



Translation and Adaptation of the Self Assessment of Communication (SAC) and Significant Other Assessment of Communication (SOAC) into Afrikaans

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Table of Contents

Acknowledgements	ii
Table of Contents	iii
List of Tables	vii
List of Figures	viii
Glossary	ix
List of Abbreviations	xiv
Abstract	xv
Introduction.....	18
Chapter One: Literature Review	21
SAC and SOAC	25
Translation and Adaptation Method	27
Chapter Summary	30
Chapter Two: Methodology	31
Aims and Objectives	31
Aim 1: To Develop an Afrikaans Version of the SAC and SOAC Using the AAOS Guidelines	311
Aim 1: Research Design	311
Aim 1: Participants	32
Aim 1: Data Collection	37
Aim 1: Materials	38
Aim 1: Procedure	38
Aim 1: Data Management.....	42

Aim 1: Data Analysis.....	422
Aim 1: Trustworthiness	433
Aim 2: To Describe the Usability of the Afrikaans SAC and SOAC by Audiologists	45
Aim 2: Research Setting	45
Aim 2: Research Design	455
Aim 2: Participants	455
Aim 2: Data Collection	477
Aim 2: Materials	488
Aim 2: Procedure	48
Aim 2: Data Management.....	49
Aim 2: Data Analysis.....	49
Aim 2: Trustworthiness	500
Ethical Considerations	522
Autonomy	522
Justice.....	522
Beneficence: Risk/Benefit Ratio.....	53
Non-maleficence	533
Confidentiality	533
Chapter Three: Results.....	54
Aim 1: To Develop an Afrikaans Version of the SAC and SOAC Using AAOS Guidelines	544
Stage 1 and 2: Forward Translation and Synthesis.....	54
Stage 3 and 4: Backward Translation and Expert Review.....	59
Stage 5: Field Testing	633

Aim 2: To Describe the Usability of the Afrikaans SAC and SOAC by Audiologists	68
Surveys.....	722
Verbal Feedback Interviews	733
Chapter Four: Discussion.....	778
Aim 1	778
Main Findings of the Study	778
Issues/Challenges in the Translation Procedure	800
Other Underlying Issues and Factors to Consider for Translation Studies.....	811
Other Translation Procedures – the Delphi Technique.....	844
Aim 2	877
Main Findings of the Study Aim	877
Discussion on the Themes Identified.....	877
Practical Issues and Challenges	911
Conclusion	933
References.....	955
Appendices.....	1033
Appendix A: Original SAC.....	1033
Appendix B: Original SOAC	1044
Appendix C: Participant Information Form.....	1055
Appendix D: Research Assistant Information Sheet (Aim 1, Objective 2)	1066
Appendix E: Author’s Consent.....	1088
Appendix F: HREC Approval Letter	10909
Appendix G: Translator’s Informed Consent Letter (Aim 1, Objective 1).....	1111

Appendix H: Letter to Private Audiological Company	1122
Appendix I: Patient Participant’s Informational Consent Letter (Aim 1, Objective 2)	1144
Appendix J: Forward Translations and Synthesis Changes (Aim 1, Objective 1).....	1166
Appendix K: Back Translations and Expert Panel Review Changes (Aim 1, Objective 1).	1311
Appendix L: Raw Data of the Field Testing Responses (Aim 1, Objective 2).....	1433
Appendix M: Witrand Hospital Approval Letter	1544
Appendix N: Audiologist Participant Informed Consent Letter (Aim 2)	1555
Appendix O: Letter to the Practice Patients (Aim 2)	15757
Appendix P: Afrikaans SAC.....	15858
Appendix Q: Afrikaans SOAC	15959
Appendix R: Audiologist Participant’s Survey (Aim 2).....	1600
Appendix S: Raw Data of Survey Responses (Aim 2)	1622
Appendix T: Transcription of Verbal Feedback Interviews (Aim 2)	16969
Interview 1	16969
Interview 2	1711
Interview 3	1743

List of Tables

Table 1: Item 1 to 4 Word Changes during Forward Translation and Synthesis.....56

Table 2: Changes made during Expert Committee Review for Items 1 to 361

Table 3: Analysis of the Patient Participant Responses in Field Testing Stage.....64

Table 4: Summary of Survey Responses on the Usability of the Afrikaans SAC and SOAC.....69

Table 5: Data Analysis of the Verbal Feedback Interviews.....76

List of Figures

Figure 1: The Translation and Adaptation Procedure as per AAOS Guidelines 387

Glossary

Activity limitations: This term is used in the World Health Organization's (WHO) International Classification of Functioning (ICF) in disability and health framework (see definition below) to describe an individual's capacity to execute an activity due to a health disability (Granberg et al., 2014). For example, an individual with a hearing loss (health disability) is experiencing difficulty to hear their spouse or significant other (activity limitation).

Conceptual equivalence: This refers to words that appear different due to cultural differences but the meanings and ideas are conceptually congruent and consistent to the translation (Beaton et al., 2000). For example, in a South African language such as isiXhosa, there is no direct translation of the word "strangers" or "unfamiliar people". Thus, in order to achieve conceptual equivalence, Xhosa people would understand the term if it was translated to "people who are not known to you" in isiXhosa (Pascoe & McLeod, 2016).

Convenience sampling: A technique that uses participants who happen to be at a given place at a given time (Etikan et al., 2016b).

Confirmability: This term is equivalent to objectivity in quantitative studies, but is known as confirmability in qualitative studies (Shenton, 2004). Confirmability in qualitative work refers to unbiased interpretation of data and study findings (Shenton, 2004).

Credibility: This term is equivalent to internal validity in quantitative studies, but is known as credibility in qualitative studies (Korstjens & Moser, 2018). In qualitative work, credibility is the degree of confidence in the truthfulness of study findings which is established by correct representation and interpretation of the participant's original view (Colorafi & Evans, 2016; Korstjens & Moser, 2018).

Dependability: This term is equivalent to reliability in quantitative studies, but is known as dependability in qualitative studies (Korstjens & Moser, 2018). Dependability in qualitative work is when the study findings are consistent and reliable (Colorafi & Evans, 2016).

Additionally, dependability is the degree to which the research methodology is documented so that other future researchers can repeat the process to obtain similar results (Shenton, 2004).

Experiential equivalence: This refers to items within an outcome measure reflecting the daily living of the country or culture under study (Beaton et al., 2000). For example, an item may ask: “Do you need others to speak louder to hear better?” when it is culturally acceptable to speak loudly in a specific culture.

Hearing loss categorisations: The degree of hearing loss is based on the hearing threshold. The study used the categorisation scale reported by Clarke (1981).

Idiomatic equivalence: This term refers to colloquialisms, idioms, and jargons used that are equivalent to the expressions in the target language (Beaton et al., 2000). For example, the English word “barbeque” is not used in the South African culture and is often referred to as “braai”. “Braai” is an Afrikaans word but is used and understood nationally in all South African languages and cultures.

International Classification of Functioning in Disability and Health (ICF) framework: ICF is a framework that conceptually classifies health and disability by Body Structures and Functions, Activities and Participation, as well as Environmental and Contextual Factors (Granberg et al., 2014). Body Structures and Functions refers to an individual’s physiological body functioning by the anatomical parts of the body (Granberg et al., 2014) for example, understanding the physiological and anatomical aspects of the ear to hear. Activities and Participation refers to the execution of an activity by the individual in a specific situation

(Granberg et al., 2014), for example, the ability to hear family members in a restaurant. Environmental and contextual factors are factors that influence an individual's functioning (Granberg et al., 2014). This includes, for example, significant others encouraging and supporting the purchase of hearing aids (contextual factors) for their affected partner to improve communication (activity) when socialising (participation). Disability in health is an umbrella term to describe Body Structure and Body functions, as well as Activity and Participation by its impairments, activity limitations, and participation restrictions (Granberg et al., 2014).

Item equivalence: This refers to the relevance of the items in an outcome measure (Hall et al., 2018). For example, an item such as: "Do you have difficulty eating with a fork?" is not a relevant item in a hearing-related outcome measure.

Outcome measure: Measures that are used to quantify changes in ability from before to after an intervention or treatment (Jette et al., 2009).

Participation restrictions: This term is used in the WHO's ICF in disability and health framework (see definition above) to describe an individual's capacity to be involved in a life situation due to a health disability (Granberg et al., 2014). For example, an individual with a hearing loss (health disability) is experiencing difficulty to hear in a restaurant (participation restriction).

Purposive sampling: A non-probability technique involving participants that are recruited according to the qualities that they possess and which are stated in the inclusion criteria (Etikan et al., 2016b).

Quality of life: The general well-being of an individual which includes physical, material, social, and emotional well-being (Saunders et al., 2005).

Semantic equivalence: This term refers to whether the meaning of the words used are equivalent to the source language (Beaton et al., 2000). For example, the word that describes a shop that dispenses medicine in South Africa is called a pharmacy, whilst in the United Kingdom, it is referred to as a chemist, and in the United States of America as a drugstore.

Snowball sampling: A non-probability sampling technique in which once participants are found, they, in turn, suggest further participants (Etikan et al., 2016a).

Standardised measures: Measures that are standardised use close-ended questions or other specific protocols to create norms for scoring purposes which will allow quantitative assessment of ability, and have been evaluated for psychometric properties (Jette et al., 2009).

Third-party disability: The effect of an impairment, such as hearing disability, on significant others or communication partners (Scarinci et al., 2012).

Transferability: This term is equivalent to generalisability or external validity in quantitative studies, but is known as transferability in qualitative studies (Shenton, 2004). In qualitative work, transferability is when the findings from a study are applicable in other contexts (Colorafi & Evans, 2016).

Triangulation: Triangulation aims to enhance the credibility of a qualitative study by introducing various approaches (Korstjens & Moser, 2018). Methodological triangulation refers to the different data collections methods used in the study such as observations, focus groups, and individual interviews (Korstjens & Moser, 2018). Investigator triangulation involves several participants in the analysis process where consensus of interpretation of the data is required (Korstjens & Moser, 2018). Site triangulation is when participants are from different organisations or sites, providing information of one phenomenon under study (Colorafi & Evans, 2016; Shenton, 2004).

Usability: This refers to the extent to which a product can be administered by specified users to achieve specified goals that is effective, efficient, and satisfactory in a specified context of use (Hassan & Galal-Edeen, 2017). Thus, for the context of this study, usability is defined as the tool's user-friendliness during administration (efficiency), the individual's ability to understand and accurately answer the tool (effectiveness), the tool's ability to identify problem areas, and to quantify an improvement after treatment (effectiveness).

Verbal feedback interview: The researcher conducted verbal feedback interviews to obtain verbal feedback by conducting a short semi-structured interview with the audiologist participants regarding their experience when using the Afrikaans SAC and SOAC in their respective practices.

List of Abbreviations

AAOS: American Association of Orthopaedic Surgeons

APHAB: Abbreviated Profile of Hearing Aid Benefit

BT: Backward Translator

FT: Forward Translator

HHIE: Hearing Handicap Inventory for the Elderly

HHI-SO: Hearing Handicap Inventory for the Significant Other

HPCSA: Health Professions Council of South Africa

ICF: International Classification of Functioning

QD: Qualitative Descriptive

QDS-m: Quantified Denver Scale – Modified

SA: South Africa

SAAA: South African Association of Audiologists

SAC: Self Assessment of Communication

SASLHA: South African Speech Language and Hearing Association

SLP: Speech Language Pathologist

SO: Significant Other

SOAC: Significant Other Assessment of Communication

USA: United States of America

WHO: World Health Organization

Abstract

The Self Assessment of Communication (SAC) and Significant Other Assessment of Communication (SOAC) are self-report outcome measures that are based on the World Health Organization's (WHO) International Classification of Functioning in Disability and Health (ICF) framework. The SAC and SOAC focus on hearing-related activity limitations, participation restrictions, quality of life, hearing aid use, and satisfaction from the perspective of the hearing-impaired individual and the communication partner or significant other (SO). The SAC is administered to the hearing-impaired individual, while the SOAC is the companion questionnaire that is administered to the SO. The SOAC focuses on the hearing disability and handicap of the hearing-impaired individual from the perspective of the SO.

The SAC and SOAC were initially developed in English and standardised for a developed country population, the United States of America (USA). Thus, to make the outcome measures more relevant to a multicultural and multilingual country like South Africa (SA), the most practical solution is to translate and adapt the measure for the SA population. In SA, few audiological outcome measures have been translated and adapted. Therefore, to add value to the limited research available, the study aimed 1) to adapt and translate the SAC and SOAC into Afrikaans using the American Association of Orthopaedic Surgeons (AAOS) guidelines; and 2) to describe the usability of the Afrikaans SAC and SOAC by South African audiologists through surveys and verbal feedback interviews.

The AAOS translation and adaptation guideline is a multi-step translation method that involves five stages: (i) Forward Translation from the source language (English) to the target language (Afrikaans); (ii) Synthesis of the forward translations; (iii) Backward Translation from the target language (Afrikaans) back to the source language (English); (iv) Expert Committee

Review by analysing all the translations to create a pre-final Afrikaans SAC and SOAC measure; and (v) Field testing the pre-final Afrikaans SAC and SOAC. The field testing stage involved the target population (Afrikaans speaking hearing-impaired individuals and SOs) who analysed the pre-final Afrikaans SAC and SOAC. The participants in the field testing stage were sampled using purposive, convenience, and snowball sampling methods within the Western Cape Province in private practice.

For the second aim of the study, 16 bilingual Afrikaans and English audiologists (referred to as audiologist participants) were sampled using purposive and snowball sampling. The audiologist participants were invited to use the Afrikaans SAC and SOAC in their practice for one to two months. Following implementation, the audiologist participants were required to comment on the usability of the Afrikaans SAC and SOAC by completing a survey. Three audiologists agreed to do a verbal feedback interview reporting their experience with the Afrikaans SAC and SOAC. Overall, audiologist participants' responses (survey and verbal feedback interview) indicated positive feedback regarding the translated Afrikaans SAC and SOAC. Most felt that the measure was a useful counselling tool, was user friendly and provides valuable information on the perception of hearing loss. However, some implementation challenges were reported such as (i) limited time available, which caused a delay in appointments with other patients, and (ii) patients' SO were not always present in consultation, as such, the SOAC could not be administered.

In conclusion, findings revealed that following a multi-step approach when translating and adapting a measure is valuable, as it allows researchers to identify inaccuracies and discrepancies during the translation process to achieve a good quality translation. Furthermore, based on audiologists' perspectives, the Afrikaans SAC and SOAC can be used in clinical

practice by South African audiologists. However, it is recommended that further research is necessary to explore psychometric properties such as criterion and concurrent validity.

Keywords: audiologist, hearing aid, self-report, validation, translation

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Introduction

In audiology, it is important to identify the effects of hearing loss on the individual and to measure the success of a hearing-impaired individual's benefit from hearing aids (Niemensivu et al., 2015). Self-report outcome measures can provide crucial information to determine the success of a treatment – such as a hearing aid fitting reducing the effects of hearing loss – based on the individual's experience (Cox, 2003; Niemensivu et al., 2015). Not only does hearing loss affect an individual functionally and emotionally, it also impacts all who share communication with the hearing-impaired individual. Thus, it is equally important to obtain information from the communication partner or significant other (SO) as they have first-hand experience of the hearing-impaired individual's hearing difficulties and the outcomes of their treatment (Singh & Launer, 2014).

In audiology, various self-report outcome measures exist for evaluating specific domains in aural rehabilitation such as psychosocial or activity limitations. However, the focus of this study was to select a self-report outcome measure that covers all aural rehabilitative domains for translation into Afrikaans. One standardised audiology outcome measure, the Self Assessment of Communication (SAC) (Schow & Nerbonne, 1982) and its companion questionnaire, Significant Other Assessment of Communication (SOAC)¹ focuses on activity limitations, participation restrictions, quality of life, hearing aid use, and satisfaction (Hodes et al., 2009). The English versions of the SAC and SOAC were developed and standardised in the United States of America (USA) (Schow & Nerbonne, 1982). In the American context, efforts at standardisation²

¹ The SOAC is similar to the SAC except that the wording is different as it examines the significant other's (SO) perception of the hearing-impaired person's hearing difficulties. An example item includes: "Does he/she experience difficulties in situations when speaking with one other person?"

² Refer to Glossary under "Standardised measures"

suggested these questionnaires were psychometrically reliable and valid to measuring the effect of hearing loss and hearing aid outcomes (Hodes et al., 2009).

Although the English SAC and SOAC are readily available for use worldwide, many countries including South Africa (SA) may need to modify the measure to accommodate various languages (Hall et al., 2018). SA currently has 11 official languages (Constitution of the Republic of South Africa Act, 1996; StatsSA, 2018), therefore, to develop and standardise a new measure would be time-consuming and likely require monetary resources and effort that is not readily available (Hall et al., 2018; Pascoe & Norman, 2011). To make use of an outcome measure like the SAC and SOAC for a developing country such as SA, the most practical and feasible procedure is to translate and adapt the standardised measure to be congruent with the linguistics and context of the population (Hall et al., 2018; Pascoe & McLeod, 2016; Pascoe & Norman, 2011). In SA, only a few tools have been translated and adapted to accommodate the South African context and languages (Rogers et al., 2011). Some focus more on developing speech materials for use in speech audiometry, specifically in Afrikaans, Zulu, and Tswana (Pascoe & Norman, 2011). Translating and adapting a measure will allow health professionals to cover a larger population of service users, while also respecting the right to access services in a home language (HPCSA, 2016).

To provide a potential audiology outcome measure for the Afrikaans speaking South African population, this study translated and adapted the SAC and SOAC into Afrikaans using the American Association of Orthopaedic Surgeons' (AAOS) translation and adaptation

guidelines. Additionally, the study described the usability³ of the Afrikaans SAC and SOAC by South African audiologists through surveys and verbal feedback interviews.

³ Refer to Glossary.

Chapter One: Literature Review

Hearing loss can profoundly affect the social, functional and psychological well-being of the individual due to difficulties experienced when interacting and communicating with other people (Ciorba et al., 2012; Niemensivu et al., 2015).

It is essential to acknowledge the negative impact that hearing loss has on quality of life). Several studies indicated that hearing loss can cause negative emotional responses such as loneliness, depression, and anxiety. Additionally, hearing loss involves social reactions such as withdrawing and blaming; and other consequences such as confusion, difficulty focusing, and decreased self-esteem (Andrade et al., 2018; Ciorba et al., 2012; Niazi et al., 2020; Punch et al., 2019; Sung et al., 2016). However, likely due to high mortality rates of chronic diseases such as tuberculosis (TB) and human immunodeficiency virus (HIV) in South Africa (SA), little focus and support have been placed on non-communicable conditions that affect the quality of life, such as hearing loss (Makhoba & Joseph, 2016).

In addition to the impact of hearing loss for the affected individual, hearing loss can negatively affect the communication partners, or significant other (SO). This is also known as third-party disability⁴ (Ekberg et al., 2015; Scarinci et al., 2012; Stark & Hickson, 2004). In a study by Stark and Hickson (2004), SOs reported high levels of frustration and annoyance related to the hearing-impaired individuals' hearing difficulties, such as uncomfortably loud television volumes or often having to repeat what they said (Stark & Hickson, 2004). Since SOs can positively impact the affected individual's behaviour and attitude, they are important role players (Stark & Hickson, 2004). Accordingly, Singh and Launer (2016) found that when SOs

⁴ Refer to Glossary.

accompanied hearing-impaired individuals to their audiology consultations, the latter were more likely to adopt hearing aids. Furthermore, SOs were more likely to support the affected individuals by encouraging a positive attitude towards hearing aid adoption and seeking audiological services (Singh & Launer, 2016). Similar studies confirmed the favourable influence that SOs and family members have on seeking audiological services and positive hearing aid outcomes (Hickson et al., 2014; Meyer et al., 2014; Stark & Hickson, 2004).

Adequate provision of aural rehabilitative services is not limited to providing hearing aids to improve functional hearing (Rutherford & Petersen, 2019). Comprehensive rehabilitation should include counselling for patients with hearing disabilities, understanding the impact of hearing loss and third-party disability, and ensuring that hearing-related quality of life and activity and participation is improved (Ciorba et al., 2012; Cox, 2003; Rutherford & Petersen, 2019). Thus, it is considered important to identify an individual's need for audiology services. For this reason, self-report outcome measures were developed to identify hearing difficulties and to quantify hearing aid outcomes based on self-reported real life experiences (Cox, 2003; van Leeuwen et al., 2020). Self-report outcome measures highlight the expectations of aural rehabilitation, evaluate the impact of the hearing loss, and explore the level of functioning in daily living for the hearing-impaired individual (Pienaar et al., 2010; van Leeuwen et al., 2020). Certain widely used self-report measures focus on different domains in aural rehabilitative care. For example, the Abbreviated Profile of Hearing Aid Benefit (APHAB) (Cox & Alexander, 1995) focusses on identifying specific amplification needs in different environments, which may not be relevant to each individual and does not measure the psychosocial effects of hearing loss (Löhler et al., 2017). In contrast, the Hearing Handicap Inventory for the Elderly (HHIE) (Ventry

& Weinstein, 1982) focusses on measuring the psychosocial impact of hearing loss, and less so on activity limitations (Preminger, 2009).

Additionally, researchers developed companion questionnaires to the self-report outcome measures, which provide insight regarding the effect of hearing loss from the perspective of the SO. Examples include the Quantified Denver Scale – Modified (QDS-m) (Schow & Nerbonne, 1982) and the Hearing Handicap Inventory for the Significant Other (HHI-SO) (Newman & Weinstein, 1988). In aural rehabilitation, it is important to holistically consider an individual's hearing loss, covering domains of the WHO's ICF health and disability framework, to provide appropriate management. Use of self-report outcome measures can guide clinicians to provide individualised and holistic patient-centred care based on the needs of the individual and their communication partner, which considers the patient in the context of the family (Stark & Hickson, 2004).

