section *initiative*.

Based on the above discussion of the factors that influence language acquisition in isiZulu, the Photovoice photographs further accentuated the impact of FLES audiologist's isiZulu linguistic competency on their ability to render services. Exhibit B illustrated the illusion of communication, which conveys a sense of deception on many levels. The first false sense of security was created at university level where the FLES audiologist was eluded into thinking that once she entered the working sector, she would be adequately prepared to communicate with patients. "*The illusion of English being the dominant language of communication, met the barrier of truth. English is spoken worldwide and so they say until you arrive at a hospital, which is in a rural area".* Thus once again, bringing tertiary preparedness to the forefront.

The second area of illusion appears to be the FLES audiologist's expectations, "*English is not a language used by many, they communicate solely in their mother language- isiZulu".* The FLES audiologist's unrealistic expectations may stem from tertiary influences or her own, initial stereotypical views. Lastly, and perhaps the most obvious, the deception that effective communication transpires in a cross-linguistic setting. "*Unable to effectively communicate in isiZulu with patients quickly escalated to the realisation of how much this is affecting service delivery and audiological services".* It is inferred that the above deceptions have led the FLES audiologist to reassess the concept of communication in a cross-linguistic setting due to its multifaceted nature. "*Suddenly realising the language barrier to communication is far more*

complicated that I would have anticipated". When looking at the photograph, one may see two faces that symbolize communication, but with a second glance the faces disappear, and a glass is apparent. This indicates that it may initially appear that FLES audiologists and isiZulu patients should be engaging. However, when they come face-to-face, the language barrier may prevent information from being conveyed and understood, which results in essentially no communication taking place.

In the second Photovoice photograph (refer to Exhibit D), the audiologist employed an introspective approach to convey the impact of the isiZulu language barrier on her emotional well-being. The FLES audiologist titled her photograph *sinking into obscurity*, which conveys a sense of helplessness and loneliness. "W*henever I realized that my patient could not speak or understand a single word of English. It felt as if I was drowning".* This narrative suggests that negative emotions are experienced when communication is compromised during interaction with isiZulu patients. "*When attempting to communicate with a patient who spoke/understood only Zulu, there was confusion, disorientation, fear and the feeling that the torment would never end",* it is evident that such feelings can adversely influence FLES audiologists desire to continue to work with isiZulu patients. This was further illustrated by the FLES audiologist's account which suggests as sense of uncomfortable dread "*-and that often awkward silence and confused stares between myself and the patient would never end"*. The state of both the patient and the FLES audiologist further depicts a non-conducive therapeutic environment. In this case, the concept of air, which is needed to breathe and stay alive, can be likened to linguistic competency in isiZulu, which is needed to communicate with the patient and engage with them professionally. Keane, Lincoln and Smith (2012) revealed that allied health staff placed in rural areas often felt isolated from society and being away from professional and private support structures. The above photograph indicates that the linguistic barrier faced, when encountering isiZulu patients, creates an additional sense of isolation and not coping that may be detrimental to FLES audiologist's whole well-being. *"No matter how hard I tried to reach the top of the water, I could never get there",* therefore suggests that the FLES audiologist felt as though her audiology goals/ treatment were unattainable due to the presence of the language barrier, which overwhelmed her.

The next photograph (refer to Exhibit C) symbolized the language barrier between the FLES audiologist and isiZulu patients that prevents successful communication. "*The picture above was chosen to show that I often felt as if a "wall" had formed between myself and my patient due to the lack of a common language".* The physical properties of the wall in the picture suggest that

audiologist considers the language barrier to be high, rigid, impenetrable and hard to overcome. The FLES audiologist demonstrated that the presence of the physical language barrier often resulted in uncertainty due to misinterpretation *"confusion was eminent with both myself and the patient with frequent misunderstandings and communication breakdowns",* as well as opportunities for misdiagnosis and mismanagement, "*I felt fear that I would not understand the patients concerns/complains and would misdiagnose or not treat their condition".* Thus, indicating that the language barrier has further impacted on the FLES audiologists self confidence and belief in her professional capabilities. Furthermore, the above sentiment reflects the possibility of medico-legal consequences.

Moreover, a wall is intended to isolate or sanction two entities, which implies that in the presence of the language barrier wall, the FLES audiologist is unable to see the patient in terms of their individual needs and identity. The effect of the wall on the patient-practitioner relationship may indicate one-sided communication with lack of common ground, which can further introduce power imbalances in the provision of audiology services. To analyse the photograph, personification was used in which human traits were given to a non-living thing. Lastly, the language barrier wall may highlight the concept of "so near yet so far", in which FLES audiologists have the opportunity to access and engage with isiZulu patients, particularly in rural outskirts, but are unable to provide effective services due to the language barrier. In that sense, FLES audiologists are merely scratching at the surface of the problem without fully reaching out to isiZulu patients.

Overall linguistic competency:

In light of the above challenges concerning the ever present language barrier in service delivery, the majority of participants (47%) perceived their linguistic competency in isiZulu to be poor. In comparison, the majority (97%) of FLES audiologist's actual linguistic competency scores in isiZulu were also calculated to be poor. However, although the classification regarding perceived and actual competency levels coincided (ie. poor linguistic competence), it is evident that they clearly differ quantitatively. This indicates that FLES audiologists may not be aware to what extent their limited isiZulu language abilities are affecting areas of audiological service delivery. The results from this study motivate for mechanisms to be put in place that increase the above linguistic competency levels, which is discussed further in this chapter under recommendations.

To the researcher's knowledge, few studies have evaluated healthcare provider's linguistic competency levels, and have instead focussed on establishing the presence of a language barrier and

investigating its influence on service delivery. To exemplify this point, Schlemmer and Mash (2006) demonstrated in their study, conducted in the Western Cape, that the language barrier between English speaking healthcare providers and Xhosa speaking patients significantly imposed on health outcomes. Although the context of this present study focused on FLES audiologists' linguistic competency in isiZulu in KZN, it is also important to view the broader issue of cross-cultural and cross-linguistic communication.

One may argue that there are many languages in the world that FLES audiologists may encounter in their existence as a practitioner, therefore the question arises regarding how will competency in one language, such as isiZulu, facilitate cross-cultural and cross-linguistic communication in other worldwide contexts. Paternotte, Van Dulmen, Van Der Lee, Scherpbier and Scheele (2015) respond to this argument stating that is unrealistic for healthcare professionals to be proficient in every language of their patients, rather communication can be achieved through learning key aspects of the language, such as establishing key words that can be used to meet outcomes (Brugge, Edgar, George, Heung & Laws, 2009). In the present study, the ability to meet such outcomes, that deem FLES audiologists linguistically competent, was evaluated through isiZulu patient's perspectives.

Welfel (2016) further adds that healthcare professional's competency implies their ability to provide satisfactory care as well as carry out tasks, and that they should continuously strive to improve knowledge and skills. This has relevance to the present study, as it suggests that linguistic competency in isiZulu is a continuum that is not measured by perfection in fluency but rather the techniques needed to adequately communicate to isiZulu patients that would enable appropriate and adequate service delivery. Therefore, reverting back to the initial argument, improving FLES audiologist's linguistic competency in isiZulu can in fact facilitate broad cross-linguistic communication as the techniques/strategies utilised in this context can be transferred to other language contexts.

5.3 OBJECTIVE 2. Factors that influence communication between First Language English speaking audiologists and isiZulu patients

The second objective of the study investigated the influence of additional factors on cross- cultural and cross-linguistic communication between FLES audiologists and isiZulu patients, specifically those associated with informed consent, trust, collaboration, empathy, attitude and professional superiority.

5.3.1 Informed consent

Informed consent can be considered the most widely accepted ethical safeguard in healthcare (Amer, 2013), thus there was a need to determine whether FLES audiologists ability to obtain it is compromised in the presence of cultural and language barriers. Although a mixed response was reported from the FLES audiologists, the isiZulu patients felt more strongly about the challenges they experience in providing consent for audiological procedures (refer to Figure 4.18). Peterson and Kopishke (2010) identified the following pertinent features that influence the process of informed consent ie. incomplete disclosure, informed consent documentation and competency, which are used to explain the results obtained.

Incomplete disclosure refers to the partial provision of information that may inhibit the patient from being genuinely informed to make a decision. The mixed responses obtained from the FLES audiologists may have been influenced by differing views on the amount of disclosure required. Schwartz (2011) explains that informing the patient about statistical information, such as the risks of relating procedures, often results in the patient over or underestimating the risk involved, which can ultimately affect their decision toward treatment. This has relevance to the present study as similar sentiments were provided by a FLES audiologist, *"To be brutally honest, I feel like if you tell a patient too much, then the procedure seems scarier than it actually is. Try explaining the risks for ear irrigation, they would never agree to it. And my Zulu isn't that fluent enough to effectively ease their concerns".* Schwartz (2011) therefore recommends that healthcare providers should not always divulge such information to their patients. Walker (2006) reports that there is little agreement between clinicians regarding what information should and should not be disclosed to a patient. Therefore, FLES audiologists mixed responses regarding the difficulty in obtaining informed consent from isiZulu patients may be attributed to their varying stance on the amount of information deemed necessary to disclose. Furthermore, some healthcare professionals justify that the reason for their incomplete disclosure is based on the fact that the entire set of risks may be unknown until after a procedure is complete (Peterson & Kopishke, 2010).

A recent local study by Chima (2015) investigated the existence of informed consent in 404 patients at randomly selected hospitals within the eThekwini district of KwaZulu Natal. The results revealed that 81% of patients felt they were informed regarding their medical diagnosis, but that only 57% were informed about the risks of procedures (Chima, 2015). The difference in the results with the current study, could be attributed to the fact that only slightly over half (56%) of the

patients in the Chima study were isiZulu speaking. Hence, linguistic barriers may not have as significantly imposed on the process of obtaining informed consent as seen in the present study, which consisted of all patients being isiZulu speaking. The study also lacked information regarding whether the healthcare professionals obtaining informed consent were of the same linguistic and cultural background of the patients surveyed. Nonetheless, the results reported by Chima (2015) draw attention to the difficulties in obtaining consent regarding procedural risks, which remains one of the least disclosed topics during the process of informed consent. Given the gravity of risks associated with audiological procedures, ie. a ruptured tympanic membrane during ear mould impression taking as well as side effects of sedation during Auditory Brainstem Response (ABR) testing, it is essential that patients have full disclosure of the potential risks that would inform their decisions for treatment.

The second aspect needed central to the process of informed consent is relevant documentation (Peterson & Kopishke, 2010). A study conducted by Bottrell, Alpert, Foschbach and Emanuel (2000) investigated the quality of informed consent forms used in 167 hospitals by analysing 540 consent forms, 96% of which described the related procedure and a mere 26% described associated risks. It was concluded that the analysed forms did not meet acceptable requirements for informed consent (Bottrell et al., 2000). These results have implications for the present study as it suggests that the availability and quality of audiology informed consent forms, in conjunction with whether such forms were translated in isiZulu, could be reasons for the low levels of satisfaction regarding informed consent across isiZulu participants.

In contrast, the narrative from one FLES audiologist indicated confidence in the informed consent procedures that are in place at her institution. "*I don't find getting informed consent a particular problem. We have forms in isiZulu that explain the risks of ear mould impression taking. It seems to work well in helping the patient understand what we are doing.* However, when probed further, the FLES audiologist indicated that they did not have equivalent informed consent forms for procedures such as ear syringing and irrigation. According to Ballachanda (2013) impacted wax is one of the most common conditions seen by audiologists, thus wax removal techniques are frequently requested. Furthermore, ear syringing requires corresponding invasiveness to that used in ear mould impression taking and would therefore require patients to be informed regarding the procedure and potential risks. These findings indicate the need for committees, such as the KZN Audiology Forum, to designate a task team that could develop informed consent audiology

procedure forms in both English and isiZulu, to ensure consistency and standardization across public sector hospitals in KZN.

The last aspect influencing informed consent is competency (Peterson & Kopishke, 2010) and it requires the capabilities of the patient to understand and assimilate all information provided by the healthcare provider that would enable the decision to proceed (Amer, 2013). It is fair to assume that the competency of isiZulu patients to make an informed decision will be diminished if all underlying information (ie. type of procedure, risks and benefits) are explained in a language that they do not understand. Taking into consideration, the isiZulu linguistic ability of FLES audiologists (mean level-poor) and the lack of formal interpreters at public hospitals to assist, the reduced competency of isiZulu patients to make knowledgeable decisions due to the presence of a language barrier, could be a plausible explanation for them having difficulty in providing consent to procedures. In the context of this study, reduced competency can also be linked to the FLES audiologists' ability to provide the necessary language services and resources that facilitate obtaining informed consent.

It is evident that the interaction of incomplete disclosure, inadequate informed consent documentation and poor communication between FLES audiologists and isiZulu patients, contribute to the challenge of obtaining informed consent in a cross-cultural and cross-linguistic setting. Lack of informed consent, firstly implies that the isiZulu audiology patients do not voluntarily accept the proposed assessment/ intervention procedures. From a medico-legal perspective, lack of voluntary agreement to procedures can be contrived as coercion or manipulation from the FLES audiologist (Farrell, 2015). This suggests that in the event that procedure risks manifest, without formal documentation citing that informed consent was obtained, isiZulu patients may have grounds for a legal lawsuit against the FLES audiologist.

In light of the above, the researcher recommends the education of both FLES audiologists and isiZulu patients regarding the purpose and content of informed consent documentation. FLES audiologists need to be made aware that the process of informed consent is not merely an ethical guideline but also a legal requirement that has corresponding implications. Institutional policies that stipulate mandatory informed consent for specific procedures can assist in ensuring that it is obtained and in doing so; safeguards both their staff and patients. Furthermore, isiZulu patients need to be made more aware of their rights, including the right to refuse treatment. This can be achieved by institutions orientating isiZulu patients to the *Patients Right Charter*, with

consideration to patient's literacy levels, to ensure that they understand their autonomy role in providing permission for procedures.

5.3.2 Trust

The majority of FLES audiologists and isiZulu patients believed that the ability to establish trust is compromised in the presence of cultural and language barriers (refer to Figure 4.19). From the perspectives of FLES audiologists, two important factors that affect levels of trust emerged ie. communication "*I do feel like trust is an issue, they don't trust me because they don't understand me"* and race *"Sometimes it seems that Zulu patients don't trust my capabilities, maybe because I am White. I could be wrong. It just feels that way sometimes.*

With regard to communication, the above sentiment concurs with the statement from Purnell (2012) regarding ineffective communication impeding the fostering of trust in the patient-practitioner relationship. The second factor, relating to race is also recognized in the literature, with Ngometzer et al. (2007) reporting that when compared to white patients, ethnically diverse patients, such as isiZulu patients, experience increased levels of distrust in their health service provider. He further expands that heightened distrust can occur due to past experiences, which in this case could be associated with historical political factors, poor services received at other public hospitals or to a lack of cultural appreciation by the practitioner.

Jacobs, Rolle, Ferrans, Whitaker and Warnecker (2006) attempted to understand African-Americans views regarding trustworthiness of their healthcare practitioner by conducting focus groups with 66 patients. The authors cited interpersonal skills as the main contributor to African-Americans distrust in their healthcare provider (Jacobs et.al., 2006), with patients reporting that healthcare providers often did not communicate with them and instead immediately initiated examination. In addition, the patients reported being inadequately assessed due to healthcare providers spending very little time with them. Furthermore, some felt that differences in language and culture fostered their mistrust in their healthcare providers. However, interestingly enough, the majority of the African-American patients contended that with regard to trust, the race of the healthcare provider was irrelevant, provided that they displayed characteristics of care and compassion. The patients developed mistrust when it was the healthcare provider instead, who treated them differently on the basis of race. This was substantiated by patients reporting that the general manner of the provider changed when treating white patients.

The results from the reviewed study signify two noteworthy points for consideration. FLES audiologists may not be able to change their race, corresponding culture or the colour of their skin, but they are able to change their interpersonal skills, which is what patients consider the most important in developing trust during cross-cultural and cross-linguistic interaction. Such interpersonal skills include spending sufficient time with isiZulu patients and listening to their concerns with genuine care. Secondly, FLES audiologists may require improved self-awareness that enables detecting change in their behaviour when treating different race groups, including that of their own. The ability to self-reflect on their behaviour and make the necessary changes permits for equitable treatment that would positively influence the trust of isiZulu patients. From the perspective of the patient, Visagie and Schneider (2014) reported that trust is also impeded by the yearly rotation of community service audiologists, which highlights the importance of continuity of care to establishing a trusting relationship between patients and their providers.

5.3.3 Collaboration

Both FLES audiologists and isiZulu patients mutually agreed that limited collaboration was taking place during assessment/treatment (refer to Figure 4.20) These findings are similar to that reported by Cooper, Beach, Johnson and Inui (2006), who identified that diverse patients, particularly African-Americans, demonstrated reduced participation during encounters with health care professionals. The FLES audiologists in this study cited linguistic barriers as the primary inhibitor to participation, "*I believe Zulu patients 'hold-back' information or 'build a wall' in front of them because they are unable to effectively express their concerns and thus become frustrated and anxious and are thus less likely to share and open-up to me".* However, one FLES audiologist also felt that isiZulu patients make the conscious decision not to participate by putting forward a challenging stance. *"They withdraw almost as if they settling and saying –you don't speak my language so what are you going to do about it? Establishing rapport with Zulu patients is that much harder".* The above narrative suggests that the presence of language barriers can lead to tension and a hostile environment between the patient and the audiologist that is not conducive to therapeutic outcomes.

The limited participation noted by FLES audiologists may be explained by the majority of isiZulu patients feeling as though they were not consulted when decisions regarding their treatment were made (refer to Figure 4.21). This can create a power positon for the FLES audiologist and can result in isiZulu patients feeling that their autonomy is not respected, both of which is not in line with patient-centred care (Naidoo, 2014). The importance of collaborating and encouraging participation

amongst isiZulu patients can be illustrated with the important decision for a hearing impaired child, regarding their mode of a communication. If the FLES audiologist advocates for the hearing aid impaired children to be enrolled in sign language school yet the parents desire the child to learn how to speak, this can create a conflict of interest. Failure to consult with the family on such decisions can harbour resentment and affect parents degree of support towards their child. Thus, emphasizing the importance of collaborative decision-making between isiZulu patients and FLES audiologists.

However, a study by Gordon et al. (2006) revealed that African American patients rarely engaged in communication styles that involve posing questions, expressing problems or being assertive. Such findings could be used to explained isiZulu patients limited involvement in decision-making. Schlemmer and Marsh (2006) argue that patients belonging to certain cultures refrain from asking questions to the healthcare provider out of respect. FLES audiologists therefore need to take into account cultural considerations that may otherwise be perceived as lack of participation. Furthermore, Levinson, Kao and Kuby (2005) investigated the preferences of clinical participation in 2765 patients. Their findings revealed not every patient desires to be involved in decision-making with half of the participants (52%), particularly African American and Hispanic populations, indicating preference for their healthcare provider to make the final decision regarding their healthcare. Based on the above, it is evident that patient collaboration is of a subjective nature and can vary considerably. Although it is suggested that FLES audiologists employ subtle approaches that can ecnourage isiZulu patients to be active in decision-making, it is also important for FLES audiologists to be intuned to their patients preferences and tailor management accordingly.

5.3.4 Empathy

The findings of the study revealed that majority of isiZulu patients detected a lack of empathy from their FLES audiologist (refer to Figure 4.22). Hojat, Vergare and Maxwell (2009) stated that increased satisfaction was reported from patients who perceived their clinician to be empathetic. Lack thereof will adversely influence isiZulu patients return for follow up appointments, which can ultimately delay or cease appropriate management being received. Consequently, this can increase the overall burden of disease in South Africa. Secondly, patients who perceived their clinician as empathetic reported experiencing reduced feelings of apprehension during consultation (Van Dulmen & van den Brink-Muinen, 2004). If isiZulu patients feel anxious due to detecting an

uncaring approach from the FLES audiologists, this may affect their ability to be forthcoming with information, which has implications for audiological assessment and management.

In contrast, FLES audiologists had varying views on their ability to be empathetic, with one FLES audiologist being honest in reflecting that stronger empathy may be expressed to patients of her own cultural and linguistic background. *"As humans we all empathize with the pain of other humans but I think they might be an ingrained bias that makes us more inclined to identify with our own, not many people will admit that though.* In most recent literature, Bloom (2017) makes a strong case against empathy, echoing the above sentiment of the FLES audiologist by stating that we empathize with those who are similar to us and in doing so we provide marginalized care that turns a blind eye to others. The author described an experiment conducted by Batson et al., as cited in Bloom (2017), in which participants were informed that a 10 year old girl with a terminal disease was waiting in line for pain medication. When asked to imagine how the patient felt, the healthcare providers opted to move her ahead of other children in the line. This has significance to the present study as it suggests that if FLES audiologists are empathetic towards their own cultural and linguistic groups, such empathy may take precedence over fairness. This is important to consider in light of hearing aid waiting lists and distribution of the assistive devices.

The second varying view came from a FLES audiologist who explained her lack of empathy in line with what appears to be a clinical approach. *"When diagnosing hearing loss on a daily basis, kids, adults-it can take its toll on you. I prefer to keep a little distance and make my feelings less transparent. For my own sanity".* The participant is not isolated in her rationale as Halpern (2003) reports that healthcare professionals often prefer detachment in order to provide objective care. Alternatively, the FLES audiologists approach may be explained by what is commonly referred to as "*doctors' avoidance behaviour*", in which the emotional impact of patient's diagnoses is avoided due to the healthcare provider being unable to effectively handle such issues (Maguire, 2002). As a result of observing avoidance behaviour, patients reported being reluctant to disclose their emotional response to their diagnosis which led to harbouring feelings of resentment and difficulty accepting the diagnosis (Maguire, 2002)

In view of the above, the findings of the present study shed light on both the negative and positive aspects of empathy. However, there is a need for both isiZulu patients and FLES audiologists to navigate through their respective emotional subtexts to ensure that quality services are not compromised.

5.3.5 Professional Superiority

Undoubtedly, language barriers can impede the interaction between FLES audiologists and isiZulu patients, this being evidenced by the isiZulu patients who reported feeling inferior and some FLES audiologists acknowledging the assumption of a superior role (refer to Figure 4.23). Penn, Watermeyer and Evans (2011) reported that healthcare professionals tend to speak down to patients due to their limited linguistic competency in local languages. This suggests that although FLES audiologists may be simplifying their dialogue due to inadequacy in isiZulu, their manner of communication may be perceived as substandard inferior care. In contrast, one FLES audiologist felt that it was the complexity of language rather than the simplicity, which induced feelings of inferiority among isiZulu patients, *"Medical jargon is intimidating enough, try medical jargon in a language you don't understand. It doesn't make it easy for you and the patient to be on the same level. It's no wonder some patients feel like we above them".* Schyve (2007) confirms that linguistically diverse patients struggle with health literacy due to complex, medical terminology. Based on the above, it is evident that in order for FLES audiologists to avoid coming across as superior, the provision of information to isiZulu patients needs to occur in a manner that is neither too complicated, nor too simple where it may be considered "dumbed down". It may be unrealistic to assume the same approach for every isiZulu patient, therefore the most practical manner would be for the FLES audiologists to assess isiZulu patient's level of comprehension during information giving and observe for nuances that indicate offense. This may provide a baseline for whether modifications to the approach are required.

The second view regarding superiority focused on how lack of communication affected shared decision-making. *"I never intend to be perceived as superior, but it happens when you have a patient who doesn't understand you then you have to make all the decisions. I wish it didn't have to be that way".* Although the importance of collaboration was earlier discussed, the above sentiment re-emphasizes that improved levels of isiZulu linguistic competency can encourage patient participation and minimize power imbalances that favour the healthcare provider over the patient.

5.3.6 Attitude

Overall the FLES audiologists showed a negative attitude towards isiZulu patients (refer to Figure 4.24), which was also detected and reported on by isiZulu patients. Similar findings were reported by Komaric, Bedford and van Driel (2012). According to Ceuvas (2013) attitudes are influenced by the way people are perceived, particularly regarding stereotypes and various other influencing factors such as experience, education and exposure to other cultures.

Similarly, FLES audiologist felt that isiZulu patients also display a deliberated a negative attitude. *"It's ironic because sometimes it's the patients that have a bad attitude towards you. Like you can tell them something in Zulu and they will say they don't understand. Then when you get a Zulu speaking colleague to assist, who will tell them the exact same thing that you did and they will acknowledge it. I don't know why they do that".* A similar account to the above was described in the study by Schlemmer and Mash (2006) where it was reported that Xhosa speaking patients do actually understand what is being said but intentionally pretend that they don't. In keeping with the theory that attitude may be affected by past experiences (Banyard, Dillon, Norman & Winder, 2015), it is reasonable to assume that isiZulu patients may display a negative attitude towards FLES audiologists based on previous incidents of prejudice and socioeconomic disadvantage (Eiser & Ellis, 2007). This suggests that changes in attitudinal organization needs to occur on both the level of the audiologist and the patient.