In South Africa, a resource constrained and developing country, many audiologists do not prioritise and incorporate self-report outcome measures in clinical practice (Makhoba & Joseph, 2016). A survey study by Makhoba and Joseph (2016), described the practices and views of aural rehabilitation in SA. The results showed that hearing aids were the main aural rehabilitation service provided by most audiologists, while other services such as counselling, auditory training, and use of programmes or self-report questionnaires to aid aural rehabilitation service provision were provided less frequently. Reasons cited for the lack of other aural rehabilitative service provision were insufficient resources, awareness, and knowledge of the measures available, as well as language barriers and poor treatment adherence (Makhoba & Joseph, 2016). Despite the study's limitations (especially the small sample size and consequent lack of generalisability), it provided insight to the current aural rehabilitative practices and views by

audiologists in SA specifically (Makhoba & Joseph, 2016; Rutherford & Petersen, 2019).

Furthermore, other aural rehabilitative related studies in a developing country context reported hearing aids as the main aural rehabilitative service, rather than the use of outcome measures, counselling, auditory training, and environmental or communication strategies (Makhoba & Joseph, 2016; Olusanya, 2004; Pienaar et al., 2010; Rutherford & Petersen, 2019). Consequently, there is a paucity of research on self-report outcomes for aural rehabilitation in SA.

There are many self-report outcome measures that are available for clinical and research use, of which most are standardised⁵ for a developed country (Hall et al., 2018). Although most standardised measures are available in English, arguably they are not applicable for clinical use in developing countries such as SA due to a cultural and socio-linguistical mismatch (Rutherford & Petersen, 2019). A difference in the social, linguistic, and cultural aspects of a standardised measure can negatively influence the psychometric properties of the tool such as internal consistency and validity (Paiva et al., 2017). This may result in inaccurate scoring and interpretation (Paiva et al., 2017). Therefore, it is advisable to develop outcome measures that are relevant to the country's language and cultural context for valid and reliable measurements (Rutherford & Petersen, 2019). The downside of developing and standardising a new outcome measure is that it is labour intensive and requires time, monetary, and human resources which is not feasible for a multilingual and multicultural country like SA (Pascoe & McLeod, 2016; Pascoe & Norman, 2011). The more practical and cost-effective solution to accommodate various languages and contexts is to translate and adapt existing standardised outcome measures (Pascoe & Norman, 2011). Currently, there are only a few audiological outcome measures

⁵ Refer to Glossary.

translated and adapted for the South African population (Rogers et al., 2011). Others focus more on developing speech materials for use in speech audiometry, specifically in Afrikaans, Zulu, and Tswana (Pascoe & Norman, 2011). Therefore, this study will add value to SA by translating and adapting a standardised self-report audiological outcome measure (specifically the SAC and SOAC), that will be congruent to the linguistics and context of the Afrikaans-speaking South African population (Pascoe & McLeod, 2016; Pascoe & Norman, 2011). Afrikaans, one of SA's official languages, was chosen as it is the third most spoken language in the country (StatsSA, 2018). The research was set in the Western Cape, where Afrikaans is the most spoken language and the most accessible language for the researcher in terms of data collection. In SA, there is a lack of Afrikaans translated audiological outcome measures (Rogers et al., 2011; Pascoe & McLeod, 2016), thus adapting and standardising a self-report outcome measure into a SA language will allow health professionals to cover a larger population of Afrikaans-speaking service users, respecting the right to access services in a home language (HPCSA, 2016). Therefore, the intent of this study is to assist audiologists with language barriers working in Afrikaans settings to understand the patient's hearing needs in order to provide appropriate and holistic aural rehabilitative care.

SAC and SOAC

The researcher selected the SAC and the SOAC as outcome measures that cover the overall impact of hearing loss such as participation and activity limitations, quality of life, and psychosocial effects to aid and measure the aural rehabilitation process. Specifically, the SAC and SOAC were selected for the following reasons: (i) the development of the measure is based on the WHO's International Classification of Functioning in Disability and Health (ICF)

framework⁶ allowing the measure to cover all domains; (ii) the measure can be used to determine the impact of hearing loss as well as measure the benefit of hearing aid use (pre- and post-fitting); (iii) the measure includes the perception of the SO which allows for more holistic care; and (iv) the measure is brief, easy to administer, and easy to score.

The SAC and SOAC were developed and standardised in the USA by Schow and Nerbonne (1982) to measure the impact of hearing loss and hearing aid outcomes using the principles of WHO's ICF framework. The SAC and SOAC are 10-item questionnaires, respectively, that focuses on activity limitations, participation restrictions, quality of life, and hearing aid use and satisfaction (Hodes et al., 2009). The first five questions focus on "Disability or Activity Limitation" (e.g., Item 1: "Do you experience difficulties when speaking with one other person?"); questions six to nine focus on "Handicap or Participation Restriction" (e.g., Item 6: "Do you feel that any difficulty with your hearing negatively affects or hampers your personal or social life?"); and the final two question focus on hearing aid use and satisfaction (Hodes et al., 2009). The questionnaire uses a five-point Likert response scale ranging from 1 = rarely or never, to 5 = practically always or always (Hodes et al., 2009). Scores are formulated into a percentage where the lowest percentage range (0 – 20%) indicates no disability or handicap, to the highest percentage range (70 – 100%) indicating severe hearing disability or handicap. The SOAC is similar to the SAC except the wording is different as it provides the SO's perception of the hearing-impaired individual's hearing difficulties (e.g. Item 1, "Does he/she experience difficulties in situations when speaking with one other person?") (Hodes et al., 2009).

⁶ Refer to Glossary.

In addition to selecting an appropriate standardised outcome measure, the measure itself needs to be reliable and valid. The SAC and SOAC's first test-retest reliability results on the 1982 version was reported highly reliable, specifically, $\alpha = .80$ for the SAC and $\alpha = .90$ for the SOAC (Schow & Nerbonne, 1982). In 2007, Schow and Nerbonne introduced an updated version of the SAC and SOAC (Hodes et al., 2009). The updated version included two replaced items: one item was replaced with an open-ended disability/activity limitation item (Item 5: "How often do you experience communication difficulties in the situation where you most want to hear better? Situation: ____") and the other replaced with a quality of life item (Item 9: "How often does your hearing negatively affect your enjoyment of life") (Hodes et al., 2009). Furthermore, a single item for satisfaction and use of hearing aid was added (Item 10) (Hodes et al., 2009). A computerised version was developed using the updated 2007 version to further decrease clinician burden, which reported reliability scores of 0.94 and 0.97 (Hodes et al., 2009). Due to the two versions (1982 and 2007) being near-identical, the mean data on the total scores for both versions showed similar total score performances which confirmed reliability. The unaided mean data of the 2007 version were compared to the mean unaided data of Gatehouse's Glasgow Hearing Aid Benefit Profile (GHABP) with results indicating that the means were identical except for mild losses, suggesting good validity (Hodes et al., 2009).

Translation and Adaptation Method

After selecting a standardised outcome measure that is reliable and valid for translation and adaption, it is important to select a translation method that will result in a high-quality translation. Poorly translated and adapted measures affect the reliability and validity of the measure and may lead to inaccurate interpretation of the results (Paiva et al., 2017). To successfully translate and adapt an outcome measure, it is important to translate with the intent of

achieving conceptual, experiential, idiomatic, semantic, and item equivalences⁷ between the original (source language) and translated (target language) versions (Beaton et al., 2000).

Moreover, the translations must be adapted in accordance to the target population's culture, location, and practices, ensuring that the modifications are appropriate for the local context (Beaton et al., 2000; Thammaiah et al., 2016). To translate and achieve the aforementioned equivalences, many translation and adaptation guidelines were published for research and translation studies (Beaton et al., 2000; Hall et al., 2018; Sousa & Rojjanasrirat, 2011).

According to a systematic review, 31 translation and adaptation guidelines were identified and published. However, presently, there is neither universal consensus regarding a "gold standard" guideline nor empirical evidence of the superiority of one method (Acquadro et al., 2008).

Based on the systematic review by Maneesriwongul and Dixon (2004), it is highly recommended that a multi-step approach be used when translating and adapting an outcome measure to obtain a high quality translation. A multi-step approach that includes a subsequent backward translation and field testing among the target population, will allow identification of discrepancies and appropriateness of the translations. Furthermore, documenting and reporting the translation process is important (Maneesriwongul & Dixon, 2004).

Most translation and adaptation guidelines available for research follow a similar multi-step process: (i) Forward Translations; (ii) Backward Translations; (iii) Expert Committee Review; and (iv) Pre-final Field Testing (Thammaiah et al., 2016). Most of the guidelines recommend a minimum of two bilingual translators for forward translation (translation from source to target language). Using two bilingual translators allows for the identification of

⁷ Refer to Glossary for definitions of conceptual, experiential, idiomatic, semantic and item equivalence.

semantic differences (Thammaiah et al., 2016). Backward translation (from target to source language) is an important step to quality check the translation, achieve semantic equivalence, and to identify discrepancies and conceptual errors (Beaton et al., 2000; Thammaiah et al., 2016). Backward translation requires a minimum of two outsourced bilingual translators who are “blinded” from the research concept (Thammaiah et al., 2016). The expert committee review involves an expert panel of the translators, the researchers, and other experts in the field to review and evaluate all the translated measures (Thammaiah et al., 2016). The expert committee review is a crucial step to evaluate the accuracy of the translations and to ensure equivalences are achieved. Lastly, the pre-final field testing involves obtaining feedback/opinion from a sample of the target population that analyses the relevance and understanding of the items to verify whether the translation was clear, understandable, and contextually appropriate (Thammaiah et al., 2016).

For this thesis, the researcher adopted the American Association of Orthopaedic Surgeons (AAOS) guidelines (Beaton et al., 2000) to translate and adapt the SAC and SOAC into Afrikaans. The AAOS guideline follows a multi-step approach with an additional step after forward translation (as described above), called the synthesis stage. The synthesis stage focuses on reviewing the two forward translations for any discrepancies and combining the translations to one translated version for the backward translation stage (Beaton et al., 2000). The inclusion of the synthesis stage allows for a more robust and comprehensive process to achieve a good quality translation (Beaton et al., 2000). Taking this into consideration, along with the AAOS guideline being one of the first and most extensively used guidelines in translation studies – used for a wide range of questionnaires (Acquadro et al., 2008) – the AAOS was used in the present study. Finally, the nature of the study and limited resources available contributed to the use of the AAOS guideline to provide a comprehensive and quality translation (Acquadro et al., 2008;

Manchaiah et al., 2021; Sousa & Rojjanasrirat, 2011; Thammaiah et al., 2016; Zam Zam et al., 2019).

Due to the limitations of the research setting (i.e., being a Master's thesis with limited time and resources), the study did not focus on the cultural aspect of translating and adapting. Instead, the translations focused on contextual relevance and ease of understanding (see Discussion section for further details).

Chapter Summary

There is strong evidence-based literature that recommend the use of self-report outcome measures for aural rehabilitative service provision, which includes measuring benefit of hearing aids and ensuring positive patient satisfaction, usage and health-related quality of life. In addition, many self-report outcome measures available in English for hearing-impaired individuals with and without SO components, are standardised in developed countries (e.g., USA and United Kingdom). Thus, the results obtained from a standardised outcome measure may not accurately represent the South African context. In addition, there is little to no research on translated and adapted tools in audiology to accommodate South African languages and cultures. Thus, this study aimed to translate and adapt the SAC and SOAC to Afrikaans using the AAOS guidelines. Additionally, using the translated Afrikaans SAC and SOAC, the study aimed to describe the usability of the measure among South African audiologists to determine whether they found the Afrikaans SAC and SOAC useful to incorporate into their clinical procedure when facing an Afrikaans speaking patient.

Chapter Two: Methodology

Aims and Objectives

This study had two main aims and the objectives for each aim are presented separately:

1. To translate the SAC (see Appendix A) and SOAC (see Appendix B) into Afrikaans using the American Association of Orthopaedic Surgeons (AAOS) guidelines (Beaton et al., 2000);
 - a. To describe and modify the adaptations, errors, and inaccuracies within the translations to obtain a pre-final version.
 - b. To identify and describe the accuracy of the translated pre-final version by field testing the translated SAC and SOAC among the Afrikaans speaking population.
2. To describe the usability of the Afrikaans SAC and SOAC by audiologists through surveys and verbal feedback interviews⁸.

The research design, setting, participants and recruitment procedure, data collection, and data analysis for each aim and respective objective, will be discussed in the following section.

Aim 1: To Develop an Afrikaans Version of the SAC and SOAC Using the AAOS

Guidelines

Aim 1: Research Design

This study employed a qualitative descriptive (QD) study design by obtaining the opinions of experts and the target population to refine the translation of the questionnaire (Kim et al., 2017). A QD design allows the researcher to stay close to the data and the participant's point

⁸ Refer to the Glossary.

of views (Neergaard et al., 2009). Unlike other qualitative methods, the process of data analysis in QD research designs does not require concept development or in-depth interpretative description of an experience or phenomenon (Neergaard et al., 2009). The analysis of the data was a straight description of the translation and translation process by the participants in the study aim. A weakness of QD, and this study, is that the findings may not be generalised to the Afrikaans-speaking South African population and are restricted to the Western Cape Afrikaans dialect (Neergaard et al., 2009).

Aim 1: Participants

This section describes the participants involved in the translation process (Objective 1) and the participants in the field testing stage (Objective 2) separately.

Aim 1, Objective 1: Inclusion Criteria Participants

The participants included were translators and the expert committee. As suggested by AAOS guidelines (Beaton et al., 2000), the translators had to:

- (i) Be bilingual in English and Afrikaans, determined by a self-reported participant information form (see Appendix C).
- (ii) Be familiar with the culture of the English and Afrikaans-speaking population, determined by a self-reported participant information form (see Appendix C).
- (iii) Have specific backgrounds:
 - a. Forward Translator one (referred to as FT1) had to be a health professional familiar with health care/audiology knowledge, to create a translation equivalent to the original version from a clinical and measurement perspective (Beaton et al., 2000; Sousa & Rojjanasrirat, 2011).

- b. Forward Translator two (referred to as FT2) had to be an individual familiar with colloquial and emotional terms related to health care, but not knowledgeable about audiology. Familiarity will create a less clinically and academically influenced translation using words that were common in the Afrikaans-speaking population (Beaton et al., 2000; Sousa & Rojjanasrirat, 2011).
- c. The Backward Translators (referred to as BT1 and BT2) were individuals unfamiliar with the English questionnaire and with no healthcare background.

As suggested by AAOS guidelines (Beaton et al., 2000) the expert committee comprised:

- (i) The translators involved in the study (FT1, FT2, BT1, and BT2).
- (ii) Further, Beaton et al. (2000) recommended additional members to complete the committee such as methodologists, health professionals, and language professionals.

However, within the time frame, the researcher was only able to recruit one health professional who agreed to the expert role and its responsibilities. Thus, an additional bilingual (English and Afrikaans) Speech Language Pathologist (SLP) – registered at the Health Professions Council of South Africa (HPCSA) – was recruited.

Aim 1, Objective 1: Recruitment and Sampling

The translators and SLP were recruited through convenience sampling, utilising personal and professional connections. Convenience sampling refers to recruitment of participants for the convenience of the researcher (Etikan et al., 2016b). Furthermore, the participants were sampled using purposive sampling as the experts were recruited according to the qualities that they possess, as stated above (Etikan et al., 2016b).

Aim 1, Objective 1: Sample Size and Participant Description

As per AAOS guidelines (Beaton et al., 2000), the sample consisted of five participants including:

(i) Two Forward Translators (FT1 and FT2):

- a. FT1 was a 28-year-old bilingual (Afrikaans and English) HPCSA registered female, dually qualified (Audiologist and SLP) with more than two years' experience in Audiology.
- b. FT2 was a 33-year-old bilingual (Afrikaans and English) experienced female translator, with more than two years' practical experience.

(ii) Two Backward Translators (BT1 and BT2):

- a. BT1 was a 27-year-old bilingual (Afrikaans and English) female secondary teacher.
- b. BT2 was a 40-year-old bilingual (Afrikaans and English) female law firm receptionist.

(iii) Expert panel members:

- a. All the translators as described in (i) and (ii).
- b. A 29-year-old bilingual (English and Afrikaans), qualified and HPCSA registered SLP female, with more than two years of experience.

Aim 1, Objective 2: Research Setting

Patient participants that took part in the field testing stage (Aim 1, Objective 2) were from urban settings in the Western Cape province where most residents are Afrikaans-speaking. Specific areas included: Stellenbosch, Strand, Kraaifontein, Durbanville, and Platteklouf.

Aim 1, Objective 2: Inclusion Criteria

According to AAOS guidelines (Beaton et al., 2000), the patient participants for field testing had to represent the target population (Afrikaans-speaking individuals). Therefore, the following inclusion criteria were used:

- (i) First language must be Afrikaans, determined by a self-reported participant information form (see Appendix C).
- (ii) Must have a known/previously diagnosed bilateral hearing loss ranging from mild to severe⁹ (Clark, 1981).
- (iii) Had to be ≥ 18 years old. In South Africa, 18 years of age is the requirement for individuals to participate in research studies without the need of a guardian (Strode & Slack, 2015).

In terms of the Significant Others, the following inclusion criteria were used:

- (i) First language must be Afrikaans determined by a self-reported participant information form (see Appendix C).
- (ii) Frequent communication with the patient participant, allowing them to provide knowledgeable feedback on the content of the outcome measure.

Aim 1, Objective 2: Recruitment

Patient participants were recruited at five different branches in a large private audiology company's network situated in the Western Cape and serving the Afrikaans population. The private company provided diagnostic hearing tests and hearing aids for older adults. The patient

⁹ Refer to Glossary under "Hearing loss categorisation".

participants were the adult hearing-impaired patients that entered the audiologists'¹⁰ respective practices and met the inclusion criteria. Therefore, the study employed purposive, snowball (Etikan et al., 2016a), and convenience sampling, i.e., any individual that visited the practice and met the inclusion criteria was eligible to participate in the study (Etikan et al., 2016b).

Aim 1, Objective 2: Sample Size and Participant Description

Following the AAOS guidelines (Beaton et al., 2000) requiring a sample of 30-40 participants (target population) for the field testing the sample size were as follows.

- (i) Five research assistants agreed to assist the researcher by collecting data for the study's Objective 2 of Aim 1.
- (ii) Patient participants ($n = 22$) that met the inclusion criteria participated in field testing the SAC (female = 13, male = 9; mean age = 57 years old, age range = 26 – 90 years).
- (iii) SO participants ($n = 16$) participated in field testing the SOAC (female = 112, male = 4; mean age = 52 years, age range = 26 – 82 years). Six SO participants were family members, nine were life partners, and one was a friend to the hearing-impaired individual.

Nine individuals with a hearing loss came with their SO of which both the SAC and SOAC were completed together.

¹⁰ The audiologists also served as research assistants. Specifically, five audiologists (bilingual in English and Afrikaans, HPCSA registered and qualified to practices, consulting Afrikaans patients in their practice) were contacted and attended a meeting. At the meeting, the research study, the audiologists' (research assistants') role, and any questions the audiologists had, were discussed. Training and details of the process were also discussed (see Appendix D). All five audiologists consented to serve as research assistants in the study.

Aim 1: Data Collection

Prior to data collection, the following individuals/institutions, in chronological order, provided relevant permissions or consent to participate and implement the study.

- (i) The developers of the original instruments (Schow & Nerbonne, 1982) provided consent to translate and adapt the English language SAC and SOAC to the South African Afrikaans context (see Appendix E).
- (ii) The University of Cape Town (UCT) Faculty of Health Sciences Human Research Ethics Committee granted ethical clearance for the study (HREC REF: 344/2018) (see Appendix F).
- (iii) Translators were sourced via the internet and through personal contacts. They were first telephonically contacted to participate in the study to which they agreed. Thereafter, informed consent letters were sent via email to formally invite them (see Appendix G).
- (iv) A letter was sent to the large private company for permission to use the practices from the Western Cape as the primary research setting for this study (see Appendix H).
- (v) Each patient/SO participant in Objective 2 was given the option to participate in a study by their recruited research assistant after their consultation. If the patient/SO participant agreed, a hard copy of the informed consent letter (see Appendix I) was given for their signature.
- (vi) Once permission was received by all participants involved in Aim 1 (expert committee members and the patient/SO participants in field testing), each had to

complete a participant information form (see Appendix C) to ensure that the participants met the inclusion criteria.

Aim 1: Materials

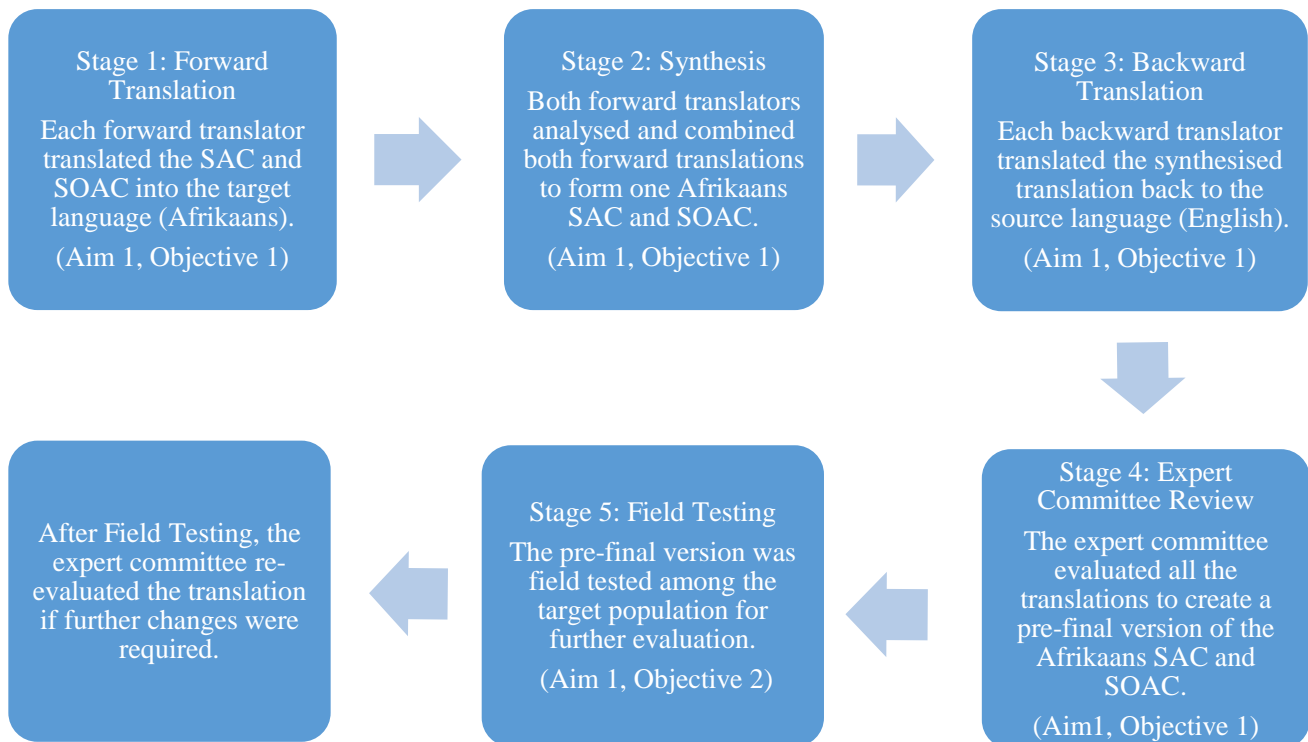
Copies of the original English SAC and SOAC (Appendix A and B, respectively) were used for forward translation. Copies of the forward translated SAC and SOAC were used for back translation. The pre-final version of the Afrikaans translation was used for the field testing stage.

Aim 1: Procedure

According to AAOS' guidelines of translating and adapting health measures, five stages were followed, as summarised in Figure 1 below.

Figure 1

The Translation and Adaptation Procedure as per AAOS Guidelines



Stage 1: Forward Translation

Each Forward Translator (FT) translated the English SAC and SOAC (Appendix A and B respectively) into Afrikaans. Each FT was required to translate the heading, instructions, response options, and all the questions in the measure. During the translation process, the FTs commented on items or phrases that were difficult to translate of which a rationale for their choices were recorded and tabulated (see Appendix J). All raw data of the SAC and SOAC were recorded in an Excel workbook on separate sheets for ease of data analysis.

Stage 2: Synthesis

After forward translation, the FTs (FT1 and FT2) analysed and compared both individual translations of the SAC and SOAC, facilitated by the researcher. The purpose of analysing and comparing both individual translations was to create a combined pre-final translation of the SAC and SOAC. Both FTs compared their individual translations to the original English version to identify ambiguities and discrepancies of the words used, the sentence structures, and meanings (Beaton et al., 2000). Any ambiguities and discrepancies were corrected and recorded (see Appendix J). It was important that both translators agreed to any changes, if one did not agree, an alternative and better word or sentence structure was suggested until both were in agreement (Sousa & Rojjanasrirat, 2011). The 100% consensus agreement approach was done under the researcher's own discretion as only two people were involved in the decision making. All raw data (changes and discussions) of the SAC and SOAC were recorded on separate sheets in an Excel workbook.

Stage 3: Backward Translation

The Backward Translators (BT1 and BT2) translated the synthesised Afrikaans version back to English (see Appendix K). It was important that the BTs were unfamiliar with the

original version of the tool (Sousa & Rojjanasrirat, 2011). Backward translation allows for validity checking, ensuring the translations made reflect the same content as the original (Beaton et al., 2000). The purpose of backward translation was to identify the inconsistencies or conceptual errors in the translation (Beaton et al., 2000). The backward translation was recorded on the same Excel sheets mentioned previously.

Stage 4: Expert Committee Review

Once the backward translations were completed, the expert committee analysed all the versions (all forward and backward translated versions) to develop a pre-final version of the Afrikaans SAC and SOAC; all analyses and changes were recorded and reported (see Appendix K).

No set consensus percentage was recommended by Beaton et al. (2000). Thus, the researcher facilitated the discussion by reaching consensus with majority agreements i.e., at least three out of five expert members must agree (Thammaiah et al., 2016). It was important that most expert committee members agreed on changes of word choice and grammar by first discussing a problem area and providing an alternative suggestion (Sousa & Rojjanasrirat, 2011). If most of the panel agreed, then the suggestion was applied. If most of the panel disagreed, an alternative would be suggested until majority agreed. Throughout this process, the semantic, idiomatic, conceptual, and experiential equivalences between the English and Afrikaans versions of each item was considered. There were no criteria set for the equivalences. Instead, the consensus of expert opinion needed to be reached through discussion. All raw data of the whole translation process of the SAC and SOAC were recorded in an Excel workbook on separate sheets before being put in tabular form (see Appendix J and K).

Stage 5: Field Testing

The researcher assistants were asked to ensure that the patient/SO participants meet the inclusion criteria. If the potential patient/SO participant met the inclusion criteria, the research assistant asked if the potential patient/SO participant would like to participate in a research study that would only take ten to 15 minutes of their time. The research assistant explained the research briefly, along with the patient/SO participant's role and what was expected of them. Ethical principles including confidentiality, voluntary participation and no-consequence withdrawal were explained to each potential patient/SO participant. If the patient/SO participant agreed, the research assistant provided an informed consent letter for them to sign (see Appendix I) completion of the participant information form requested (see Appendix C).

The research assistants were given a time frame of one to two months to complete ten evaluations of the Afrikaans SAC and SOAC. Following informed consent, the research assistant provided the Afrikaans SAC to the hearing-impaired individual (patient participant) and the Afrikaans SOAC to the SO participant. The participants were asked to analyse the translation and make suggested corrections on the SAC or SOAC form, if any. After analysing and correcting the SAC and SOAC, the participants verbally completed a survey (see Appendix D). The research assistant wrote the answers verbatim on the back of the SAC or SOAC page. This method was used as it was more time consuming for patient/SO participants to write their own answers. The survey questions required the patient/SO participants' opinion on the practicality of completing the SAC/SOAC; the ease of understanding and use, relevance of the questions in the measure, relevance to the Afrikaans language and context, overall grammar and word choices, and whether clarification was needed in any part of the measure. If the patient/SO participant did not understand or wrongly interpreted an item in the measure, the research assistant clarified the

item and kept record of it for the researcher. All the raw data (comments and feedback) by the patient/SO participants were recorded and tabulated in a Word document (see Appendix L) for analysis.

Aim 1: Data Management

All forward translations and backward translations, as well as the details of the synthesis and committee review feedback, were recorded on one Excel Workbook on separate spreadsheets for the SAC and SOAC respectively. The raw data of the translation process and changes were later tabulated on three different tables for specific stages: Forward Translation and Synthesis (see Appendix J); Back Translation and Expert Committee Review (see Appendix K); and Field Testing (see Appendix L).

The raw data of the patient/SO participants' responses in the field testing stage (Objective 2) were recorded in a table (see Appendix L) for analysis. Confidentiality of the data was maintained. Participant information, consent, and completed questionnaires were stored in a lockable office drawer, secured in a lockable box that was only accessible to the researcher. The anonymised data will be stored for five years by the research supervisor after the research is completed (South African Medical Research Council [SAMRC], 2019).

Aim 1: Data Analysis

For Objective 1 (stage one to four of the translation processes), any changes made and consensus reached were summarised and reported in an Excel spreadsheet (see Appendix J and K).

The raw data recorded in a table for Objective 2 were analysed and summarised using content analysis. The researcher analysed the responses according to five categories:

- 1) Easy to use.

- 2) Easy to understand.
- 3) Questions are relevant to the target population.
- 4) The grammar and sentence structures are satisfactory.
- 5) The vocabulary and word choices are satisfactory.

For each category, responses were analysed according to “Agree” or “Disagree”. “Agree” responses to all categories indicate that the patient/SO participant felt that the translated outcome measure was easy to understand, easy to complete, and that the items were relevant to the Afrikaans population, as well as the grammar, sentence structures, and word choices were satisfactory. Accordingly, “Disagree” indicated that the patient/SO participants felt that further alterations or corrections of the translation were necessary, these disagreements were reviewed by the expert committee panel. The outcome of the analysis was to finalise an Afrikaans SAC and SOAC for Aim 2. According to the AAOS guidelines, once consensus is reached among the expert committee and the target population, and little to no modifications is necessary, the translated measure is considered equivalent to the original measure (Beaton et al., 2000).

Aim 1: Trustworthiness

In qualitative research, the quality of a study’s findings is determined by its trustworthiness (Korstjens & Moser, 2018; Shenton, 2004). The criteria of trustworthiness in qualitative work include credibility, transferability, dependability, and confirmability (Korstjens & Moser, 2018; Shenton, 2004) which will be explained separately.

Credibility

Credibility is equivalent to internal validity in quantitative studies and poses the question, “How congruent are the study findings with reality?” (Korstjens & Moser, 2018; Shenton, 2004). In the present study, credibility was ensured through triangulation and member checking. The

aim of triangulation is to enhance the research findings by using different approaches (Korstjens & Moser, 2018). Methodological triangulation was achieved through group discussions and field notes from the target population (Korstjens & Moser, 2018). Participant triangulation was applied by involving experts and the target population (field testing participants) to analyse the translations that were made (Korstjens & Moser, 2018). If the interpretations were different or consensus was not reached, the experts had to discuss until the most suitable interpretation was found. Member checking was applied during field testing to ensure that the feedback obtained from the target population was interpreted correctly by the research assistant.

Transferability

Transferability is equivalent to external validity in quantitative studies (Shenton, 2004). The study achieved transferability as the researcher provided a detailed description of the participants and research process to allow for transferability judgement (Korstjens & Moser, 2018). Transferability judgement refers to the reader's assessment on whether the study findings are transferable in their own setting (Korstjens & Moser, 2018). The study aim is transferable to Afrikaans-speaking Capetonians in urban settings who can afford private health care.

Dependability

In qualitative studies, dependability refers to the consistency and reliability of the data collected and analysed (Cope, 2014). To enhance dependability, an "audit trail" of the conducted process and outcomes as well as detailed documentation of the raw data, analysis, and process notes (Cope, 2014; Neergaard et al., 2009) was implemented.

Confirmability

Confirmability is equivalent to objectivity in quantitative studies (Shenton, 2004). To enhance confirmability, the interpretation of the data should not be biased and should be

grounded in the data (Korstjens & Moser, 2018). Strategies on enhancing confirmability is through triangulation and audit trails (Korstjens & Moser, 2018; Shenton, 2004), which was implemented in this study.

Aim 2: To Describe the Usability of the Afrikaans SAC and SOAC by Audiologists

Aim 2: Research Setting

The same audiological private company from Aim 1, as well as several individual private practices, were invited to participate in implementing Aim 2. Three South African provinces (Western Cape, Gauteng and Eastern Cape) were used. Practices that serviced the Afrikaans population and met the inclusion criteria were invited to participate in the study. Additionally, Witrand Psychiatric Hospital, a state facility in Potchefstroom (North West Province requested to participate via social media and was subsequently included.

Aim 2: Research Design

A QD design was employed (Heale & Forbes, 2013) where the usability of the tool was described using surveys and verbal feedback interviews (Heale & Forbes, 2013; Neergaard et al., 2009). The QD design was appropriate, as it focuses on gaining first-hand knowledge of an individual's experiences with a particular topic, that does not require in-depth theory-based analysis and allows one to stay close to the data (Neergaard et al., 2009).

Aim 2: Participants

In Aim 2, the focus was the opinions of the audiologists and not the patients' responses on the Afrikaans SAC and SOAC.

Aim 2: Inclusion Criteria for Audiologist Participants and their patients

To qualify as an audiologist participant for Aim 2, certain inclusion criteria for both the audiologist and their patients had to be met. Specifically, the audiologist had to:

- (i) Be registered as an audiologist with the HPCSA with a minimum of two years' experience. This was to ensure efficiency and that accurate results are obtained. A minimum of two years' experience was deemed adequate for audiologists to provide experienced and constructive feedback.
- (ii) Be bilingual in English and Afrikaans as determined by a self-reported participant information form (see Appendix C).
- (iii) Consult Afrikaans-speaking patients in their respective practices (self-reported).

Practice patients had to meet the following inclusion criteria:

- (i) First language Afrikaans speakers (self-reported).
- (ii) Must have a hearing loss that may range from mild to severe, diagnosed by an audiologist.
- (iii) Use of a hearing aid was not mandatory.
- (iv) Communication partners with a hearing loss was not mandatory. However, they should meet the other criteria as stated above.

Aim 2: Recruitment and Sampling

Audiologist participants were recruited through personal and professional connections which resulted in convenience, purposive, and snowball sampling. Other forms of recruitment entailed use of internet databases such as the South African Association of Audiologists (SAAA), South African Speech, Language and Hearing Association (SASLHA), and social media (Facebook). On these platforms, the inclusion criteria were clearly stated for both audiologists (bilingual, HPCSA registered with more than two years' experience) and the profile of patients they consulted (Afrikaans-speaking patients).

Aim 2: Sample Size

A large sample size was unnecessary as the aim was to describe one phenomenon: the usability of the tool (Daniel, 2019). A large sample would not have provided new information (Daniel, 2019) once saturation was reached. The “golden rule” for sample size in qualitative studies should be no more than 50 (Sim et al., 2018). Some authors advise 12 to 60 and others 20 to 50. Samples exceeding 50 participants could affect the quality of data and may be challenging to manage (Sim et al., 2018).

Aim 2: Participant Description

The study aimed to recruit 30 bilingual Afrikaans and English audiologists. However, only 27 bilingual Afrikaans and English audiologists (2 – 5 years’ experience) indicated interest to participate in the study. Of the 27 potential participants, three declined due to self-reported limited Afrikaans speaking patient loads. Twenty-four audiologists verbally agreed to participate in the study; yet only 16 completed the survey, resulting in a 59% response rate.

Fifteen of the 16 audiologist participants were in private practice, and one was from a state hospital in the North West province (Witrand Psychiatric Hospital). Due to time and logistical constraints, only five of the audiologists were invited for a verbal feedback interview of which two did not respond, and three accepted the invitation and followed through. Data saturation was reached and hence no further participants were invited to participate.

Aim 2: Data Collection

Prior to data collection, an application was sent to Witrand Psychiatric Hospital for approval to conduct the research in the Audiology department. A letter of approval to use the site was emailed to the researcher by the North West Department of Health Provincial Office (see Appendix M). Additionally, a letter was sent to the large private company for permission to use

the practices from the Western Cape, Eastern Cape and Gauteng branches as a setting of this study aim (see Appendix G). Lastly, each audiologist participant provided consent (see Appendix N) before participating in the study. It was required that the practice patients involved in completing the Afrikaans SAC and SOAC were aware of the research study in progress and that confidentiality was guaranteed, thus were asked to sign an informational letter (see Appendix O) to confirm this. This letter promised confidentiality of patients' details as the completed Afrikaans SAC/SOAC would be kept for research purposes.

Aim 2: Materials

Copies of the Afrikaans SAC and SOAC (see Appendix P and Q respectively) were used for this stud. These were accompanied by a survey (see Appendix R).

Aim 2: Procedure

Audiologist participants from the private company were personally contacted telephonically or via WhatsApp to invite them to participate. Three other small private practices were also contacted the same way (recruited through professional connections). Those that agreed, were sent a formal informed consent letter (see Appendix N) via email. An advertisement was posted on SAAA, SASLHA, and social media about the study. Three individual audiologists responded and were formally invited with an informed consent letter (see Appendix M).

Informed consent letters (see Appendix N and O), copies of the Afrikaans translated SAC and SOAC (see Appendix P and Q), and surveys (see Appendix R) were couriered to each audiologist participant's practice. Each audiologist participant was allocated a two-month period in which to administer the Afrikaans SAC and/or SOAC to their consenting patients. After completion, the audiologist participant was asked to complete a survey that required their opinions on the grammar and language used as well as the relevance and practicality of the

measure (see Appendix R). Verbal feedback interviews were conducted (after the surveys were received) via WhatsApp video call with three audiologists, respectively. The verbal feedback interviews were approximately ten minutes as the interviews followed the survey questionnaire as a topic guide (see Appendix R).

Aim 2: Data Management

The raw data from the survey feedback for each audiologist were recorded on an Excel spreadsheet and was later tabulated (see Appendix S). The verbal feedback interviews were recorded and transcribed verbatim on a Word document. Pseudonyms were used to keep audiologist participants' names anonymous during data management. All completed surveys were stored and secured in a lockable box that is only accessible to the primary researcher. The data will be stored by the research supervisor for five years after the research is completed (SAMRC, 2019).

Aim 2: Data Analysis

Once the raw data of the audiologist participants' survey responses were recorded (see Appendix S), the data were analysed using content and thematic analysis. Content analysis was used to analyse textual data by identifying trends and patterns of words used (Vaismoradi et al., 2013). All the audiologist participants' responses for each survey question were analysed separately by counting the frequency of positive ("Yes" & "No challenges" responses) and negative ("No" & "Challenges were faced") responses. The summary of the analysis of the data was recorded in a which can be found in the Results section under Aim 2. Furthermore, themes were extracted from all the audiologist participants' actual responses for each survey question. These themes were summarised and recorded on the same table.

Once the verbal feedback interviews were transcribed (see Appendix T), the researcher analysed the verbatim transcription and **bolded** the positive responses and *italicised* negative responses (see Appendix T). The positive and negative responses were counted for each area in question:

- (i) Practicality (commenting on the response scale, length of the measure, and ease of administration).
- (ii) Content relevance (relevance of the tool for target population and relevance of the items in the tool).
- (iii) Target population (views and opinions collected from their patients).
- (iv) Challenges (challenges faced while using the outcome measure).
- (v) Usefulness (the benefit of using the measure and if it assisted the audiologist in any way).
- (vi) Improvements (if the measure needed alterations or improvements on practicality, items, grammar, or word choice).
- (vii) Practice use (if the audiologist would use this translated measure in their own practice).

Furthermore, emerging themes were identified from the audiologist participants' responses for each aforementioned category. The summary of the analysis of the verbal feedback interviews were recorded in Table 5 which can be found in the Results section under Aim 2.

Aim 2: Trustworthiness

The trustworthiness of the research study was analysed according to its credibility, transferability, dependability, and confirmability which will be explained separately.

Credibility

The credibility of this study aim was enhanced using triangulation¹¹. Methodological triangulation was achieved with surveys and verbal feedback interviews with the audiologist participants. Converging the outcomes from these methods provided a comprehensive understanding of the phenomena under study (Korstjens & Moser, 2018). Additionally, if the outcomes/experiences reported were similar under different methods, the dependability, credibility and confirmability of the study findings were enhanced (Heale & Forbes, 2013). Participant triangulation was applied by involving various audiologists to describe the usability of the Afrikaans SAC and SOAC. Site triangulation was achieved by the participation of the audiologists from different provinces where similar results were found at these different sites (Shenton, 2004). A limitation that may affect the credibility of the study aim is the sample size of the verbal feedback interviews and researcher bias¹² during data analysis.

Transferability

The study achieved transferability through a detailed description of the participants and research process (Korstjens & Moser, 2018). In this study aim, the usability of the Afrikaans SAC and SOAC by audiologists has shown to be transferable to private based audiologists with Afrikaans-speaking patients in urban settings.

Dependability

Dependability refers to the consistency and reliability of the data collected and analysed (Cope, 2014). The study used the triangulation method by using surveys and verbal feedback

¹¹ Refer to Glossary.

¹² Unintentional errors in the research procedure or interpretation of the data influenced by the researcher's expectancies, perceptions or beliefs (Cope, 2014).

interviews to enhance dependability. Furthermore, documenting the raw data analysis and process were implemented to enhance dependability (Cope, 2014; Neergaard et al., 2009).

Confirmability

Confirmability refers to the researcher's ability to not influence the data due to subjectivity by staying close to the data and describing how conclusions and interpretations were established (Cope, 2014). Strategies to enhance confirmability included triangulation and audit trails (Korstjens & Moser, 2018; Shenton, 2004).

Ethical Considerations

The study adhered to the ethical principles set out by the Declaration of Helsinki (World Medical Association [WMA], 2013).

Autonomy

Participants were not coerced to participate in the study. Every participant participated out of their own free will and was allowed to withdraw at any time (Tangwa, 2009). The objectives of the study were clearly communicated, and each participant gave written informed consent prior to participation. Potential participants who did not accept or respond to participant invitations were automatically taken off the list and new participants that met the inclusion criteria were added.

Justice

Justice ensures fairness among the participants where the needs of the participants are always put first, above the objectives of the study (Tangwa, 2009). This principle was achieved by involving hearing-impaired individuals that used the services of the practices, reducing the burden of any extra costs to participate. All individuals who met the inclusion criteria were

eligible to participate in the study. Further, after completion of the report, the researcher will communicate and disseminate the research findings to all participants, as well as share knowledge from the study for the benefit of employers, the economy, and society (Emanuel et al., 2004).