Inferential statistics (Annexure J) revealed a significant association between FLES audiologists cognitive attitude towards the ability to master the isiZulu language and the type of institution based at which they were based (*p* value= 0.012). These findings re-affirm the previous argument, regarding increased skills development at urban institutions, and suggests that limited resources and support services available at rural institutions can result in FLES audiologists developing a negative attitude towards mastering the isiZulu language. Secondly, a significant association (Annexure J) was found between FLES audiologist's race and their behavioural attitude regarding the preference to assess English speaking patients over isiZulu patients (*p* value=0.039). These results may be explained by factors relating to lack of competency and fear of inadequacy in the isiZulu language.

It therefore seems necessary for FLES audiologists to participate in seminars that target cultural and linguistic diversity, as a solution to developing a positive attitude towards isiZulu patients. However, Steed (2010) reported that despite attending such seminars, clinicians still possessed a negative attitude to African-Americans. Nonetheless, Herbelein (2012) asserts that education is one of the strongest modifiers enabling change of a negative attitude. This implies that although seminars have proven to be largely unsuccessful, other education modalities, such as role play and immersion programmes could be used to improve attitudes amongst FLES audiologists and isiZulu patients.

5.4 OBJECTIVE 3. Communication strategies used by First Language English speaking audiologists when providing services to isiZulu patients

The intention of this objective was to understand the communication mechanisms that FLES audiologists have in place by identifying the communication strategies used. This includes the utilization of interpreters, the role of remote translations such as Google Translate, as well as the role of written communication when interacting with isiZulu patients.

5.4.1 Type of communication strategies

The literature identifies use of interpreters as the most common communication strategy employed by healthcare professions when encountering culturally and linguistically diverse patients (Mucic & Hilty, 2015). This is supported by the narrative of a FLES audiologist. "*I did not know what to do or what to say to make myself better understood, and spent a great deal of time running around in hope that I would find an isiZulu speaking colleague to aid me".* The above dialogue suggests that often the first communication strategy employed when encountering language and cultural barriers, although time consuming, is to seek the assistance of an interpreter, and this practice can be considered utilization of an external communication strategy, which refers to use of an entity that originates outside of oneself (Gura, 2015). In contrast, use of internal strategies are described as those created and controlled by the practitioners own mind and capabilities (Gura, 2015). The author summarizes that the decision to use either internal or external strategies is based on their availability, as well as the sustainability, satisfaction and effectiveness derived from it.

In contrast, Taylor, as cited in Cook and Levi (2008) propose that use of internal strategies rank superior to that of external strategies during problem solving based on the fact that they are complete in and of themselves. In contrast, external solutions require third party involvement and are thus dependant on various factors such as availability and competency. Such factors relating to the use of interpreters as an external communication strategy bare relevance to the present study and will be discussed in this chapter.

5.4.2 Type of interpreter

The type of interpreter utilised runs parallel with their availability or competency, with Hsieh, Ju and Hong (2010) recognizing that the latter as one of the four pertinent features central to the success of professional interpretation. Competence in interpreting refers to the knowledge and abilities that are acquired through expert training (Pochhacker, 2016). However, the findings in this study indicate that none of the FLES audiologists utilize formally trained interpreters during their interaction with isiZulu patients (refer to Figure 4.27). These results were supported by the majority

of isiZulu patients and FLES audiologists who indicated that trained interpreters were not available when needed at the institution.

The lack of formally trained interpreters at public sector hospitals could possibly be attributed to budget and finance constraints faced by third world countries in employing professional interpreters (Saulse, 2010). These results substantiate the statement from Killian, Swartz, Dowling, Dlalic and Chiliza (2014) who put forward that despite South Africa's advocacy for equality, denoted by 11 official languages, several patients accessing health care services receive intervention from professionals who are of a different language with "no formal interpreting services available" (p.700).

Despite the lack of priority placed on employing formally trained interpreters at public sector hospitals across KZN, the benefits of professional interpreters are tenfold. Karliner, Jacobs, Chen and Mutha (2006) reported that the use of professional interpreters produced enhanced clinical care in patients with limited English proficiency as opposed to the use of ad hoc interpreters. Furthermore, professional interpreters resulted in clinical care that moves towards if not equivalent to the quality of care provided in the absence of language barriers (Karliner et al., 2006). These findings strongly motivate for policies that compels the inclusion of formally trained professional isiZulu interpreters at public sector hospitals across KwaZulu Natal, in line with improving service delivery.

As an alternative to formal interpreters, the majority of FLES audiologists reported use of the patient's family members as a medium of interpretation. Although this may alleviate the challenge surrounding language, underlying issues may arise with this communication strategy, particularly associated with professional boundaries. To illustrate this point, during audiological consultation, obtaining the medical history of patients involves probing for chronic or acquired health conditions and associated medication that may influence audiological assessment/intervention. This includes determining whether audiology patients are infected with HIV (Human Immunodeficiency Virus) or have contracted Multi-Drug Resistant TB (MDR TB). This is based on the presence of HIV increasing the prevalence of ear infections (otitis media) due to immune system suppression (Parthasarathy, 2013). Similarly, treatment for MDR TB is considered ototoxic and often results in hearing loss (Miller, Le Prell & Rybak, 2015). However, both HIV and TB are associated with stigma in South Africa (Rohleder, Swartz, Kalichman & Simbayi, 2009). It is therefore reasonable to deduce that isiZulu patients may not be comfortable or willing to disclose their HIV or TB status

in the presence of family members. Consequently, the FLES audiologists' use of family members to interpret may result in the patient's confidentiality and privacy being infringed upon.

In contrast, a study conducted by Edwards, Bogusia and Claire (2005) reported that patients may actually prefer use of their family members over any other type of interpreter based on the perception that their relatives are trustworthy and supportive. Although a positive medium of interpretation is important, there are other factors that need to be considered when using family members as interpreters, particularly accuracy. Family members may not have sufficient medical knowledge to explain treatment regimes, such as dosage and frequency of antibiotics for otitis media, or associated side effects, as in the case of MDR TB treatment. Elderkin-Thompson, Silver and Waitzkin (2001) elaborate by reporting on the occurrence of inaccuracy and omissions that occurs with use of family members as interpreters. "Interpretation errors may contribute towards making the patient appear more ill" (Kilian et al., 2014, p26).

Secondly, findings from Rosenberg, Leanza and Seller (2007) reported that healthcare professionals complained of incidents where family members would answer for the patient by neglecting to translate information and instead interjecting their personal perceptions. Thirdly, the role of the family member who is interpreting needs to be considered, with Ngo- Metzger, as cited in Pochhacker and Shlesinger (2007) asserting that English proficient children interpreting for their parents can change family dynamics and influence the type of information provided. Similar sentiments were made by a FLES audiologist, *"How can you understand when a patient begins to speak of his or her dizziness with no one to assist with interpretation but their child who sometimes doesn't even understand the true extent of the problem".* Furthermore, Jacobs et al., as cited in Pochhacker and Shlesinger (2007) added that these children may also be psychologically at risk when delivering information to their parents regarding life-changing diagnosis. In light of the above, employing the family members of isiZulu patient's to interpret is not recommended. The results from this study indicate the need for FLES audiologists to be educated on the different consequences associated with this communication strategy.

Still in keeping with ad hoc interpreters, another common practice, used by FLES audiologists was the use of other patients, who have functional proficiency in English, as channel for communication (refer to Figure 4.27). However, this method also revealed drawbacks, as the isiZulu patients reported confidentiality concerns. Parekh and Childs (2016) agree that confidentiality is often compromised, particularly for isiZulu patients who reside in the same community. Not only can

confidentiality concerns lead to patients withholding information but it can also affect the therapeutic relationship, as isiZulu patients may develop mistrust towards the ad hoc interpreter and the FLES audiologist. Furthermore, FLES audiologists reported not always being satisfied with the level of translation provided. These results can be explained with reference to the varying standards of interpretation provided by untrained individuals, despite Parekh and Childs (2016) reporting that their use is rife in the healthcare setting, ranging from bystanders to staff members.

The use of staff members was confirmed to be the most common ad hoc interpreter strategy used by the majority of FLES audiologists, with one noting her concerns in this regard, *"I often used bilingual cleaners as interpreters and I worry about the accuracy of the translation provided".* Pochhacker, as cited in Antia and Bertin (2004) reported similar findings in which general orderly cleaners were most often utilized to assist with interpretation. The relationship between the utilized ad hoc interpreter and his/her corresponding job description cannot be overlooked. It is reasonable to infer that interpreting does not solely involve the translation of information from one language into another. Gentile et al., as cited in Pochhacker (2016) affirm that interpreter competency involves language proficiency, cultural competence, good memory, professional ethical conduct and interpreting techniques (Gentile et al., as cited in Pochhacker, 2016). Moreover, knowledge of medical terminology is required when interpreting in the healthcare setting (Kronenfeld, 2011).

Knowledge is determined by prior education and Jobert, Marry and Rainbird (2013) add that preliminary education strongly determines level of qualification and job description. Therefore, it can be inferred that the distributed profile of staff descriptions (physiotherapists, occupational therapists, speech therapists, social workers, nurses, security and cleaners) at public sector hospitals has resulted in diverse levels of medical knowledge, not all of which is relevant to audiological service delivery. Furthermore, Parekh and Childs (2016) reported that staff members may feel embarrassed to admit that they do not know medical terminology while interpreting, which can adversely affect the documentation of symptoms, diagnosis and management. Lack of medical knowledge could be a reason for the FLES audiologist's concerns regarding the accuracy of the interpretation.

Parekh and Childs (2016) further add that requesting the assistance of bilingual staff members to interpret can lead to tension if the FLES audiologist is more senior or if the interpreting staff member has a supportive job role, as in the case with general orderly staff. The power imbalance of

staff occupations can result in bilingual staff being less likely to declare that they are uncomfortable interpreting. In addition, bilingual staff members may fear coming across as unhelpful and may therefore feel forced to assist FLES audiologists with interpretation, which can lead to a build-up of resentment (Parekh & Childs, 2016). Moreover, excessive acquisition of language proficient staff members as interpreters, as seen in the present study, can affect job performance, as it results in such staff members being taken away from their own principal job duties (Spouse, Cook & Cox, 2008). The above arguments suggest that in order to ensure that bilingual staff are able to perform their core duties, stay within their scope of practice and possess adequate medical knowledge to facilitate audiology services, the use of isiZulu audiologists as interpreters may be one possible solution.

The results however, indicate that FLES audiologists rarely use audiologist colleagues to interpret, as many (68%) reported not having other audiologists, who can fluently converse in isiZulu, based at their institution. These results therefore confirm the impracticality regarding the earlier introduced concept of language matching therapists to patients. Despite, Meyer and Zane (2013) describing effective therapeutic outcomes associated with linguistic matching, the dynamics of public sector hospitals in a developing country, such as South Africa, make it impossible to achieve such standards. In the absence of matching an isiZulu audiologist with every isiZulu patient, there is a need to capitalize on human resources that are available by strengthening the isiZulu cultural and linguistic skills of FLES audiologists, for them to cope with the demands of the South African context. Furthermore, if FLES audiologists are able to become increasingly culturally and linguistically competent in isiZulu, this may negate the need for external interpreters. Consequently, this will promote established patterns of care, which Hsieh et al. (2010) identified as the fourth pertinent feature in interpreting.

In light of the extensive ad hoc interpreter usage, there is a need to discuss how FLES audiologists view them, with one noting a positive affiliation, *"I don't necessarily feel intimidated when I have someone in the room interpreting. Their task is to transfer the message in Zulu. I rarely use the same person twice; I haven't felt daunted thus far".* These findings differ from those presented by Schofield and Mapson (2014), who, in investigating the dynamics of interpretation, evoked the perspective of an audiologist. The audiologist reported that when the session did not proceed as intended, he/she became aware of the presence of the interpreter and thus experienced anxiety in being seen as incompetent. The feeling of being scrutinized has been associated with an increase in errors and reduced attention span which can affect competence (Bradley et al., 2015). A reason for the difference in findings could be attributed to the fact that the audiologist in the study by

Schofield and Mapson (2014) refers to working with trained interpreters, whereas the FLES audiologist in the present study refers to working with ad hoc interpreters. In countries such as Missouri (USA), trained interpreters undergo up to 40 hours of instruction to become familiar with medical technology, and their experience with multiple clinical interactions may result in them being more critical during work sessions. Hsieh (2010) agrees adding that as interpreters hone their expertise in mediating clinical interactions, they may feel that they now possess clinical expertise. This could explain the anxiety experienced by the audiologist in Schofield and Mapson's study.

An additional plausible reason for the difference in findings could be attributed to the frequency of the interpreter used. Professional interpreters are employed by a health institution to interpret several sessions throughout the day (Hsieh, 2010). Their familiarity and expertise may enable them to detect differences in a session when compared to the norm, thus resulting in the audiologist feeling apprehensive when the assessment did not commence as planned. In contrast, the FLES audiologist requesting once off assistance, as seen with recruiting a nearby bilingual patient or the patient's family member, experienced reduced levels regarding fear of error based on the unlikelihood of encountering the ad hoc interpreter again. However, the use of various interpreters suggests that continuity of care among isiZulu patients may be compromised.

The third factor that emerges from the FLES audiologist's narrative speaks to the role of the interpreter. In her description, the FLES audiologist described that the core duty of the interpreter is to translate the information provided into isiZulu. The literature presents ongoing debate regarding the role of the interpreter, with some healthcare providers sharing similar sentiments to the FLES audiologist (Leanza, 2005). In contrast, researchers argue that language conversion is in fact oversimplifying the role of the interpreter, who is in a powerful position to act as social and cultural broker (Hsieh, 2010). Due to FLES audiologists working primarily with ad hoc interpreters, there is limited opportunity to establish the different roles that an interpreter could fulfil in a clinical session. As a result, the audiology session may focus solely on language with cultural information being ignored.

In addition to the manner in which the interpreter engages with the patient, the behaviour of the audiologist in engaging with the interpreter can also inhibit the clinical interaction. This was evidenced by the introspective of a FLES audiologist. "*When using an interpreter I would often make the mistake of directing all my questions and attention to the interpreter and not the patient, which could have resulted in a breakdown of the patient-practitioner relationship"*. The

perspective of the FLES audiologist coincided with that of isiZulu patients who reported feeling insignificant when attention is directed to the interpreter instead of them.

Addressing the interpreter instead of the patient, is a common mistake made by healthcare professionals. Toole (2012) recommends that FLES audiologists become aware of the interpersonal skills needed during collaboration with an interpreter, emphasizing that patients needed to be looked at and spoken to rather than allowing the interpreter to dominate the clinical interaction. Thus, educating FLES audiologists appears to be key to remediating inappropriate interpreter techniques. However, a national study in America revealed that approximately 50% of healthcare providers have not received training on collaborating with interpreters and a further 67% have not been trained regarding management strategies when an interpreter has misunderstood the message (Lee, Winickoff & Kim, 2006).

Taking into account the personal experience of the FLES audiologist and the perspectives of isiZulu patients, it is evident that a change in interaction dynamics needs to occur. In a study conducted by Hsieh (2010) trained interpreters described using specific nonverbal techniques to ensure that the healthcare provider addresses the patient. These included standing behind or avoiding eye contact with the healthcare provider, which in turn forces the healthcare provider to communicate directly with the patient. However, the healthcare providers in Hsieh's study were opposed to interpreters employing such techniques (Hsieh, 2010), with one elaborating that when interpreters attempt to make themselves invisible by avoiding eye contact and looking straight ahead, they appear as inanimate, language robots which distracts from the clinical interaction. Miletic et al. (2006) instead recommend a triangle seating position that is conducive to interaction with both the patient and the interpreter. This has implications for the present study as it provides FLES audiologists with techniques that require implementation and evaluation when working with ad hoc interpreters. In doing so, FLES audiologists may become more in control during their session rather than assuming a passive role that lacks sufficient patient interaction.

It is therefore evident that facets of the audiologist-interpreter interaction can impose on the audiologist-patient interaction. Although perhaps not intentional, FLES audiologists directing their attention to the interpreter instead of acknowledging the presence of the patient, can be perceived as disrespectful. In a study examining the perspectives of 34 adult patients, Lacy, Paulman, Reuter and Lovejoy (2004) cited feelings of perceived disrespect and being overlooked as one of the main reasons as to why patients do not adhere to follow up appointments. Of the 34 participants, the

majority (58%) were African American patients, and thus similarities can be drawn to the present study. Furthermore, Kendal (2001) reiterated that although interpreters were used, the patients desired respect, acknowledgment, and for healthcare providers to spend sufficient time engaging with them. However, the results in the present study revealed that use of an interpreter may have a negative impact on time. Some isiZulu patients felt that audiological assessments are time consuming when interpreters are used, which concurs with findings from Henn, Sartorius and Helmchen (2013). This may be attributed to FLES audiologists use of various ad hoc interpreters, who are unfamiliar with the patient, their prognosis and specific medical technology, all of which contribute to a time consuming clinical interaction.

In addition, one FLES audiologist weighed in on the time constraints faced. *"I do feel like alot of time is spent engaging with a single patient when I use someone to interpret. The back and forth...it takes up time. Time that I don't always have when there are three other patients in my waiting room. And it's not like the extra time is spent actually attending to the patient, that time is more due to repeated conversation. Or like if I ask a yes or no question and then there's a long-winded discussion between the person translating for me and my patient. It's both confusing and time consuming".* The above narrative highlights that the duration of time taken to provide services to isiZulu patients increases when using an interpreter. One of the issues emerging from her narrative speaks to the double dialogue that generally occurs during an interpreted conversation. Therefore, the FLES audiologist draws attention to the fact that the additional time spent with an isiZulu patient may not necessarily translate to improved service provision but rather merely facilitates conversation. The additional time consumed during interpretation can be considered unproductive in the busy public sector that caters for 80% of the population.

As a means of resolve, Hauser, Finch and Hauser (2008) recommend that healthcare providers plan their session with the interpreter prior to the appointment. A clear set of objectives decided on beforehand can promote efficient time management (Barrett & George, 2005). However, with the South African context and the emergence of spontaneous, ad hoc interpreters, the above recommendation seem impractical. Instead, a more viable solution is simultaneous interpreting, which involves interpreting while the FLES audiologist is still speaking (Hsieh, 2010). This method is advantageous in that it not only reduces the time lag between speech but it can also improve the audiologist-patient interaction as it enables the FLES audiologist to focus on the patient, rather than the interpreter which occurs during the consecutive interpreting style (Hsieh, 2010).

An additional factor raised by the FLES audiologist relates to the nature of interpretation. Her narrative suggests that when long discussions occur between the interpreter and the isiZulu patient, the audiologist-patient interaction is affected as it creates a sense of confusion and isolation for the FLES audiologist. The manifestation of incongruent length of conversation has also been discussed in the literature and the healthcare providers in the Hsieh (2010) study have developed interesting strategies to reintroduce themselves to the triad of communication with the interpreter and patient. Such strategies include directly engaging with the interpreter and requesting to know what was said following a long conversation with the patient. Additionally, FLES audiologists can listen for key words and observe patients' non-verbal cues during their engagement with the interpreter. The implementation of such strategies can help FLES audiologists to better understand the isiZulu patient's situation and improve their interaction with the patient.

The above challenges associated with interpreter use, clearly motivate for FLES audiologists to increase their cultural and linguistic competency in isiZulu, in order to remove the need for communication across a third person. One FLES audiologist identified that sometimes she experiences reduced empathy for isiZulu patients due to working across interpreters, *-can also feel like the emotive aspect is less a bit when I use an interpreter because it's not direct.* According to Hsieh (2010) communicating through a third person can impair the ability of healthcare professionals to understand the feelings of their patients. Furthermore, Leanza (2005) identified that role reversal can occur, where the interpreter fulfils the role of being the sympathizer and listener opposed to the healthcare professional, widening the bridge of distance between the FLES audiologist and the isiZulu patient. The above findings further make a case for preventing the need for interpreter use, this suggestion being met with unanimous agreement amongst the isiZulu patients, who reported preference for FLES audiologists to communicate with them in isiZulu rather than use an interpreter. One FLES audiologist concurred *"I do wish that I was a 100% fluent in Zulu and wouldn't need the help of anyone to translate. How amazing would that be, never having to worrying about whether information is correctly imparted and just being able to build a good relationship with the patient itself. Being able to answer their every question".* Having discussed the use of interpreters as an external communication strategy employed by FLES audiologists, the chapter will now review the findings of an internal communication strategy.

5.4.3 Written handouts:

The results revealed that the majority of FLES audiologists did not prefer the use of written handouts over verbal communication (refer to Figure 4.32), which is in line with Hamlin (2014)

who stated that written materials should be used to reinforce and supplement verbal interaction. The advantages of verbal communication include the ability to provide individualized information and answer relevant questions (Zirwas & Holder, 2009), with Dent, as cited in Zirwas and Holder (2009) referring to verbal communication as the gold standard in educating patients.

In contrast, Thomson, Cunningham and Hunt (2001) assert that verbal communication is not a very effective method, while Kessels (2003) adds that 40-80% of information provided verbally by healthcare practitioners is forgotten almost immediately. The author elaborated on the inverse relationship that occurs in which the more information provided, the less likely it is for patients to correctly recall what was said. Similar findings were revealed by Hout, Bachrach and Witmer, as cited in Kessels (2003) who advocated for the use of written materials but revised using pictographs due to low literacy levels among patients. Pictographs are referred to as use of pictures with accompanying key words to convey a message (Pitler & Stone, 2012). The results from their study showed that while only 14% of HIV positive and cancer patients were able to correctly remember information provided during verbal communication, a staggering 80% of patients yielded accurate recall with use of pictographs (Hout, Bachrach & Witmer, as cited in Kessels, 2003). The findings resonate with some FLES audiologists who recommended the use of pictures and visual aids as a communication strategy. It is therefore evident, that using internal strategies, such as developing a picture system, can be a viable solution when encountering difficulties during verbal interaction with isiZulu patients.

In addition, despite authors such as Dent, as cited in Zirwas and Holder (2009), placing priority on verbal interaction, patients expressed the need for more information (Hong, Nguyen, Prose, 2012). This could possibly be attributed to the difficulties experienced by culturally and linguistically diverse patients in understanding verbal instruction as well as the time constraints faced by FLES audiologists working in the public sector. Davidson (2013) substantiates that healthcare professionals working in the public health sector institutions face considerable pressure to provide services to as many patients as quickly as possible. Zirwas and Holder (2009) identified time constraints as one of the main disadvantages associated with verbal communication, thus indicating that the role of written materials cannot be disregarded as a tool to satisfy patients need for further information.

Particularly in terms of newly diagnosed hearing loss, written handouts can play a powerful role. Therefore, although the majority of audiologists indicated that they did not prefer written handouts over verbal communication, there may be indications in which a pamphlet can prove to be more helpful than verbal interaction. The concept of *information overload* may be relevant when patients are meeting with audiologists, this being considered a chief disadvantage in verbal communication (Zirwas & Holder, 2009). Wessel, Van der Kooy and Merckelbach (2000) clarify that during a stressful or emotional experience, *attentional narrowing* occurs. Consequently, isiZulu patients diagnosed with hearing loss may experience reduced attention following their diagnosis, and therefore not retain important peripheral information, such as counselling and follow-up dates. The use of written materials detailing the peripheral information could be an effective way of providing information that the patient can review at their leisure after coming to terms with their diagnosis. Blinder, Rotenberg, Peleg and Taicher (2001) support this notion, reporting that written content is better remembered and results in better clinical adherence opposed to verbal interaction. The advantages of written handouts include: message consistency, information recall and easy reference of information when required (Bernier, as cited in Hoffmann, McKenna, Herd & Wearing, 2007).

The effectiveness of written materials however, is determined by FLES audiologist's ability to develop appropriate written materials that meet the content and literacy needs of their culturally and linguistically diverse patients. Griffin, McKenna and Tooth (2006) investigated the use of written materials offered to a geriatric population by occupational therapists, with the results concluding that some were considered too difficult for older patients to read and comprehend. Caposecco, Hickson and Meyer (2014) reported similar findings as 69% of hearing aid written brochures were inappropriate for geriatric audiology patients due to the technical terminology used. Atcherson, Zraicj and Brasseux (2011) agreed elaborating that FLES audiologists may be unaware about the diverse literacy abilities of isiZulu patients and the need to adapt the written resources accordingly. It can therefore be inferred that failure of FLES audiologists to consider factors, such as age and literacy levels of isiZulu patients, may have resulted in ineffectiveness of written materials and adversely affected FLES audiologists preference to continue using them. This could be a plausible explanation for the results obtained. Furthermore, inferential statistics (Annexure J) revealed a significant association between FLES audiologists disregard for the use of written materials and number of years practicing as an audiologist (*p* value= 0.035). The number of years practising as an audiologist can be associated with age. Marcus (2011) identified that older individuals display less initiative in developing and adopting new materials as they are often set in their ways of practising. In contrast, newly-graduated community service audiologists may be more open to implementing

the concept of written materials in service delivery, which could be used to explain the results obtained.

In view of the above, it is evident that the misconception that exists, in both the literature and the study's participants, regarding the gold standard of verbal communication, may need to be challenged, as written communication does not rank inferior to verbal communication in every circumstance. Both modalities have their own set of strengths and weaknesses that require evaluation in its use. That being said, it is also apparent that no specific mode, neither written or verbal communication, should be standard for every isiZulu patient. Patient specific factors need to be considered by FLES audiologists in selecting the type of mode that would optimize patient education and enhance intervention outcomes.