Beneficence: Risk/Benefit Ratio

There was no direct benefit to any of the participants. However, participation in the study contributed to creating an Afrikaans version of the SAC and SOAC that could benefit hearing-impaired individuals in the Afrikaans population; as well as potentially using the instruments in South African audiology practices. The risks were related to the participants' professional time to implement the study in their naturalistic setting without charging for extra professional time used.

Non-maleficence

Non-maleficence is a principle that ensures and protects research participants from harm (Tangwa, 2009). Similar to other qualitative studies, this study was conducted in a naturalistic setting, and no treatment was imposed. If participants felt that the study affected their time (personal or professional), they had the option to voluntarily withdraw from the study.

Confidentiality

Confidentiality of the participants was maintained and monitored. Participants' names remained anonymous during data management. All participant information, consent, and completed questionnaires were stored in a lockable office drawer, secured in a lockable box that is only accessible to the primary researcher and supervisors. The data will be stored for five years by the research supervisor after the research is completed (SAMRC, 2019).

Chapter Three: Results

This chapter reports on the outcomes of the data collection phase for Aim 1 and 2. The results of Aim 1 and aim 2 are reported separately.

Aim 1: To Develop an Afrikaans Version of the SAC and SOAC Using AAOS Guidelines

The results for Aim 1 are reported as follows: (i) Forward Translation and Synthesis; (ii) Backward Translation and Expert Committee Review; (iii) Field Testing.

Stage 1 and 2: Forward Translation and Synthesis

Following forward translations, the synthesis stage consisted of both forward translations being analysed to form one synthesised translation. During this process, most changes entailed selecting the better word choice, and substitution with a word more commonly used and familiar to the general Afrikaans-speaking population. For example, the term "Significant Other," FT1 provided the literal translation to "Betekenisvolle Ander" and FT2 translated the term as "Lewensmaat" (English: "Life Partner"). Due to the difference in translation found, FT1 admitted that the former term was difficult to translate as it is not usual for Afrikaans people to refer to anyone as their "Significant Others". Therefore, FT1 provided the literal translation. However, FT1 preferred FT2's translation as it was a more widely used term in the Afrikaans community and was well understood. Thus, both FTs agreed to translate "Significant Other" to "Lewensmaat."

In the instructions section of the measure, the original English SAC and SOAC referred to the items as "statements." FT1 translated this term to "vraag/vrae" (English: "question/s") as FT1 felt that the items in the measure were questions and not statements. Although FT2 translated the word as "stellings" (English: "statements"), FT2 agreed to change the word as it was more appropriate based on the nature of the measure.

Other notable changes involved the phrase “enjoyment of life” in Item 9, which was translated as “genieting van die lewe” by FT2 and “genot in die lewe” by FT1. The English phrase was difficult for both FTs to translate as neither could identify an appropriate term/phrase to use. However, both felt that FT1’s literal translation, was the best and most appropriate translation between the two; therefore, both agreed to translate the phrase as “genot in die lewe.” A summary table of the word changes for question one to four is shown in Table 1. See Appendix J for all the changes made during forward translation and synthesis stage.

In addition to selecting the better word choice, several changes were adopted during the synthesis stage on sentence structures and grammar. For example, in Item 3, the forward translations of "when conversing with a small group of several persons" were differently translated by FT1 and FT2. Specifically, FT1 translated the phrase as "meer as een persoon gesels" which can be directly translated as “speaking to more than one person” assuming that when speaking with more than one person, automatically also refers to speaking to several persons. FT2 translated the phrase as "waar u in gesprek is met 'n klein groep of verskeie persone", which was a more literal translation to the original sentence (“when conversing with a small group of several persons”). Both translators reconciled the differences by revisiting the original item and compared the translations, both agreed that FT2’s literal translation was the better choice as it retained semantic equivalence to the original.

Another example includes Item 4, “when someone whispers or talks from across the room” which was translated to “wanneer iemand fluister of van die ander kant van die vertrek af praat” by FT2 and to “wanneer iemand fluister of praat oor ‘n afstand” by FT1. During synthesis, both translators revisited the original item and compared the translations. They agreed that FT2's

Table 1:*Item 1 to 4 Word Changes during Forward Translation and Synthesis*

	Translations of FT1 and FT2	Changes made during Synthesis	Synthesised Translation
Question 1			
FT 1	Ervaar u kommunikasieprobleme in situasies waar u met een ander persoon gesels? (by die huis, by die werk, in sosiale omstandighede, met 'n kelnerin, met 'n winkelklerk, u huweliksmaat, u baas, ens.)	1. FT1 felt that “praat” was not incorrect, but when you are in conversation with someone, Afrikaans people use “gesels” more than “praat”. However, both terms are used interchangeably by the Afrikaans speaking population. FT2 agreed to change the word to “gesels”.	Ervaar u kommunikasieprobleme in situasies waar u met een ander persoon gesels? (by die huis, by die werk, in 'n sosiale situasie, met 'n kelnerin, 'n winkelklerk, met 'n eggenoot, baas, ens.).
FT 2	Ervaar u kommunikasieprobleme in situasies waar u met een ander persoon praat? (by die huis, by die werk, in 'n sosiale situasie, met 'n kelnerin, 'n winkelklerk, met 'n eggenoot, baas, ens.)	2. FT2 felt that one can provide a literal translation of “social situation” (sosiale situasie) as it was not an uncommon term and Afrikaans people would understand the term. FT1 agreed, for the sake of retaining equivalence to the original. Thus, decided to change the “omstandighede” to “situasie”. The same was observed for “spouse”, FTs decided to use “eggenoot” instead as it was more of a literal translation, but still a commonly used word.	
Question 2			
FT 1	Ervaar u kommunikasieprobleme terwyl u televisie kyk en tydens verskeie tipes vermaaklikhede? (flieks, radio, tonele, nagklubs, musikale vermaaklikhede, ens.)	1. FTs discussed the use of “vermaak” and “vermaaklikhede”: “vermaak” is the singular form of “entertainment” and “vermaaklikhede” is the plural form. The original SAC has used the singular form therefore, “vermaak” was used instead, which was agreed by both FTs. 2. FT 2 felt that this term can be used interchangeably, therefore, felt that either one could be used. FT1 agreed to “toneelstukke” as it is the “fuller” and formal term than “tonele”.	Ervaar u kommunikasieprobleme terwyl u TV kyk en in verskeie tipes vermaak? (flieks, radio, toneelstukke, nagklubs, musikale vermaak, ens.)
FT 2	Ervaar u kommunikasieprobleme terwyl u TV kyk en in verskeie tipe vermaak? (flieks, radio, toneelstukke, nagklubs, musikale vermaak, ens.)		

3. Both decided to keep the abbreviation of TV (the same as the original) as it is a commonly known term, and it is culturally appropriate to use.

Translations of FT1 and FT2	Changes made during Synthesis	Synthesised Translation
Question 3		
FT 1 Ervaar u kommunikasieprobleme in situasies waar u met 'n klein groep mense of meer as een persoon gesels? (met vriende of familie, met kollegas in vergaderings of informele gesprekke, tydens maaltye, terwyl u kaart speletjies speel, ens.)	1. FT2 provided the literal translation. FT1 altered the meaning of the original SAC from “with a small group of several persons” to “with a small group of people or more than 1 person” by assuming that “more than one person” refers to “various persons”. However, FT2 felt that her literal translation was semantically more equivalent to the original and easy to understand among Afrikaans speakers without the need to alter any phrases. FT1 agreed but suggested a change in the grammar – placing the verb “gesels” to the end of the sentence which would make the sentence grammatically correct.	Ervaar u kommunikasieprobleme in situasies waar u met 'n klein groep mense van verskeie persone gesels? (met vriende of familie, kollegas, in vergaderings of informele gesprekke, oor aandete of terwyl u kaarte speel, ens.)
FT 2 Ervaar u kommunikasieprobleme in situasies waar u in gesprek is met 'n klein groep van verskeie persone? (met vriende of familie, kollegas, in vergaderings of informele gesprekke, oor aandete of terwyl u kaarte speel, ens.)	2. The same, as above, for the term “over dinner or while playing cards”, both agreed to go for the literal translation as it was still understandable and commonly used in the Afrikaans population.	
Question 4		
FT 1 Ervaar u kommunikasieprobleme wanneer u in 'n moeilike luister omstandigheid is? (by 'n raserige partytjie, waar daar agtergrondmusiek is, terwyl u in 'n kar of bus ry, wanneer iemand	1. The phrase “unfavourable listening environment” was translated differently. FT1 used “moeilike luister omstandigheid” because when describing a listening environment that affects communication, it is often described as “difficult” to the patient and clinician, thus, “moeilike” (difficult) was the choice of word. “Ongunstige”	Ervaar u kommunikasieprobleme wanneer u in 'n ongunstige luisteromgewing is? (by 'n raserige partytjie, waar daar agtergrondmusiek is,

Translations of FT1 and FT2	Changes made during Synthesis	Synthesised Translation
<p>fluister of praat oor 'n afstand, ens.)</p> <p>FT 2 Ervaar u kommunikasieprobleme wanneer u in 'n ongunstige luisteromgewing is? (by 'n lawaaierige partytjie, waar daar agtergrondmusiek is, terwyl u in 'n kar of bus ry, wanneer iemand fluister of van die ander kant van die vertrek af praat, ens.)</p>	<p>as translated by FT2 is the literal translation. FT1 felt that both terms can be used interchangeably thus, decided to stick with the literal translation to ensure equivalence. Furthermore, the two terms “luisteromgewing” and “luisteromstandigheid” both mean the same but the most widely used and simplified term was selected i.e., “luisteromgewing”.</p> <p>2. "Raserige" and “lawaaierige” are terms that could also be used interchangeably. Both were semantically equivalent to the original and were commonly used in the Afrikaans language. Both FTs did not have a preference but went with “raserige”.</p>	<p>terwyl u in 'n kar of bus ry, wanneer iemand fluister of praat oor 'n afstand, ens.)</p>

Note. FT1 refers to Forward Translator 1 and FT2 refers to Forward Translator 2.

translation was too literal and “wordy.” Therefore, they shortened the phrase whilst still maintaining semantic equivalence and used "oor 'n afstand" as translated by FT1 (English: "over a distance"). The full table, describing all the decisions and changes that were made can be found under Appendix J.

Stage 3 and 4: Backward Translation and Expert Committee Review

Once a combined Afrikaans translation was synthesised, the measure was backward translated. Thereafter, an expert committee reviewed all the translations.

Without changing the meaning and general sentence structures, some items were simplified to allow for a better understanding of the questions. For example, in Item 1, "Ervaar u kommunikasieprobleme in situasies waar u met een ander persoon gesels?" was simplified by replacing “in situasies waar” (English: “in situations where”) to “wanneer” (English: “when”). This change was suggested by the Speech Language Pathologist (SLP) in the expert committee panel who explained that both terms/phrases were semantically equivalent and “wanneer” is used more often in the Afrikaans community. All the other members reviewed the original and the new translation in the sentence; FT1 agreed and commented that simplifying to “wanneer” still retains semantic equivalence. Additionally, the item provided appropriate examples for a better understanding. No other member had a different opinion, and all agreed that changing the phrase to “wanneer” (“when” in English) does not change the meaning of the sentence. They also felt that using “wanneer” simplified the sentence and that the word was commonly used among the Afrikaans-speaking population.

With other simplifications such as Item 3 “Ervaar u kommunikasieprobleme in situasies waar u in gesprek is met 'n klein groep of verskeie persone?”, the committee immediately agreed that “in situasies waar” can once again be simplified to “wanneer”, for the same reason stated

earlier. Additionally, the SLP argued that “in situasies waar u in gesprek is met 'n klein groep of verskeie persone” basically refers to a small group of people (“klein groep mense”). The reasoning was that a small group of people generally does contain various persons (“verskeie persone”). Therefore, the translation was modified and simplified to "wanneer u met 'n klein groep mense gesels" by completely removing the “verskeie persone” phrase. The committee members checked the original Item 3 “when conversing with a small group of several persons” and agreed that “small group of people” is semantically equivalent to “small group of several persons”. Furthermore, examples of possible situations stated after the question allows the reader to understand the type of small group situations that the item refers to. All members were in agreement and modified the sentence to "wanneer u met 'n klein groep mense gesels".

Item 9 was assessed again, and the backward translators found that "genot in die lewe” was difficult to back translate and felt that the phrase was not an accurate description of “enjoyment of life”. Furthermore, according to the backward translators, “genot in die lewe” was not a commonly used word and the phrase sounded “odd”. The SLP recommended the word “lewensvreugde”, although it may not be a direct translation to the original, the meaning implies “enjoyment of life”. Further, “lewensvreugde” is considered a more commonly used word and better understood term among the Afrikaans-speaking population. All agreed to the suggestion as no one else in the committee had an alternative word for consideration. In addition, it was agreed that the suggested word, “lewensvreugde”, is a more simplified term to use.

Error! Not a valid bookmark self-reference. is a summary of items one to three that required changes during consensus. The full table of all the changes and agreements during committee review was recorded and can be found in Appendix K.

Table 2:*Changes made during Expert Committee Review for Items 1 to 3*

BT1/2	Translations	Expert Panel review	Afrikaans pre-final version
Question 1			
BT1	Do you experience communication problems when you are talking to one other person? (At home, at work, in a social situation, with a waitress, with a store clerk, with a spouse, with your boss, etc.)	The committee reviewed the translations where the speech therapist recommended to replace "in situasies waar" with "wanneer" to make it more simplified as both basically means the same. Both BTs also translated it as "when" instead of "in situasies waar". All members agreed to this change as it was also more common to use "wanneer" in the Afrikaans language.	Ervaar u kommunikasieprobleme wanneer u met een ander persoon gesels? (by die huis, by die werk, in 'n sosiale situasie, met 'n kelnerin, 'n winkelklerk, met 'n eggenoot, baas, ens.).
BT2	Do you experience any communication problems when conversing with another person? (At home, work, social situation, with a waitress, shop clerk, with a spouse, boss, etc)	The expert panel agree that both back translations are equivalent to the original and accept the changes that were made in forward translation.	
Question 2			
BT1	Do you experience communication problems when you are watching television and during other types of entertainment? (Movies, radio, plays, night clubs, musical entertainment, etc.)	The committee was satisfied with the changes made during the forward translation. However, one BT recommended to replaced "terwyl" with "wanneer" as it was a simpler and often used term, although both terms mean the same. The committee felt they made similar changes with the previous question, thus, decided to make the slight change as it does not affect the equivalence.	Ervaar u kommunikasieprobleme wanneer u TV kyk en in verskeie tipes vermaak? (flieks, radio, toneelstukke, nagklubs, musikale vermaak, ens.)
BT2	Do you experience any communication problems while watching television and during other forms of entertainment? (Movies, radio, theatre, night clubs, music entertainment etc.)		

BT1/2	Translations	Expert Panel review	Afrikaans pre-final version
Question 3			
BT1	Do you experience communication problems in situations where you are speaking to a small group of different people? (friends/family, colleagues during meetings or social discussions, during mealtimes, during card games, etc).	<ol style="list-style-type: none"> 1. The committee agreed unanimously to change "in situasies waar" again to "wanneer" as previously done in Item 1 for simplification purposes. 2. The speech language pathologist argued that "in situasies waar u met 'n klein groep of verskeie persone gesels" basically refers to a small group of people ("klein groep mense") because a small group of people generally does contain various persons ("verskeie persone"), therefore, recommended that the translation be modified and simplified to "wanneer u met 'n klein groep mense gesels" by completely removing the "verskeie persone" phrase. The members checked the original item which states, "when conversing with a small group of several persons" and all discussed and agreed that "small group of people" is semantically equivalent to "small group of several persons" and that examples of possible situations stated after the question allows the reader to understand which type of small group situations that the item was referring to. All members were in agreement and modified the sentence to "wanneer u met 'n klein groep mense gesels". 	Ervaar u kommunikasieprobleme wanneer u met 'n klein groep mense gesels? (met vriende of familie, kollegas, in vergaderings of informele gesprekke, oor aandete of terwyl u kaarte speel, ens.)
BT2	Does he/she experience any problems in situations where he/she interact in a small group of people or talk to more than 1 person at a time? (friends/family, colleagues during a meeting or informal conversation, during dinner or while playing card games, etc.).		

Note. BT1 refers to Backward Translator 1 and BT2 refers to Backward Translator 2.

Stage 5: Field Testing

Once the Afrikaans measure was finalised, it was used for the field testing stage. Five audiologists were trained as research assistants for data collection. No research assistant sought/needed clarification about the procedure. The completed surveys had all the patient/SO participant responses written on the back of the pages. Two research assistants with the least number of completed surveys admitted to forgetting to administer the measures and struggled with time management. Thirty-eight questionnaires were completed, of which 22 were patient participants that completed the SAC and 16 were SO participants that completed the SOAC.

The raw data of the responses (SAC and SOAC) from the patient/SO participants (see Appendix L) were analysed together and were summarised according to the following categories as seen in Table 3:

- 1) Easy to use.
- 2) Easy to understand.
- 3) Questions are relevant to the target population.
- 4) The grammar and sentence structures are satisfactory.
- 5) The vocabulary and word choices are satisfactory.

Table 3:*Analysis of the Patient Participant Responses in Field Testing Stage*

Category	Response	% (n=38)	General feedback
Easy to use	Agree	100%	<ul style="list-style-type: none"> • Short questionnaire • Quick and easy to complete • The Likert scale was easy to use • Did not need clarification on how to use it
	Disagree	0%	No negative comments were provided
Easy to understand	Agree	100%	<ul style="list-style-type: none"> • Easy to understand and follow (instructions, questions and scale) • As if an Afrikaans person translated the questionnaire • No clarification was needed when reading through the questionnaire • The examples in brackets after the questions are helpful as it allowed for better understanding of the question.
	Disagree	0%	No negative comments were provided
Questions are relevant to the target population	Agree	94.7%	<ul style="list-style-type: none"> • Questions are very relevant to the hearing-impaired individual; this was also reported by SOs as they can relate to it • The example in the brackets makes the questions even more relevant as it provides scenarios that are typically difficult for hearing-impaired individuals • The questions also bring awareness to participants that they may have a hearing loss. • Appropriate translation for Afrikaans speaking people • Relevant to the language and culture of Afrikaans population
	Disagree	5.3%	<ul style="list-style-type: none"> • One participant does not think he has a hearing loss therefore feels that the questions are not relevant and recommended adding a “0 - N/A” option in the scale.

Category	Response	% (n=38)	General feedback
			<ul style="list-style-type: none"> One participant felt that the questions are relevant, but some are not relevant to her such as questions asking about socialising – she does not socialise anymore due to her age thus her hearing loss does not impact her at all.
The grammar and sentence structures are satisfactory	Agree	97.4%	<ul style="list-style-type: none"> The Afrikaans grammar and language that is used is appropriate and correct for Afrikaans speaking populations. No changes/ improvements needed
	Disagree	2.6%	<ul style="list-style-type: none"> One participant suggested to rephrase Q10 to: “Hoeveel ure gebruik u die gehoorapparaat op ‘n gemiddelde dag?”
The word vocabulary and word choices are satisfactory	Agree	21%	<ul style="list-style-type: none"> Vocabulary and word choice are satisfactory and appropriate for Afrikaans speaking populations No improvement required
	Disagree	79%	<p>Word change suggestions:</p> <ul style="list-style-type: none"> “Lewensmaat” to be replaced with “Naasebestaande” for individuals that are not life partners such as family and friends. “Naasbestaande” is appropriate for all persons that are close with the hearing-impaired individual Q2: “TV kyk en <i>in</i> verskeie tipes vermaak”. It was argued that the word causes a slight ambiguity that maybe not everyone will pick up but was recommended to replace it with “tydens”. Q3: “<i>oor</i> aandete”. Participants argued that the most appropriate or commonly used word is “tydens” in this context. Q4: “luisteromgewing” vs “gehooromgewing”: one participant suggested the latter as it seems more correct.

The responses were analysed according to the categories by “Agree” or “Disagree”. “Agree” responses were where the patient/SO participant felt that the outcome measure was easy to use and to understand, items were relevant to the target population, and the grammar, sentence structures, and word choices were satisfactory. “Disagree” responses indicated when the patient/SO participants recommended that alterations or corrections of the translation was necessary. The analysis of the responses collected from field testing can be found in Table 3.

Whilst analysing the data, there were no notes indicating that any patient participant/SO needed any clarification. Therefore, all the patient/SO participants had a positive response, reporting the questionnaire was easy to use and to understand with no clarification needed. Additionally, some patient/SO participants provided suggestions on six areas, which will be discussed next.

The most significant response and change was the word “lewensmaat”. Seven SOs were family members or friends; six of the seven SOs (five were family members and one was a life partner) suggested to replace the word with “Naasbestaande” (literal translation: “next of kin”). SOs stated that “Lewensmaat” is a very specific term used to refer to a partner with whom one has an intimate relationship, which was directly translated and understood as “life partner”. Accordingly, not all hearing-impaired individuals seek hearing services with their life partners; in fact, many came with other family members or friends. Therefore, “Naasbestaande” was suggested as a more appropriate and accurate word choice to account for other members. Further, “naasbestaande” can still be used to refer to an individual’s life partner. The suggested change was referred to the expert committee panel, and all agreed to the word change based on the reason previously stated.