5. 4.4 Google Translate

Google Translate is the third communication strategy that was reported on and in the context of this study can be considered an external communication strategy. The results revealed the overall rejection of Google Translate by FLES audiologists with the majority not using the application (Figure 4.32). Similarly, the literature provides sufficient justification to support its disuse, with Nunez (2016) identifying that although Google Translator offers translation into 79 languages in order to overcome language barriers, the end result is "raw machine translation" that may vary in accuracy (p.176). Patil and Davies (2014) shared similar concerns, which prompted their evaluation regarding the accuracy and usefulness of Google Translator. Their study involved the translation of 10 frequent medical statements into 26 languages, including various European, African and Asian languages, via Google Translate. These statements were then back translated into English by respective Native language speakers. The results revealed that the medical translations produced from Google Translator had a 57.7% accuracy level. Furthermore, translations into African languages yielded the lowest accuracy scores, with a mere 45% of translations being correct.

Balk, Chung, Chen, Trikalinos and Kong Win Chang (2013) concurred adding that Google Translator employs statistical matching instead of following formal grammar rules, thus resulting in illogical translations. This could be used to explain the results from Patil and Davies (2014) regarding African languages being the most inaccurate, based on the complex grammatical system of the isiZulu language, as discussed in chapter two. The above findings have significance to the present study as the isiZulu African language dominates in KwaZulu Natal and would thus require the majority of translation by English speaking healthcare professionals. The authors concluded that

despite Google Translator being the most easily accessible, free communication medium in the presence of language barriers, it is not recommended for healthcare communication (Patil & Davies, 2014), which supports the results obtained in the present study.

In keeping with the thread of technology, the use of videoconferencing is proposed as a solution to the challenges encountered with Google Translator (Mucic & Hilty, 2015). Video conferencing is part of Telemedicine, which involves the exchange of information across distance to improve clinical healthcare. Theoretically, the use of video conferencing addresses the primary issues of raw machine inaccuracy that is associated with Google Translator by seeking the assistance of a Native Language speaker to facilitate interaction across language barriers. Positive outcomes derived from video conferencing have been documented in European countries (Mucic & Hilty, 2015). However, Wootton, Patil, Scot and Kendal (2009) inform that many hospitals situated in rural areas in South Africa have limited access to the internet and would therefore not be able to initiate video conferencing. Thus, the success reported by Mucic and Hilty (2015) needs to be cautiously viewed for feasibility against the background of the under-resourced South African context. Furthermore, although language challenges may be alleviated with assistance of a native language speaker during video conferencing, the successfulness in providing culturally-appropriate care is questioned. Napoles et al. (2013) shed light on this matter by revealing that cultural competence was better achieved during in-person interaction when compared to video conferencing.

The above findings, in conjunction with the results from the present study, reiterate that despite the profession of audiology being renowned for state of the art diagnostic equipment and technology, the basic fundamentals of communication cannot be mechanical or contrived. This emphasizes the importance of strengthening the cultural and linguistic skills of FLES audiologists to enable an authentic and accurate interaction with isiZulu patients. Relating back to the initial discussion focusing on the use of internal versus external communication strategies, the perspectives of isiZulu patients as well as the above challenges associated with external ad hoc interpreters and Google Translator suggest that internal strategies may produce more favourable outcomes in cross-cultural and cross-linguistic interaction. The ability to rely on internal strategies also suggests that if FLES audiologists had to encounter patients who were first language speaking in any of the country's other eleven official languages, such as Xhosa or Sesotho, they will be in a position to facilitate cross-cultural and cross linguistic interaction.

5.5 OJECTIVE 4. Recommendations to improve cross-cultural and cross-linguistic communication

In view of the cultural and linguistic challenges encountered between FLES audiologists and isiZulu patients, several recommendations are discussed, in terms of improving cross-cultural and cross-linguistic communication.

Presently, South African universities have embarked on increasing the number of Black African students that are being trained in healthcare, to address the language and cultural needs of the population (Kessi and Cornell, 2015., Smith, 2014). This transformative agenda is supported by various stakeholders to endorse equality. However, it is important to consider that in the interim of changes to training policy, there is a need to up skill the current workforce that are providing services to diverse patients. This study strongly recommends measures to be put into place that enable FLES audiologists to improve their cultural and linguistic competency in isiZulu.

In addition, the participants of the study identified several recommendations for improving cross-cultural and cross-linguistic communication, with the first being the employment of formally trained interpreters at public sector hospitals. *"Need for qualified, competent translators in cases where the therapist is not fluent in isiZulu, particularly and has extreme difficulty learning the language despite several attempts".* However, the previously discussed challenges associated with interpreter use in conjunction with interpreter costs affect the feasibility of implementing this recommendation. A more viable and cost effective solution may be to employ a tutor to train staff in the use of relevant terminology instead of employing full time on-site interpreters. Tutoring can provide FLES audiologists with relevant health-related content, which appeared to be lacking during the isiZulu undergraduate training. This suggestion is supported by FLES South African doctors who found having access to a tutor, while employed in a hospital, as helpful in learning the Xhosa language (Pfaff & Cooper, 2009). More importantly, training from a tutor rather than depending on interpreters, encourages the FLES audiologists to build cultural and linguistic competency skills that are needed for independent practice.

Secondly, both FLES audiologists and isiZulu patients expressed the need for audiological assessment and management resources to be available in isiZulu. *"Resources in Zulu for all audiology areas will be of value to help us learn".* FLES audiologist's specific requests for isiZulu dictionaries, isiZulu handouts and pamphlets convey their desire to comply with linguistically appropriate and culturally sensitive practices. These findings coincide with those of Pascoe (2011)

by advocating for the development of contextually relevant resources. The third resounding recommendation pertained to the availability of isiZulu courses, with one FLES audiologist noting that *"Going for Zulu courses will be most beneficial".* It was surprising to note that majority of FLES audiologists have never attended a post graduate isiZulu language/culture course. These findings warrant for collaboration amongst HPCSA and CPD course coordinators to make isiZulu workshop/seminars and training available that meets FLES audiologist's needs.

Furthermore, initiative also emerged as an important underlying recommendation, this suggesting that despite challenges associated with undergraduate training, interpreter use and lack of relevant resources as well as courses, the FLES audiologists recognized that to achieve cultural and linguistic competency in isiZulu, the onus rests with them. In doing so, achieving cultural and linguistic competency was realized to be a process of growth *"-grown, not only in my ability to speak the isiZulu language, but also in my skills and patience in treating those of different cultural and linguistic background".* This is in line with Campinha-Bacote's conception of cultural competency as a continuum.

The notion of growth was further illustrated in Photovoice (refer to Exhibit F) in which the photograph depicting transition of the growing tree symbolized that competency in the isiZulu language and culture is not sporadic and requires various nurturing elements to ensure success. One of the factors crucial to individual growth, was identified as initiative required to develop communication techniques, "*As the months of community service progressed, listening to colleagues helping with translation, making notes seemed to be a useful tool".* These two techniques utilized by the FLES audiologist are also supported in literature, where learning by listening to interpreting colleagues align with Krashen's *natural approach*. This approach is based on the premise that language is learnt through auditory input (Pfaff & Cooper, 2009). Furthermore, English speaking doctors found the process of keeping notes and trying out different words on patients to be a successful method of acquiring the Xhosa language (Pfaff & Cooper, 2009). The notion of implementing small techniques was also illustrated with Photovoice, in which the photograph depicting the boat going out into the vastness of the sea can be symbolized by the FLES audiologist being emerged in the vastness of cross-cultural and cross-linguistic encounters. The analogy of the small boat going far out suggests that FLES audiologists' small efforts, such as note taking, can be impactful. Furthermore, it suggests that with effort and perseverance, slow movement in the direction to reach the destination can be achieved, this being efficient service delivery.

Although the FLES audiologist's initiative is a strong predictor related to achieving cultural and linguistic competency, it is undisputable that there are varying motivators that influence initiative. In Pfaff and Cooper's (2008) study, FLES doctors cited motivational influences that encouraged language learning, such as: experiencing frustration when working with translators and the desire to interact with Xhosa patients on an in-depth level. Nonetheless, FLES audiologists are encouraged to draw on their individual motivational influences in propelling their initiative to become more culturally and linguistically competent in isiZulu.

5.6 CONCLUSION

Chapter five provided discussion in relation to the objectives and results of the present study. The body of existing literature was used to compare and explain the findings revealed in this study. The chapter began by discussed the facets of FLES audiologists cultural and linguistic competency in isiZulu with relevance to audiological service delivery. Thereafter the chapter honed in on the interplay of factors that influence cross-cultural and cross-linguistic communication. Subsequently, the use of three primary communication strategies, in terms of interpreters, written handouts and Google Translate, were evaluated for effectiveness. The chapter concluded by providing recommendations that can be used to improve FLES audiologists' communication with isiZulu patients, in which initiative to be competent in isiZulu was raised as an important pre-determinant for success in communicating with isiZulu patients.

CHAPTER 6. CONCLUSION

6.1 INTRODUCTION

This chapter provides a holistic view of the study, by highlighting the main findings and their implications on the provision of audiological service delivery to isiZulu patients. This is followed by an outline of the strengths and limitations of the study. Subsequently the clinical implications and research implications of the study are outlines.

6.2 SUMMARY OF THE MAIN FINDINGS

The study set out to explore communication between FLES audiologists and isiZulu patients by considering both perspectives. Due to the majority (52%) of audiologists practicing in the public health sector being first language English speaking, it was important to determine the nature of service delivery to isiZulu patients in the presence of language and cultural barriers, in order to ensure equitable healthcare. This section will provide a summary of the main findings of the study.

The study revealed that FLES audiologists in KZN are not yet culturally or linguistically competent in isiZulu. With regard to cultural competency, FLES audiologists reported difficulties in areas of isiZulu cultural knowledge, skill and encounters, all of which were corroborated by the perspectives of isiZulu patients. FLES audiologists' limited knowledge on the health related beliefs and behaviours of isiZulu patients have implications for understanding their explanatory model of disease. As a result, conventional audiology approaches may prove ineffective in meeting heath outcomes. This was further highlighted by isiZulu patients who expressed the need for FLES audiologists to obtain more knowledge on traditional methods of treating hearing loss. Therefore, suggesting the need for collaboration between FLES audiologists and traditional healers in order to provide holistic patient-centered care.

The importance of cultural skills is essential in ensuring accurate, valid assessment results for the population being tested. However, a significant association revealed that FLES audiologists based at rural institutions experience difficulty in efficiently adapting resources for their isiZulu patients, which may stem from unfair resource distribution between urban and rural hospitals. Furthermore, a significant association revealed that female FLES audiologists were found to be more successful at cross-cultural communications than males. Thus, suggesting the need for FLES audiologists to be

mindful of the approach employed when interacting with isiZulu patients and the degree of success derived from their stance. Although FLES audiologists at both urban and rural institutions frequently encounter isiZulu patients and thus have several opportunities of exposure, the feeling of unpreparedness was raised. This has implications for FLES audiologists desire to continue to encounter isiZulu patients, which was detected by isiZulu patients who reported often sensing dread from their FLES audiologist. These findings warrant the need for support mechanisms to enable FLES audiologists to become confident and prepared for cross-cultural and cross-linguistic communication. It was positive to note that FLES audiologists expressed the desire to learn more about the isiZulu culture. It is therefore important to capitalize on this desire by ensuring the availability of isiZulu courses and seminars to facilitate learning. In reviewing FLES audiologists overall cultural competency in isiZulu, the findings can be related to "cultural humility", which describes achieving cultural competency as a life-long process of self reflection through experiences (Yeager & Bauer-Wu, 2013). Nonetheless, the present study has provided recommendations that can support and strengthen the above process.

With regard to linguistic competency, the study revealed that FLES audiologists' linguistic competency in isiZulu has adversely impacted on their ability to administer components of assessment and management. This was supported by the perspectives of isiZulu patients, who reported communication difficulties during areas such as providing case history information, understanding feedback of results, aural rehabilitation and being counselled. Such difficulties have implications for accurate diagnosis and management of hearing loss in isiZulu patients.

The primary attributer to FLES audiologists cultural and linguistic competency levels was identified to be undergraduate training, with concerns raised regarding the frequency, duration and relevance of content covered in the isiZulu course offered within the structure of the audiology degree. In addition, the results revealed that important factors necessary in healthcare communication such as: informed consent, trust, collaboration, empathy, superiority and attitude, are being compromised in the presence of language and cultural disparities. This has implications for patient-centered management, establishing rapport as well as adherence to rehabilitation.

With regard to communication strategies, the use of ad hoc interpreters was revealed to be common practice amongst FLES audiologists when interacting with isiZulu patients. However issues regarding confidentiality, the accuracy of information conveyed and incorrect interpreter techniques were raised by both FLES audiologists and isiZulu patients. These findings draw attention to the

ineffectiveness of interaction through a third medium and thereby further emphasize the need for FLES audiologists to become increasing culturally and linguistically competent in isiZulu that moves toward being able to communicate independently with their patients. Although a significant association was found between older FLES audiologists and their indifference towards written handouts as a communication strategy, the study highlighted strengths associated with written handouts. Therefore, there is a need for awareness on selecting communication modalities that best suit the individual patient.

With regard to recommendations, both FLES audiologists and isiZulu patients identified the need for courses, contextually relevant resources and formally trained interpreters. Furthermore, FLES audiologists identified self-initiative towards learning the isiZulu culture and language, as an important determinant for successful communication.

The above study findings indicate the need for transformation in the way which FLES audiologists communicate with isiZulu patients. Increasing FLES audiologist's cultural and linguistic competency in isiZulu is identified as a necessity to the provision of equitable service delivery. This is further supported by *The Patients Right Charter* and the *Constitutional Bill of Rights,* in which policy dictates the provision of culturally sensitive care in the patient's first language. Failure to adhere to such standards can have legal implications in the form of malpractice. However, achieving cultural and linguistic competency in isiZulu appears to be a joint responsibility that will involve many stakeholders such as: undergraduate management, executive management of public sector hospitals, HPCSA and CPD accredited organizations as well as initiative from FLES audiologists.

6.3 STRENGTH OF THE STUDY

The strength of the study is the insight and value of information regarding how FLES audiologists, in particular young graduates, in the KZN context, communicate with patients who are of a different culture and language, which has not been previously investigated or addressed. This study has examined the impact and discussed the consequences of cultural and language barriers on specific areas of audiological assessment and management, which is of importance when advocating for patient-centered care. Furthermore, a description of FLES audiologist's current communication strategies when interacting with isiZulu patients has been identified and examined

for effectiveness. Lastly, viable recommendations to improve cross cultural/linguistic communication in the audiological setting, has been provided.

6.4 LIMITATIONS OF THE STUDY

The findings of the study need to be considered against the identified limitations of the research.

6.4.1 The geographical location for this study was limited to KZN, therefore caution should be taken when generalising these findings to other provinces in South Africa.

6.4.2 The perspectives of isiZulu audiology patients were obtained from two public hospitals and therefore may not represent the opinions and views of all isiZulu speaking patients in KZN.

6.4.3 The study consisted of a small sample size of FLES audiologists, as dictated by the number of FLES audiologists working in the public sector in KZN. A larger sample size of FLES audiologists from other provinces may allow for further inferences to be made regarding cross-cultural and cross-linguistic communication.

6.4.4 The majority of audiologists presently working in the KZN public health sector are community service officers, as reflected by the majority of the sample. This may have implications in the way knowledge and experience shapes cross-cultural and cross-linguistic communication. Nonetheless, the results do deter the challenges experienced by the current audiology workforce in KZN.

6.4.5 The gender distribution of FLES audiologists was uneven, thus inferential results associated with the variable of gender may need to be viewed with caution.

6.4.6 The qualitative data from the two FLES audiologists represents their worldviews, which may have been shaped by their own unique experiences. Thus, generalization of their results may be limited. Nonetheless, the qualitative provides rich ground root-experience that enables better understanding of cross-cultural and cross linguistic communication.

6.5 CLINICAL IMPLICATIONS

The following clinical implications are highlighted:

6.5.1 The findings of this study may have implications for changes to the isiZulu language course curriculum that is being offered at University level, by increasing the duration and frequency which the course is offered as well as the inclusion of relevant profession-specific content.

6.5.2 The findings of this study may have implications for the development and implementation of a *Communication Skills Clinical Module* within the structure of the audiology degree.

6.5.3 The findings of this study may have implications for the development and availability of contextually relevant audiology resources, which caters to the needs of isiZulu patients.

6.5.4 The findings of this study may have implications for the employment of formally trained isiZulu tutors at public sector hospitals.

6.5.5 The findings of this study may have implications for motivating for the provision of annual isiZulu refresher courses, through HPCSA and CPD accredited organizations.

6.6 RESEARCH IMPLICATIONS

6.6.1 To conduct a comparative study investigating FLES audiologists cultural and linguistic competency in isiZulu/ isiXhosa across different provinces in KZN.

6.6.2 To ascertain the perspectives of isiZulu patients, regarding cross-cultural and cross-linguistic communication, from all the public sector hospitals in KZN.

6.6.3 To obtain Photovoice narratives from the isiZulu patients perspectives.

6.6.4 To conduct focus groups with both FLES audiologists and isiZulu patients at public sector hospitals in KZN, regarding cross-cultural and cross linguistic communication.

6.7 CONCLUSION

This study has demonstrated that communication between the FLES audiologists and isiZulu patients is being compromised due to the interplay cultural and linguistic competency, influencing factors and communication strategies employed. This has implications for audiology assessment, diagnosis and management. Failure to acknowledge and address such challenges can affect patient's view of healthcare as a whole, which can have crippling effects on the large scale burden of disease due to noncompliance to treatment. All of which have socioeconomic consequences in South Africa. This chapter further highlighted the strengths of this study as well as the limitations of the study which need to be considered. Lastly, the clinical and research implications of the study were outlined.

REFERENCES

Abidin, J. Z., Pour-Mohammadi, M., & Alzwari, H. (2012). EFL Students' Attitudes towards learning English Language: The Case of Libyan Secondary School Students. *Asian Social Science, 8*(2), 119-134.

Abrahams, D. (2011). Retrieved September 25, 2015, from http://www.socialresearchmethods.net/tutorial/Abrahams// Research.html.

Aczel, A. D., & Sounderpandian, J. (2006). *Complete Business Statistics*. New York: McGraw-Hill Irwin.

Aliotta, M. (2015). The Physician-patient relationship: should physicians control healthcare? *Health Law Outlook*, *8*(1), 1–9.

Altschuld, J. W. (2014). *Bridging the Gap between Asset/Capacity Building and Needs*. London: SAGE Publications Ltd.

Amer, A. B. (2013). Informed Consent in Adult Psychiatry. *Oman Medical Journal*, *28*(4), 228–231.

American Speech-Language-Hearing Association (ASHA). (2011). *Audiology Scope of Practice*. Retrieved August 24, 2015, from: http://www.asha.org/ html

American Speech-Language-Hearing Association (ASHA). (2004). *Cultural Competence*. Retrieved March 4, 2016, from: http://www.asha.org/ html

Amos, S., Read, K., Cobb, M., & Pabani, N. (2012). *Facilitating a Photovoice Project: What you need to know*. Canada: Nova Scotia Participatory Food Costing Project.

De Andrade, V. D., & Ross, E. (2009). Beliefs and practices of Black South African traditional healers regarding hearing impairment. *International Journal of Audiology*, *44*(9), 489–499.

Andrasik, F., Goodie, J. L., & Peterson, A. L. (2015). *Bio-psychosocial Assessment in Clinical Health Psychology*. New York: The Guilford Press.

Angelelli, C. (2004). *Medical interpreting and cross-cultural communication*. Cambridge, UK: Cambridge University Press.

Antia, B. E., & Bertin, F. D. A. (2004). Multilingualism and healthcare in Nigeria: A management perspective. *Communication & Medicine, 1*(2), 107–117.

Aragaw, A., Yigzaw, T., Tetemke, D., & Amlak, W. (2015). Cultural Competence among Maternal Providers in Bahir Dar City Administration, Northwest Ethopia: Cross-sectional Study. *BMC Pregnancy and Childbirth*, *15*, 227-237.

Arnold, E., & Boggs, K. U. (2015). *Interpersonal Relationships - E-Book: Professional Communication Skills for Nurses*. Missouri: Elsevier Health Sciences-Medical.

Atcherson, S. R., Zraicj, R. I., & Brasseux, R. E. (2011). Readability of patient-reported outcome questionnaires for use with persons with tinnitus. *Ear and Hearing, 32*(5), 671–673.

Auer, P., & Wei, L. (2007). *Handbook of Multilingualism and Multilingual Communication*. Germany: Walter de Gruyter.

Babbie, E. (2010). *Practice of Social Research*. Wadsworth: Cengage Learning.

Baernholdt, M. (2010). What does quality care mean to nurses in rural hospitals? *Journal of Advanced Nursing*, *66*(6), 1346–1355.

Balcazar, F. E., Suarez- Balcazar, Y., & Taylor- Ritzler, T. (2009). Cultural Competence: Development of a conceptual framework. *Disability and Rehabilitation*, *31*(14), 1153-1160.

Ballachanda, B. (2013). *The Human Ear Canal*. New Delhi: Plural Publishing.

Balk, E. M., Chung, M., Chen, M. L., Trikalinos, T. A., & Kong Win Chan, L. (2013). Assessing the accuracy of Google Translate to allow data extraction from the trials published in Non-English Languages. *PubMed Health, 12*(13).

Banyard, P., Dillon, G., Norman, C., & Winder, B. (2015). *Essential Psychology*. London: SAGE publications.

Barbour, R. S. (2008). *Introducing Qualitative Research*. London: SAGE Publications Ltd.

Barrett, K., & George, W. H. (2005). *Race, Culture, Psychology and Law*. New Delhi: SAGE Publisher.

Batmangelich, S., & Christian, A. (2015). *Physical Medicine and Rehabilitation Patient- Centered Care.* New York: Demos Medical Publishing.

Battle, E. D. (2012). *Communication Disorders in Multicultural Contexts*. Missouri: Elsevier

Betancourt, J. R., Green, A. R., Carrillo, J. E., & Ananeh-Firempong, O. (2003). Defining Cultural Competence: A Practical Framework for Addressing Racial/Ethnic Disparities in Health and Health Care. *Public Health, 118,* 293-302.

Bennett, J. (2003). *Evaluation methods in Research*. London: Continuum.

Berg, K. E., & Latin, R. W. (2008). *Essentials of research methods in health, physical education, exercise science, and recreation*. Philadelphia: Wolters Kluwer Health.

Berger, E. H. (2003). *The Noise Manual*. Fairfax, VA: American Industrial Hygiene Association.

Bernstein, A. (2011). *Reforming Healthcare in South Africa*. Johannesburg: The Centre for Development and Enterprise.

Bhatia, T, K., & Ritchie, W. C. (2006). *The Handbook of Bilingualism.* Australia: Blackwell Publishing Ltd.

Bhattacharaya, J., Hyde, T., & Tyde, P. (2013). *Health Economics*. New York: Palgrave Macmillian.

Bhattacharyya, D. K. (2011). *Performance Management Systems and Strategies*. India: Dorling Kindersley.

Birx, J. (2009). *Encyclopedia of Time, Science, Philosophy, Theology and Culture*. London: SAGE Publications.

Bischoff, A., Bovier, P. A., Isah, R., Coise, G. F., Ariel, E., & Loui, L. (2003). Language barriers

between Nurses and Asylum workers: their impact on Symptom reporting and Referral. *Social Science and Medicine*, *57*(1), 503-512.

Bista, K., & Foster, C. (2016). *Exploring the Social and Academic Experiences of International Students in Higher Education Institutions*. Monroe: Information Science.

Bleile, K. M. (2015). *The Manual of Speech Sound Disorders: A Book for Students and Clinicians*. Stamford: Cengage Learning.

Blinder, D., Rotenberg, L., Peleg, M., & Taicher, S. (2001). Patient Compliance to Instructions after Oral Surgical Procedures. *Journal of Oral Maxillofacial Surgery*, *30*, 216–219.

Bloom, P. (2017). *Against Empathy: The Case for Rational Compassion*. London: The Bodley Head.

Bluestone, C. D., Stool, S. E., Casselbrant, M. L., & Dohar, J. E. (2003). *Paediatric Otolaryngology*. Philadelphia: Elsevier Science Publishers.

Borrego, E., & Johnson, R. G. (2011). *Cultural Competence for Public Managers: Managing Diversity in Today's World*. USA: CRC Press.

Bottrell, M. M., Alpert, H., Foschbach, R. L., & Emanuel, R. (2000). Hospital informed consent for procedure forms: facilitating quality patient-physician interaction. *Archives of Surgery*, *135*(1), 26–33.

Bradford, H. (2009). *Communication, Language and Literacy in the Early Years Foundation Stage*. Canada: Routledge.

Bradley, S., Kamwendo, F., Chipeta, E., Chimwazi, W., Pinho, H.m & McAuliffe, E. (2015). Too few staff, too many patients: a qualitative study of the impact on obstetric care providers and on quality of care in Malawi. *BMC Pregnancy Childbirth*, *15*(65),1-10.

Braun, V., & Clark, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101.

Braun, V., & Clarke, V. (2013). *Successful Qualitative Research: A Practical Guide for Beginners*. London: SAGE Publications.

Breidert, J. T., & Fite, J. E. (2009). *Self- assessment: Review and Implications for Training*. *US:* Army Research Institute for the Behavioral Social Sciences.

Briley, C., & Parker, S. (2011). *Photovoice Training: Giving a Voice to a Photograph.* Mississippi State University: Office of Agricultural Communications.

Brink, H. I. (2002). *Fundamentals of Research Methodology for Health Care professionals*. South Africa: Juta and Company.

Brooks, N. D. (2013). *Adult Aural Rehabilitation*. Devon: Springer Publications.

Brown, H. D. (2000). *Principles of language learning and teaching*. New York: Longman.

Brown, R. F., & Bylund, C. (2008). Communication skills training: describing a new conceptual model. *Academic Medicine*, *83*(1), 37–44.

Brown, O., Ham-Baloyi, W. T., Van Rooyen, D. R. M., Aldous, C., & Marais, L. C. (2016). Culturally competent patient–provider communication in the management of cancer: An integrative literature review. *Global Health Action*, *9*, 1–13.

Brugge, D., Edgar, T., George. K,, Heung, J., & Laws, M. B. (2009). Beyond literacy and numeracy in patient provider communication: focus groups suggest roles for empowerment, provider attitude and language. *Public Health*, *9*(1), 354–564.

Bryman, A. (2008). *Social Research Methods*. New York: Oxford University Press.

Budhwar, P. S., & Debrah, A. (2013). *Human Resources in Developing Countries*. Canada: Routledge.

Burger, R., & Grobler, C. (2007). *Have Pro-Poor Health Policies improved the targeting of spending and effective delivery of healthcare in South Africa?* Cape Town: University of Cape Town.

Burges, D., Van Ryn, M., & Dovidio, J. (2007). Reducing Racial Bias amongst Health Care Providers: Lessons from Social-Cognitive Psychology. *Society of General Internal Medicine, 22,* 882-887.

Burney, D. (2017). Surgeon-Patient Communication: The Key to Patient Satisfaction, Patient-Centered Care and Shared Decision Making. *Instructional Course Lectures*, *15*(66), 659–665.

Bush, S. (2014). *Psychological Assessment of Veterans*. New City: Oxford University Press.

Buttriss, J. L., Welch, A. A., Kearney, J. M., & Langham-New, S. (2017). *Public Health Nutrition*. Oxford, UK: John Wiley & Sons Ltd.

Campinha-Bacote, J. (2007). *The Process of Cultural Competence in the Delivery of Healthcare Services*. Cincinnati, OH: Transcultural C.A.R.E Associates.

Caposecco, A., Hickson, L., & Meyer, C. (2014). Hearing Aid User Guides: Suitable for Older Adults. *International Journal of Audiology*, *53* (1), 43-51.

Carter, J., Lees, J., Murira, G., Gona, J., Neville, B., & Newton, C. (2004). Issues in the Development of Cross-cultural Assessments of Speech and Language for Children, *International Journal of Language and Communication Disorders*, *40*(4), 385-401.

Cartwright, L. A., & Shingles, R. R. (2011). *Cultural Competence in Sports Medicine*. Champaign, IL: Human Kinetics.

Ceuvas, A. G. (2013). *Exploring four barriers experienced by African-Americans in healthcare: Perceived discrimination, Medical Mistrust, Race Discordance and Poor Communication* (Unpublished master's thesis). Portland State University.

Chima, S. C. (2015). "Because I want to be informed, to be part of the decision-making": Patients' insights on informed consent practices by healthcare professionals in South Africa. *Nigerian Journal of General Practice*, *18*(7), 46–56.

Chipps, J. A., Simpson, B., & Brysiewicz, P. (2008). The effectiveness of cultural competency training for health professionals in Community Based Rehabilitation. *Worldviews on Evidence-Based Nursing*, *5*(2), 85–94.

Christensen, B. L., & Kockrow, E. O. (2013). *Foundations of Nursing*. Missouri: Mosby Elsevier.

Christian, A., & Batmangelich, S. (2014). *Physical Medicine and Rehabilitation Patient-Centered Care: Mastering the Competencies*. New York: Demos Medical Publishing.

Chu, G., & Goode, T. (2009*). Cultural and Linguistic Competence: Optometric Care within the Public Health Community*. New York: Old Post Publishing.

Chu, S. K., Reynolds, R. B., Tavares, N. J., Notari, M., Wing, C., & Lee, Y. (2016). *21st Century Skills Development through Injury-based learning: From theory to practice*. New York: Springer Publications.

Claramita, M., Nugraheni, M. D., Dalen, V., & Vleuten, V. (2013). Doctor-patient communication in Southeast Asia: a different culture? *Advanced Health Science Education: Theory and Practice*, *18*(1), 15–31.

Classe, O. (2000). *Encyclopedia of Literary Translation into English.* London: Fitzroy Dearborn Publishers.

Cook, K. S., & Levi, M. (2008). *The Limits of Rationality*. London: University of Chicago Press.

Cooper, D. R., & Schindler, P. S. (2003). *Business Research Methods*. New Delhi: Tata McGraw-Hill.

Cooper, K., & Gosnell, K. (2014). *Foundations of Nursing*. Missouri: Elsevier.

Cooper, L., Beach, M., Johnson, R., & Inui, T. (2006). Delving below the surface: Understanding how race and ethnicity influence relationships in healthcare. *Journal of General Internal Medicine*, *21*(1), 21–27

Coon, D., & Mitterer, J. (2007). *Introduction of psychology: Gateways to mind and behaviour*. Belmont: Thomson Wadsworth.

Creswell, J. W. (2003). *Research Design- Qualitative, Quantitative and Mixed Methods Approaches.* London: SAGE Publications.

Creswell, J. (2008). *Educational Research: Planning, conducting and evaluating Quantitative and Qualitative Research*. New Jersey: Pearson Education.

Crossley, S., Salsbury, T., Titak, A., & McNamara, D. (2014). Frequency effects and second language lexical acquisition. *International Journal of Corpus Linguistics*, *19* (3), 301-332.

Courtenay, M., Carey, N., Stenner, K., Lawton, S., & Peters, J. (2011). Patients' views of nurse prescribing: effects on care, concordance and medicine taking. *British Journal of Dermatology*, *164*(2), 396-401.

Currie, I., & Waal, J. (2013). *The Bill of Rights Handbook*. Cape Town: Juta & Co. Ltd.

Davidson, B. (2013). Questions in Cross-Linguistic Medical Encounters : The Role of the Hospital Interpreter. *Anthropological Quarterly*, *74*(4), 170–178.

Dayer-Berenson, L. (2011). *Cultural Competencies for Nurses: Impact on Health and Illness*. Canada: Jones and Bartlett Publishers.

De Beer, J., & Chipps, J. (2014). A Survey of Cultural Competence of Critical Care Nurses in KwaZulu Natal. *The Official Southern Journal of Critical Care*, *30*(2), 50-54.

Department of Basic Education (2012). National Curriculum Statement. Available at www.education.gov.za

Deumert, A. (2010). It would be nice if they could give us more language-serving south africa's multilingual patient base. *Social Science and Medicine*, *71*(1), 53–61.

Dias, M. A., Devdas, U., & Rajashekhar, B. (2015). Development of Speech Audiometry Material in Goan Konkani Language. *Language in India*, *15*, 268-280.

Donna, D., Ignatavicius, M., & Workman, L. (2013). *Medical-surgical Nursing: Patient-centered Collaborative Care*. Missouri: Elsevier Health Sciences-Medical.

Donsbach, W. (2015). *The Concise Encyclopaedia of Communication*. West Sussex, UK: John Wiley & Sons.

Dowson, M., & Devenish, S. (2010). *Religion and Spirituality*. North Carolina: Information Age Publishing.

Durankaya, S. M., Serbetcioglu, B., Dalkilic, G., Gurkan, S., & Kirkim, G. (2014). Development of a Turkish Monosyllabic Word Recognition Test for Adults, *International Journal of Advanced Otology*, *10* (12), 172-180.

Edwards, R., Bogusia, T., & Claire, A. (2005). Users experiences of interpreters: the critical role of trust. *Interpreting, 7*, 77–95.

Elderkin-Thompson, V., Silver, R. C., & Waitzkin, H. (2001). When nurses double as interpreters: a study of spanish-speaking patients in a US primary care setting. *Social Science Medical Journal, 52*, 1343–1358.

Elmes, D. (2014). The Relationship between Language and Culture. *National Institute of Fitness and Sports in Kanoya, International Exchange and Language Education Centre, 46*, 11-18.

Eiselen, R., Uys, T., & Potgieter, N. (2005*). Questionnaire Design*. South Africa: University of Johannesburg.

Eisenberg, L. S. (2016). *Clinical Management of Children with Cochlear Implants*. San Diego: Plural Publishing.

Eiser, A. R., & Ellis, G. (2007). Cultural Competence and the African American Experience with Health Care: The Case for Specific Content in Cross- Cultural Education. *Academic Medicine*, *82*(2), 176–183.

Elwyn, G., Frosch, D., Thomson, R., Joseph-Williams, N., Lloyd, A., Kinnersley, P., Cording, E., Tomson, D, Dodd, C., Rollnick, S., Edwards, A., & Barry, M. (2012). Shared Decision-Making: A Model for Clinical Practice. *General International Medicine*, *27*(10), 1361–1367.

Falvo, D. R. (2010). *Effective Patient Education: A guide to adherence*. Massachusetts: Jones and Bartlett Publishers.

Farjardo, A. C., & Kimn, Y. (2015). Development of Filipino Phonetically-Balanced Words and Phoneme-Level Hmms. *International Journal of Advanced Research in Computer and Communication Engineering*, *4*(1), 1-6.

Farrell, C. (2015). *Advanced Nursing Practice and Nurse-led Clinics in Oncology*. New York: Routledge.

Fernandez, A., Schillinger, D., Grumbach, K., Rosenthal, A., Stewart, A. L., Wang, F., & Pérez-Stable, E. (2004). Physician Language Ability and Cultural Competence. *Journal of General Internal Medicine*, *19*, 167–174.

Flores, D. (2000). Culture and the patient-physician relationship: Achieving Cultural Competency in Health Care. *The Journal of Paediatrics, 136* (1), 14-23.

Fontes, L. A. (2012). *Interviewing Clients across Cultures: A Practitioners Guide*. New York: Guilford Press.

Francis, D., Mahlomaholo, S., & Nkoane, M. (2010). *Praxis towards Sustainable Empowering Learning Environments in South Africa*. Bloemfontein: Sun Press.

Fretters, M. D., Curry, L. A., & Creswell, J. (2013). Achieving integration in mixed method designs: Principles and Practices. *Health Sciences Research*, *48*(6), 2134–2156.

Gaede, B., & Versteeg, M. (2011). *The state of the right to health in rural South Africa: South African Health Review*. Durban: Health Systems Trust.

Garcia-Mayo, M. P. (2003). *Age, Length of exposure and grammaticality judgements in the acquisition of English as a foreign language*. Clevedon, Avon: Multilingual Matters.

Gelfand, S. A. (2009). *Essentials of Audiology*. New York, Thieme.

George, G., Atujuna, M., & Gow, J. (2013). Migration of South African health workers: the extent to which financial considerations influence internal flows and external movements. *BMC Health Services Research*, *13*, 297.

Gianopoulos, I., Stephens, D., & Davis, A. (2002). Follow up of people fitted with hearing aids after adult hearing screening: The need for support after fitting. *British Medical Journal*, *31*(1), 324–471.

Giger, J. N., & Davidhizar, B. (2002). The Giger and Davidhizar Transcultural Assessment Model. *Journal of Transcultural Nursing*, *13*, 185–188.

Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Methods of Data Collection in Qualitative Research: Interviews and Focus Groups. *British Dental Journal*, *204*, 291-295.

Gliemius, N., Mthimunye, E., & Subanyoni, E. (2003). *The Zulu of Africa*. Malaysia: Learner Publications Company.

Good, M., Willen, S. S., Hannah, S. D., Vickery, K., & Park, L. T. (2011). *Shattering Culture: American Medicine Responds to Cultural Diversity.* New York: Russell Sage Foundation.

Gordon, H. S., Street, R. L., Sharf, B. F., & Souchek, J. (2006). Racial differences in doctors' information-giving and patients' participation. *Cancer, 107*, 1313-1320.

Gorske, T. T., & Smith, S. R. (2008). *Collaborative, Therapeutic Neuropsychological Assessment*. New York: Springer Publications.

Govere, L., Fioravanti, M. A., & Tuite, P. K. (2016). Increasing the Cultural Competency Levels of Undergraduate Nursing Students. *Journal of Nursing Education*, *55*(3), 155-159.

Grass, S. M., Behney, J., & Plonsky, L. (2013). *Second Language Acquisition: An Introductory Course*. New York: Routledge.

Gravetter, F. J., & Orzano, L.B. (2011). *Research Methods for Behavioural Sciences*. New York: Cengage Learning.

Grenness, C., Hickson, L., Laplante-Levesque, A., Meyer, C., & Davidson, B. (2015).The Nature of Communication throughout Diagnosis and Management Planning in Initial Audiology Rehabilitation Consultations. *Journal of the American Academy of Audiology*, *15*, 36-50.

Grice-Dyer, A. (2010). *Cultural Competence among Cardiovascular Healthcare Providers with Black Patients in Rock Island Country, Illinois* (Unpublished master's thesis). University of Iowa.

Griffin, T., McKenna, K., & Tooth, L. (2006). Discrepancy between Older Client's ability to read and comprehend and the reading level of written Education Materials used by Occupational Therapists. *The American Journal of Occupational Therapy*, *60*(1), 70–80.

Griner, D., & Smith, T. (2006). Culturally Adapted Mental Health Interventions: A meta-analysis Review. *Psychotherapy: Therapy, Research, Practice and Training*, *43*(4), 531–548.

Guilding, E., & Hogan, T. (2011). *What Is Global Leadership: 10 Key Behaviours That Define Great Global Leaders*. Boston: Nicholas Berkley Publishing.

Guirdham, M. (2011). *Communicating Across Cultures at Work*. UK: Palgrave Macmillan.

Gulya, A. J., Minor, L. B., & Poe, D. (2010). *Glasscock-Shambaugh Surgery of the Ear*. Connecticut, USA: Peoples Medical Publishing House.

Gura, M. W. (2015). *Exploring your Life: Mindfulness, Meditation and Secular Spirituality*. Georgia: Inner Action Press Copyright.

Ha, J. F., & Longnecker, N. (2010). Doctor-Patient Communication: A Review. *Ochsner Journal*, *10*(1), 28-43.

Hales, S. (2010). *An Invitation to Health: Choosing to Change*. UK: Wadsworth Cengage Learning.

Halpern, J. (2003). What is Clinical Empathy? *Journal of General Internal Medicine*, *18*(8), 670–674.

Hamlin, S. (2014). *Monitoring Tissue Perfusion and Oxygenation: an issue of Critical Nursing*. London: Elsevier Health Sciences-Medical.

Handley, B. (2012). *Fast Easy ways to learn a language*. Sydney: John Wiley & Sons Australia.

Hanuman, M. (2006). *A Critical Evaluation of Bed Occupancy Rates at Public Hospitals in the eThekwini District and Recommendations for Addressing Critical Shortages* (Unpublished MBA thesis*)*. Regent Business School.

Hartveit, M., Thorsen, O., Biringer, E., Vanhaecht, K., Carlsen, B., & Aslaksen, A. (2013). Recommended content of referral letters from general practitioners to specialised mental health care : a qualitative multi-perspective study. *BMC Health Services Research*, *13*(1), 329–336.

Hasnain-Wynia, R., Yonek, J., Pierce, D., Kang, R., & Greising, C. H. (2006). *Hospital Language Services for Patients with Limited English Proficiency: Results from a National Survey*. Chicago: Health and Education Trust.

Hauser, P. C., Finch, K. L., & Hauser, A. B. (2008). *Deaf Professionals and Designated Interpreters*. Washington DC: Gallaudet University Press

Hayes, S. C., Barnes-Holmes, D., & Roche, B. (2001). *Relational Frame Theory: A Post-Skinnerian Account of Human Language and Cognition*. New York: Plenum Publishers.

Haynes, W. O., Moran, M. J., & Pindzola, R. H. (2012). *Communication Disorders in Educational and Medical Settings*. Canada: Jones and Bartlett Publishers.

Health Professions Council of South Africa (HPCSA). (2005). *Speech-Language and Hearing Professions.*

Health Professions Council of South Africa (HPCSA). (2010). *The Bulletin.*

Henn, F., Sartorius, N., & Helmchen, H. (2013). *Contemporary Psychiatry*. Berlin: Springer Science and Business Media Copyright.

Henning, E., Van Rensburg, W., & Smit, B. (2005). *Finding your Way in Qualitative Research.* Pretoria: Van Schaik Publishers.

Herbelein, T. A. (2012). Navigating Environmental Attitudes. *Conservation Biology, 26*(4), 583-585.

Hirsch, E. M. (2007). The Role of Empathy in Medicine: A Medical Student's Perspective. *American Medical Association Journal of Ethics, 9*(6), 423-427.

Hoffmann, T., McKenna, K., Herd, C., & Wearing, S. (2007). Written Education Materials for Stroke patients and their carers: Perspectives and Practices of Health Professionals. *Top Stroke Rehabilitation, 14*(1), 88–97.

Hojat, M., Vergare, M. J., & Maxwell, K. (2009). The devil is in the third year: a longitudinal study of erosion of empathy in medical school. *Academic Medicine, 84*(9), 1182–1191.

Hong, J., Nguyen, T. V., & Prose, S. N. (2012). Compassionate care: Enhancing physician–patient communication and education in dermatology. *Journal of the American Academy of Dermatology*, *68*(3), 364 e1– 364.

Hsieh, E. (2016). *Bilingual Health Communication: Working with Interpreters in Cross-Cultural Care*. New York: Routledge.

Hsieh, E. (2010). Provider-Interpreter Collaboration in Bilingual Health Care: Competitions of Control over Interpreter-Mediated Interactions. *National Institution of Health*, *78*(2), 1–12.

Hsieh, E., Ju, H., & Hong, S. (2010). Not all desired: providers views on interpreters emotional support for patients. *Patient Education and Counselling*, *81*(2), 192–197.

Hulley, S. B., Cummings, S. R., Browner, N.S., Grady, D. G., & Newman, T. B. (2007). *Designing Clinical Research*. Philadelphia: Lippincott Williams and Wilkins.

Hunt, L. M., & deVoogd, K. B. (2007). Are Good Intentions Good Enough? Informed Consent without Trained Interpreters. *Journal of General International Medicine, 22*(5), 598-606.

Hussain, T. S., & Coleman, S. L. (2015). *Design and Development of Training Games*. New York: Cambridge University Press.

Ingleby, D. (2011). *Good practice in health service provision for migrants*. UK: Open University Press.

Institute of Medicine. (2011). *Committee on Quality Health Care in America: Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington DC: National Academy Press.

Integrated Support Team. (2009). *Review of health over-spending and macro-assessment of the public system in South Africa*: Pretoria

Isaacs, A. N., Raymond, A., Jacob, E., Jones, J., McGrail, M., & Drysdale, M. (2016). Cultural desire does not improve with cultural knowledge: A cross-sectional study of student nurses. *Nurse Education in Practice, 19*, 91-96.

Jacobs, E., Chen, A. H., Karliner, L. S., Agger-Gupta, N., & Mutha, S. (2006). The Need for More Research on Language Barriers in Health Care: A Proposed Research Agenda. *The Milbank Quarterly, 84*, 111-133.

Jacobs, E. A., Rolle, I., Ferrans, C. E., Whitaker, E. E., & Warnecke, R. B. (2006). Understanding African Americans' views of the trustworthiness of physicians. *Journal of General Internal Medicine, 21*(6), 642–647.

Jani, B. D., Blane, D. N., & Mercer, S.W. (2012). The role of empathy in therapy and the physician-patient relationship. *Forsch Komplemed*, *19*(5), 252-257.

Jin, J., Sklar, G. E., Oh, V. M., & Li, S. C. (2008). Factors affecting therapeutic compliance: A review from the patient's perspective. *Therapeutics and Clinical Risk Management, 4*(1), 269-286.

Jiwa M., & Satwinder, D. (2012). Referral writer: preliminary evidence for the value of comprehensive referral letters. *Quality Primary Care, 20*(1), 39–45.

Jobert, A., Marry, C., & Rainbird, H. (2013). *Education and Work in Great Britain, Germany and Italy*. London: Routledge.

Johansson, T. B., Patwardhan, A., Nakicenovic, N., & Gomez- Echeverri, L. (2012). *Global Energy Assessment towards a Sustainable future*. New York: Cambridge University Press.

Johnston, L., Wolfie, K., Yoder, J., & deMarco, A. (2014). *Cross-Cultural Interaction: Concepts, Methodologies, Tools, and Applications*. USA: IGI Global.

Jolly, E., Fry, A., & Chaudhry, A. (2016). *Training in Medicine*. New York: Oxford University Press.

Kaboru, B. B., Falkenberg, T., Ndulo, J., Muchimba, M., Solo, K., & Faxelid. E. (2006). Communities' views on prerequisites for collaboration between modern and traditional health sectors in relation to STI/HIV/AIDS care in Zambia. *Health Policy, 78*(3):330–339

Kale, E., & Syed, H. R. (2010). Language Barriers and the Use of Interpreters in the Public Health Services: A Questionnaire-based Study. *Patient Education and Counselling*, *81*, 187-191.

Kamwangamula, N. M. (2017). *Second/ Foreign Language Learning in South Africa*. Washington: DC: Springer International Publishing.

Karim, S. S. A., & Karim, Q. A. (2010). HIV/AIDS in South Africa. New York: *Cambridge University Press.*

Karliner, L. S., Jacobs, E. A., Chen, A. H., & Mutha, S. (2006). Do Professional Interpreters Improve Clinical Care for patients with Limited English Proficiency? A Systematic Review of the Literature, *Health Services Research, 42* (2), 727-754.

Keane, S., Lincoln, M., & Smith, T. (2012). Retention of allied health professionals in rural New South Wales: a thematic analysis of focus group discussions. *BMC Health Services Research, 12*(175), 2-11.

Keeton, N. (2013). *Clinical Educators Expectations and Experiences of Supervising Audiology Students in South Africa: A Focus on Race and Language* (Unpublished master's thesis). University of Cape Town.

Kendall, L., & Lissauer, R. (2001). *The Future Patient*. London: The Institute of Public Policy Research.

Kersey- Matusiak, G. (2006). *Delivering Culturally Competent Nursing Care*. New York: Springer Publishing Company

Kessels, R. P. C. (2003). Patients' memory for medical information. *Journal of the Royal Society of Medicine, 96,* 219–222.

Kessi, S., & Cornell, J. (2015). Coming to UCT: Black students, transformation and discourses of race. *Journal of Student Affairs in Africa, 3*(2), 1–16.

Keyton, J. (2011). *Communication and Organizational Culture: A key to Understanding Work Experiences*. London: SAGE Publications.

Khan, N., Knight, S., & Esterhuizen, T. (2009). Perceptions of and attitudes to the compulsory Community Service programme for therapists in KwaZulu Natal. *The South African Journal of Communication Disorders, 56,* 17-22.

Kidd, G. D., Cox, L. C., & Matthies, M. L. (2003). Boston University Doctor of Science Degree Program: Clinical Doctorate in Audiology. *American Journal of Audiology*, *12*, 3-6.

Kilian, S., Swartz, L., & Joska, J. (2010). Competency of interpreters in South African Psychiatric Hospitals. *Psychiatric Services*, *61*(3), 309–312.

Killian, S., Swartz, L., Dowling, T., Dlalic, M., & Chiliza, B. (2014). The potential consequences of informal interpreting practices for assessment of patients in a South African psychiatric hospital. *Social Science and Medicine*, *106*, 159–167.

King, A., & Hoppe, R. B. (2013). Best Practice for Patient-Centered Communication: A Narrative Review. *Journal of Graduate Medical Education*, *5*(3), 385–393.

Klieger, D. M. (2013). *Essentials of Medical Assisting*. Missouri: Saunders Publishers.

Komaric, N., Bedford, S., & Van Driel, M. L. (2012). Two sides of the coin: patient and provider perceptions of health care delivery to patients from culturally and linguistically diverse backgrounds. *BMC Health Services Research*, *12*(322), 1-14.

Kronenfeld, J. J. (2011). *Access to Care and Factors That Impact Access, Patients as Partners In Care and Changing Roles of Health Providers*. UK: Emerald Group Publishing.

Lacy, N. L., Paulman, A., Reuter, M. D., & Lovejoy, B. (2014). Why we don't come: patient perceptions on no-shows. *Annals of Family Medicine*, *2*, 541-545.

Lambelet, A., & Berthele, R. (2015). *Age and Foreign Language Learning in School*. England: Palgrave Macmillan.

Lang-Roth, R. (2014). Hearing Impairment and language delays in infants. *GMS Current Topics in Otorhinolaryngology: Head and Neck Surgery*, *13*, 26–31.