Another change involved a word replacement in Item 2. It was suggested that “Ervaar u kommuniekasieprobleme wanneer u TV kyk en *in* verskeie tipes vermaak” should be translated with a word change to: “TV kyk en *tydens* verskeie tipes vermaak”. Nine patient/SO participants made the suggestion and argued that the sentence using “in” may make the sentence ambiguous as it can be asking whether you are having hearing difficulties while watching TV during social entertainment. Thus, it was recommended to replace “in” with “tydens” (literal translation: during) to separate watching TV and engaging in other entertainment. The expert committee panel reviewed the suggestion and rationale, and all members agreed to the change.

Eight participants recommended a small change in Item 3: “*oor* aandete” (literal translation: over dinner) to “*tydens* aandete” (literal translation: during dinner). Participants felt that “tydens” was a more appropriate term for the context of the question. The expert committee panel reviewed the suggestion and most agreed to the change.

Other suggested changes, as seen in Table 3, were reviewed by the expert committee panel but did not reach majority consensus. For example, three members of the expert committee panel did not agree to the addition of the number “0” to the scale as “Not Applicable”. They provided the following reasons: one can simply rate “1” which indicates “Almost never (or never)” which means the patient does not struggle in those situations at all, similarly if one were to rate “Not Applicable”. Second, the measure was standardised using the current Likert-scale to create the norms for scoring purposes; therefore, changing the scale may affect the reliability and validity of the measure.

One patient participant suggested changing Item 10 to “Hoeveel ure gebruik u die gehoorapparate op ‘n gemiddelde dag?” (Direct translation: “How many hours do you use your hearing aids on an average day?”), by removing the phrase in the beginning: “Indien u

gehoorapparate gebruik” (Direct translation: “If you are a hearing aid user”). However, the expert committee panel did not agree to the suggestion made because if one were to remove the starting phrase, it would imply that each person completing the outcome measure were wearing hearing aids. The Afrikaans SAC and SOAC was intended to be completed by Afrikaans hearing-impaired individuals and their SOs, whether they were hearing aid wearers or not. Therefore, the starting phrase of Item 10 was necessary to indicate that the question was to be answered by a hearing aid wearer. As a result, the expert committee panel decided to keep the translation as is.

Overall responses from the field testing stage showed that the Afrikaans SAC and SOAC was:

- 1) Easy to use.
- 2) Easy to understand.
- 3) Relevant to the hearing-impaired individual and SOs.
- 4) Appropriately translated and relevant for the Afrikaans speaking population.
- 5) The Afrikaans SAC and SOAC grammar and language that was used was relevant, accurate, and appropriate for the Afrikaans-speaking population.

Aim 2: To Describe the Usability of the Afrikaans SAC and SOAC by Audiologists

Sixteen audiologists participated in the study and completed feedback surveys regarding the usability of the Afrikaans SAC and SOAC after administration in their respective practices over a one-to-two-month period. The overall response was positive; all raw data of the responses can be found in Appendix S. This section will report the results of surveys and verbal feedback interviews separately. The survey responses obtained from the audiologist participants were summarised in tabular form according to each survey question (see Table 4).

Table 4:

Summary of Survey Responses on the Usability of the Afrikaans SAC and SOAC

Question	Response	% (n=16)	Feedback
Is the tool practically easy to administer (looking at the response scale, the length of the measure and ease of administration)? If not, please elaborate.	Yes	100%	<ul style="list-style-type: none"> • User friendly • Easy to understand • Easy and convenient for clinicians to explain because questions were straight forward (especially if patients are unsure about the question) • The Likert-scale is practically easy to understand • Quick to complete
	No	0%	
Comment on the content of the measure – do you think it is relevant? If not, please elaborate.	Yes	100%	<ul style="list-style-type: none"> • Provides valuable information on perception of hearing loss • Mentions all the different challenging environments that one can struggle in • Great counselling tool by using the content of the measure • Content is straightforward and not too long • Relevant to get the opinion of SO as most patients don't think they have a hearing loss • Assists with HA fitting to focus on problem areas
	No	0%	
What were the challenges (if any) when administering the tool?	No challenges	75%	<p>None</p> <ul style="list-style-type: none"> • Time was an issue, as the patient already has a lot of administration to complete • Significant others are not always present at the consultation. • Some felt that question 6 and 9 were confusing as it meant the same thing. • Some patients had dexterity issues, therefore needed assistance to complete. • Rating scale had to be explained to 1 patient. Not very sensitive to patients with profound losses as even with hearing aids, she still struggles to hear.
	Challenges faced	25%	

Question	Response	Count	Feedback
Did you find the tool useful? In other words, did it assist you with fine-tuning and identifying problem areas	Yes	93.8%	<ul style="list-style-type: none"> • Provides insight into problem areas to determine whether extra hearing aid programs or accessories will be needed for the patient • Gives insight into the patient's emotional aspect • Allows patients to realise specific hearing difficulties earlier on in the assessment as well as thoughts of SOs. • Helps to increase patient satisfaction on hearing aids as it guides audiologists with fine-tuning sessions by focusing on problem areas • One did not find it useful during consultations as limited amounts were used • Some did not find it helpful but mentioned that it might be helpful if used before and after fitting
	No	6.2%	
Would you use the Afrikaans SAC and SOAC again?	Yes	100%	<ul style="list-style-type: none"> • Provides valuable information. • Helps patients feel better understood at the end of the appointment • Self-awareness of hearing loss for patients • Allows audiologists to provide tailored hearing solutions focusing on what is most important to the patient • Assisted with the counselling of patients. • Quick and easy to administer. • Assists clinicians to identify problem areas. • Can be used to motivate patients to wear hearing aids for longer periods as it may help them environments that they struggle in. • If used more, would be able to see before and after fittings and in between fine tunings for improvement in specific situations.
	No	0%	

Question	Response	Count	Feedback
Do you have any suggestions on improving the Afrikaans SAC and SOAC?	Yes	12.5%	<ul style="list-style-type: none">• Q7 "bekommer, irriteer en onstel" are three different emotions that should be separated into separate questions• Grammar suggestions• To use the measure as a metric system to use before fitting and after fitting (approximately 3-6 months apart)• Q6 and Q9 seemed to mean the same and confused some patients• Thorough, relevant, easy and sufficient
	No	87.5%	

Surveys

Each audiologist participant administered a minimum of one outcome measure (SAC or SOAC or both) in their respective practices. Thereafter, audiologist participants were required to complete a survey on the usability of the SAC and SOAC (see Appendix R). The researcher analysed the raw data (see Appendix S) and compiled a table (see Table 4). All 16 audiologist participants had positive feedback regarding the translated Afrikaans SAC and SOAC. Based on the positive feedback, seven different themes emerged:

- 1) The measure was user friendly.
- 2) Items and instructions were straight forward and easy to understand.
- 3) Quick to administer.
- 4) Provides valuable information on perception of hearing loss for hearing-impaired individual and SO in different listening environments.
- 5) Good counselling tool which may also assist in hearing aid fittings and fine-tuning.
- 6) Involving the perception of SO in consultations which allowed for family centred care.
- 7) Allowed hearing-impaired individuals realise their hearing difficulty and how it affects them and their SO.

Four audiologist participants reported challenges that were related to implementation, rather than the usability of the Afrikaans SAC and SOAC. Two audiologist participants at busy practices felt that completing the SAC/SOAC during the patient's administration¹³ time resulted in rushing their consultations or causing a delay in their next appointment. The lengthened administration time was more apparent with patients that had dexterity issues, who could not

¹³ The patient's administration time refers to the time that the patient must complete their personal information and other forms for a practice prior to the appointment.

complete all the practice administration forms and the SAC/SOAC quickly enough. Furthermore, three audiologist participants mentioned that not all the individuals came with their SOs.

Therefore, they could not complete the SOAC. Two audiologist participants recommended that the tool may be useful for pre- and post-fitting (3-6 months apart) but unfortunately did not have the opportunity to do so in the given time. The raw data of the responses of each audiologist participant can be found under Appendix S.

Verbal Feedback Interviews

Three audiologist participants accepted the invitation to participate in an individual verbal feedback interview. The verbal feedback interviews were conducted over WhatsApp video call at dates and times that were convenient for the interviewee. The verbal feedback interviews were conducted after each audiologist participant's one-to-two-month implementation period, and after receiving their completed surveys. The verbatim transcriptions of the recorded interviews can be found in Appendix T. To guide the interview, the researcher followed the questions on the survey (see Appendix R), that was completed by the audiologist participants. Overall, responses in the interview were positive and similar to the responses found in the surveys, one of the interviewees reported:

I found the tool to be quite easy to use, like it was pretty user-friendly...
um...because it wasn't a very long questionnaire, and the scale wasn't
difficult to use and understand. And I also felt that even the questions
were not difficult to explain; like if a patient asked me about something,
then I wouldn't struggle to explain it, I think. So, I pretty enjoyed how
practical it was!

The relevance of the measure was also reported: “Yeah, I do think it’s relevant to use as an audiologist, because it like provides valuable information on the patient’s perception of their hearing loss and it’s very straightforward.”

Other themes, such as assisting audiologists with fine-tuning hearing aids were also mentioned:

I think that if an audiologist is able to understand the patient’s needs and problems through this questionnaire, then it can be used to improve fine tunings. So, for example, the patient struggles in background noise, then you would make some adjustments on the features on the hearing aid, but at the same time counsel them on communication strategies and more importantly, on realistic expectations.

The themes identified were identical to what was found during the analysis of the surveys. However, one audiologist reported a challenge which matched with the survey findings:

I think the only challenge I had was that not every patient came in with a partner, or what this measure calls it, a significant other. But I can see how it can benefit having the partner involved. In my previous experience, I have seen patients purchasing hearing aids from us because the partner encouraged it.

When asked what the possible reason was for non-attendance, the audiologist participant could not provide a definite answer but reported:

I would think that some partners can't take time off from work, and plus we are not open after 5[pm] or weekends... Or it could just be they are not '*lus*' [desire] to sit and wait in the room. It could be anything.

The summary of the analysis and results of the verbal feedback interviews can be found in Table 5.

Table 5:*Data Analysis of the Verbal Feedback Interviews*

Topic	Intended topic points	Responses	Count	Themes
Practicality	Response scale	Positive	3	User-friendly
	Length of the measure			Instructions were clear
	Ease of administration	Negative	0	The scale was easy to use and understand Short and not too long (quick administration)
Content	Relevance of the tool	Positive	3	Very relevant to us
	Relevance of the items in the tool	Negative	0	Insight on their perceptions (SO) Counselling tool Provides relevant information on perception of hearing loss using straightforward questions Helps clinicians to focus on the problem areas No patient required clarification on the tool
Challenges	Practical challenges	Positive	2	Did not face any challenge while using the tool
	Content-specific issues			Not every individual came with a significant other but
	Other	Negative	1	understands the benefit of SO involvement
Usefulness	Practice specific	Positive	3	Allowed patients to learn their specific hearing problems and how it is affecting them
	How is it beneficial to you as a clinician?	Negative	0	Initiated the use of hearing aids More aware of their hearing problem Awareness of their problem made counselling easier Useful for fine tuning hearing aids/ guided follow up sessions
Improvements	Suggestions on any improvements (if any)	Positive	3	No suggestions Great measure
		Negative	0	Precise, relevant, comprehensive and easy to administer.

Topic	Intended topic points	Responses	Count	Themes
	Would you use the Afrikaans SAC and SOAC in your own practice?	Positive	3	Provides information about patient's hearing which prepares the clinician on what to expect in consultation
		Negative	0	Great addition to South African Audiology Makes patients feel understood

Chapter Four: Discussion

In this chapter, Aim 1 and Aim 2 will be discussed separately, including each aim's study limitations, clinical implications and recommendations for further research.

Aim 1

The study's translation-adaptation procedure followed the AAOS guidelines as set out by Beaton et al. (2000). Following a forward-backward translation, an expert committee analysed the translations to create a pre-final version which was used for field testing. The discussion commences with the main findings of the study aim, followed by describing the issues and challenges that arose during the translation process. This section concludes with exploring the Delphi technique (Hsu & Sanford, 2007) as an alternative translation method to use in translation studies.

Main Findings of the Study

During the translation process, most changes and consensus reached by the expert committee involved selecting the most commonly used and appropriate word choices or phrases in the Afrikaans language. An example includes translating the phrase "enjoyment of life" to "genot in die lewe" (literal translation by FTs), which seemed to be the most appropriate term during the forward translation stage. However, when reviewed by the expert committee, although the backward translations of the phrase captured the meaning correctly, the committee did not feel that the phrase was familiar or commonly used among the Afrikaans population as it sounded "odd." An alternative replacement word was suggested by the committee members as: "Lewensvreugde" (direct translation is "joy of life"). The replacement word was more simplified, whilst retaining semantic equivalence to the original, than the previously suggested

translated phrase. Additionally, it was a more familiar and commonly used word in the Afrikaans-speaking population.

Additionally, the researcher found that within the translation procedure, the selection and recruitment of the FTs is an important step as the FTs are the initial participants that set up the bulk of the translation which are based on their professional knowledge, linguistic competence, and cultural experience (Thammaiah et al., 2016). The translation process relies on the FTs' initial translation for further modifications throughout the process. Further, choosing two FTs with clinical and non-clinical backgrounds was beneficial, as it allowed for the comparison and analyses of different translations, resulting in the best possible translated version (Thammaiah et al., 2016). For example, in audiology terms, "unfavourable listening environments" (item 4), often refer to environments that make communication difficult, such as communicating in the presence of background noise. Thus, the FT with the clinical background translated the term as "moeilike luister omstandigheid" (literal translation: difficult listening circumstance) whereas the FT without the clinical background translated the term literally, "ongunstige luisteromgewing". The latter was selected as it was semantically equivalent to the original and the FTs felt that the examples in brackets would allow readers to understand the meaning of the phrase in question.

Furthermore, present study findings showed that following different steps in the procedure allowed one to identify discrepancies and ambiguities in the translation. For example, the translation of the term "Significant Other" was revisited at different stages of the procedure until the most appropriate and commonly used translation was agreed upon. During the forward translation phase, FT1 translated the term as "Betekenisvolle Ander" (literal translation) and FT2 as "Lewensmaat" (English: life partner). During the synthesis stage, the FTs decided that "Lewensmaat" was the better word choice, as it was a more commonly used and familiar term to

the Afrikaans population and culture, which was also approved by expert committee for the pre-final version. However, as it came to the field testing stage, this term was revisited as communication partners of the hearing-impaired individuals (who were not necessarily significant others but were a family member or friend) felt that “Lewensmaat” was not an accurate term to describe the latter. Thus, it was recommended that the term be modified to “Naasbestaande” which means “Next of Kin” in English. The expert committee re-evaluated the term and agreed that “Naasbestaande” was an appropriate term referring to family members, friends, and life partners of the hearing-impaired individual. The inclusion of the field testing stage has proved to be essential in the translation procedure to provide cultural and linguistic relevance to the translations.

Issues/Challenges in the Translation Procedure

The success of the translation is dependent on the execution of the adopted translation procedure rather than the selection of translation method (Acquadro et al., 2008). Implementing a translation procedure is a challenge on its own, which was evident in this report. Practical issues and challenges included: (i) recruitment of the expert committee members; (ii) co-operation of the research assistants; and (iii) small sample size in the field testing stage.

According to the AAOS guidelines (Beaton et al., 2000), the expert committee should include methodologists, health professionals, language professionals, and the translators as well as being in close contact with the developers of the outcome measure. However, in the study aim, the expert committee only consisted of five members: the translators and a health professional (SLP). Based on the guidelines, this is a limitation as the researcher was unable to recruit other recommended members due to insufficient resources. Consequently, the results may not be representative of the broader population of Afrikaans first language speakers. In contrast,

similar forward and backward translation procedures only recommend the translators, a health professional, and a methodologist to complete the expert committee (Sousa & Rojjanasrirat, 2011). Specifically, Sousa and Rojjanasrirat (2011) recommended including one monolingual (of the target language) committee member for expert reviews to enhance the quality of the translated measure, which can be considered for future studies.

Another practical limitation was noted in the field testing stage. The study aim relied on the research assistants' professional time to collect data. Thus, their co-operation impacted the field testing stage's sample size. The present study's field testing stage recruited 22 patient participants for the SAC and 16 SO participants for the SOAC, which was less than the recommended amount of 30-40 participants (Beaton et al., 2000). Despite the small sample size, the results did not yield any significant new information from the patient/SO participants except for the modification of the term "Significant Other." Therefore, the sample size may have provided sufficient information to provide a quality translation. Additionally, the accuracy of the data collected was not monitored or supervised. Thus, for future research in translation studies, employing one research assistant to collect all the data may be beneficial to manage data consistency and reliability (Thammaiah et al., 2016).

Other Underlying Issues and Factors to Consider for Translation Studies

Although a robust and comprehensive translation procedure – such as the AAOS guideline that is extensively used in translation studies (Thammaiah et al., 2016; Acquadro et al., 2008) was used, other underlying issues and factors were identified that were not considered in the guideline. These issues/factors include: (i) language proficiency of the translators; (ii) reaching consensus during the expert committee review stage; and (iii) considerations of language dialects.

Language Proficiency of the Translators

When recruiting translators, the AAOS guideline (Beaton et al., 2000) did not define the levels of expected language proficiency in the target or source languages. In Aim 1, language proficiency in English and Afrikaans was self-assessed, which may have caused undetected flaws in the translation. In addition, it was assumed that following a multi-step approach including a backward translation and committee review, should assist with identification of discrepancies and ambiguities. The argument is that if the study followed a single-direct translation (one forward translation) from one translator, even if the translator was highly qualified and experienced, the risk of not identifying ambiguities and discrepancy would be higher. Therefore, using a single-direct translation method will result in low validity and reliability of the translated measure (Acquadro et al., 2008; Maneesriwongul & Dixon, 2004). Thus, in future translation studies, future researchers may consider employing a language proficiency test of the target language to ensure quality translations.

Reaching Consensus During the Expert Committee Review Stage

Another factor that may arise in translation studies is reaching consensus in the expert committee review stage (Thammaiah et al., 2016). For example, the expert committee could not agree on the specific literal or conceptual appropriateness of certain items, while some members dominated the consensus discussions to express their views (Thammaiah et al., 2016). Another limitation that can occur during committee reviews, due to lack of knowledge or competence in their role, is that members may have common views or be pressurised to agree for the sake of consensus (Acquadro et al., 2008). Accordingly, in this report during consensus, certain members assumed specific roles:

- (i) The SLP provided the most modification suggestions on word choices and grammar, providing an external opinion on the translation;
- (ii) The BTs provided a few single word modifications that were identified during backward translating; and
- (iii) The FTs assumed the role of agreeing or disagreeing with suggestions, possibly due to being the first translators in the study, thus welcoming input from others to realise a different perspective.

To manage the challenges mentioned, consensus was reached by the majority, a method also adopted by Thammaiah et al. (2016)'s translation study. However, the researcher felt that if the committee panel had more members, then reaching consensus by the majority may not be a robust method to use, as it would allow more room for missed discrepancies and ambiguities. Published guidelines that advocate for a multi-step approach (see for example, Beaton et al., 2000; Hall et al., 2018; Soussa & Rojjanasrirat, 2011) do not include consensus criteria when consensus is needed to be reached in the expert committee review stage. Previous studies that have translated or adapted questionnaires also rarely indicate the method of reaching consensus (Thammaiah et al., 2016). Further research may consider a systematic review of published translation studies comparing the consensus methods used and analyse the method that provided the most robust translation.

Considerations of Language Dialects

Last, when translating a measure that is representative of the target language, one should consider dialectal differences, which was not accounted for in the AAOS guidelines. SA has at least three Afrikaans dialects which were not considered in this study (Coetzee et al., 2019). In the Western Cape, there are two main dialects that are different due to culture and origin, i.e.,

Cape Flats spoken by the Coloured¹⁴ community and “standard” Afrikaans spoken by the white community (Coetzee et al., 2019). Due to this study’s research setting, the patient participants were white, “standard” Afrikaans speakers. Thus, this limitation may have affected the generalisability of the translated outcome measure. Thammaiah et al. (2016) identified and discussed dialectical differences in their work. The authors recommended that researchers should recruit multiple translators with different dialects, along with participants with diverse dialects for field testing to close the gap of dialectical differences (Thammaiah et al., 2016). Accounting for the dialectal differences will allow generalisability and usability of the translated measure in all regions in the country (Thammaiah et al., 2016). For future studies, researchers could implement a pilot study using the Afrikaans SAC and SOAC to ascertain if dialectical differences have an impact in the validity and reliability of the Afrikaans SAC and SOAC.

Other Translation Procedures – the Delphi Technique

There are many translation methods available to use, but none are regarded as the “gold” standard translation method (Acquadro et al., 2008). While this report suggests that the multi-step approach of the translation process was essential to identify discrepancies and ambiguities to obtain a quality translation, others promote a more pragmatic approach that is simple, time efficient, and cost-effective (Pascoe et al., 2013). Specifically, Pascoe et al. (2013), argued that the need to develop assessments and materials that are culturally and linguistically appropriate for the South African context was recognised. Thus, the authors recommended the Delphi technique as a cost-effective methodology to use. The Delphi technique is a method often used in health-related research (Hsu & Sandford, 2007; Rogers et al., 2011). The method is for

¹⁴ “Coloured people” is a non-pejorative term used in South Africa to identify persons of mixed European (“white”) and African (“black”) or Asian ancestry.

consensus-building of opinions collected from knowledgeable participants using a series of questionnaires through multiple iterations (Hsu & Sandford, 2007; Rogers et al., 2011). In a study by Rogers et al. (2011), the Vertigo Symptom Scale (VSS) was first translated into Afrikaans and evaluated using the Delphi consensus procedure with two panels of participants. The first panel consisted of five first language Afrikaans speakers who commented on the language, grammar, and vocabulary of the measure. The second panel consisted of five bilingual health care practitioners with knowledge or interest in the field who commented on the applicability of the items. Using the Delphi technique, each panel received a list of questions answered on a five-point Likert scale ranging from “Strongly Agree” to “Strongly Disagree.” Upon data analysis, the study opted for 80% consensus. An additional round of the Delphi consensus was added if consensus was not reached on certain items. The second part of the study piloted the Afrikaans VSS (AVSS) with populations of patients with dizziness and ENT patients, respectively. The results showed that the AVSS, produced with the Delphi technique, achieved concurrent validity and internal consistency as well as good sensitivity and specificity (Rogers et al., 2011).

As seen in the study by Rogers et al. (2011), one of the advantages of using the Delphi technique is that the panel members are selected according to their strengths and their opinions are kept anonymous. The anonymity of the opinions reduces the influences of group pressures or dominant individuals (Hsu & Sandford, 2007). However, in the present study, no group dominance or pressures were experienced.

Furthermore, concerns regarding the accepted consensus percentage during data analysis were reported by Rogers et al. (2011) which implemented an 80% majority consensus as it was considered a robust number that would provide minimal errors. However, since a similar study

by Thammaiah et al. (2016) reported that majority consensus was a better option when a group interaction is involved during analysis, the present study aimed for majority consensus.

Another concern by Rogers et al. (2011) was selection bias, due to the small number of participants involved in each panel, as the panels' opinions may not have been representative of a wider first-language or expert population, respectively. However, there are no firm recommendations in the literature regarding the optimal sample size for the panellists in the Delphi method (Hsu & Sandford, 2007). Similar to the present study, the Delphi technique allows for different interpretations or translations that come from the target population and health care professionals, which are merged to obtain a final translation (Hsu & Sandford, 2007). Despite the differences in methods and process of the Delphi technique to a multi-step approach in translation studies, if the latter is implemented correctly, the results may be similar. Future studies may translate an outcome measure into the same language using both methods where advantages and disadvantages of both methods are directly compared.

In summary, despite there being many translation methods available, for this report, a multi-step translation approach was beneficial as each phase of the translation process yielded notable changes, resulting in a quality translation. Evaluation of the psychometric properties such as construct validity, concurrent validity, internal consistency, reliability, and test-retest reliability is recommended for further research so that the Afrikaans SAC and SOAC can be used for clinical and research purposes.

Aim 2

Main Findings of the Study Aim

Sixteen audiologists participated in the study and used the Afrikaans SAC and SOAC in their own practices. They provided feedback regarding the measures' usability through surveys and verbal feedback interviews. Seven themes were identified through content analysis:

- 1) The measures were user friendly.
- 2) The items and instructions were straight forward and easy to understand.
- 3) The measures were quick to administer.
- 4) The measures provided valuable information on perceptions of hearing loss for hearing-impaired individuals and SOs in different listening environments.
- 5) The measures are good counselling tools which may also assist in hearing aid fittings and fine-tuning.
- 6) Exploring the perception of SOs in consultations provides a positive impact to consultations.
- 7) The measures allowed hearing-impaired individuals to realise their hearing difficulty and how it affected them as well as their SOs.

In addition, all 16 audiologist participants indicated that they would use the Afrikaans SAC and SOAC in their respective practices for the reasons stated in the themes identified. The discussion will commence with expanding some of the themes identified, followed by describing the practical issues and challenges experienced in the study aim.

Discussion on the Themes Identified

The themes identified in this study aim matched the researcher's initial intent of choosing the SAC and SOAC. The researcher aimed to select an outcome measure that was short, easy,

and quick to administer and score, that will provide minimal burden on the patient and clinician, especially for busy clinics. Beck (2000) described easy to use outcome measures as containing specific characteristics including: low patient burden (the patient's experience in completing the test based on factors such as number of items, reading level, size of the fonts, etc.); easy to administer; quick to complete; and ease of data management capability so that results can be scored and retained (Beck, 2000; Ivory et al., 2009). The available computerised version of the SAC and SOAC will allow even lower patient/clinician burden and assist with data management and automatic scoring (Hodes et al., 2009). In future, developing a computerised version of the Afrikaans SAC and SOAC which can be administered by the patient or clinician, will allow for convenience and time efficiency for busy clinics.

The audiologist participants indicated that the Afrikaans SAC and SOAC are valuable tools that provide information on the patient's perception of their hearing loss. Arguably, gaining insight into the perception of self-reported hearing difficulties by an affected individual is valuable to both patients and audiologists through making patients aware of the impact of hearing loss; and for audiologists to provide appropriate management recommendations and counselling (Meyer et al., 2014). Thus, allowing patients to self-report their perceived hearing abilities based on real life experiences should be the basis of audiologic rehabilitation (Meyer et al., 2014). However, conflicting factors include patients with confirmed mild hearing losses who do not necessarily perceive any hearing handicap, and as such would not self-report any hearing difficulties (Manchaiah & Freeman, 2011).

There are other contributing factors that may hinder patients to truthfully self-report perceptions of their hearing loss. For example, a study conducted in Australia where monolingual English speakers and monolingual Cantonese speakers were compared according to

their level of hearing and self-perceived hearing loss found that, with the same level of hearing loss, the monolingual English speakers reported a higher hearing handicap outcome than the monolingual Cantonese speakers (Doyle et al., 2002). The study indicated that the results were attributed to cultural differences, as Cantonese speakers believed that speaking loudly is acceptable, which compensated for the hearing loss (Doyle et al., 2002). Although the study did not use the SAC to measure the differences in hearing handicap outcomes, it provided awareness on how cultural differences can impact self-perceived hearing losses in hearing-impaired individuals. Furthermore, cultural differences may also cause health professionals to use their own cultural background as a frame of reference to manage patients, which can result in a misunderstanding that negatively influences management decisions (Mdladlo et al., 2016). Currently, to our knowledge, there is no relevant research that determines factors that may affect self-perceived hearing loss in the South African context, specifically among the Afrikaans population. Therefore, this should be further researched to add value to understanding the population's beliefs and attitudes towards hearing loss.

Furthermore, Mukari and Wan Hashim (2018) reported that a language's linguistic properties may also affect an individual's perception of hearing loss. Speakers of languages that contain less high frequency phonemes as well as tonal languages that use tone contouring to differentiate words (such as the Malay and Chinese languages) tend to report lower self-perceived hearing loss (Mukari & Wan Hashim, 2018). Additional factors related to lower self-perceived hearing loss include stigma of hearing loss, where patients may not accept their perceived handicap due to it being a sign of old age or realising the need to use hearing aids (Mukari & Wan Hashim, 2018). Obtaining the patient's perception of their hearing ability is an important aspect to audiological management (Mukari & Wan Hashim, 2018); however, other

factors that may reduce the perception of hearing disability must be considered when counselling and managing the patient.

Although self-report outcome measures rely heavily on the subjective perception of the individual's hearing capabilities which can be influenced by various factors, they have been proven useful in quantifying hearing aid benefit (Hickson et al., 2014; Ivory et al., 2009; Stark & Hickson, 2004). With the use of self-report measures such as the original SAC and SOAC, when used pre- and post- fitting, one would expect a reduction in activity limitations, participation restrictions, and negative emotions and an improved quality of life (Ivory et al., 2009). However, although audiologist participants have indicated that the Afrikaans SAC and SOAC may be useful for measuring hearing aid benefit pre- and post- fitting, the Afrikaans SAC and SOAC will require further psychometric testing to ensure that the translated measure is valid and reliable. Currently, the tool is reported useful for identifying hearing difficulties and counselling needs.

In terms of the role of the SOs, inclusion and support offered by the SOs to the hearing-impaired individual is essential in achieving audiologic rehabilitation success (Hickson et al., 2014). The audiologist participants felt that obtaining information from the SOs would provide valuable information, as it allowed hearing-impaired individuals to realise the severity of their hearing loss and their need for audiologic assistance. Additionally, older adults with a higher perception in severity of the hearing handicap, positive attitudes to hearing aids, high self-efficacy, and support from SOs were more likely to achieve a successful outcome with hearing aids than those without SOs' support (Hickson et al., 2014).

Practical Issues and Challenges

Acknowledging the positive impact that SOs have in audiological rehabilitation, the attendance of SOs to appointments with the affected individual was reported as a challenge. Three audiologist participants indicated that some individuals attended their appointments without their SOs, and therefore could not complete the SOAC. Reasons of non-attendance were not stated (in the surveys), but one audiologist interviewee linked non-attendance to time issues, where communication partners were not available to attend due to their occupation. Other studies have shown that attendance of SOs/family members to audiology appointments are less than 30% (Grenness et al., 2015; Meyer et al., 2015). As the study aim encouraged the use of the Afrikaans SAC and SOAC in a naturalistic setting, the researcher did not control the patient recruitment; therefore, not all patients came to their appointments with their SOs. However, to improve SO attendance for research and clinical purposes, the audiologist can provide verbal reminders and encouragement to their patients to attend with their SOs or family members (Meyer et al., 2015). Alternatively, a computerised/app version of the Afrikaans SOAC (and SAC) can be developed to save SOs' time and enhance their involvement. To understand SO non-attendance in aural rehabilitation, future research can investigate the factors that are contributing to SO non-attendance in the South African context. It is important to do so from a SO/family perspective, so that clinicians can manage and include SO/family members in audiological appointments.

Other research implementation challenges include the lengthened administration time (time to complete patient information forms and other documents) before a consultation, which inconvenienced busy private practices. The intent of the study aim was to administer the Afrikaans SAC and SOAC in a naturalistic setting for audiologist participants to experience the

usability of the outcome measures. To enhance time management when implementing similar research methods, one could have resolved this issue by sending the Afrikaans SAC and SOAC via email to the patient to complete before the appointment. Sending the forms electronically would also allow for the SO to complete the SOAC, making data collection possible even if the SO cannot confirm attendance. The audiologist participant from the Witrand Psychiatric Hospital, a state/public hospital, did not report implementation related challenges as found in private practice audiologist participants. Possible reasons may be that patients that seek services from a state hospital already has an expectation of waiting for their appointments due to high patient volumes (Maphumulo & Benghu, 2019). Thus, the need to send forms electronically before appointments in state hospitals may not be necessary as in private practice. In addition, it is probable that state patients may not have access to an email address (Maphumulo & Benghu, 2019).

A further limitation of the study was the small sample size of the audiologist participants. The small sample size may be attributed to audiologists' needing to commit to a research study and use their professional time to administer the Afrikaans SAC and SOAC in their respective practices. As the intent of the translated measures is for national use, including more audiologists from the public sector (resulting in a larger sample size) would provide better generalisability regarding the usability of the Afrikaans SAC and SOAC. The study could improve the sample size by retrieving emails or contact details on a national database, where audiologists could be contacted directly, instead of purely advertising on platforms (social and non-social) (Pascoe & McLeod, 2016).

According to the results of Aim 2, the Afrikaans SAC and SOAC was clinically useful to audiologists in urban private practice settings. All the audiologists indicated that they would use

the Afrikaans SAC and SOAC in their practice as it allows them to holistically understand the patients self-perceived hearing loss, within the context of SOs. Although, there were some research implementation challenges which could have been resolved, the overall response on the usability of the Afrikaans SAC and SOAC as reported by audiologists was positive.

Conclusion

In SA, there is a lack of audiological outcome measures that are translated and adapted for the South African context due to limited resources. Thus, this study translated the SAC and SOAC to Afrikaans, using a rigorous multi-step approach proven useful to identify inaccuracies and discrepancies in the different stages of the translation process. However, other methods such as the Delphi technique (which is simple, time efficient, cost-effective, and suitable for different projects for resource constrained developing countries), should be considered for future translation studies. The Afrikaans SAC and SOAC will require further testing to ensure that the psychometric properties are in line with the original SAC and SOAC. Further psychometric testing will allow the Afrikaans SAC and SOAC be used as a hearing aid outcome measure for pre- and post- hearing aid fitting outcomes.

Audiologists from three provinces in South Africa reported positive feedback regarding the usability of the Afrikaans SAC and SOAC and indicated that they would use the measures in their practices. Some research implementation challenges were faced, such as time management of busy practices. This could have been managed by sending the Afrikaans SAC and SOAC electronically to the patients and SOs before their appointments.

In conclusion, the Afrikaans SAC and SOAC can potentially be used nationally by South African audiologists as a tool to determine the effects of hearing loss based on the psychosocial effects, activity limitations, and participation restrictions for both the hearing-impaired individual

and SO. More importantly, the translated measures will assist audiologists to understand the hearing needs from the perspective of the hearing-impaired individual and SO. This may provide appropriate aural rehabilitative care.

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Appendices

Appendix A: Original SAC

SELF-ASSESSMENT OF COMMUNICATION (SAC)

Name: _____

Date: _____

Instructions: The purpose of this form is to identify the problems your hearing loss may be causing you. If you wear hearing aids, answer the questions according to how you communicate *when the hearing aids are NOT in use*. One of the five descriptions on the right should be assigned to each of the statements below.

- | |
|--|
| (1) Almost never (or never) |
| (2) Occasionally (about ¼ of the time) |
| (3) About ½ of the time |
| (4) Frequently (about ¾ of the time) |
| (5) Practically Always (or always) |

Select a number from 1 to 5 next to each statement (please do not answer with yes or no and pick only one answer for each question)

(1) Do you experience communication difficulties in situations when speaking with one other person? (at home, at work, in a social situation, with a waitress, a store clerk, with a spouse, boss, etc.)	1 2 3 4 5
(2) Do you experience communication difficulties while watching TV and in various types of entertainment? (movies, radio, plays, night clubs, musical entertainment, etc.)	1 2 3 4 5
(3) Do you experience communication difficulties in situations when conversing with a small group of several persons? (with friends or families, co-workers, in meetings or casual conversations, over dinner or while playing cards, etc.)	1 2 3 4 5
(4) Do you experience communication difficulties when you are in an unfavourable listening environment? (at a noisy party, where there is background music, when riding in an auto or bus, when someone whispers or talks from across the room, etc.)	1 2 3 4 5
(5) How often do you experience communication difficulties in the situation where you most want to hear better? Situation: _____	1 2 3 4 5
(6) Do you feel that any difficulty with your hearing negatively affects or hampers your personal or social life?	1 2 3 4 5
(7) How often do others seem to be concerned or annoyed or suggest that you have a hearing problem?	1 2 3 4 5
(8) Does any problem or difficulty with your hearing worry, annoy or upset you?	1 2 3 4 5
(9) How often does your hearing negatively affect your enjoyment of life?	1 2 3 4 5
(10) If you are using a hearing aid: On an average day, how many hours did you use your hearing aids? Hours _____/16= _____%	1 2 3 4 5

Please rate your overall satisfaction with your hearing aids:

- Not at all satisfied (0%)
 Slightly satisfied (25%)
 Moderately satisfied (50%)
 Mostly satisfied (75%)
 Very satisfied (100%)
 _____%

<p><i>FOR OFFICE USE ONLY</i></p> <p>SCORING: (Q1-9) _____ (/9) _____ -1 _____ x 25 = _____%</p> <p>D: (Q1-5)/5= _____ - 1 x 25 = _____%</p> <p>H: (Q6-9)/4 = _____ - 1 x 25 = _____%</p> <p>QoL: Q9= _____ - 1 x 25 = _____%</p>

<p>No handicap: 0-20%</p> <p>Slight: 21%-40%</p> <p>Mild: 41%-70%</p> <p>Severe: 71% - 100%</p>

Appendix B: Original SOAC

SIGNIFICANT OTHER ASSESSMENT OF COMMUNICATION (SOAC)

Name of Patient: _____ Date: _____

Name of Person Completing Assessment: _____ Relationship: _____

Instructions: The purpose of this form is to identify the problems a hearing loss may be causing your significant other. If the patient has a hearing aid, answer the questions according to how he/she communicates *when the hearing aids are NOT in use*. One of the five descriptions on the right should be assigned to each of the statements below.

- (1) Almost never (or never)
- (2) Occasionally (about ¼ of the time)
- (3) About ½ of the time
- (4) Frequently (about ¾ of the time)
- (5) Practically Always (or always)

Select a number from 1 to 5 next to each statement (please **do not** answer with yes or no and pick only one answer for each question)

(1) Does he/she experience communication difficulties in situations when speaking with one other person? (at home, at work, in a social situation, with a waitress, a store clerk, with a spouse, boss, etc.)
(2) Does he/she experience communication difficulties while watching TV and in various types of entertainment? (movies, radio, plays, night clubs, musical entertainment, etc.)
(3) Does he/she experience communication difficulties in situations when conversing with a small group of several persons? (with friends or families, co-workers, in meetings or casual conversations, over dinner or while playing cards, etc.)
(4) Does he/she experience communication difficulties when in an unfavourable listening environment? (at a noisy party, where there is background music, when riding in an auto or bus, when someone whispers or talks from across the room, etc.)
(5) How often does he/she experience communication difficulties in the situation where he/she most wants to hear better? Situation: _____
(6) Do you feel that any difficulty with hearing negatively affects or hampers his/her personal or social life?
(7) Do you or others seem to be concerned or annoyed or that he/she has a hearing problem?
(8) Do you feel that any problem or difficulty with hearing worries, annoys or upsets him/her?
(9) How often does hearing loss negatively affect his/her enjoyment of life?
(10) If he/she is using a hearing aid: On an average day, how many hours will he/she use the hearing aids? Hours _____/16= _____%

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

Please rate what you feel is his/her overall satisfaction with the hearing aids:
 Not at all satisfied (0%) Slightly satisfied (25%) Moderately satisfied (50%)
 Mostly satisfied (75%) Very satisfied (100%) _____%

FOR OFFICE USE ONLY
 SCORING: (Q1-9) _____ (/9) _____ -1 _____ x 25 = _____%
 D: (Q1-5)/5 = _____ - 1 x 25 = _____%
 H: (Q6-9)/4 = _____ - 1 x 25 = _____%
 QoL: Q9 = _____ - 1 x 25 = _____%

No handicap: 0-20%
 Slight: 21%-40%
 Mild: 41%-70%
 Severe: 71% - 100%

Appendix C: Participant Information Form**UNIVERSITY OF CAPE TOWN****Faculty of Health Sciences****Department of Health and Rehabilitation Sciences**

Divisions of Communication Sciences and Disorders, Nursing and Midwifery, Occupational Therapy, Physiotherapy; and Disability Studies

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 Fax: +27 (0) 21 406 6323
 www.dhrs.uct.ac.za

PARTICIPANT INFORMATION FORM

STUDY _____

Participant number: _____

WHAT IS YOUR ROLE IN THIS RESEARCH STUDY?

Participant Significant Other Translator Other health professional

AGE: _____ SEX: _____

Please tick or circle the correct box below that applies to you:

Question	Answer	
1) What is your first language?	Afrikaans	English
2) Would you say you are fluent and proficient in your first language (vocabulary, grammar and general language abilities)?	Yes	No
3) Are you familiar with the cultural nuances of your first language?	Yes	No
4) What is your second language?	Afrikaans	English
5) Would you say you are proficient in your second language (vocabulary, grammar, and general language abilities)?	Yes	No
6) Are you familiar with the cultural nuances of your second language?	Yes	No
7) Do you have a hearing loss/hearing aid?	Yes	No

Appendix D: Research Assistant Information Sheet (Aim 1, Objective 2)

Good day Audiologists,

Thank you for assisting me in my research study.

This handout is created to summarize what was discussed during our meeting to allow you to refer back to, should you need a refresher.

PROCESS:

1. In order to not disrupt the order of your consultations, please conduct the data collection **after** your consultation for your convenience.
2. Ask the patient if they are willing to take part in the study. Explain that the study is a questionnaire that is translated into Afrikaans. The questionnaire is used to identify the impact of their hearing loss so that we (as audiologists) can see how the hearing loss is affecting them. This will provide information to see where we should help them. In addition, it is important that the translation in Afrikaans is understandable, and thus, their assistance will be needed.
3. It is important that you ensure the patient's names will be kept confidential and they are welcome to withdraw at any time should they feel uncomfortable to continue.
4. If the patient agrees to take part in the study, please give the patient an informed consent letter for their signature (it is in the pack that was given to you), then complete the patient information form (it will probably be quicker and easier if you complete it for them).
****Please remember SAC is for hearing-impaired individual and the SOAC is for the significant other/ communication partner****
5. Place the Afrikaans SAC/ SOAC in front of the patient/participant, ask them to read through the translation and answer the questions.
6. Tell them that you will be asking a few questions regarding the translation, and they must please answer as honest as possible (please see on the next page for the questions)
7. Make sure you take a copy of the relevant form (SAC/SOAC). I would like you to write down the responses that the patient is giving – both positive and negative.
8. Please also make a note if the patient required any clarification on the items.
9. If you have queries regarding the process or is unsure of what to do, you are welcome to contact me any time.
10. Once you are done, please complete the survey that I have given you. I am happy to send a word document as well if you prefer to type it.
11. You will have maximum 2 months to complete 5 SAC and SOAC papers. I know that everyone is extremely busy, and it is okay if you are unable to complete all the papers I have given you.

Questions

1. Is the questionnaire easy to use and explain why? (Patient can comment on the length of the questionnaire, the amount of time to read through and complete it, the ease of using the scale, if any clarification was necessary)
2. Is the questionnaire easy to understand? (Patient can comment on the overall translation, whether clarification was needed, if it would be understandable for another Afrikaans speaking person, if there were any difficulties in understanding certain phrases or sentences, etc)
3. Do you feel that the questions are relevant to your hearing problem? Do you think that the questions and translation are also relevant to an Afrikaans speaking individual like yourself (Patient can comment on how it is relevant to them, if not – why is it not relevant to them, do they relate to any of the questions, do they think the translation and questionnaire is culturally appropriate and relevant to the Afrikaans speaking population?)
4. What are your views on the Afrikaans grammar and sentence structure used in the questionnaire? (Patient can comment whether they feel anything needs to be changed or improved, if any phrase or sentence sounded ambiguous or confusing, to suggest any changes if applicable).
5. What are your views on the vocabulary and word choices in the questionnaire? (Patients can comment on words that may be incorrectly or inappropriately used; to provide an explanation and alternatives where necessary; do they feel the vocabulary used are familiar and commonly used in Afrikaans language and culture; are the words used satisfactory and whether improvements or changes are necessary).