Lawson, G. D., & Peterson, M. E. (2011). *Speech Audiometry*. UK: Plural Publishing.

Leanza, Y. (2005). Roles of community interpreters in paediatrics as seen by interpreters, physicians and researchers. *Interpreting*, *7*, 167–192.

Lee, K. C., Winickoff, J. P., & Kim, M. K. (2006). Resident physicians' use of professional and nonprofessional interpreters: A national survey. *American Medical Association, 296,* 1050–1053.

Leedy, P., & Ormrod, J. (2005). *Practical research: Planning and design*. New Jersey: Pearson Merrill Prentice Hall.

Leendertz, A. E. (2012). *Cultural Competency: Perceptions of South African Trained Occupational Therapists* (Unpublished master's thesis). University of Witwatersrand.

Legg, C., & Penn, C. (2013). A stroke of misfortune: Cultural interpretations of aphasia in South Africa. *Aphasiology*, *27*(2), 126–144.

Leipert, B., & Smith, J. (2009). Using Photovoice to explore rural older women's' health promotion needs and resources. *Women's Scholars Press*, 136–150.

Lennie, J. (2006). Increasing the rigour and trust worthiness of participatory evaluations: learning from the field. *Evaluation Journal of Australasia*, *6*, 27–35.

Lerch, M. (2010). *Disparities in minority healthcare and implications for the field of Audiology*. Ohio: State University.

Les, Z., & Les, M. (2012). *Shape Understanding System: Machine Understanding and Human Understanding*. Australia: Springer Publications.

Leung, W. (2001). How to design a Questionnaire. *Student BMJ*, *9*, 187-189.

Levinson, W., Kao, A., & Kuby, A. (2005). Not All Patients Want to Participate in Decision Making. *Journal of General Internal Medicine*, *20*(9), 531–535.

Levinson, W., Lesser, C., S., & Epstein, R. M. (2010). Developing physician communication skills for patient-centered care. *Health Affairs*, *29*(7), 1310-1318.

Levinson, W., & Pizzo, P. A. (2011). Patient- Physician Communication. *American Medical Association, 305*, 1802- 1803.

Li, W., Ahmed, M., Khan, Q., & Hongwei, M. (2016). *Education and Training for Rural Transformation*. New City: SAGE Publisher.

Linde, J. V., & Kritzinger, A. (2013). Perceptions of rural primary healthcare personnel about expansion of early communication intervention. *African Journal of Primary Health Care Family Medicine, 5*(1), 1–11.

Lloyd, M., & Bor, R. (2009). *Communication Skills of Medicine*. New York: Elsevier Publications.

Longman, C. (2011). *Inter-professional Communication in a rural hospital* (Unpublished master's thesis). University of Witwatersrand.

Lubinski, R., Hudson, M. W. (2013). *Professional Issues in Speech-Language Pathology and Audiology*. New York: Cengage Learning.

Lucas, A. (2014). *The Importance of Verbal and Non-Verbal Communication*. Retrieved 28 February 2015 from www.livestrong.com.

Lundy, K. S., & Janes, S. (2009). *Community Health Nursing: Caring for the Public's Health*. London: Jones & Bartlett Publishers.

Luterman, D. (2006). *T*he Counselling Relationship.*doi:10.1044, 11*, 8-33.

Maesschalck, S. D., Willems, S., Maeseneer, J. D., & Deveugele, M. (2012). Development and Validation of EMP-3: An Instrument to Measure Physicians Attitudes toward Ethnic Minority Patients. *Family Medicine, 42*(4), 262-267.

Maguire P. (2002). Key communication skills and how to acquire them. *BMJ, 325*(7366), 697–700.

Mandela, N. (2001). *Reflections in Prison*. Cape Town: Zebra Press.

Marcus, A. (2011). *Design, User Experience and Usability: Theory, Methods, Tools and Practice*. New York: Springer Publications.

Maree, K. (2008). *First Steps in research*. Pretoria: Van Schaik Publishers.

Margaret, G. D., Kirubaker, S. G., & Kumutha, N. (2012). Communication skills: A Cognitive-behavioural approach to enhance relationship skills in young sports coaches. *British Journal of Sports Medicine*, *44*(1), 49–50.

Marshall, P. L., & World Health Organization. (2007). *Ethical Challenges in Study Design and Informed Consent for Health Research. In Resource-Poor Settings*. France: WHO

Martella, R. C., Nelson, J. N., Morgan, R. L., & Marchand- Martella, N. E. (2013). *Understanding and Interpreting Educational Research*. New York: The Guilford Press.

Martin, L. R., Williams, S. L., Haskard, K. B., & DiMatteo, M. R. (2005). The challenge of patient adherence. *Therapeutics and Clinical Risk Management*, *1*(3), 189-199.

Mason, M. (2010). Sample Size and Saturation in PhD Studies using Qualitative Interviews. *Forum Qualitative Social Research*, *11*(3), 8-10.

May, T. (2013). *Autonomy, Authority and Moral Responsibility.* Madrid: Kluwer Academic Publishers.

Mayo, P. (2014). *Learning with Adults*. Rotterdam: Sense Publishers.

McCormack, A., & Fortnum, H. (2013). Why do people fitted with hearing aids not use them? *International Journal of Audiology*, *52*(5), 260–368.

McLeod, G. (2008). *Evaluate the Medical Model and the Behavioural Model of Abnormality*. The Psychology of Individual differences. New York: SAGE Publications.

Mendenhall, W., Beaver, R. J., & Beaver, B. M. (2012). *Introduction to Probability and Statistics.* Boston: Cengage Learning.

Meyer, O. L., & Zane, N. (2013). The influence of race and ethnicity in client's experiences of mental health treatment. *Journal of Community Psychology*, *41*(7), 884–901.

Miletic, T., Piu, M., Minas, H., Stankovska, M., Stolk, Y., & Klimidis, S. (2006). *Guidelines for working effectively with interpreters in mental health settings*. Australia: Victorian Transcultural Psychiatric Unit.

Miller, J., Le Prell, C. E., & Rybak, L. (2015). *Free Radicals in ENT Pathology*. New York: Humana Press.

Minahan, J. (2002). *Encyclopedia of the Stateless Nations: Ethnic and National Groups*. London: Greenwood Press.

Moghaddam, A. N., & Araghi, S. M. (2013). Brain-based aspects of cognitive learning approaches in second language learning. *English Language Teaching, 6*(5), 55-61.

Montano, J., & Spitzer, J. B. (2013). *Adult Audiological Rehabilitation*. San Diego: Plural Publishing.

Moore, D. S., & McCabe, G.P. (2005). *Introduction to the Practice of Statistics.* New York: W.H Freeman & Company.

Moore, P., Vargas, A., Nunez, S., & Macchiavello, S. (2011). A study of hospital complaints and the role of the doctor- patient communication. *Revista Medical Chile, 139,* 880-885.

Mor-Barak, M. E. (2016). *Managing Diversity: Toward a Globally Inclusive Workplace*. Singapore: SAGE Publications.

Morrow, J. R., Jackson, A. W., Disch, J. G., & Mood, D. P. (2010). *Measurement and Evaluation in Human Performance*. Canada: Human kinetics.

Mucic, D., & Hilty, D. M. (2015). *E-Mental Health*. New York: Springer Publications.

Mueller, H. G., Bentler, R., & Ricketts, T. A. (2014). *Modern Hearing Aids*. Plural Publishing: San Diego.

Munoz, C. C., Morraga, M. A., & Piattini, M. (2008*). Handbook of Research on Web Information Systems Quality*. New York: Hershey.

Murakami, Y., & Lin, D. (2016). *Worldwide Language Service Infrastructure*. Japan: Springer Publications.

Naidoo, S. (2014). Transcultural and language barriers to patient care. *South African Dental Journal*, *69*(9), 425–426.

Napoles, A. M., Santoyo-Olsson, J., Karliner, L. S., O' Brien, H., Gregorcih, S. E., Perez-Stable-, E. (2010). Clinician ratings of interpreter mediated visits in underserved primary health care settings with ad hoc, in person professional and video conferencing modes. *Journal of Health Care Poor Underserved, 21*(1), 301–317.

National Department of Health Act (1998). *Community Service Policy Guidelines*. National Department of Health: Pretoria.

National Department of Health (2007). *The Patients Rights Charter*. National Department of Health: Pretoria.

Ncana, L. (2010). *Evaluating the referral system between Cecelia Makhiwane Hospital ART unit and its feeder sites* (Unpublished master's thesis). University of Stellenbosch.

Nemeth, C. P. (2008). *Improving Healthcare Team Communication.* England: Ashgate Publishing Ltd.

Ngo-metzger, Q., Telfair, J., Sorkin, D. H., Weidmer, B., Weech-Maldonado, R., Hurtado, M., & Hays, R. D. (2006). Cultural Competency and Quality of Care: Obtaining the Patient's Perspective. *Commonwealth Fund, 963*, 1–40.

Niesler, T., Louw, P., & Roux, J. (2005). Phonetic analysis of Afrikaans, English, Xhosa and Zulu using South African speech databases. *Southern African Linguistics and Applied Linguistics Studies*, *23*(4), 459–474.

Nunez, G. G. (2016). *Translating in Linguistic Diverse Societies: Translation Policy in the United Kingdom*. Philadelphia: John Benjamin's publishing Company.

OECD (2012). *Taking Inequalities in Brazil, China, India and South Africa: The Role of Labour Market and Social Policies*. OECD Publishing.

Oliffe, J. L., Bottorff, J. L., Kelly, H., & Halpin, M. (2008). Fatherhood, smoking and Photovoice: an approach to analysing participant produced photographs. *Research in Nursing and Health*, *21*, 529–939.

Osmond, J. (2008). *Creating a bilingual Wales: the role of Welsh in education*. Wales: Institute of Welsh Affairs.

Palibroda, B., Krieg, B., Murdock, L., Havelock, J. (2009). *A Practical Guide to Photovoice: Sharing Pictures, Telling Stories and Changing Communities*. Winnipeg: Prairie Women's Health Centre of Excellence.

Panday, S. (2006). *The Development of a Zulu Speech Reception Threshold Test for Zulu First Language Speakers in KwaZulu Natal* (Unpublished master's thesis). University of KwaZulu Natal.

Parekh, R., & Childs, E. W. (2016). *Stigma and Prejudice: Touchstones in Understanding Diversity in Healthcare*. Boston: Springer Publications.

Parthasarathy, A. (2013). *Textbook of Paediatric Infectious Diseases*. New Delhi: Jaypee Brothers Medical Publishers.

Pascoe, M. (2011). Contextually relevant resources in speech-language therapy and audiology in South Africa-are there any? *Journal of Communication Disorders*, *58*(1), 1–7.

Pascoe, M., Rogers, C., & Norman, V. (2013). Are we there yet? On a journey towards more contextually relevant resources in speech-language therapy and audiology. *Journal of Communication Disorders*, *60*(1), 1–9.

Patil, S., & Davies, P. (2014). Use of Google Translate in Medical communication: evaluation of accuracy. *BMJ*, *349*, 1-3.

Paternotte, E., Van Dulmen, S., Van der, L.N., Scherpbier, A. J., & Scheele, F. (2015). Factors influencing intercultural doctor-patient communication: a realist review. *Patient Education and Counselling*, *98*(4), 420–445.

Penn, C. (2007). Don't give me the theory, just tell me what to do in therapy: the slippery slope challenge for the South African profession of speech-language pathology and audiology. *South African Journal of Communication Disorders, 54*, 13-17.

Penn, C. (2009). From pillars to posts: Some reflections on community service six years on. *South African Journal of Communication Disorders*, *56*(1), 8–16.

Penn, C., Watermeyer, J., & Evans, M. (2011). Why don't patients take their drugs? The role of communication, context and culture in patient adherence and the work of the pharmacist in HIV/AIDS. *Patient Education and Counselling, 83*, 310–318.

Pera, S. A., & Van Tonder, S. (2011). *Ethics in Healthcare*. Lansdowne: Juta & Co. Ltd.

Peterson, A. M., & Kopishke, L. (2010). *Legal Nurse Consulting Principles*. London: CRC Press Copyright.

Pfaff, C., & Cooper, I. (2009). How do doctors learn the spoken language of their patients? *South African Medical Journal*, *99*(7), 520-522.

Pilkington, A. (2016). *Communication Projects: An End-to-End Guide to Planning, Implementing and Evaluating Effective Communication*. London: Routledge.

Pinto, R. Z., Ferreira, M. L., Oliveira, V.C., Franco, M.R., Adams, R., Maher, C. G., & Ferreira, P. H. (2012). Patient-centred communication is associated with positive therapeutic alliance: a systematic. *Journal of Physiotherapy*, *58*(2), 77–87.

Pitler, H., & Stone, B. J. (2012). *A Handbook for Classroom Instruction That Works*. Denver: ASCD.

Pochhacker, F. (2016). *Introducing Interpreting Studies*. London: Routledge.

Pochhacker, F., & Shlesinger, M. (2007). *Healthcare Interpreting: Discourse and Interaction.* Amsterdam: John Benjamin's publishing Company.

Poirier, T., Butler, L., Devraj, R., Gupchup, G., & Santanello, C. (2009). A Cultural Competency Course for Pharmacy Students. *American Journal of Pharmaceutical Education, 73* (5), 81-85.

Pollitt, J. D. (2012). *Psychiatric Emergencies in Family Practice*. UK: MTP Press Limited.

Pollozhani, A., Kosevska, E., Petkovski, K., Memeti, S., Limani, B., & Kasapinov, B. (2013). Some Aspects of Culturally Competent Communication in Health Care in the Republic of Macedonia. *Mater Sociomed, 25*(4), 250–254.

Porter, J. (2014). *Understanding and Responding to the Experience of Disability*. London: Routledge.

Purnell, L., & Paulanka, B. (2003). *Transcultural Healthcare: A Culturally Competent Approach*. Philadelphia: F. A Davies Company.

Purnell, L. (2012). *Transcultural Health Care: A Culturally Competent Approach.* Philadelphia, USA: F. A. Davis

Quay, J., & Seaman, J. (2013). *John Dewey and Education Outdoors: Making Sense of the 'Educational Situation through more than a century of progressive reforms*. Boston: Sense Publishers.

Queensland Government Statistics. (2005). *Survey Methods*. Retrieved on 30 May 2015, from http://www. Qgso.qld.gov.au/about-statistics/survey-methods/

Quereshi, A., Khan, M. S., & Quereshi, I. U. (2015). Problems Faced by Hearing Impaired Children in getting Medical Services. J*ournal of Riphah College of Rehabilitation Sciences*, *3*(2), 75-78.

Rabi, S., Bhagat, H., Charalambos, T., & McDevitt, A. S. (2012). *Managing Global Organizations: A Cultural Perspective*. Massachusetts: Edward Elgar Publications.

Raingruber, B. (2016). *Contemporary Health Promotion in Nursing Practice*. Burlington: Jones and Bartlett Publishers.

Ramkissoon, I. (2001). Speech recognition thresholds for multilingual populations. *Communication Disorders Quarterly*. *22*(3), 158-162.

Reagen, T. G. (2002). *Language, Education and Ideology: Mapping the linguistic Landscape of U.S schools*. Westport, CT: Praeger.

Reel, L. A., Hicks, C. B., Ortiz, N., & R. (2014). New Resources for Audiologists Working With Hispanic Patients: Spanish Translations and Cultural Training. *American Journal of Audiology*, *24*, 11–23.

Riding, R. J., & Rayner, S. G. (2000). *International Perspectives on Individual Differences*. USA: Ablex Publishing Corporation.

Ritchie, J., & Lewis, J. (2013). *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. London: SAGE.

Rivadeneyra, R. V., Elderkin-Thompson, Silver, R. C., & Waitzkin, H. (2000). Patient centeredness in medical encounters requiring an interpreter. *The American Journal of Medicine, 108*, 470–474.

Robertson, P., & Joseph, J. (2005). *English Language Learning in the Asian Context*. British Virgin Islands: Asian EFL Journal Press.

Rogers, A. T. (2015). *Human Behaviour in the Social Environment: Perspectives on Development, the Life Course and Macro Concepts*. New York: Routledge.

Rogers, B. (2015). *Classroom Behaviour: A Practical Guide to Teaching, Behaviour Management and Colleague Support.* London: SAGE Publications Ltd.

Rohleder, P., Swartz, L., Kalichman, S. C., & Simbayi, L. C. (2009). *HIV/AIDS in South Africa: 25 Years On*. New York: Springer Science and Business Media Copyright.

Roman, J. D. (2006). *The Communication Man*. Ammrtown: Librosenred

Rosdahl, C. B., & Kowalski, M. T. (2008). *Textbook of Basic Nursing*. USA: Lippincott Williams & Wilkins.

Rose, P. R. (2017.). *Health Disparities, Diversity and Inclusion: Context, Controversies and Solutions*. Burlington: Jones and Bartlett Publishers.

Rosenberg, E., Leanza, Y., & Seller, R. (2007). Doctor–patient communication in primary care with an interpreter: Physician perceptions of professional and family interpreters. *Patient Education and Counselling, 67*, 286–292.

Rowe, R., & Calnan, M. (2006). Trust relations in health care: the New Agenda. *Journal of Public Health*, *16*(1), 4-6.

Rudwick, S. (2008). Shifting Norms of Linguistic and Cultural Respect: Hybrid Sociolinguistic Zulu Identities. *Nordic Journal of African Studies*, *17*(2), 152-174.

Saha, S., Arbelaez, J. J., & Cooper, L. A. (2003). *Patient-Physician Relationships and Racial Disparities in the Quality of Health Care*. *American Journal of Public Health*, *93*(10), 1713-1719.

Saideman, S., & Ayres, R. W. (2012). *For kin or Country: Xenophobia, Nationalism and War.* New York: Columbia University Press.

Sanchez-Campos, M. C. (2004). *Understanding Language Barriers: Nurses and Patients Perspectives* (Unpublished master's thesis). University of Utah.

Saulse, B. (2010). *Interpreting within the Western Cape Health Sector: a descriptive overview* (Unpublished master's thesis). University of Stellenbosch.

Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research Methods for Business Students*. London: Prentice Hall.

Schlemmer, A., & Mash, B. (2006). The effects of a language barrier in a South African district hospital. *Family Medicine and Primary Care*, *96*(10), 3–6.

Schofield, M., & Mapson, R. (2014). Dynamics in interpreted interactions: An insight into the perceptions of healthcare professionals. *Journal of Interpretation*, *23*(1), 1-14.

Schwartz, P. H. (2011). Decision Aids, Prevention and the Ethics of Disclosure. *Academic Journal: The Hastings Centre Report*, *41*(2), 30-39.

Schyve, P. (2007). Language Differences as a barrier to Quality and Safety in Healthcare: The Joint Commission Perspective. *Journal of General Internal Medicine*, *22*(2), 360–361.

Shally-Jensen, M. (2014). *Mental Care Issues in America: An Encyclopedia*. Santa Barbara: ABC-CLIO.

Sheppard, M. (2004). *Mental Health Work In The Community: Theory And Practice In Social Work And Community Psychiatric Nursing*. London: Falmer Press.

Selim, Y. F., & Mohamed, E. (2014). *Who Defines Me: Negotiating Identity in Language and Literature*. Newcastle: Cambridge Scholars Publishing.

Silverman, R. M., & Patterson, K. (2011). *Qualitative Research Methods for Community Development*. New York: Routledge.

Simon, M. K. (2011). *Validity and Reliability in Qualitative Studies: Recipes for Success*. Seattle: WA.

Sleptsova, M., Hofer, G., Morina, N., & Langewitz, W. (2014). The Role of the Health Care Interpreter in the Clinical Setting: A Narrative View. *Journal of Community Health Nursing*, 167-184.

Smith, D. G. (2014). *Diversity and Inclusion in Higher Education: Emerging perspectives on institutional transformation*. New York: Routledge.

Soek, S., Meyen, E. L., & DaCosta, B. (2010). *Handbook of Research on Human Cognition and Assistive Technology: Design, Accessibility and Transdisciplinary Perspectives*. New York: Medical Information Science Reference.

Sooful, P. (2006). *The maintenance and utilisation of government hearing aids* (Unpublished master's thesis). University of Pretoria.

Southwood, F., & Van Dulm, O. (2015). The challenge of linguistic and cultural diversity: Does length of experience affect South African speech language therapists' management of children with language impairment. *African Journal of Communication Disorders, 62*(1), 72-79.

Spouse, J., Cook, M. J., & Cox, C. (2008). *Common Foundation Studies in Nursing*. New York: Elsevier Health Sciences Copyright.

Sprecher, H. (2015). *Relationship tips: Everything about Relations: An Encyclopedia on Relationship*. Plural Publishing: San Diego.

Srivastava, U. K., Shenay, G. V., & Sharma, S. C. (2007). *Quantitative Techniques for Managerial Decision*. New Delhi: New Age International Publisher.

Stach, A, B. (2010). *Clinical Audiology: An Introduction.* New York: Delmar.

Statistics South Africa. *Census 2011*. Retrieved from Statistics South Africa: http://statsa.gov.za/publications/p030142011.pdf

Strazny, P. *Encyclopedia of Linguistics*. New York: Taylor and Francis Group.

Steed, R. (2010). Attitudes and beliefs of occupational therapists participating in cultural competency workshop. *Occupational Therapy International*, *17*(3), 142-151.

Street, R. L., Gordon, H., & Haidet, P. (2007). Physicians communication and perceptions of patients: is it how they look, how they talk or is it just the doctor? *Social Science and Medicine*, *65*(3), 586–598.

Street, R. L., & Haidet, P. (2011). How well do doctors know their patients? Factors affecting the physician understanding of patient's health beliefs. *Journal of General Internal Medicine*, *26*(1), 21–27.

Strode, A., Slack, C., & Essack, Z. (2010). Child consent in South African law: Implications for researchers, service providers and policy-makers. *South African Medical Journal*, *100*, 247-249.

Stuckler, D., Basu, S., & Mckee, M. (2011). Health care capacity and allocations among South African provinces: Infrastructure inequality traps after the end of apartheid. *American Journal of Public Health*, *101*(1), 165–172.

Surbone, A., & Baider, L. (2013). Personal values and cultural diversity. *Journal of Medicine and the Person.*, *11*, 11–18.

Suresh, K. P., & Chandrashekara, S. (2012). Sample size estimation and power analysis for clinical research studies. *Journal of Human Reproduction*, *5*(1), 7-13.

Swanepoel, D. W. (2006). Audiology in South Africa. *International Journal of Audiology*, *45*, 262-266.

Taras, V., & Gonzalez- Perez, M. A. (2016). *The Palgrave Handbook of Experiential Learning in International Business*. New York: Palgrave Macmillan.

Taveras, E. M., & Flores, G. (2004). Why Culture and Language Matter: The Clinical Consequences of providing Culturally and Linguistically Appropriate Services to Children in the Emergency Department. 76-83, *doi:10.1016*/j.cpem

Terrell, S. (2012). *Statistics Translated: A step by step Guide to Analysing and Interpreting Data*. New York: The Guilford Press.

Thackrah, R. D., & Thompson, S. (2013). Refining the concept of cultural competence: building on decades of progress. *Medical Journal of Australia*, *199*(1), 35–38.

Thakur, D. (2005). *Research Methodology in Social Sciences*. New Delhi: Deep & Deep Publications Pty. Ltd.

The Joint Commission. (2010). The Joint Commission Standards for Hospitals. Oakbrook: Terrace.

Thomson, A. M., Cunningham, S. J., & Hunt, N. P. (2011). A comparison of information retention at an initial orthodontic consultation. *European Journal of Orthodontics, 23*, 169-178.

Thompson, T. L. (2014). *Encyclopedia of Health Communication*. London: SAGE Publications.

Timofeeva, A. A. (2003). *Nursing Profession: Description and Issues*. New York: Novinka Books.

Tongue, J. R., Epps, H. R., & Forese, L. L. (2005). Communication Skills. *The Journal of Bone and Joint Surgery*, *87*, 652–658.

Toole, G. O. (2012). *Communication: Core Interpersonal Skills for Health Professionals by Gjyn O'Toole*. Australia: Elsevier Health Sciences-Medical.

Toomey, S. S. (2012). *Communicating Across Cultures*. New York: Guilford Press.

Trochim, W., Donnelly, J. P., & Arora, K. (2015). *Research Methods: The Essential Knowledge Base*. Australia: Cengage Learning.

Tshuma, N. (2010). *An Evaluation of a Change Strategy to Integrate Nutrition in HIV and AIDS Programmes run by the Community AIDS Response* (Unpublished MBA thesis). Regent Business School.

Turner, N. S. (2012). African languages as compulsory courses in KwaZulu Natal : Illusory initiative or inspired intervention, *Per Linguam*, *28*(2), 28–45.

Tye-Murray, N. (2014). *Foundations of Aural Rehabilitation: Children, Adults and their Family Members*. Stamford: Cengage Learning.

Valente, M., Hosford-Dunn, H., & Roeser, R. J. (2008). *Audiology Treatment*. New York: Thieme Medical Publishers.

Van Dulmen, S., & Van den Brink- Munien, A. (2004). Patient's preferences and experiences in handling emotions: a study on communication sequences in primary care medical visits. *Patient Education and Counselling*, *55*(1), 149–152.