Appendix E: Author's Consent

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Move to Inbox
👉
More ▾

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Juoe Liu <liujuoe@gmail.com>
to schorona ▾

Dear Dr Schow,

I trust that you are well.
I got your email from the Idaho university website - I hope that you don't mind this email.

My name is Juoe. I reside in Cape Town. I am currently doing my Masters at the University of Cape Town. My topic will be focusing on translating and adapting the SAC and SOAC tool (2007 version) through use of paper and pencil method into Afrikaans (one of our local languages)

I am emailing you to ask for your permission to allow me to do so. If you have other extra information on these tools will also be appreciated.

Please do not hesitate if you have any queries regarding this.

I hope to hear from you soon.

Kind regards,
Juoe

Virus-free. www.avg.com

👤
Ronald Schow <schorona@isu.edu>

11/21/17
☆
↶
▾

to me ▾

Juoe

You have my permission to translate and adapt the SAC and SOAC.

Here is a website that has more information on these self report tools. This is found on our ISU department website
<http://www2.isu.edu/csed/audiology/profile/>

Good luck to you.

Ronald L. Schow

....

👤

Click here to [Reply](#) or [Forward](#)

Appendix F: HREC Approval Letter



UNIVERSITY OF CAPE TOWN
Faculty of Health Sciences
Human Research Ethics Committee



Room E53-46 Old Main Building
Groota Schuur Hospital
Observatory 7921
Telephone [021] 406 6492
Email: sunayah.ardeldien@uct.ac.za
Website: www.health.uct.ac.za/fhs/research/humanethics/forms

10 July 2018

HREC REF: 344/2018

Ms L Petersen
Division of Communication Sciences & Disorders
F-45
OMB

Dear Ms Petersen

PROJECT TITLE: TRANSLATION AND ADAPTATION OF THE SELF-ASSESSMENT OF COMMUNICATION (SAC) AND SIGNIFICANT OTHER ASSESSMENT OF COMMUNICATION(SOAC) TO AFRIKAANS (MASTERS CANDIDATE - MS CHIAWEN LIU)

Thank you for submitting your study to the Faculty of Health Sciences Human Research Ethics Committee (HREC) for review.

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study.

Approval is granted for one year until the 30 July 2019.

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period.

(Forms can be found on our website: www.health.uct.ac.za/fhs/research/humanethics/forms)

We acknowledge that the student: Ms Chiawen Liu will also be involved in this study.

Please quote the HREC REF in all your correspondence.

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please note that for all studies approved by the HREC, the principal investigator **must** obtain appropriate institutional approval, where necessary, before the research may occur.

Yours sincerely


PROFESSOR M BLOCKMAN
CHAIRPERSON, FHS HUMAN RESEARCH ETHICS COMMITTEE

Federal Wide Assurance Number: FWA00001637.
Institutional Review Board (IRB) number: IRB00001938



FACULTY OF HEALTH SCIENCES
Human Research Ethics Committee



FHS016: Annual Progress Report / Renewal

HREC office use only (FWA00001637; IRB00001938)			
This serves as notification of annual approval, including any documentation described below.			
<input checked="" type="checkbox"/> Approved	Annual progress report	Approved until/next renewal date	20.11.2020
<input type="checkbox"/> Not approved	See attached comments		
Signature Chairperson of the HREC			Date Signed 14/11/2019

Comments to PI from the HREC

Thanks you for the deviation request

Principal Investigator to complete the following:

1. Protocol information

Date (when submitting this form)	12 November 2019		
HREC REF Number	344/2018	Current Ethics Approval was granted until	30 July 2019
Protocol title	Translation and Adaptation of the Self-Assessment of Communication (SAC) and Significant Other Assessment of Communication (SOAC) to Afrikaans		
Protocol number (if applicable)			
Are there any sub-studies linked to this study?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If yes, could you please provide the HREC Ref's for all sub-studies? Note: A separate FHS016 must be submitted for each sub-study.			
Principal Investigator	Lucretia Petersen		
Department / Office Internal Mail Address	Lucretia.petersen@uct.ac.za		

Appendix G: Translator's Informed Consent Letter (Aim 1, Objective 1)

UNIVERSITY OF CAPE TOWN
Faculty of Health Sciences
Department of Health and Rehabilitation Sciences



Divisions of Communication Sciences and Disorders,
 Nursing and Midwifery, Occupational Therapy,
 Physiotherapy; and Disability Studies

F45 Old Main Building, Groote Schuur
 Hospital
 Observatory, Cape Town, W Cape,
 7925
 Tel: +27 (0) 21 406 6628/ 6428/ 6534
 Fax: +27 (0) 21 406 6323
 www.dhrs.uct.ac.za

18 September 2018

Dear Sir/ Madam

My name is Juoe Liu. I am an Audiology Master's degree student (MSc Audiology by dissertation) at the University of Cape Town under the supervision of Lucretia Petersen and Christine Rogers. I would like to formally invite you to participate in my research study. It is important that you provide consent whilst have a good understanding of the study, the procedure that will be followed and your role in the study (HREC REF: 344/2018).

The study:

This study is aiming to translate and adapt an audiological self-assessment tool that is used for rehabilitation of patients with hearing aids or hearing loss. It is also aiming to determine whether the tool is clinically useful.

The researcher:

I am a qualified audiologist, working in Kind2Hearing Stellenbosch and I have decided to obtain my Master's degree by dissertation in Audiology with the University of Cape Town. My supervisors and co-supervisors are Lucretia Petersen and Christine Rogers respectively.

Purpose and scope of the research:

Studies have shown that there is a lack of tools in Audiology that are available to use in South Africa. Most tools that are developed for audiology use are only available in English. However, to develop and standardize a tool in a local language requires extensive resources and time. In South Africa, with limited resources and 11 official languages, this procedure is unrealistic. Therefore, translating and adapting an existing tool in South African context will be more achievable. The SAC and SOAC have been selected to for translation and adaptation into Afrikaans. This will help to improve the quality of audiological care and services. You will, however, not benefit from the study or be harmed in any way.

What is your role in the study?

- Translate the tool into Afrikaans/English
- Analyse the different versions of translations done i.e. looking at ambiguities and discrepancies of words used;

Appendix H: Letter to Private Audiological Company**UNIVERSITY OF CAPE TOWN****Faculty of Health Sciences****Department of Health and Rehabilitation Sciences**

Divisions of Communication Sciences and Disorders,
Nursing and Midwifery, Occupational Therapy,
Physiotherapy; and Disability Studies

F45 Old Main Building, Groote Schuur
Hospital
Observatory, Cape Town, W Cape,
7925
Tel: +27 (0) 21 406 6628/ 6428/ 6534
Fax: +27 (0) 21 406 6323
www.dhrs.uct.ac.za

30 November 2018

Dear Kind2Hearing management

Re: Approval to access Kind2Hearing's clients for Chiawen Liu (Juoe) Master's degree

I am a Master's degree student in Audiology (MSc Audiology by dissertation) at the University of Cape Town under the supervision of Lucretia Petersen and Christine Rogers. Approval from the Research and Ethical Committee, Faculty of Health Sciences at the University of Cape Town has been given (Ref: 344/2018).

My study aims to translate and adapt an audiological self-assessment tool into Afrikaans, specifically the Self-Assessment of Communication (SAC) and the Significant Other Assessment of Communication (SOAC). It is a 10-item tool that covers the client's complaints regarding with hearing, the specific situations that he/she struggles the most, the patient's feelings about the status of his/her hearing, it also looks at how hearing loss is affecting him/her psychosocially. This test was selected for translation as I have found it to be a user-friendly and appropriate tool to use under the circumstances of the population that we serve. These two tests were formulated using the World Health Organization's ICF framework which is a framework used by clinicians as a guideline to provide holistic and comprehensive care. This tool will help to improve the quality of our services by ensuring that each aspect or complaint that is listed by the client are met with satisfaction of our services.

The study asks for permission to conduct the research within the Kind2Hearing practices. I will ensure that the study will not negatively affect the practice or the participating client in any way by ensuring that the participating audiologist is well-informed of the procedure and ethical considerations of the study. The participating audiologist will also be informed to ensure that the client has consented to complete the assessment before being administered and assist the client where necessary. Some clients will be required to rate the translation and others will be required to answer questions within the tool. The questionnaire should not take 5 minutes to complete for each patient. There are also no risks involved with this study for the audiologist or patient. The data collection of this study is expected to run until June 2019.

Please feel free to contact the following persons should you have further queries:

1. Juoe Liu (Researcher)
Tel: 0733638093
Email: liujuoe@gmail.com
2. Lucretia Petersen (Research Supervisor)
Tel: 021 4066993
Email: lucretia.petersen@uct.ac.za
3. Christine Rogers (Research co-supervisor)
Tel:
Email: christine.rogers@uct.ac.za

Should you have any concerns about the welfare or human rights of any of the participants, or the conduct of this research, please contact:

Professor Marc Blockman
Chair: The Research and Ethical Committee,
Faculty of Health Sciences at the University of Cape Town,
Old Main Building Groote Schuur Hospital,
Floor E52, Room 23,
Observatory, 7925.
Tel: 021 4066492

Thanking you in advance,

Regards,

Chiawen Liu

Kind2Hearing management approves the request outlined by Chiawen Liu to support her Master's degree in Audiology.

Signature

Date

Appendix I: Patient Participant's Informational Consent Letter (Aim 1, Objective 2)

UNIVERSITY OF CAPE TOWN
Faculty of Health Sciences
Department of Health and Rehabilitation Sciences



Divisions of Communication Sciences and Disorders,
 Nursing and Midwifery, Occupational Therapy,
 Physiotherapy; and Disability Studies

F45 Old Main Building, Groote Schuur
 Hospital
 Observatory, Cape Town, W Cape,
 7925
 Tel: +27 (0) 21 406 6628/ 6428/ 6534
 Fax: +27 (0) 21 406 6323
 www.dhrs.uct.ac.za

7 May 2019

Dear Sir/ Madam

My name is Juoe Liu. I am an Audiology Master's degree student (MSc Audiology by dissertation) at the University of Cape Town under the guidance and supervision of Lucretia Petersen and Christine Rogers. I would like to formally invite you to participate in my research study. It is important that you provide consent whilst have a good understanding of the study, the procedure that will be followed and your role in the study (HREC REF: 344/2018). If you need the help with reading this letter, please ask someone of your choice to help you or alternatively we can provide you with someone to help.

The study:

I am translating and adapting an audiological self-assessment tool into Afrikaans so that it can be used for rehabilitation of patients with hearing aids.

The researcher:

I am a qualified audiologist, and a part-time Masters student in Audiology at the University of Cape Town. My supervisors and co-supervisors are Lucretia Petersen and Christine Rogers respectively.

Purpose and scope of the research:

Studies have shown that there is a lack of tools in Audiology that are available to use in South Africa. Most tools that are developed for audiology use are only available in English. However, to develop and standardize a tool in a local language requires extensive resources and time. In South Africa, with limited resources and 11 official languages, this procedure is unrealistic. Therefore, translating and adapting an existing tool in South African context will be more achievable. The SAC and SOAC have been selected to for translation and adaptation into Afrikaans. This will help to improve the quality of audiological care and services. You will, however, not benefit from the study or be harmed in any way.

What is your role in the study?

- Analyse, rate and give feedback on the Afrikaans translation of the tool using your understanding of the translation. This will only take 5 minutes of your time. Your honest judgement will be appreciated.
- This will not be included in your consultation fee.

Voluntary nature of participation and right to withdrawal

It is a personal decision whether you take part in the study or not. If you change your mind, you are welcome to withdraw from the study.

Confidentiality

The standard practice for clinical research is confidentiality. Your personal details and data collected by you will be protected at all times. The data will be kept secure in locked cabinets.

Risks and benefits of the study

There are no risks involved in this study. The benefits associated with the study is that you and other patients will receive an improved quality of care.

Feedback and contact details

If you would like to know the findings of the study, please let me know so that I can email it to you. Should you have further questions regarding this study, you are welcome to contact:

- 1. Juoe Liu (Researcher)
Tel: 0733638093
Email: liujuoe@gmail.com
- 2. Lucretia Petersen (Research Supervisor)
Tel: 021 4066993
Email: lucretia.petersen@uct.ac.za
- 3. Christine Rogers (Research co-supervisor)
Tel:
Email: christine.rogers@uct.ac.za

Should you have any concerns about the welfare or human rights of any of the participants, or the conduct of this research, please contact:

Professor Marc Blockman
Chair: The Research and Ethical Committee,
Faculty of Health Sciences at the University of Cape Town,
Old Main Building Groote Schuur Hospital,
Floor E52, Room 23,
Observatory, 7925.
Tel: 021 4066492

Statement of Consent

I have read (or was read to me by) the information letter. I understand the content of the information letter and the role that I am required to full fill in the research study. I understand that my participation in the research study is completely voluntary, of my own free will and that I can withdraw at any time without affecting me in anyway.

Signed:

.....

Participant Date and place

.....

Researcher Date and place

Appendix J: Forward Translations and Synthesis Changes (Aim 1, Objective 1)

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
Titles			
SAC FT1	Self-Assessering van Kommunikasie (SAC)	No changes	Self-Assessering van Kommunikasie (SAC)
SAC FT2	Self-Assessering van Kommunikasie (SAC)		
SOAC FT1	Betekenisvolle Ander Assessering van Kommunikasie (SOAC)	"Betekenisvolle Ander" is a literal translation but not used often by the Afrikaans population. FT1 felt that FT2's "Lewensmaat" translation was more appropriate and a better understood term. Thus, both agreed to "Lewensmaat".	Lewensmaat Assessering van Kommunikasie (SOAC)
SOAC FT2	Lewensmaat Assessering van Kommunikasie (SOAC)		
Personal Details			
SAC FT1	Naam: Datum:	No changes	Naam: Datum:
SAC FT2	Naam: Datum:		
SOAC FT1	Naam van pasiënt: Datum: Naam van persoon wat assessering voltooi: Verhouding:	FT2 explained her translation to FT1 that she used "wie" (whom) because the statement was referring to people/persons and not objects. FT1 revisited the sentence and agreed that it was a more accurate choice of word, thus both agreed to "wie".	Naam van pasiënt: Datum: Naam van persoon wie die assessering voltooi: Verhouding:
SOAC FT2	Naam van pasiënt: Datum: Naam van persoon wie die assessering voltooi: Verhouding:		
Instructions			

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
SAC FT1	<p>Instruksies: Die doel van hierdie vorm is om die probleme wat u gehoorverlies vir u veroorsaak, te identifiseer. Indien u gehoorapparate dra, antwoord die vrae volgens hoe u kommunikeer wanneer u <u>NIE</u> die gehoorapparate gebruik <u>NIE</u>. Gebruik een van die 5 beskrywings aan die regterkant om die vrae hieronder te beantwoord.</p> <p>Kies ‘n nommer van 1 tot 5 langs elke vraag (moet asseblief geen ja of nee antwoorde verskaf nie en kies slegs een antwoord vir elke vraag)</p>	<ol style="list-style-type: none"> 1. FT1 felt that FT2’s sentence structure was a bit off. FT1 explained that in Afrikaans, the verb (identifiseer (identify)) should always appear at the end of a sentence. FT2 was aware of that but it was a difficult sentence to translate for her. FT2 agreed that FT1’s sentence structure seems more accurate, thus both agreed to use FT1’s translation instead as FT2 cannot come up with a better alternative. 2. FT1 explained that “volgens” is a more simplified and widely used word than “na gelang van” and fits better in the sentence. FT2 agreed that both terms do mean the same and that “volgens” was a better simplification and choice. 3. FT1 explained that the word “statement” should be translated to “question” (vraag) as questions were listed in the form, not statements. FT2 did not think about that therefore translated the word literally but agrees with FT1’s observation. 4. FT2 has provided a literal translation for the sentence “One of the five ...below” however, FT2 preferred FT1’s translation as it retained the original meaning to “Use 1 of the 5 descriptions on the right to answer the questions below” which made it more understandable when translated in Afrikaans. Thus, both agreed to change it to FT1’s translation. 	<p>Instruksies: Die doel van hierdie vorm is om die probleme wat u gehoorverlies kan veroorsaak te identifiseer. Indien u gehoorapparate dra, antwoord die vrae volgens hoe u kommunikeer wanneer u <u>NIE</u> die gehoorapparate gebruik <u>NIE</u>. Gebruik een van die 5 beskrywings aan die regterkant om die vrae hieronder te beantwoord.</p> <p>Kies ‘n nommer van 1 tot 5 langs elke vraag (moet asseblief nie ja of nee antwoorde verskaf nie en kies slegs een antwoord vir elke vraag).</p>
SAC FT2	<p>Instruksies: Die doel van hierdie vorm is om probleme te identifiseer wat u gehoorverlies moontlik vir u kan veroorsaak word. Indien u gehoorapparate dra, antwoord hierdie vrae na gelang van hoe u kommunikeer wanneer u <u>NIE</u> die gehoorapparate gebruik nie. Een van die vyf beskrywings</p>	<ol style="list-style-type: none"> 5. FT1 felt her translation of “moet asseblief nie ... elke vraag” was more appropriate and formal than FT2. FT2 agreed that “ja’s en nee’s” (yes’ and no’s) seemed informal and not appropriate for a healthcare tool. Thus, both agreed to FT1’s translation. 	

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
	<p>regs moet aan elk van die onderstaande stellings toegeken word.</p> <p>Kies 'n nommer van 1 tot 5 langs elke stelling (asseblief geen ja's of nee's en kies slegs een antwoord vir elke vraag)</p>		
SOAC FT1	<p>Instruksies: Die doel van hierdie vorm is om die probleme wat u gehoorverlies vir u betekenisvolle ander/maat veroorsaak, te identifiseer. Indien die pasiënt gehoorapparate dra, antwoord die vrae volgens hoe hy/sy kommunikeer wanneer hy/sy <u>NIE</u> die gehoorapparate gebruik <u>NIE</u>. Gebruik een van die 5 beskrywings aan die regter kant om die vrae hieronder te beantwoord.</p> <p>Kies 'n nommer van 1 tot 5 langs elke vraag (moet asseblief geen ja of nee antwoorde verskaf nie en kies slegs een antwoord vir elke vraag)</p>	<p>Changes that were made in the SAC were also corrected on the SOAC, whilst inserting the correct pronouns.</p> <p>One of the small changes include: Instead of saying “u gehoorverlies” (your hearing loss) it was modified to “n gehoorverlies” (a hearing loss) as seen in the original SOAC English version. This was suggested by FT2.</p>	<p>Instruksies: Die doel van hierdie vorm is om die probleme wat 'n gehoorverlies kan vir u lewensmaat veroorsaak, te identifiseer. Indien die pasiënt gehoorapparate dra, antwoord die vrae volgens hoe hy/sy kommunikeer wanneer hy/sy <u>NIE</u> die gehoorapparate gebruik <u>NIE</u>. Gebruik een van die 5 beskrywings aan die regterkant om die vrae hieronder te beantwoord.</p> <p>Kies 'n nommer van 1 tot 5 langs elke vraag (moet asseblief geen ja of nee antwoorde verskaf nie en kies slegs een antwoord vir elke vraag).</p>
SOAC FT2	<p>Instruksies: Die doel van hierdie vorm is om probleme te identifiseer wat u gehoorverlies vir u lewensmaat veroorsaak.</p> <p>As die pasiënt 'n</p>		

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
	<p>gehoorapparaat het, antwoord die vrae na gelang van hoe hy/sy kommunikeer wanneer hy/sy NIE die gehoorapparate gebruik NIE. Een van die vyf beskrywings regs moet aan elk van die onderstaande stellings toegeken word.</p> <p>Kies 'n nommer van 1 tot 5 langs elke stelling (asseblief geen ja's of nee's en kies slegs een antwoord vir elke vraag)</p>		
Question 1			
SAC FT1	<p>Ervaar u kommunikasieprobleme in situasies waar u met een ander persoon gesels? (by die huis, by die werk, in sosiale omstandighede, met 'n kelnerin, met 'n winkelklerk, u huweliksmaat, u baas, ens.)</p>	<p>1. Both translators clarified and felt the same way when translating “communication difficulties” as there is no literal translation available thus was translated as “communication problems” (kommunikasieprobleme). This term was more accurate and appropriate, and the FTs felt that the term achieved semantic equivalence.</p>	<p>Ervaar u kommunikasieprobleme in situasies waar u met een ander persoon gesels? (by die huis, by die werk, in 'n sosiale situasie, met 'n kelnerin, 'n winkelklerk, met 'n eggenoot, baas, ens.).</p>
SAC FT2	<p>Ervaar u kommunikasieprobleme in situasies waar u met een ander persoon praat? (by die huis, by die werk, in 'n sosiale situasie, met 'n kelnerin, 'n winkelklerk, met 'n eggenoot, baas, ens.)</p>	<p>2. FT1 felt that “praat” was not incorrect, but when you are in conversation with someone, Afrikaans people use “gesels” more than “praat”. However, both terms are used interchangeably by the Afrikaans speaking population. FT2 agreed to change the word to “gesels”.</p> <p>3. FT2 felt that one can provide a literal translation of “social situation” (sosiale situasie) as it is not an uncommon term and Afrikaans people would understand the term. FT1 agreed, for the sake of retaining equivalence to the original. Thus, decided to change the “omstandighede” to situasie. The</p>	