Van Ryn, M., & Burke, J. (2000). The effect of patient race and socio-economic status on physicians' perceptions of patients. *Social Science and Medicine*, *50*, 813–828.

Van Wyk, N. C. (2009). *Integrative Healthcare: A Guide to Meet the Needs of Africa*. Cape Town: Berne Convention.

Vaughn, L. M., Jacquez, F., & Baker, R. C. (2009). Cultural Health Attributions , Beliefs , and Practices : Effects on Healthcare and Medical Education. *The Open Medical Education Journal*, *2*(1), 64–74.

Veispak, A., Jansen, S., Ghesquiere, P., & Wouters, J. (2015). Speech Audiometry in Estonia: Estonian Words in Noise Test. *International Journal of Audiology*, *54*(8), 573-578.

Ventola, C. L. (2015). The Antibiotic Resistance Crisis. *Pharmacy & Therapeutics*, *40*(4), 277–283.

Videbeck, S. L. (2006). Psychiatric Mental health Nursing. Philadelphia: Lippincott Williams & Wilkins.

Virnig, B. A., Lurie, N., Huang, Z., Musgrave, D., McBean, A. M., & Dowd, B. (2002). Racial variation in quality of care among Medicare Choice enrolees. *Health Affairs (Millwood)*, *21*(6), 224–230.

Visagie, S., & Schneider, M. (2014). Implementation of the principles of primary health care in a rural area of South Africa. *African Journal of Primary Health Care & Family Medicine, 6*(1), 562–572.

Vliet, D. V. (2005). Hello darkness my old friend. *The Hearing Journal, 58(2), 66.*

Vonkeman, G. H. (2013). *Sustainable Development of European Cities and Regions*. Netherlands: Kluwer Academic Publishers.

Waddell, G., & Burton, A.K. (2004). *Concepts of Rehabilitation for the Management of Common Health Problems*. London: The Stationery Office.

Walia, S., & Liepert, B. (2012). Perceived Facilitators and Barriers to Physical Activity for Rural Youth: An Exploratory Study using Photovoice. *Journal of Rural and Remote Health, 12*, 1842-1856.

Walker, J. M. (2006). Beyond Informed Consent. *Journal of Legal Nurse Counselling*, *17*(3), 8–10.

Wang, C., & Li, V. C. (2008). *Photovoice: Beyond Visual Anthropology*. Los Angeles: University of California, School of Public Health.

Wanjau, K. N., Muiruri, B. W., & Ayodo, E. (2012). Factors affecting provision of service quality in the public health sector: A case of Kenyatta National Hospital. *International Journal of Humanities and Social Science*, *2*, 114-124.

Wardhaugh, R. (2002). *An Introduction to Sociolinguistics*. Oxford: Blackwell Publishers.

Weber, J. (2015). *Language Racism*. London: Palgrave Macmillan.

Weber, J. R., & Kelly, J. H. (2013). *Health Assessment in Nursing.* Philadelphia: Walters Khuler Health.

Wegner, L., & Rhoda, A. (2014). The influence of cultural beliefs on the utilisation of rehabilitation services in a rural South African context: Therapists perspective. *African Journal of Disability, 4*(1), 128-136.

Welfel, E. R. (2016). *Ethics in Counselling and Psychotherapy: Standards, Research and Emerging Issues.* Boston: Cengage Learning.

Welling, D. R., & Ukstins, C. A. (2015). *Fundamentals of Audiology: For the Speech Language Pathologist.* Burlington: Jones and Bartlett.

Wemmer, K. (2007). *Education Audiologists in South Africa* (Unpublished master's thesis). University of Witwatersrand.

Wessel, I., Van der Kooy, P., & Merckelbach, H. (2000). Differential recall of central and peripheral details of emotional slides is not a stable phenomenon. *Memory, 8*, 95–109.

Wiang, J. (2000). *The Relationship between Language and Culture*. Oxford: University Press.

Woodside, M. R., & McClam, T. (2011). *Helping Process: Assessment to Termination*. UK: Cengage Learning.

Wootton, R., Patil, N. G., Scot, R. E., & Kendal, H. (2009). *Tele-health in the Developing World*. London: The Royal Society of Medicine Press.

World Health Organisation (2009). *Increasing access to health workers in remote and rural areas through improved retention.*

Wright II, E., & Wallace, E. V. (2016). *The Ashgate Research Companion to Black Sociology*. New York: Routledge.

Wright, D. L. (2004). *Job Survival: How to adjust to the workplace and keep your job*. Business & Economics: Jist Works.

Wright, K. B., Sparks, L., & O'Hair, H. D. (2013). *Health Communication in the 21st Century*. UK: John Wiley & Sons Inc.

Yeager, K. A., & Bauer-Wu, S. (2013). Cultural humility: essential foundation for clinical researchers. *Applied Nursing Research*, *26*(4), 251-256.

Yoder-wise, P. S. (2015). *Leading and Managing in Nursing.* Missouri: Elsevier Inc.

Zeidner, M., Mathews, G., & Roberts, R. D. (2009). *What We Know About Emotional Intelligence: How to Affects Learning, Work, Relationships and Our Mental Health*. Massachusetts: MIT Press Books.

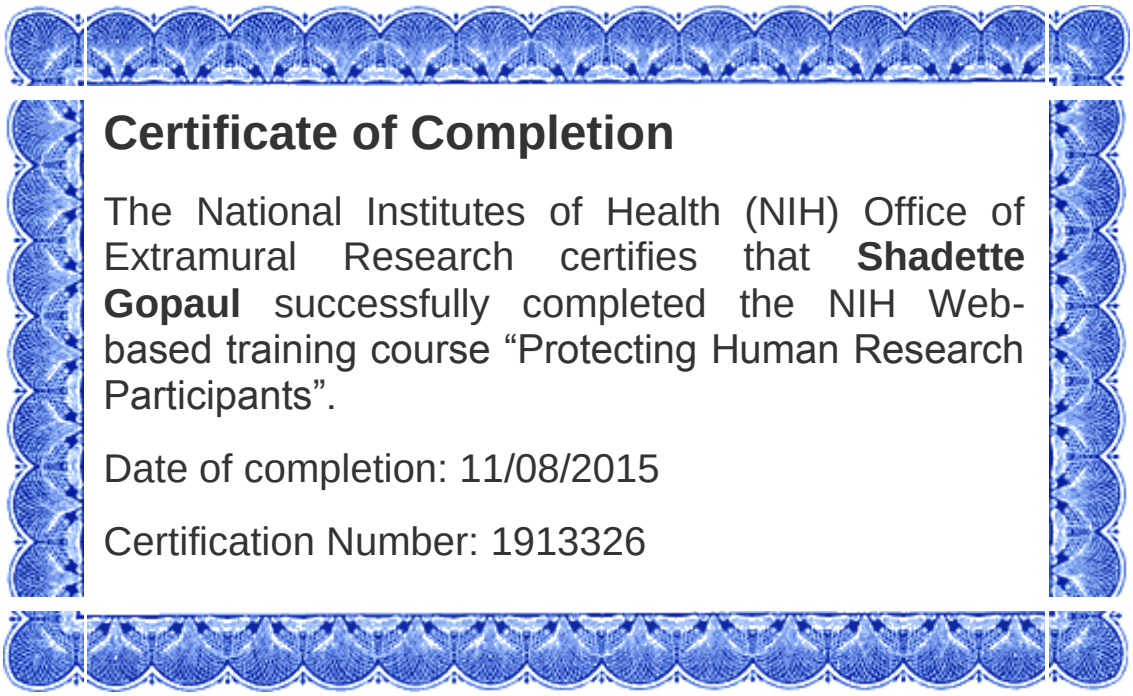
Zhang, W. (2016). *Variation in Metonymy: Cross-linguistic, Historical and Lectal Perspectives*. China: Walter de Gruyter.

Zirwas, M. J., & Holder, J. L. (2009). Patient Education Strategies in Dermatology. *The Journal of Clinical and Aesthetic Dermatology*, *2*(12), 28–34.

Zohrabi, M. (2013). Mixed Methods Research: Instruments, Validity, Reliability and Reporting Findings. *Academy Publisher*, *3*(2), 254–262.

Zolnierek, K. H., & Dimatteo, M. R. (2009). Physician Communication and Patient Adherence to Treatment: A Meta- Analysis. *Journal of Medical Care*, *47*(8), 826-834.

APPENDIX A



Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Shadette Gopaul** successfully completed the NIH Web-based training course “Protecting Human Research Participants”.

Date of completion: 11/08/2015

Certification Number: 1913326

APPENDIX B

19 July 2017

Ms Shadette Gopaul 209509047
School of Health Sciences-Audiology
Westville Campus

Dear Ms Gopaul

Protocol reference number: HSS/0105/016M
New Project Title: Exploring communication between First Language English speaking audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu Natal.

Approval notification – Amendment Application

This letter serves to notify you that your application for an amendment dated 11 July 2017 has now been granted **Full Approval** as follows:

- **Change in Title**

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

Best wishes for the successful completion of your research protocol.

Yours faithfully

.....

Dr Shenuka Singh (Chair)
Humanities & Social Sciences Research Ethics Committee

/pm

Cc Supervisor: Ms Seema Panday
Cc Academic Leader Research: Prof Johan Van Heerden
Cc School Administrator: Ms P Nene

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Telephone: +27 (0) 31 260 3587/8350/4557 **Facsimile:** +27 (0) 31 260 4609 **Email:** ximbap@ukzn.ac.za / snymanm@ukzn.ac.za / mohunp@ukzn.ac.za
Website: www.ukzn.ac.za

APPENDIX C

health
Department:
Health
PROVINCE OF KWAZULU-NATAL

Physical Address: 330 Langalibalele Street, Pietermaritburg
Postal Address: Private Bag X9051
Tel: 033 395 2805/ 3169/ 3123 Fax: 033 394 3782
Email:
www.kznhealth.gov.za

DIRECTORATE:
Health Research & Knowledge Management

Reference: 50/16
KZ_2015RP32_380

Date: 2 March 2016

Dear Ms S. Gopaul
Email: shadette.gopaul@gmail.com

Approval of research

1. The research proposal titled **'Exploring communication between first language English speaking audiologists and culturally and linguistically diverse patients in the provision of services at public sector hospitals in KwaZulu Natal'** was reviewed by the KwaZulu-Natal Department of Health.

   The proposal is hereby **approved** for research to be undertaken at all hospitals in the province.

2. You are requested to take note of the following:
   a. Make the necessary arrangement with the identified facility before commencing with your research project.
   b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.

3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za

For any additional information please contact Mr X. Xaba on 033-395 2805.

Yours Sincerely

Dr E Lutge
Chairperson, Health Research Committee
Date: 03/05/16

Fighting Disease. Fighting Poverty. Giving Hope

APPENDIX D

PERMISSION LETTER: PUBLIC HOSPITAL 1

GATEKEEPER PERMISSION LETTEI

Exploring Communication between first language English speaking audiologists and culturally and linguistically diverse patients in the provision of services at public sector hospitals in KwaZulu Natal

To Medical Managers at Government Health Institutions

INFORMED CONSENT:

The research study has been explained to me in writing in the information document (Appendix D1). I, DR Sunday (full name) medical manager of Estcourt Hospital hereby:

Grant permission for my institution to be involved in the present study ☑

Do not grant permission for my institution to be involved in the present study ☐

Signature

Witness

Shadette Gopaul

(Masters student)

APPENDIX E

PERMISSION LETTER: PUBLIC HOSPITAL 2

LETTER OF SUPPORT

Exploring Communication between first language English speaking audiologists and culturally and linguistically diverse patients in the provision of services at public sector hospitals in KwaZulu Natal

To Medical Managers at Government Health Institutions

INFORMED CONSENT:

The research study has been explained to me in writing in the information document (Appendix D1). I, Dr Mabatho Kekana (full name) medical manager of Emmaus hospital. hereby:

Grant permission for my institution to be involved in the present study ☑

~~Do not grant permission for my institution to be involved in the present study~~ ☐

Signature **(Medical manager)**

16/2/16

Signature **(C.E.O)**

Witness

Witness

Shadette Gopaul **(Masters Student)**

APPENDIX F

INFORMATION LETTER FOR MEDICAL MANAGERS

DISCIPLINE OF AUDIOLOGY
SCHOOL OF AUDIOLOGY, OCCUPATIONAL THERAPY
& SPEECH-LANGUAGE PATHOLOGY
FACULTY OF HEALTH SCIENCES

Tel: 031 260 7438
Fax: 031 260 7622

E-mail: naidoor1@ukzn.ac.za

Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu-Natal.

To Medical Managers at Government Institutions

I am a student registered for a Masters degree in audiology at the University of KwaZulu-Natal and am required to complete a research project. The title of the study is "*Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu-Natal".*

Data obtained from the 2011 Census revealed that revealed that isiZulu is the most common language of South Africans, spoken by 22.4% of the total population, with a staggering 77% of the KwaZulu Natal population being isiZulu speakers. However, according to Penn (2007) the population of qualified Audiologists is not parallel to the linguistic diversity of the South African population

Therefore, the aim of the study is to explore the communication that transpires between first language English speaking audiologists and their isiZulu patients during service delivery. This study will determine the cultural and linguistic competency levels of first language English speaking audiologists and the factors that influence communication. In addition, the study aims to

gain insight on the communication strategies currently being utilised in addressing the needs of diverse patient populations. Furthermore, the study aims to hone in on recommendations and practical solutions.

The researcher has selected your institution to conduct Phase two and phase three of the study. This decision was based on a first language English speaking audiologist, residing at your institution, displaying an interest in participating in the second phase. A description of both phases is outlined below:

Phase two of the study will entail conducting Photovoice with the one first language English speaking audiologist from your institution, who has expressed interest in participation. That individual will be required to take photographs of any subject matter (abstract or literal) that she feels best represents the research topic. A minimum of 2 and a maximum of 5 photographs will be permitted. The audiologist will be trained on the Ethics surrounding permission when photographing people and organisations, a photo release form will need to be issued. There will be no known risks to the participant or the subject matter photographed.

The third phase of the study will involve the researcher conducting a short survey to isiZulu audiology patients at your institution. The survey should take no more than 5 minutes to complete. The aim of this survey is to obtain the patients perspective on the challenges faced due to the presence of language barriers and their recommendations to overcome such challenges.

The information obtained in this study may be useful in improving service delivery and may influence policy makers in terms of curriculum changes, implementation of support services as well as contextually relevant audiology resources, if need be

This research project will be conducted by Shadette Gopaul under the supervision of Ms. Seema Panday, who is a lecturer at the Discipline of Audiology, University of KwaZulu Natal. Should you have any queries you are welcome to contact Ms Panday in the Audiology Department at the University of KwaZulu Natal on (031) 260 7438/7623. Prior to collecting the data this proposal was submitted to the School of Health Sciences ethics and high degrees committee for approval. Permission has been granted by the School of Health Sciences Ethics committee to conduct this research project.

There will be no known or anticipated risks to participants. Confidentiality of information is guaranteed. Each individual will sign a consent form and they will be provided with a copy. In addition, participation in this study is voluntary. Individuals who choose not to participate in the

study will not be disadvantaged in any way. Participants are free to withdraw from the study at any stage and for any reason. After completion of the study, research data will be stored in a locked file cabinet in the research supervisor's office for a period of five years and thereafter will be destroyed.

We would be grateful if you would allow permission to access your institution for phase two and three of this study. The premise of this study is to improve service delivery and such changes could prove to be beneficial to your institution as well as to both staff and patients. Your cooperation is much appreciated.

Please feel free to contact us at any time on the contact details provided below:

Email: shadette.gopaul@gmail.com

Tel: (031) 260 7438

Regards,

_____

Shadette Gopaul

(Student Researcher)

_____

Seema Panday

(Research supervisor)

APPENDIX G

FIRST LANGUAGE ENGLISH SPEAKING (FLES) AUDIOLOGISTS QUESTIONNAIRE

Dear Participant

Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu-Natal.

Thank you for displaying an interest in the following study. The study aims to explore how First Language English speaking (FLES) audiologists communicate with isiZulu patients. The information obtained from this study may be used to influence policy makers in terms of curriculum changes for undergraduate audiology programmes as well as implementing support services and culturally/linguistically relevant resources at public sector health institutions.

You will be required to complete the following survey that will not take more than 10 minutes of your time. Your data will be summarised with that of the other participants and at no stage will your specific results be used. This will ensure that the anonymity of your results will be maintained.

INSTRUCTIONS:

- The survey is divided into 6 sections
- Please answer all questions in all 6 sections.
- Some questions provide options, please select the most appropriate option.
- Other questions require your opinions; please provide them in the spaces provided.
- Please answer as honestly as possible and to the best of your ability to ensure that the information obtained from the study will contribute to improving audiological services in the public sector.

QUESTIONNAIRE

For Official Use Only

Participant No:_____

SECTION 1: BIOGRAPHICAL INFORMATION: *Please tick (√)or mark **(X)**for the appropriate response*

1. Age:

22-25 Years		26-29 Years		30-35 years		36- 39 years		40-49 years		+ 50years	

2. Gender:

Male		Female	

3. Race

African		Coloured		Indian		White		Other (specify)	

4. Primary/Main language:

English		Afrikaans		IsiZulu		Xhosa		Sotho		Other	

5. Language/s fluent in: *Please tick (√)or mark **(X)** to indicate fluency in the appropriate columns*

English		**Afrikaans**		**IsiZulu**		**Xhosa**		**Sotho**		Other (specify)	
Read		Read		Read		Read		Read		Read	
Write		Write		Write		Write		Write		Write	
Speak		Speak		Speak		Speak		Speak		Speak	

SECTION 2: **TRAINING AND EMPLOYMENT HISTORY**: *Please tick **(√) or** mark **(X)** for the appropriate response*

6. At which institution were you awarded your undergraduate Audiology degree

UKZN		UCT		Other (specify):	

7. Please indicate the number of years practising as an audiologist

Less than one year		1-2 years		2-3 years		3-4 years		4-5 years		5+ years	

8. Please describe the location of your current institution

Urban		Rural		Other (specify):	

9. Please indicate the duration of employment at the current institution

Less than one year		1-2 years		2-3 years		3-4 years		4-5 years		5+ years	

10. Please indicate your current position held at this institution

Community Service Audiologist		Junior Audiologist		Senior Audiologist		Chief Audiologist		Dual registered Audiologist &Speech Therapist	

11. Was the audiology department established before you were employed

Yes		No		Unsure	

12. Please indicate the number of audiologists currently employed in your institution

1		2		3		4		5		>5	

13. Are audiologists employed at your institution who can converse fluently in IsiZulu

Yes		No		Unsure	

14. Please indicate the approximate percentage of patients who speak the various languages below as their primary language (ensuring that the total is 100%)

IsiZulu %	English %	Afrikaans %	Xhosa %	Sotho %	Other (specify) %

SECTION 3: CULTURAL COMPETENCY IN ISIZULU

The following statements relate to communication with first language isiZulu patients, based on IsiZulu being the dominant language in KwaZulu Natal. There are no right or wrong answers. Respond to the statement, indicating the extent you agree or disagree with each statement by placing a cross (x) or tick (✓) in the appropriate column using the following scales

	1	2	3	4	5
Questions	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
15. I am aware that the IsiZulu culture is different from my own and is bound by its own norms					
16. I have limited knowledge regarding health related IsiZulu cultural beliefs and values					
17. I have limited knowledge regarding health related isiZulu cultural behaviours eg. Seeking of traditional medicine					
18. It can be difficult to collect accurate cultural information about an IsiZulu patient during case history					
19. It is not always easy to conduct a culturally based audiological assessment with IsiZulu patients					
20. It is time consuming to adapt services, such as test materials and assessment procedures, when encountering IsiZulu patients					
21. I am not adequately equipped to manage a patient who prefers traditional treatment over conventional audiological services.					
22. I sometimes dread cross-cultural encounters with patients as I do not feel adequately prepared.					

23. I would benefit from more knowledge and training on the isiZulu culture and how to incorporate cultural sensitivity in my daily audiological practices.					

24. Have you ever worked with a traditional healer in audiological service delivery**?**

Yes ☐ No ☐

SECTION 4: **LINGUISTIC COMPETENCY IN ISIZULU**: *Please place a cross **(x)** or tick **(✓)** in the appropriate column using the following scales*

	1	2	3	4	5
Questions	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
25. Formal education (school and university) has adequately prepared me to converse in isiZulu in the South African context.					
26. The Indigenous language (eg isiZulu/ Xhosa) courses taught at University were not specific to the discipline of Audiology and therefore not beneficial.					
27. I was orientated to the isiZulu culture and language during my community service					
28. The quality of conducting case history, eg obtaining a wealth of in-depth information, is significantly better when communicating with my First Language English speaking patients					
29. It is difficult to elaborate and probe areas of concern during case history with a First Language isiZulu patient					
30. When patients elaborate on the area of concern and speak fluently in isiZulu I have difficulty understanding all that is being conveyed.					
31. It is not easy to document symptoms reported in isiZulu					
32. Providing audiological test instructions to a patient in isiZulu is fairly easy.					

33. I am concerned about the accuracy of speech testing with isiZulu patients.					
34. It can be challenging to provide feedback on results to isiZulu patients.					
35. Counselling a patient on topics, such as the acceptance of hearing loss, communication strategies and school placement, can be challenging with first language isiZulu patients.					
36. Aural rehabilitation encompasses many areas that can be challenging to communicate to a first language isiZulu patient					

37. I obtain majority of information about the patient from:*(Please indicate one option*)

Patient file		Referral letter		Patient during case history		Accompanying person		Other (specify):	

38. I consider the following aspect/s to be challenging in communicating in IsiZulu

Unknown terminology		Tone and prosody		Dialect and linguistic differences		Sentence grammar		All of the above		None of the above	
Other (Specify											

39. I consider the following audiological area/ areas to be challenging to communicate fully with isiZulu patients:

1. Case History Interview	
2. Audiology test instructions	
3. Reinforcement during audiological test procedures	
4. Speech testing	
5. Feedback on assessment results	
6. Counselling (acceptance of hearing loss, school placement, Tinnitus counselling etc.)	
7. Hearing aid orientation	
8. Aural Rehabilitation (communication strategies, issues regarding body image and stigma associated with hearing aid use etc.)	
9. Other (Specify):	
10. All of the above	
11. None of the above	

SECTION 5: FACTORS THAT INFLUENCE EFFECTIVE COMMUNICATION BETWEEN THE AUDIOLOGIST AND ISIZULU PATIENTS: *Please place a cross **(x)** or tick **(✓)** in the appropriate column using the following scales*

	1	2	3	4	5
Questions	Strongly Agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
40. It can be challenging to obtain informed consent from isiZulu patients who cannot communicate in English for audiological procedures					
41. It is not always easy for culturally and linguistically diverse patients to trust me during the audiological consultation					
42. Patients sometimes withdraw and do not actively participate because I do not speak isiZulu as my first language					
43. I sometimes feel a lack of empathy on my part during counselling due my inability to communicate effectively in IsiZulu					
44. I sometimes feel like it appears that I am assuming a superior role in the presence of language barriers					
45. The isiZulu language is easy to master					
46. English is used as the global language of instruction; hence all patients should learn and be able to converse in English.					
47. I prefer conducting audiological assessments on English speakers than first language isiZulu speakers					
48. It is frustrating when I am unable to provide all the information that I need to in IsiZulu					
49. I sometimes feel the quality of service is being compromised due to language barriers					
50. I sometimes do not feel satisfied with my job and wish I could have done more when encountering first language isiZulu patients					

51. When encountering first language isiZulu patients I feel: (tick (√) as applicable)

Confident		Adequately prepared		Neutral		Anxious		Uneasy		Ill prepared	

SECTION 6: **COMMUNICATION PRACTICES OF AUDIOLOGISTS IN ASSESSING AND TREATING FIRST LANGUAGE ISIZULU SPEAKERS:** *Please place a cross **(x)** or tick **(✓)** in the appropriate column*

52. In the event of language barriers, I utilise the following strategy/strategies:

1. Formal institution interpreter	
2. Staff member translator: if applicable please indicate discipline of staff member: _____	
3. Patient's family member translator	
4. Another patient translator	
5. Other (specify):	
6. None of the above	

*Please place a cross **(x)** or tick **(✓)** in the appropriate column using the following scales*

	1	2	3	4	5
Questions	Strongly Agree	Agree	Neither Agree or disagree	Disagree	Strongly Disagree
53. Formal interpreters are not available at my institution.					
54. I am not always satisfied with the translation provided by informal/formal interpreters to isiZulu patients.					
55. I prefer written handouts as a substitute for verbal communication in IsiZulu					
56. I often use and recommend Translator Applications (eg. Google Translator) to overcome linguistic barriers.					
57. There is a need for interpreters to be available at my institution to assist in cross cultural and linguistic communication					
58. There is a need for more culturally and					

linguistically relevant audiological resources					
59. There is a need for support services in acquiring isiZulu language skills for audiologists (eg. annual refresher courses)					

60. Have you attended an IsiZulu language course since graduating from University?

Yes No

61. I consider my ability to communicate in isiZulu to be:

Excellent		Good		Average		Poor		Unsure	

SECTION 7: Recommendations:

62. What recommendations would you make to improve communication between first language English speaking audiologists and first language isiZulu patients?

Thank you for your participation!

Kindly indicate if you would like to expand on your experiences as a first language English speaking audiologist communicating with culturally and linguistically diverse by participating in the second phase of the study. Refer to the attached document (Appendix D1) for more information on phase two of the study

APPENDIX G1

INFORMATION DOCUMENT

Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu Natal

Dear Participant

Thank you for displaying an interest in the following study. The title of the study is *"Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu Natal"*

In order to achieve the above aim, FLES audiologists' cultural and linguistic competency in isiZulu will be explored as well as the factors that affect cross cultural/linguistic communication. Furthermore, FLES audiologists' communication strategies, when working with isiZulu patients, will be investigated. In addition, the study will consider the perspectives of both FLES audiologists as well as isiZulu patients, and recommendations will be sought to improve cross cultural/linguistic communication during audiological service delivery.

The information obtained in this study will be useful in improving service delivery and may influence policy makers in terms of curriculum changes, implementation of support services as well as contextually relevant audiology resources, if need be.

I kindly request your participation in order to obtain this information. You will be required to complete a survey that will require approximately 10 minutes to complete. The results obtained from the survey will be used for the purpose of this study only and full anonymity will be maintained.

Permission to conduct this study was obtained from the UKZN Human and Social Sciences Research Ethics Committee, which can be contacted on 0312604557. Furthermore, permission to conduct this study was obtained from the Department of Health, which can be contacted on 033 395 2805.

The study will be conducted by Shadette Gopaul under the supervision of Ms. Seema Panday, who is a lecturer at the Department of Audiology, University of KwaZulu Natal. Should you have any queries you are welcome to contact the Audiology Department at the University of KwaZulu Natal on (031) 260 7438.

Confidentiality of information and your identity is guaranteed. Your participation in this study is voluntary. If you choose not to participate in the study, you will not be disadvantaged in any way. You are free to withdraw from the study at any stage and for any reason. After completion of the study, research data will be stored in a locked file cabinet in the research supervisor's office for a period of five years and thereafter will be destroyed.

Should you agree to participate in this study, it would be sincerely appreciated if you could please fill in the attached consent form and complete in full the attached survey.

Yours Sincerely

_____	_____
Shadette Gopaul	**Seema Panday**
(Masters Student)	(Research supervisor)

APPENDIX G2

CONSENT FORM

Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu Natal (KZN)

INFORMED CONSENT:

The research study has been explained to me in writing in the information document (Appendix G1). I, _____ (full name) fully understand what my participation in this study involves and I voluntarily:

Agree to participate ☐

Do not agree to participate ☐

_____ _____

Signature of participant **Witness**

_____

Shadette Gopaul

(Masters Student)

APPENDIX G3

INFORMATION FOR PHASE TWO OF THE STUDY

The aim of the study is to explore communication between First Language English speaking (FLES) audiologists and isiZulu patients during service delivery at public sector hospitals in KZN.

I kindly request your participation in the second phase of the study order to obtain this information. You will be required to participate in Photovoice, which entails the use of photography (abstract or literal) to convey your experiences regarding provision of services to isiZulu patients. You will receive training on Photovoice which will be supplemented by a Photovoice training manual. This training will include practice activities to simulate the concepts of Photovoice. The training will also provide a platform to address any queries that you may have. After receiving the training you will be required to capture your photography using the camera on your cell phone device. A minimum of 2 and a maximum of 5 photographs will be permitted. You will be trained on the Ethics surrounding permission when photographing people and organisations, a photo release form will be provided to issue. There will be no known risks to the participant or the subject matter photographed. For the purpose of patient-health practitioner confidentiality, audiologists will be advised not to capture photography in which their patient's faces are visible.

You will be kindly requested to email your photography to the researcher within two weeks. You will also be provided with logbooks to narrate the reason why you choose that specific photograph. Two weeks after the training, the researcher will visit your institution to receive the logbook and conduct a short one-on-one interview with you to reflect on the selection of your photographs and the corresponding narratives.

Your participation in the second phase of the study will be highly appreciated.

Willing to participate ☐ **Not willing to participate** ☐

APPENDIX G4

SUGGESTION LETTER FOR FIRST LANGUAGE ENGLISH SPEAKING (FLES) AUDIOLOGISTS QUESTIONNAIRE

Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu Natal (KZN)

Dear Participant

Thank you for displaying an interest in the following study. The title of the study is *"Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu Natal"*

In this study, FLES audiologists' cultural and linguistic competency in isiZulu will be explored as well as the factors that affect cross cultural/linguistic communication. Furthermore, FLES audiologists' communication strategies, when working with isiZulu patients, will be investigated. In addition, the study will consider the perspectives of both FLES audiologists as well as isiZulu patients, and recommendations will be sought to improve cross cultural/linguistic communication during audiological service delivery.

In order to achieve the above aim your participation is kindly requested. This is a suggestion letter which based on your responses, will assist in improving the research study. The purpose of this letter is to evaluate the effectiveness of the questionnaire. After filling out the questionnaire, kindly answer the questions below.

1. Did you have difficulty understanding any of the questions? If yes, please indicate the question number below.

   _____

   _____

2. Were there any words/terms in the questionnaire, which you did not understand? Please list below:

   _____

   _____

3. Were the questions straightforward and easy to understand?

   _____

4. Were the options provided applicable to your response? If not, please indicate the question number.

   _____

5. Did you feel uncomfortable answering any of the questions? If yes, please indicate the question number.

   _____

   _____

6. Did you find the questionnaire too long?

   _____

7. Do you have any suggestions/ recommendations to improve the questionnaire?

   _____

   _____

   _____

8. Would you recommend this questionnaire to others?

   _____

   _____

   _____

APPENDIX H

PHOTOVOICE INTERVIEW SCHEDULE

For Official Use Only

Participant No: _____

OPENING:

1. ***Establish rapport:***

- Researcher to introduce herself.
- Researcher to introduce scribe to the participant and her role in the interview process.
- Small talk: the weather, latest topics from the news etc

2. ***Purpose:***

- Thank participant for indicating willingness to participate in phase two of the study.
- The purpose of this interview is to provide you with the opportunity to elaborate on your experiences as a First Language English Speaking audiologist when communicating with patients who are culturally and linguistically diverse.
- Your input is valuable in understanding the context of audiological service delivery to multilingual and multicultural populations.

3. **Motivation:**

- The information obtained from this study may be used to improve service delivery in terms of motivating for the provision of support services, such as interpreters, annual courses as well as culturally and linguistically relevant resources.

4. **Time line:**

- The interview should take about 15 minutes to complete. The interview will be voice recorded so that all statements made will be accurately represented upon analysis.

Transition: Let me begin by asking you some questions about your employment

BODY: (Short questions)

A: Demographic information

1. How would you describe the institution where you are currently employed?

Probing

- Rural vs urban
- Linguistic profile of majority of patients seen
- Types of resources available that cater to multilingual/ multicultural populations

2. What is your current position?

Probing:

- Community service, junior audiologist, senior audiologist or chief audiologist

3. How long have you been employed at your current institution?

Probing:

- Less than a year, 1-2 years, 2-3 years, 3-4 years, greater than 5 years
- Do you feel that your duration of employment has increased your familiarity and acquisition of the IsiZulu language?

Transition: Speaking about the IsiZulu language and culture, lets discuss your selection of photographs and how they relate to communication with culturally and linguistically diverse patients.

B: Photovoice questions

4. Firstly, what are your thoughts on the language barriers faced by first Language English speaking audiologists during service delivery to diverse patients?

Probing:

- Case history
- Aural rehabilitation, hearing aid orientation
- Speech testing

- Feedback and Counselling

5. Take me through your understanding and perceptions of the isiZulu culture

Probing:

- Knowledge on values, beliefs, behaviours
- Attitude
- Traditional medicine

6. How do you think language and cultural barriers influence factors such as: informed consent, trust, empathy, patient participation, superiority and attitudes?
7. Lets discuss your photography, what do we see in this photograph?

Probing:

- Literal description of the items, people, scenery, background
- When was this photograph taken and where
- Discuss the angle of the photograph
- Discuss the image that appears to be the focus of photograph
- Discuss the use of effects such as black and white if applicable

8. What does this photograph symbolize?

Probing:

- Discuss the association between the photograph taken and the reason why you chose that particular image
- What meaning were you trying to convey with this photograph
- How does this photograph relate to communication with culturally and linguistically diverse patients

9. What is the association between this photograph and your life

Probing:

- How does this photograph relate to the experiences that you have had when working with culturally and linguistically diverse patients
- Challenges experienced: (dialect differences, fluency, conducting audiological procedures and providing intervention etc)
- Achievements: (Picking up key words throughout duration of employment, working with other staff members to assist with translation etc)
- Your feelings: (anxiety, ill prepared, confidence, neutral)
- Your self-rated level of cultural and linguistic competence

10. Why does this circumstance exist

Probing:

- Lack of interpreters
- Availability of relevant resources
- Undergraduate training
- Lack of courses specific to this area

11. Tell me about your current practices in assessing and managing linguistically diverse patients

Probing:

- Interpreters (type: informal vs formal, availability, utilisation rate)
- Written brochures
- Translator applications (effectiveness, accuracy, issues concerning rapport)

12. What recommendations do you have regarding this situation?

Probing:

- Policy changes
- Curricular changes
- Audiologist strategies

CLOSING

- It has been a pleasure discussing your experiences and input on this topic.
- I appreciate that you took the time to be a part of this interview.
- I have all the information that i require, is it fine if we go over a quick summary of the interview to verify.

Thank you for your participation!

APPENDIX H1

INFORMATION DOCUMENT FOR PHOTOVOICE

Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu Natal (KZN)

Dear Participant

Thank you for displaying an interest in the following study. The title of the study is *"Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu Natal"*

In this study, FLES audiologists' cultural and linguistic competency in isiZulu will be explored as well as the factors that affect cross cultural/linguistic communication. Furthermore, FLES audiologists' communication strategies, when working with isiZulu patients, will be investigated. In addition, the study will consider the perspectives of both FLES audiologists as well as isiZulu patients, and recommendations will be sought to improve cross cultural/linguistic communication during audiological service delivery.

The information obtained in this study will be useful in improving service delivery and may influence policy makers in terms of curriculum changes, implementation of support services as well as contextually relevant audiology resources, if need be.

I kindly request your participation, for phase two of the study, order to obtain this information. You will be required to participate in Photovoice, which entails the use of photography (abstract or literal) to convey your experiences regarding provision of services to culturally and linguistically diverse patients. You will receive extensive training on Photovoice which will be supplemented by a Photovoice training manual (Appendix B4). This training will include practice activities to simulate the concepts of Photovoice. The training will also provide a platform to address any queries that you may have. After receiving the training you will be required to capture your photography using the camera on your cell phone device. A minimum of 2 and a maximum of 5 photographs will be permitted. You will be trained on the Ethics surrounding permission when photographing people and organisations, a photo release form will be provided to issue. There will be no known risks to the participant or the subject matter photographed. For the purpose of patient-health practitioner confidentiality, audiologists are advised not to capture photography in which their patients faces are visible.

You are kindly requested to email your photography to the researcher within two weeks. You will also be provided with logbooks to narrate the reason why you choose that specific photograph. Two weeks after the training, the researcher will visit your institution to receive the logbook and conduct a short one-on-one interview with you to reflect on the selection of your photographs and the corresponding narratives.

Permission to conduct this study was obtained from the UKZN Human and Social Sciences Research Ethics Committee, which can be contacted on 0312604557. The study will be conducted by Shadette Gopaul under the supervision of Ms. Seema Panday, who is a lecturer at the Department of Audiology, University of KwaZulu Natal. Should you have any queries you are welcome to contact the Audiology Department at the University of KwaZulu Natal on (031) 260 7438.

The results obtained from the survey will be used for the purpose of this study only and full anonymity will be maintained. Confidentiality of information and your identity is guaranteed. Your participation in this study is voluntary. If you choose not to participate in the study, you will not be disadvantaged in any way. You are free to withdraw from the study at any stage and for any reason. After completion of the study, research data will be stored in a locked file cabinet in the research supervisor's office for a period of five years and thereafter will be destroyed. The researcher will obtain permission from the participants if the photography obtained will be used in presentations to influence policy and practice.

Should you agree to participate in this study, it would be sincerely appreciated if you could please fill in the attached consent form.

Yours Sincerely

_____ _____

Shadette Gopaul **Seema Panday**

(Masters Student) (Research supervisor)

APPENDIX H2

CONSENT FORM FOR PHOTOVOICE

Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu Natal (KZN)

INFORMED CONSENT:

The research study has been explained to me in writing in the information document (Appendix E1). I, _____ (full name) fully understand what my participation in this study involves and I voluntarily:

Agree to participate ☐

Do not agree to participate ☐

Furthermore, I hereby:

Agree for my photography to be used in presentations to influence policy and practice ☐

Do not agree for my photography to be used in presentations to influence policy and practice ☐

_____ _____

Signature of participant **Witness**

_____

Shadette Gopaul

(Masters student)

APPENDIX H3

PHOTOVOICE CAMERA QUALITY SCREENING TOOL

1. Model of cell-phone: _____
2. Cell-phone is equipped with a camera function:

   Yes ☐ No ☐
3. If applicable, how many megapixels does cell-phone camera have: _____mp
4. I rate my cell-phone camera quality as: (with 1 being poor in quality and 10 being superior in quality):

   Tick to indicate your rating

   1 2 3 4 5 6 7 8 9 10
5. I am satisfied with using my cell-phone camera to capture Photovoice photography

   Yes ☐ No ☐

APPENDIX H4

PHOTOVOICE TRAINING MANUAL

PHOTOVOICE

This training manual aims to equip you with all the information needed pertaining to Photovoice. We all are familiar with the phrase "a picture paints a thousand words". Photographs capture circumstances and reflect a point in time.

Photovoice is defined as the procedure in which participants:

- Capture photographs that represent their reality, in terms of the circumstances, attitudes and factors surrounding an issue.
- Engage in discussion about their photographs, highlighting their challenges/concerns.
- Provide their photographs which will be used to make changes.

Why do we utilise photographs:

- Photographs are educational as they enhance awareness and comprehension regarding circumstances that may be of variance to one's own experiences.
- Photographs can influence relevant stakeholders and influence change in policy and practice
- Photographs aid in defining the circumstance as it allows participants to emphasize subjects most pertinent to them.

TRAINING ACTIVITIES:

Training activities will be used to simulate and encapsulate Photovoice.

<u>Activity one:</u>

- Look at this picture of a sunset and now write down all the words you would use to best describe the sunset.
- Do you agree that there are no words that could fully justify the beauty of the sunset?

<u>Activity two:</u>

- Draw a picture that describes your best strengths
- Thereafter engage in discussion about your drawing, the researcher will ask you the following questions:
  - ✓ What do we see in this drawing?

- ✓ What does this drawing symbolize or represent?
- ✓ Why do you want to share this illustration?
- ✓ Does this illustration relate to people/circumstances in your community?

CAPTURING PHOTOGRAPY:

This aspect of the training enables you to be able to capture good photography of subjects and places.

Camera:

Traditionally for large scale Photovoice projects, disposable cameras are provided to participants to capture photographs. Due to the nature of this Masters study being on a smaller scale as well as cost implications, participants will be encouraged to take photographs using the camera on their cell phone device. This will also promote accessibility to capture subject matter as cell phone devices are easily available for retrieval. As a participant, you will then email your photographs to the researcher who will print and develop the photographs.

Important tips for taking pictures:

- Distance: If you are too far away from the subject material, the photograph can become blurry if zoomed into. As a rule of thumb, you should be at least 20 steps away from the subject matter that you would like to capture.

- Lighting: It is important to always capture photographs using the best possible lighting. Avoid taking out a photograph in candlelight or dimly lit areas.

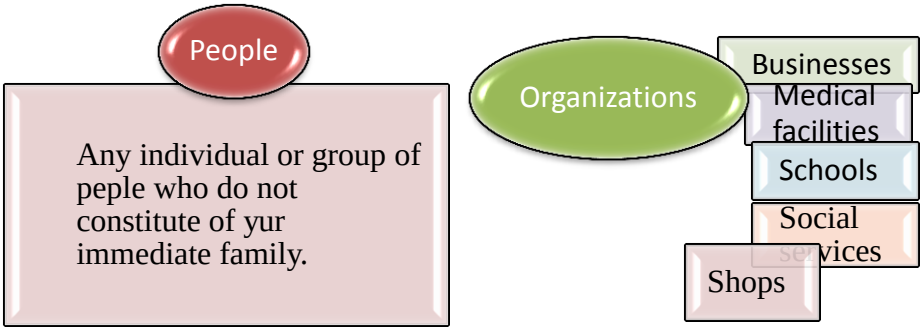
- Flash: Ensure that you use flash (check in your camera settings that you have selected the flash to be on) as this will enhance the quality of the photograph. It is important to always capture photographs using the best possible lighting

- Contrasts: Certain contrasts can add value to the photograph as well as create depth and dimension. For example, if you want to represent history in terms of a different time or era, then a black and white contrast works well. These contrasts can be found in the special features of your cell phone camera and can be used at your discretion.

- Permission: If you intend to take the picture of a person or organisation, it is very important that you first obtain permission from the relevant subjects prior to taking the photograph (this will be discussed further under Ethical considerations).

Permission for taking photographs of people and organizations:

As previously emphasized, permission is an important aspect in capturing photography. Examples of subject matter that would require you to first obtain permission include:



How do I go about obtaining permission?

- The first step is to communicate and explain the study to the person/organisation.
- The second step is to obtain consent by providing the person or individual in charge of the organisation with a permission slip, which will be provided to you (refer to Appendix E5).

- **For the purpose of patient-health practitioner confidentiality, audiologists will be advised not to capture photography in which their patients' faces are visible.**

TRAINING ACTIVITY:

- Practice by obtaining the permission of two subjects by explaining the project, issuing the permission slip and capturing their photograph.
- Follow up questions:
  - ✓ Did you encounter any difficulties during the process of obtaining permission? If yes, discuss the challenges encountered.
  - ✓ What recommendations would you make to improve the process of permission?

PRIORITISING YOUR PHOTOGRAPHY:

There are an endless number of photographs that can be taken, however an important skill to develop is the ability to review your photography and prioritise, by selecting the best photographs that represent the research topic.

TRAINING ACTIVITY:

- Capture 10 photographs that represent our country South Africa.
- After you have taken your 10 photographs, allow yourself a day to come back and review your photography with "fresh eyes".
- Upon review consider:
  - ✓ Which photographs best define the context
  - ✓ Which photographs provide the most information
  - ✓ Which photographs best answer the research question
- After your review, refine your selection by choosing five of the most appropriate photographs that you feel should be submitted.

APPLICATION TO THE PRESENT STUDY:

For the purpose of this study, a minimum of two photographs and a maximum of 5 photographs, pertaining to communication between first language English speaking audiologists and culturally/linguistically diverse patients, are required from you as a participant.

Therefore, you will apply the same principles demonstrated in the training activity, that will guide you in the selection and prioritisation of photographs for submission.

KEEPING RECORD OF YOUR PHOTOGRAPHS:

After you have selected the photographs that you want to use, appropriate documentation needs to follow. Logbooks will be provided to allow you to keep record of your photographs. There are two types of documentation that you will need to record in your logbook:

The title for each photograph

A narrative for each photograph

The title for each photograph:

- ✓ The first step requires allocation of a number eg #1.
- ✓ The second step is giving your photograph a name. You may choose any name that you feel best represents the photograph.

- ✓ Please ensure that the number and title allocated in your logbook corresponds with the number and title of the actual photograph. This can be easily achieved by renaming the photograph stored in your camera on your cell phone and saving it accordingly. This will help the researcher correlate between the logbook and the emailed photographs to be printed.

A narrative for each photograph:

- ✓ The narrative for your photograph should fall under the title and should include the following aspects as a guideline:
  - The narrative is where you attach meaning to your photograph. Think about why you want to share this photo and what the photograph symbolizes (abstract or literal meaning).
  - Consider how this photograph relates to your personal experiences as a first language English speaking audiologist and the situations you encounter when providing services to culturally and linguistically diverse patients.
  - Consider the context of your photograph, what are the inferences you are making? Try to link your narrative to the research topic by considering both positive and negative factors.

Example

If the topic of the study was about the heritage of South Africa:

An example of a photograph:

Don't forget to rename your photograph with the number and title when saving it on your cell phone! ☺

#1 The Peak of Pride

An example of the entry you would make in your logbook:

	#1 The Peak of Pride Table Mountain represents the epitome of South Africa's heritage. Nominated as one of the Worlds Wonders, it is a landmark that fills South Africans with pride. Enticing and attractive, it beckons tourists to Cape Town and allows exploration into our rich cultural diversity. Table Mountain also represents the hurdles that we as South Africans faced, in terms of apartheid, as the mountain is indicative of an uphill struggle. However, as we keep moving forward toward a democratic country, a magnificent view awaits us.	

Don't forget to first include the number and title correlating to your photograph.

Below the title provide a narrative on why you choose that particular photograph and what it represents.☺

APPLICATION TO THE PRESENT STUDY:

For the purpose of this study, after duration of two weeks the logbooks will be retrieved. This date will be communicated to you at this training session. All photography should be emailed to the researcher prior to the two week deadline to allow for the photographs to be printed and discussed on the day of logbook retrieval.

ONE-ON-ONE INTERVIEW:

Upon receiving the logbooks, the researcher will conduct a short interview with you. This interview will provide you with the opportunity to discuss your thought processes behind the selection of your photographs as well as to expand on your narratives.

The one-on-one interview will consist of 6 questions and should be approximately 15 minutes in duration.

SUMMARY OF THE PHOTOVOICE PROCEDURE FOR THIS STUDY

Read the information letter and fill out the consent form to participate in the Photovoice phase of this study.

Receive training on Photovoice:

All queries that you may have will be addressed.

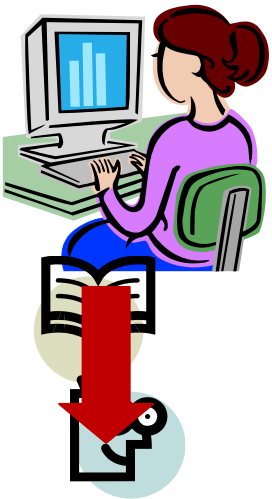
Capture your photographs (Minimum: 2 and maximum: 5) that best represent communication between first language English speaking Audiologists and culturally/linguistically diverse patients.

#Remember to use: the **camera** techniques discussed, the **prioritisation** techniques and the **Photo release form** in obtaining permission to photograph subjects.

Email all photographs to the researcher before the two week deadline. The date will be confirmed and communicated to you at the training session.

Contact details: shadette.gopaul@gmail.com

Remember to rename your photographs with the number and title before you email them to the researcher☺



Don't forget to fill in you logbook with the number and title of each photograph followed by the narrative.

Two weeks after the training, the researcher will visit your institution to retrieve the logbook.

During this visit the researcher will conduct a short one-on-one interview with you to reflect on your selection of photographs and the corresponding narratives.

Thank you for your participation in the Photovoice training!☺

REFERENCE:

Briley, C., & Parker, S. (2011). *Photovoice Training: Giving a Voice to a Photograph.* Mississippi State University: Office of Agricultural Communications.

APPENDIX H5

PHOTO RELEASE FORM

To whom it may concern

My name is _____ and I am a participant in a study that is focusing on the communication between First Language English speaking audiologists and isiZulu patients in the provision of services. I am using photographs to help answer this research question. In doing so, one of the photographs that I would like to capture is of you/your organization. Please may I obtain your informed consent to take this picture, if you approve kindly provide your signature on this photo release form that indicates that you have agreed to allow me to take this photograph.

Signature of subject: _____

Date: _____

Thank you for your participation.

APPENDIX H6

SUGGESTION LETTER

Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu Natal (KZN)

Dear Participant

Thank you for displaying an interest in the following study. The title of the study is *"Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu Natal"*

In this study, FLES audiologists' cultural and linguistic competency in isiZulu will be explored as well as the factors that affect cross cultural/linguistic communication. Furthermore, FLES audiologists' communication strategies, when working with isiZulu patients, will be investigated. In addition, the study will consider the perspectives of both FLES audiologists as well as isiZulu patients, and recommendations will be sought to improve cross cultural/linguistic communication during audiological service delivery.

In order to achieve the above aim your participation is kindly requested. This is a suggestion letter which based on your responses, will assist in improving the research study. The purpose of this letter is to evaluate the effectiveness of the questionnaire. After filling out the questionnaire, kindly answer the questions below.

1. Did you have difficulty understanding the Photovoice training? If yes, please indicate which aspects of the Photovoice training were unclear

   _____

   _____

   _____

2. Did you find the Photovoice training manual to be easy to follow and understand?

   _____

   _____

3. Having being trained on Photovoice and equipped with the training manual to supplement the information covered, do you feel confident in carrying out all relevant procedures? If no, please indicate the areas you feel require additional training on

   _____

   _____

4. Were there any words/terms in the interview, which you did not understand? Please list below:

   _____

   _____

5. Were the questions straightforward and easy to understand?

   _____

   _____

6. Did you feel uncomfortable answering any of the questions? If yes, please indicate the question number.

   _____

   _____

7. Did you find the interview too long?

   _____

8. Do you have any suggestions/ recommendations to improve the Photovoice training, training manual or the interview?

   _____

   _____

   _____

9. Would you recommend Photovoice to others?

   _____

   _____

   _____

   Thank you for your participation!

APPENDIX I

PATIENTS QUESTIONNAIRE

Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu Natal (KZN)

Dear Participant

Thank you for showing an interest in my study. This study wants to find out how English speaking Audiologists communicate and interact with their patients who speak IsiZulu. Some of the questions may seem sensitive, but I kindly request that you answer as honestly as possible. The responses to this questionnaire will not be provided to anyone in this audiology department, and your answers will not affect the service you receive or the way you are treated by the audiologist. The information from all the patients in the study will be added together so that it will not be possible to identify your responses or anyone else's. The information that you and all the other patients provide will be taken to the University of KwaZulu-Natal in Durban where it will be studied by the researcher. The information from this study will be used to improve audiology service delivery at audiology departments at public hospitals in KwaZulu-Natal.

Please answer the following questions, which will not take more than 10 minutes of your time.

QUESTIONNAIRE

For Official Use Only

Participant No:_____

SECTION 1: DEMOGRAPHICAL INFORMATION:

Age: _____

Gender: _____

Race: _____

First Language: _____

SECTION 2: ENGLISH SPEAKING AUDIOLOGISTS COMMUNICATION AND INTERACTION

The following statements are about the way the audiologist communicates with you when providing services. There are no right or wrong answers. Think about the statement and indicate which of these answers are right for you by placing a tick (✓) or cross (X) in the column that you agree with.

	1	2	3	4	5
Questions	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1. The audiologist is aware that the isiZulu culture is different from their own					
2. The audiologist needs more knowledge on traditional methods of treating hearing loss.					
3. The audiologist has difficulty conducting a culturally based assessment					
4. It comes across as if the audiologist dreads engaging with me because our culture is different					
5. The audiologist does not spend enough time speaking to me.					

6. The audiologist does not try to explain things in a way that is easy to understand					
7. It is difficult for me to understand the questions being asked about my ear and hearing problems.					
8. It is difficult for me to explain myself in IsiZulu when asked questions because I feel that the audiologist will not understand.					
9. When the audiologist tries to counsel me on my problem, I feel lost and do not understand all the information.					
10. It is sometimes difficult for me to give permission to have audiology tests because I do not understand the information explained about the test					
11. It is not always easy for me to trust the audiologist who has a different culture and does not speak my language.					
12. I sometimes have difficulty participating in the assessment or treatment because our language and culture are different					
13. The audiologist does not consult with me when making decisions about my treatment.					
14. The audiologist is not able to show that they care and understand my difficulties because our language and culture are different					
15. I sometimes feel inferior to the audiologist because our language and culture are different					
16. I sometimes notice a negative attitude from the audiologist because our language and culture are different.					
17. I sometimes do not feel satisfied with the quality of service because the audiologist is not of the same language and culture.					
18. There is a trained interpreter always available when needed.					
19. I sometimes worry about the confidentiality of information when an informal interpreter is used					
20. I sometimes feel insignificant when an interpreter is used because the audiologist speaks to the interpreter and not to me.					
21. Audiology assessment can take a very long time when an interpreter is used.					

22. I would prefer if the Audiologist was able to communicate in IsiZulu instead of using an interpreter.					
23. Audiologists need more training to improve their knowledge on the isiZulu language and culture					
24. There is a need for more audiology assessment and treatment resources in IsiZulu.					

25. I consider audiologists ability to communicate in isiZulu to be:

Excellent		Good		Average		Poor		Unsure	

26. The following individual interprets for me during audiological service delivery:

Trained interpreter		Staff member		Family member		Another patient		Other		Not applicable	

27. What recommendations do you have to improve communication between English speaking audiologists and IsiZulu patients?

ISITHASISELO I1

UkuxhumanaphakathikukadokotelawezindlebeokhulumaisiNgisinjengolimilokuqalakanyenezigulieziklhulumaizilimiezinhoblnhloboezikhungwenizikahulumenilaphokuhlinzekwakhonangezinsizazomphakathi

Mbambiqhaza

Ngiyabonga ukubonisa inthsisekelo kulolucwaningo. Lolu cwaningo lifuna ukuthola ukthi ingabe odokotels abalapha izindlebe abakhuluma isiNgisi baxhumana kanjani neziguli zabo ezikhuluma isiZulu. Eminye yemibuzo ingabe bucayi kodwa uyacelwa uyiphendula ngokwethembeka. Imibuzo nezimpendulo zakhona ngeke inikezelwe kubasebenzi bomNyango futhi angeke kuthikameze usizo olutholayo kodokotela abalapha izindlebe. Ulwazi oluyotholakala kulolu cwaningo

LolucwaningoluhloseukutholaukuqondakangconoimibonoyeziguliizinamasikoahlukenenezikhulumaizilimiezihlukenemayelananokuxhumananodokotelabezindlebeabakhulumaisiNgisi.

Ulwazioluzotholakalakulolucwaningoluzobawusizoekuthuthukiseniizingalokuhlinzekwakwezidingofuthilungabanomthelelakwabakhaizinqubomgomongokokwezinhlelozokufunda, ukwesekwanezinsizaezibalulekileekwelashwenikwezindlebe, umakunesidingo.Ulindelekeukuthiugcwaliselesaveyiezokuthathaimizuzuengeqile kweyi-10 yesikhathisakho.
Imiphumelayesaveyiizosetshenziswaocwaningwenifuthiimininingwaneyakhoiyimfihlo.

UHLU LWEMIBUZO

Okokusetshenziswa Ehhovisikuphele

Inombolo Yobambeighaza:_____

ISIGABA 1: Imininingwane Ngabantu:

Ubudala: _____

Ubulili: _____

Uhlanga: _____

Ulimilwakho: _____

ISIGABA 2:

Lezi zitatimende ezilandelayo zimayelana ngendlela udokotela olapha izindlebe axhumana ngayo nawe uma ekuhlenga. Azikho izimpendulo ezilungile nezingalunganga. Cabanga ngesitatimende futhi ukhombise impendulo ovumelana nayo kokubeka (√) noma (X) ebhokisini elisondelene nayo impendulo.

	1	**2**	**3**	**4**	**5**
IMIBUZO	**Ngiyavuma Kakhulu**	**Ngiyavuma**	**Angivumifuthiangiphiki**	**ngiyaphika**	**Ngiyaphika Kakhulu**
1. Udoketela wezindlebe uyazi ukuthi usiko lwesizulu lwehlukile kolwakhe					
2. Udoketela olapha izindlebe udinga ulwazi olunzulu ngezindlela zesintu zokulapha					
3. Udoketela wezindlebe uthola inking uma ehlola ngokuhlobane nosiko					

4. Kuke kubonakale sengathi udoketela wezindlebe akangithandi ngoba amasiko ethu ahlukane					
5. Udoketela olapha izindlebe akachithi isikhathi esanele ekhuluma nami					
6. Udoketela olapha izindlebe akazami ukuchaza izinto ngendlela eqondakala kalula					
7. Kunzima kimina ukuqonda imibuzo ebuzwa mayelana nenkinga yendlebe yami.					
8. Kunzima kimina ukuchaza ngesiZulu uma ngibuzwa imibuzo ngoba ngicabanga ukuthi udokotela ngeke angizwe					
9. Uma udokotela wezindlebe engeluleka ngenkinga yami ngizizwa ngididekile futhi ngingaluqondi ulwazi engilinikezwayo					
10. Kunzima kimina ukunikeza igunya lokuthi ngelashwe izindlebe ngoba angikuqondi okusuke kuchazwa ngokumele kwenziwe.					
11. Kunzima kimina ukunikeza igunya lokuthi ngelashwe izindlebe ngoba angikuqondi					

okusuke kuchazwa ngokumele kwenziwe.					
12. Akulula ukuthi ngithembe udokotela wezindlebe onesiko futhi okhuluma ulimi oluhlukile kolwami					
13. Ngibanenkinga ekubambeni iqhaza ngoba ulimi namasiko ethu kuhlukile					
14. Udoketela olapha izindlebe akaxhumani name uma ethatha inqumo mayelana nemithi					
15. Udoketela olapha izindlebe akakuthsengisi ukunakekela futhi nokuqonda ubunzima ngoba ulwimi nosiko lwethu lwahlukile					
16. Ngezinye izikhathi ngizwa izinga lenhlonipho liphansi kudoketela olapha izindlebe ngoba ulimi nosiko lethu lwahlukile					
17. Ngiyaye ngibone udokotela wezindlebe esesimweni esingesihle ngenxa yokuhluka kwezilimi namasiko ethu					
18. Ngiyaye ngizizwe ngingenelisekile ngosizo engilitholayo ngenxa yokuthi ulimi nesiko lwami alufani nolukadokotela wezindlebe.					

19. Kuhlale kukhona otolikayo uma edingeka					
20. Ngezinye izikhathi ngiyakhathazeka ngemfihlo lwazi uma kusethsenziswa utolika					
21. Ngezinye izikhathi ngizwa ngingelutho uma kusethsenziswa utolika ngoba udoketela olapha izindlebe ukhuluma notolika ayi name nqo					
22. Uxilongo ladoketela olapha izindlebe luthatha isikhathhi eside uma kusethsenziswa utolika					
23. Kungabancono uma udoketela olapha izindlebe angakwazi ukukhuluma isiZulu kunokuba asebenzise utolika					
24. Odokotela badinga ukuqeqeshwa okwengeziwe ukuze bakhulise ulwazi lwabo ngosiko lwesiZulu					
25. Kunesidingo esikhulu sokuxilonga izindlebe futhi nezinsiza zokuhlenga ngolwimi lwesiZulu					

26. Ikhono likadokotela wezindlebe lokukhuluma isiZulu ngilibona:

Lincomeka		Lilihle		Liphakathinendawo		Lilibi		Anginasiqiniseko	

27. Ngitolikelwa yilo olandelayo umangithola usizo lwezindlebe:

Utolika oqeqeshwe ngokusemthethweni		Omunye wabasebenzi		Ilungulomndeni		Esinye isiguli		Omunye		Akungithinti	

28. Iziphi izincomo iziphakamiso onazo zokuthuthukisa ukuxhumana phakathi kodoketela abalapha izindlebe abakhuluma isingisi neziguli ezikhuluma isiZulu

APPENDIX I2

INFORMATION DOCUMENT

Exploring Communication between First Language English speaking (FLES) audiologists and isiZulu patients in the provision of services at public sector hospitals in KwaZulu Natal (KZN)

Dear Participant

Thank you for showing an interest in my study. This study wants to find out how English speaking Audiologists communicate and interact with their patients who speak IsiZulu.

In this study, FLES audiologists' cultural and linguistic competency in isiZulu will be explored as well as the factors that affect cross cultural/linguistic communication. Furthermore, FLES audiologists' communication strategies, when working with isiZulu patients, will be investigated.

The information obtained in this study will be useful in improving service delivery and may influence policy makers in terms of curriculum changes, implementation of support services as well as contextually relevant audiology resources, if need be.

I kindly request your participation in order to obtain this information. You will be required to complete a survey that will require approximately 10 minutes to complete. The results obtained from the survey will be used for the purpose of this study only and full anonymity will be maintained.

Permission to conduct this study will be obtained from the UKZN Human and Social Sciences Research Ethics Committee, which can be contacted on 0312604557. The study will be conducted by Shadette Gopaul under the supervision of Ms. Seema Panday, who is a lecturer at the Department of Audiology, University of KwaZulu Natal. Should you have any queries you are welcome to contact the Audiology Department at the University of KwaZulu Natal on (031) 260 7438.

Confidentiality of information and your identity is guaranteed. Your participation in this study is voluntary. If you choose not to participate in the study, you will not be disadvantaged in any way. You are free to withdraw from the study at any stage and for any reason. After completion of the study, research data will be stored in a locked file cabinet in the research supervisor's office for a period of five years and thereafter will be destroyed.

Should you agree to participate in this study, it would be sincerely appreciated if you could please fill in the attached consent form and complete in full the attached survey.

Yours Sincerely

_____	_____
Shadette Gopaul	**Seema Panday**
(Masters Student)	(Research supervisor)

ISITHASISELO I3

UMBHALO ONIKA ULWAZI EZIGULINI EZINAMASIKO NEZILIMI EZIHLUKENE

Ukuxhumana phakathi kukadokotela wezindlebe okhuluma isiNgisi njengolimi lokuqala kanye neziguli ezinamasiko futhi ezikhuluma izilimi ezinhlobo nhlobo ezikhungweni zikahulumeni lapho kuhlinzekwa khona ngezinsiza zomphakathi KwaZulu-Natali.

Sawubona

Siyabonga ngokukhombisa umdlandla wokubamba iqhaza kulolucwaningo.Isihloko socwaningo sithi "Ukuxhumana phakathi kukadokotela wezindlebe okhuluma isiNgisi njengolimi lokuqala kanye neziguli ezinamasiko futhi ezikhuluma izilimi ezihlukene ezikhungweni zikahulumeni lapho kuhlinzekwa khona ngezinsiza zomphakathi KwaZulu-Natali". Inhloso yocwaningo ukubalula izinto ezinomthelela ekuxhumaneni uma kwenziwa umsebenzi wokwelapha iziguli ezinamasiko ahlukene futhi ezikhuluma izilimi ezihlukene eziphathwa izindlebe.

Lolucwaningo luhlose ukuthola nokuqonda kangcono imibono yeziguli ezinamasiko ahlukene nezikhuluma izilimi ezinhlobonhlobo mayelananokuxhumana nodokotela bezindlebe abakhuluma isiNgisi.

Ulwazi oluzotholakala kulolucwaningo luzobawusizo ekuthuthukiseni izinga lokuhlinzekwa kwezidingo futhi lungabanomthelela kwabakha izinqubomgomo ngokokwezinhlelo zokufunda, ukwesekwa nezinsiza ezibalulekile ekwelashweni kwezindlebe, uma kunesidingo.

Ngicela ubambe iqhaza ukuze kutholakale lolulwazi. Ulindeleke ukuthi ugcwalise lesaveyi ezokuthatha imizuzu engeqile kweyi-10. Imiphumela yesaveyi izosetshenziswa ekucwaningeni futhi imininingwane yakho iyimfihlo.

Imvume yokughubeka naloluphenyo okanye nalesifundo itholakala kwikkomidi eyengamele ezobuntu, nesayensi yezokuhlalisana ku- (031) 2604557. Lolucwaningo luzokwenziwa uShadette Gopaul elulekwa uNkz. Seema Panday, ongumfundisi eMnyangweni. Wezokulashwa Kwezindlebe, eNyuvesiYaKwaZulu-Natali.

Uma unemibuzo ungaxhumana noMnyango Wezokulashwa Kwezindlebe eNyuvesi YaKwaZulu-Natali ku-(031)260 7438.

Ubumfihlo bolwazi nawe buqinisekisiwe. Ukubamba kwakho iqhaza kulolucwaningo kungokuzithandela. Uma ukhetha ukungalibambi iqhaza, ngeke ubenenkinga. Unelungelo lokuhoxa

noma yinini futhi ngenxa yanoma isiphi isizathu. Uma seluphothuliwe ucwaningo, yonke imininingwane yocwaningo iyovalelwa endaweni ephephile ekhiyiwe ehhovisi likameluleki isikhathi esiyiminyaka emihlanu emva kwalokho iyobe isishatshalaliswa.

Uma uvuma ukubamba iqhaza ocwaningweni, kuyosithokozisa uma ungagcwalisa ifomu lokugunyaza eliyingxenye yalokhu futhi ugcwalise ngokugcwelisaveyi ehambisana nalo.

Abazithobayo

_____ _____

Shadette Gopaul **Seema Panday**

(Umfundiweziquze-Masters) (UmelulekiWowaningo)

ISITHASISELO I4

IFOMU LOKUVUMA UKUBAMBA IQHAZA LEZIGULI EZINAMASIKO NEZILIMI EZIHLUKENE

UkuxhumanaphakathikukadokotelawezindlebeokhulumaisiNgisinjengolimilokuqalakanyeneziguliezinamasikofuthiezikhulumaizilimiezihlukeneezikhungwenizikahulumenilaphokuhlinzekwakhonangezinsizazomphakathiKwaZulu-Natali

UKUVUMA WAZI:

Ucwaningoseluchaziwekimingokubhaliweembhalwenioyisithaiselo (Isithasiselo F3). Mina., _____ (igamaeligcwele) ngiyakuqondangokugweleukuthiukubambakwamiiqhazakulolucwaningokushoukuthinifuthingokukhululeka :

Ngiyavumaukubambaiqhaza ☐

Angivumiukubambaiqhaza ☐

_____ _____

KusayinaobambaiqhazaUfakazi

_____

Shadette Gopaul

(umfundiweziquze-Masters)

APPENDIX J

INFERENTIAL STATISTICS: SIGNIFICANT ASSOCIATIONS

QUESTION		Number of years practising as an audiologist	Type of Institution: Urban vs Rural	Race	Age
17. I have limited knowledge regarding health related isiZulu cultural behaviours eg. Seeking of traditional medicine	**ANOVA**	30.875			
	Df	31			
	Sig.	0.021			
55. I prefer written handouts as a substitute for verbal communication in IsiZulu	**ANOVA**	48.968			
	Df	31			
	Sig.	0.035			
20. It is time consuming to adapt resources and services, such as test materials and assessment procedures, when encountering IsiZulu patients	**ANOVA**		29.219		
	Df		1		
	Sig.		0.038		
45. The isiZulu language is easy to master (cognitive)	**ANOVA**		25.500		
	Df		31		
	Sig.		0.012		
25. Formal education (school and university) has adequately prepared me to converse in IsiZulu in the South African context	**ANOVA**			15.219	
	Df			31	
	Sig.			0.040	
42. Patients sometimes withdraw and do not actively participate because I do not speak isiZulu as my first language	**ANOVA**			31.719	
	Df			31	
	Sig.			0.016	

QUESTION		Race	The Indigenous language (eg IsiZulu/ Xhosa) courses taught at University were not specific to the discipline of Audiology and therefore not beneficial.
47. I prefer conducting audiological assessments on English speakers than first language isiZulu speakers (attitude)	**ANOVA**	51.719	
	Df	31	
	Sig.	0.039	
Formal education (school and university) has adequately prepared me to converse in IsiZulu in the South African context	**Chi Square**		**45.833**
	Df		**9**
	Sig.		**0.00**

T-TEST OF SIGNIFICANT ASSOCIATIONS

Independent Samples Test				
Levene's Test for Equality of Variances				
			Gender	Age
19. It is not always easy to conduct a culturally based audiological assessment with IsiZulu patients	Equal variances assumed	**F**	4.498	
		Sig.	0.042	
The quality of conducting case history, eg obtaining a wealth of in-depth information, is significantly better when communicating with my First Language English speaking patients	Equal variance assumed	**F**		37.500
		Sig.		0.00

APPENDIX K

FISCHERS EXACT TEST

Cross-tabulation					
			Q63		Total
			Average	Poor	
Q61	Excellent	Count	1	1	2
		Expected Count	.1	1.9	2.0
		% within Q61	50.0%	50.0%	100.0%
		% within Q63	100.0%	3.2%	6.3%
		% of Total	3.1%	3.1%	6.3%
	Good	Count	0	1	1
		Expected Count	.0	1.0	1.0
		% within Q61	0.0%	100.0%	100.0%
		% within Q63	0.0%	3.2%	3.1%
		% of Total	0.0%	3.1%	3.1%
	Average	Count	0	14	14
		Expected Count	.4	13.6	14.0
		% within Q61	0.0%	100.0%	100.0%
		% within Q63	0.0%	45.2%	43.8%
		% of Total	0.0%	43.8%	43.8%
	Poor	Count	0	15	15
		Expected Count	.5	14.5	15.0
		% within Q61	0.0%	100.0%	100.0%
		% within Q63	0.0%	48.4%	46.9%
		% of Total	0.0%	46.9%	46.9%
Total		Count	1	31	32

	Expected Count	1.0	31.0	32.0
	% within Q61	3.1%	96.9%	100.0%
	% within Q63	100.0%	100.0%	100.0%
	% of Total	3.1%	96.9%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	15.484[a]	3	.001	.094		
Likelihood Ratio	6.127	3	.106	.094		
Fisher's Exact Test	7.949			.094		
Linear-by-Linear Association	8.198[b]	1	.004	.063	.063	.063
N of Valid Cases	32					

a. 6 cells (75.0%) have expected count less than 5. The minimum expected count is .03.

b. The standardized statistic is 2.863.

APPENDIX L

DATA ANALYSIS OF PHOTOVOICE PHOTOGRAPHS

PHOTOGRAPH	TITLE	PREVIEW, REVIEW, COMPARE AND CONTRAST
Exhibit A	*Roots of knowledge*	Exhibit A conveys a figurative association between brightly lit light bulbs and audiological areas of competence. The burnt out light-bulb represents lack of isiZulu knowledge. The photograph, corresponding title and narrative therefore indicate good congruency. The theme identified is cultural competency in isiZulu.
Exhibit B	*The Illusion of Communication*	Exhibit B conveys a figurative association between the illusion of two faces and the illusion of effective communication transpiring between FLES audiologists and isiZulu patients. The photograph, corresponding title and narrative therefore indicate good congruency. The theme identified is linguistic competency in isiZulu.
Exhibit C	*Building Walls*	Exhibit C conveys a figurative association between a brick wall and the isiZulu language, being a barrier to successful communication. The photograph, corresponding title and narrative therefore indicate good congruency. The theme identified is linguistic competency in isiZulu.
Exhibit D	*Sinking into obscurity*	Exhibit D conveys a figuration association between the feelings experienced when drowning and the feelings experienced when being unable to communicate with isiZulu patients. The photograph, corresponding title and narrative therefore indicate good congruency. The theme identified is linguistic competency in isiZulu.
Exhibit E	*A little goes a long way*	Exhibit E conveys a figurative association between a small boat going out into sea and the use of simple techniques, such as key words, to becoming increasingly competent in isiZulu. Both emphasize that small efforts, if continuous, can be far-reaching. The photograph, corresponding title and narrative therefore indicate good congruency. The theme identified is Recommendations.
Exhibit F	*Plant a seed and a tree will grow*	Exhibit E conveys a figurative association between nurturing a seed to growth and the efforts to develop skills in achieving cultural and linguistic competency in isiZulu. The photograph, corresponding title and narrative therefore indicate good congruency. The theme identified is Recommendations.

APPENDIX M

CORRELATION TEST

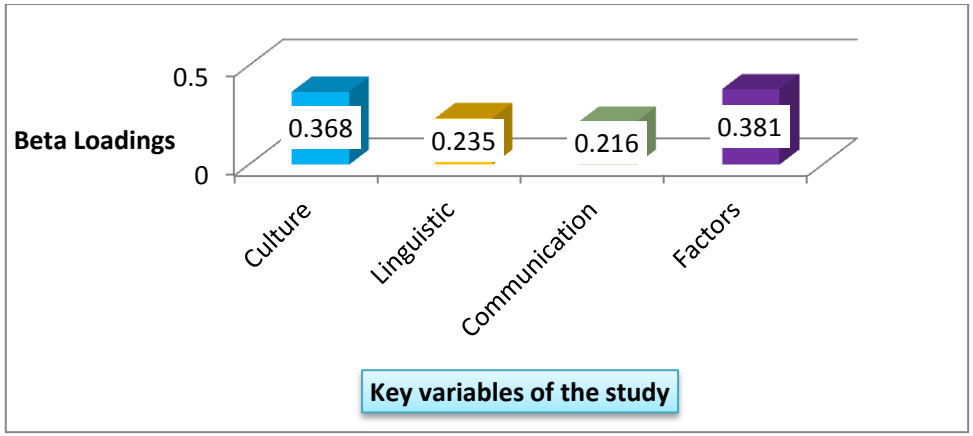
Correlations					
		Cultural competency in IsiZulu	Linguistic competency in IsiZulu	Factors that influence Effective communication	Communication practices
Cultural competency in IsiZulu	Pearson Correlation				
	Sig. (2-tailed)				
	N				
Linguistic competency in IsiZulu	Pearson Correlation	.497**			
	Sig. (2-tailed)	.004			
	N	32			
Factors that influence Effective communication	Pearson Correlation	.751**	.623**		
	Sig. (2-tailed)	.000	.000		
	N	32	32		
Communication practices	Pearson Correlation	.405*	.606**	.518**	
	Sig. (2-tailed)	.021	.000	.002	
	N	32	32	32	
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

APPENDIX N

MULTIPLE REGRESSION ANALYSIS

Regression Analysis:

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.999[a]	.998	.998	.64870		
ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6358.107	4	1589.527	3777.252	.000[b]
	Residual	11.362	27	.421		
	Total	6369.469	31			
Co-efficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-59.103	2.351		-25.140	.000
	Culture	1.054	.034	.368	30.696	.000
	Linguistic	1.002	.049	.235	20.436	.000
	Communication practices	.984	.048	.216	20.502	.000
	Factors	60.037	2.139	.381	28.065	.000


Beta Loadings
0.5
0
0.368
0.235
0.216
0.381
Culture
Linguistic
Communication
Factors
Key variables of the study