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
		same was observed for “spouse”, the FTs decided to use “eggenoot” instead as it was more of a literal translation, but still a commonly used word.	
SOAC FT 1	Ervaar hy/sy kommunikasieprobleme in situasies waar hy/sy met een ander persoon gesels? (by die huis, by die werk, in sosiale omstandighede, met ‘n kelnerin, met ‘n winkel klerk, sy/haar huweliksmaat, sy/haar baas, ens.)	Changes made in SAC were applied in the SOAC, with substitution of the correct pronouns.	Ervaar hy/sy kommunikasieprobleme in situasies waar hy/sy met een ander persoon gesels? (by die huis, by die werk, in ‘n sosiale situasie, met ‘n kelnerin, ‘n winkelklerk, met ‘n eggenoot, baas, ens.).
SOAC FT 2	Ervaar hy/sy kommunikasieprobleme in situasies waar hy/sy met een ander persoon praat? (by die huis, by die werk, in ‘n sosiale situasie, met ‘n kelnerin, ‘n winkelklerk, met ‘n eggenoot, baas, ens.)		
Question 2			
SAC FT1	Ervaar u kommunikasieprobleme terwyl u televisie kyk en tydens verskeie tipes vermaaklikhede? (flieks, radio, toneelstukke, nagklubs, musikale vermaak, vermaaklikhede ens.)	1. FTs discussed the use of “vermaak” and “vermaaklikhede”: “vermaak” is the singular form of “entertainment” and “vermaaklikhede” is the plural form. The original SAC has used the singular form therefore, “vermaak” was used instead, which was agreed by both FTs.	Ervaar u kommunikasieprobleme terwyl u TV kyk en in verskeie tipes vermaak? (flieks, radio, toneelstukke, nagklubs, musikale vermaak, vermaaklikhede ens.)
SAC FT2	Ervaar u kommunikasieprobleme terwyl		

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
	u TV kyk en in verskeie tipes vermaak? (flieks, radio, toneelstukke, nagklubs, musikale vermaak, vermaaklikhede ens.)	<p>2. FT 2 felt that this term can be used interchangeably, therefore, felt that either one could be used. FT1 agreed to “toneelstukke” as it is the “fuller” and formal term than “tonele”.</p> <p>3. Both decided to keep the abbreviation of TV (the same as the original) as it is a commonly known term, and it is culturally appropriate to use.</p>	
SOAC FT1	Ervaar hy/sy kommunikasieprobleme terwyl hy/sy televisie kyk en tydens verskeie tipes vermaaklikhede? (flieks, radio, tonele, nagklubs, musikale vermaak, vermaaklikhede ens.)	Changes made in SAC were applied in the SOAC, with substitution of the correct pronouns.	Ervaar hy/sy kommunikasieprobleme terwyl hy/sy TV kyk en in verskeie tipes vermaak? (flieks, radio, toneelstukke, nagklubs, vermaak, vermaaklikhede ens.)
SOAC FT2	Ervaar hy/sy kommunikasieprobleme terwyl hy/sy TV kyk en in verskeie tipes vermaak? (flieks, radio, toneelstukke, nagklubs, musikale vermaak, vermaaklikhede ens.)		
Question 3			
SAC FT1	Ervaar u kommunikasieprobleme in situasies waar u met 'n klein groep mense of meer as een persoon gesels? (met vriende of familie, met kollegas in	1. FT2 provided the literal translation. FT1 altered the meaning of the original SAC from “with a small group of several persons” to “with a small group of people or more than 1 person” by assuming that “more than one person” refers to “various persons”. However, FT2 felt that her literal translation was semantically more	Ervaar u kommunikasieprobleme in situasies waar u met 'n klein groep mense van verskeie persone gesels? (met vriende of familie, kollegas, in vergaderings of

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
SAC FT2	<p>vergaderings of informele gesprekke, tydens maaltye, terwyl u kaart speletjies speel, ens.)</p> <p>Ervaar u kommunikasieprobleme in situasies waar u in gesprek is met 'n klein groep van verskeie persone? (met vriende of familie, kollegas, in vergaderings of informele gesprekke, oor aandete of terwyl u kaarte speel, ens.)</p>	<p>equivalent to the original and easy to understand among Afrikaans speakers without the need to alter any phrases. FT1 agreed but suggested a change in the grammar – placing the verb “gesels” to the end of the sentence which would make the sentence grammatically correct.</p> <p>2. The same, as above, for the term “over dinner or while playing cards”, both agreed to go for the literal translation as it was still understandable and commonly used in the Afrikaans population.</p>	<p>informele gesprekke, oor aandete of terwyl u kaarte speel, ens.)</p>
SAOC FT1	<p>Ervaar hy/sy kommunikasieprobleme in situasies waar hy/sy met 'n klein groep mense of meer as een persoon gesels? (met vriende of familie, met kollegas, in vergaderings of informele gesprekke, tydens maaltye, terwyl hy/sy kaart speletjies speel, ens.)</p>	<p>Changes made in SAC were applied in the SOAC, with substitution of the correct pronouns.</p>	<p>Ervaar hy/sy kommunikasieprobleme in situasies waar hy/sy met 'n klein groep mense van verskeie persone gesels? (met vriende of familie, kollegas, in vergaderings of informele gesprekke, oor aandete of terwyl hy/sy kaarte speel, ens.)</p>
SOAC FT2	<p>Ervaar hy/sy kommunikasieprobleme in situasies waar hy/sy in gesprek is met 'n klein groep van verskeie persone? (met vriende of familie, kollegas, in vergaderings of informele gesprekke, oor aandete of terwyl hy/sy kaarte speel, ens.)</p>		

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
Question 4			
SAC FT1	Ervaar u kommunikasieprobleme wanneer u in 'n moeilike luister omstandigheid is? (by 'n raserige partytjie, waar daar agtergrondmusiek is, terwyl u in 'n kar of bus ry, wanneer iemand fluister of praat oor 'n afstand, ens.)	1. The phrase “unfavourable listening environment” was translated differently. FT1 used “moeilike luister omstandigheid” because when describing a listening environment that affects communication, it is often described as “difficult” to the patient and clinician, thus, “moeilike” (difficult) was the choice of word. “Ongunstige” as translated by FT2 is the literal translation. FT1 felt that both terms can be used interchangeably thus, decided to stick with the literal translation to ensure equivalence. Furthermore, the two terms “luisteromgewing” and “luister omstandigheid” both mean the same but the most widely used and simplified term was selected i.e., “luisteromgewing”.	Ervaar u kommunikasieprobleme wanneer u in 'n ongunstige luisteromgewing is? (by 'n raserige partytjie, waar daar agtergrondmusiek is, terwyl u in 'n kar of bus ry, wanneer iemand fluister of praat oor 'n afstand, ens.)
SAC FT2	Ervaar u kommunikasieprobleme wanneer u in 'n ongunstige luisteromgewing is? (by 'n lawaaierige partytjie, waar daar agtergrondmusiek is, terwyl u in 'n kar of bus ry, wanneer iemand fluister of van die ander kant van die vertrek af praat, ens.)	2. "Raserige" and "lawaaierige" are terms that could also be used interchangeably. Both were semantically equivalent to the original and were commonly used in the Afrikaans language. Both FTs did not have a preference but went with “raserige”. 3. For the translation of “when someone whispers ...the room”, FT2 provided the literal translation, whereas FT1 provided a simplified translation. FT1 rationalised and explained that speaking from across the room basically means speaking at a distance (they are both semantically equivalent). FT2 agreed with FT1’s explanation and preferred the simplified translation. Thus, both agreed to FT1’s translation.	
SAOC FT1	Ervaar hy/sy kommunikasieprobleme	Changes made in SAC were applied in the SOAC, with substitution of the correct pronouns.	Ervaar hy/sy kommunikasieprobleme wanneer

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
	wanneer hy/sy in 'n moeilike luister omstandigheid is? (by 'n raserige partytjie, waar daar agtergrondmusiek is, terwyl hy/sy in 'n kar of bus ry, wanneer iemand fluister of praat oor 'n afstand, ens.)		hy/sy in 'n ongunstige luisteromgewing is? (by 'n raserige partytjie, waar daar agtergrondmusiek is, terwyl hy/sy in 'n kar of bus ry, wanneer iemand fluister of praat oor 'n afstand, ens.)
SOAC FT2	Ervaar hy/sy kommunikasieprobleme wanneer hy/sy in 'n ongunstige luisteromgewing is? (by 'n lawaaierige partytjie, waar daar agtergrondmusiek is, terwyl hy/sy in 'n kar of bus ry, wanneer iemand fluister of van die ander kant van die vertrek af praat, ens.)		
Question 5			
SAC FT1	Hoe gereeld ervaar u kommunikasieprobleme in die situasies waar u die graagste beter wil hoor?	No changes	Hoe gereeld ervaar u kommunikasieprobleme in die situasie waar u die graagste beter wil hoor?
SAC FT2	Situasie: Hoe gereeld ervaar u kommunikasieprobleme in die situasie waar u die graagste beter wil hoor? Situasie:		Situasie:
SOAC FT1	Hoe gereeld ervaar hy/sy kommunikasieprobleme in die	Only substitutions of the correct pronouns were changed.	Hoe gereeld ervaar hy/sy kommunikasieprobleme in die

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
	situasies waar hy/sy die graagste beter wil hoor? Situasie:		situasie waar hy/sy die graagste beter wil hoor? Situasie:
SOAC	Hoe gereeld ervaar hy/sy kommunikasieprobleme in die situasie waar hy/sy die graagste beter wil hoor? Situasie:		
FT2			
<hr/> Question 6			
SAC	Voel u dat die probleme wat u ervaar met u gehoor, u persoonlike of sosiale lewe negatief beïnvloed?	<ol style="list-style-type: none"> 1. FT2 felt that “difficulty with your hearing” basically means “hearing difficulty” which can only be translated to “gehoorprobleem” as there was no direct translation for this term. FT2 rationalised that this was a more simplified term that means the same as the original. FT1 revisited the original and agreed to FT2’s suggestion and translation. 2. FT1 felt that “negatively affects and hampers” can be shortened to one word: “negatief beïnvloed” (negatively influence). FT1 states that being negatively affected and hampered is a negative influence, thus prefers her word choice as it is more simplified, often and well understood for the Afrikaans population than "affekteer" and "belemmer". FT2 was concerned that the word change may affect the equivalence but agrees with FT1s rationale from the Afrikaans language point of view. Thus, both decided on: “negatief beïnvloed”. 	Voel u dat u gehoorprobleem u persoonlike of sosiale lewe negatief beïnvloed?
FT1			
SAC	Voel u dat u gehoorprobleem u persoonlike of sosiale lewe negatief affekteer of belemmer?		
FT2			
SOAC	Voel u dat die probleme wat hy/sy ervaar met sy/haar gehoor, sy/haar persoonlike of sosiale lewe negatief beïnvloed?	Changes made in SAC were applied in the SOAC, with substitution of the correct pronouns.	Voel u dat sy/haar gehoorprobleem hom/haar persoonlike of sosiale lewe negatief beïnvloed?
FT1			

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
SOAC FT2	Voel jy dat die gehoorprobleem hom/haar persoonlike of sosiale lewe negatief affekteer of belemmer?		
Question 7			
SAC FT1	Hoe gereeld is ander mense bekommerd of geïrriteerd, met u gehoorprobleem, of stel voor dat u 'n gehoorprobleem het?	Both revised both translations and agreed on structural changes: "is ander mense" instead of "lyk ander" as the latter makes the sentence seem incomplete. Although the original says "others" which refers to "other people", FTs unanimously preferred to translate "other people" in full. Furthermore, FT2 felt that the extra phrase "met u gehoorprobleem" can be removed as it was not necessary and repetitive. FT1 admitted that she was not sure about that phrase but agrees to omitting it as the translation will be more equivalent to the original as well.	Hoe gereeld is ander mense bekommerd of geïrriteerd, of stel voor dat u 'n gehoorprobleem het?
SAC FT2	Hoe gereeld lyk ander bekommerd of geïrriteerd, of stel voor dat u 'n gehoorprobleem het?		
SOAC FT1	Is u of ander mense bekommerd of geïrriteerd dat hy/sy 'n gehoorprobleem het?	FT1 felt FT2's grammar seemed to be slightly off and suggested to revise it. FT2 revisited the original SOAC and her own translation and FT1's translation and realized the difference. FT2 could not think of an alternative translation from her own thus decided to agree with FT1 as it was appropriate and was semantically equivalent to the original. Pronouns were substituted accordingly.	Is u of ander mense bekommerd of geïrriteerd dat hy/sy 'n gehoorprobleem het?
SOAC FT2	Lyk dit of ander bekommerd of geïrriteerd is dat hy/sy 'n gehoorprobleem het?		
Question 8			
SAC FT1	Bekommer, irriteer of ontstel die probleme wat u met u gehoor ervaar, u?	FT1's translation is more literal than FT2 thus both agreed to use FT1's translation. However, FT2 suggested that they can also consider: "Bekommer, irriteer of ontstel u gehoorprobleem, u?" since "problem or difficulty with hearing" is basically a "hearing problem". FT1 was not sure and preferred that they stick to the literal translation to	Bekommer, irriteer of ontstel die probleme wat u met u gehoor ervaar, u?
SAC FT2	Bekommer, irriteer of ontstel enige deel van u gehoorprobleem u?		

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
		be as close as possible to the original. FT2 decided to agree to the first translation.	
SOAC FT1	Voel u dat die probleme wat hy/sy met sy/haar gehoor ervaar hom/haar bekommer, irriteer of ontstel?	FT2's translation was agreed to be more simplified and less confusing with all the pronouns. Thus, both agreed to use FT2's translation.	Voel u dat 'n gehoorprobleem hom/haar bekommeer, irriteer of ontstel?
SOAC FT2	Voel u dat 'n gehoorprobleem hom/haar bekommeer, irriteer of ontstel?		
Question 9			
SAC FT1	Hoe gereeld affekteer u gehoorprobleem u genot in die lewe op 'n negatiewe wyse?	Both FTs felt that the term "enjoyment of life" was difficult to translate as it was not a term that was often used in the Afrikaans language. Both discussed it and agreed that FT1's "genot in die lewe" literal translation was the best and most appropriate translation between the two (as both could not think of another alternative translation).	Hoe gereeld affekteer u gehoorprobleem u genot in die lewe op 'n negatiewe wyse?
SAC FT2	Hoe gereeld affekteer u gehoorprobleem u genieting van die lewe negatief?		
SOAC FT1	Hoe gereeld affekteer sy/haar gehoorprobleem sy/haar genot in die lewe op 'n negatiewe wyse?	The translation was the same as the SAC but with modifications to the pronouns.	Hoe gereeld affekteer sy/haar gehoorprobleem sy/haar genot in die lewe op 'n negatiewe wyse?
SOAC FT2	Hoe gereeld affekteer sy/haar gehoorprobleem hom/haar genieting van die lewe negatief?		
Question 10			
SAC FT1	Indien u gehoorapparate gebruik: Op 'n gemiddelde dag, hoeveel ure gebruik u die gehoorapparate? Ure /16=	The original SAC used "hearing aid" in singular form in the beginning of the sentence then later used it in plural form towards the end of the sentence. It was decided to	Indien u 'n gehoorapparaat gebruik: Op n gemiddelde dag, hoeveel ure gebruik u gehoorapparate? Ure /16=

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
SAC FT2	Indien u 'n gehoorapparaat gebruik: Op 'n gemiddelde dag, hoeveel ure gebruik u gehoorapparate? Ure /16=	translate this exactly the same as the original as it is unknown as to why the original is set up that way.	
SOAC FT1	Indien hy/sy gehoorapparate gebruik: Op 'n gemiddelde dag, hoeveel ure gebruik hy/sy die gehoorapparate? Ure /16=	Same changes as the SAC were applied with the correct pronouns in place.	Indien hy/sy 'n gehoorapparaat gebruik: Op n gemiddelde dag, hoeveel ure gebruik hy/sy die gehoorapparate? Ure /16=
SOAC FT2	Indien hy/sy 'n gehoorapparaat gebruik: Op 'n gemiddelde dag, hoeveel ure sal hy/sy die gehoorapparate gebruik? Ure /16=		
Satisfaction scale			
SAC FT1	Merk asseblief u algehele tevredenheid met u gehoorapparate:	Both FTs had different words translating “rate”. “Skaal” is not a term that is used in the Afrikaans language to rate something. However, "merk" is an appropriate and familiarly used word in the Afrikaans language if one needs to “rate” on a questionnaire. Thus, “merk” was agreed upon.	Merk asseblief u algehele tevredenheid met u gehoorapparate:
SAC FT2	Skaal asseblief u algehele tevredenheid met u gehoorapparate:		
SOAC FT1	Merk asseblief wat u dink sy/haar tevredenheid met sy/haar huidige gehoorapparate is:	Same changes were made in SOAC with the correct pronouns in place.	Merk asseblief wat u dink sy/haar algehele tevredenheid is met sy/haar gehoorapparate:
SOAC FT2	Skaal asseblief hy/sy algehele tevredenheid met sy/haar gehoorapparate:		
Rating scale (both SAC and SOAC)			

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
FT1	Glad nie tevrede nie	No changes	Glad nie tevrede nie
FT2	Glad nie tevrede nie		
FT1	Effens tevrede	Both felt both were appropriate and just went with	Effens tevrede
FT2	Effe tevrede	“Effens”	
FT1	Matig tevrede	No changes	Matig tevrede
FT2	Matig tevrede		
FT1	Meestal tevrede	No changes	Meestal tevrede
FT2	Meestal tevrede		
FT1	Baie tevrede	No changes	Baie tevrede
FT2	Baie tevrede		
FT1	Byna nooit (of nooit)	Both felt both were appropriate and just went with	Amper nooit (of nooit)
FT2	Amper nooit (of nooit)	“Amper” instead of “Byna”	
FT1	Soms (omtrent ¼ van die tyd)	No changes	Soms (omtrent ¼ van die tyd)
FT2	Soms (omtrent ¼ van die tyd)		
FT1	Omtrent ½ van die tyd	No changes	Omtrent ½ van die tyd
FT2	Omtrent ½ van die tyd		
FT1	Gereeld (omtrent ¾ van die tyd)	No changes	Gereeld (omtrent ¾ van die tyd)
FT2	Gereeld (omtrent ¾ van die tyd)		
FT1	Byna altyd (of altyd)	Both felt both were appropriate and just went with	Byna altyd (of altyd)
FT2	Amper altyd (of altyd)	“Amper” instead of “Byna”	
Office Use box			
FT1	Slegs vir kantoor gebruik	No changes	Slegs vir kantoor gebruik
FT2	Slegs vir kantoor gebruik		
FT1	Totaal	FT1 admitted that she also agreed that “telling” was the literal translation but in a lot of questionnaires that requires scoring, it tends to be the “total” (totaal). In the SAC and SOAC, after the word scoring, it provides a formula/calculation, thus it makes sense to translate the word scoring to “totaal”. FT2 agreed as she has also seen it	Totaal
FT2	Telling		

FT	Forward Translations	Changes during Synthesis	Synthesised Afrikaans version
		in other questionnaires, and it does not say “telling” in the bottom but “totaal”. Thus, both agreed to translate “scoring” to “Totaal”.	

Note. FT1 refers to Forward Translator 1 and FT2 refers to Forward Translator 2

Appendix K: Back Translations and Expert Panel Review Changes (Aim 1, Objective 1)

BT	Translations	Expert Panel review	Afrikaans pre-final version
Titles			
SAC BT1	Self Assessment of Communication (SAC)	No changes	Self Assessering van Kommunikasie (SAC)
SAC BT2	Self Assessment of Communication (SAC)		
SOAC BT1	Life Partner Assessment of Communication	Committee agreed to the notes that “Lewensmaat” was the most appropriate word that is well understood in the Afrikaans language. The back translations of “lewensmaat” are semantically equivalent to SO. Thus, everyone agreed to the term.	Lewensmaat Assessering van Kommunikasie
SOAC BT2	Partner Assessment of Communication		
Personal Details			
SAC FT1	Name:	No changes.	Naam:
	Date:		Datum:
SAC FT2	Name:		
	Date:		
SOAC FT1	Name of patient: Date: Name of person completing the form: Relation to patient:	Committee revised the original and all the translations and agreed to the change that was made in forward translation (replacing “wat” with “wie”). In further evaluation, the BTs translated “assessering” as “vorm” (form in English). The BTs explained that the SAC and SOAC is basically a form thus translated it as a form. It was an easier term to use, and a widely used word used when completing a form. In addition, changing it to “vorm” will have minimal effect on the equivalence between the translation and original. All members agreed to this change.	Naam van pasiënt: Datum: Naam van persoon wie die vorm voltooi: Verhouding tot pasiënt:
SOAC FT2	Name of patient: Date: Name of person completing this form: Relationship to patient:		

BT	Translations	Expert Panel review	Afrikaans pre-final version
Instructions			
SAC BT1 TC	<p>Instructions: The aim of this form is to identify problems that can be caused by your hearing loss. If you are a hearing aid user, answer the following questions as to how you communicate when you are NOT wearing your hearing aids. Use one of the 5 descriptions on the righthand side to answer the questions below.</p> <p>Choose a number from 1 to 5 next to each question (please do not give yes/no answers and only choose one answer per question).</p>	<p>After review of notes and translations, the panel agrees the change that was made in forward translation: “statements” (Afrikaans: “Stellings”) should rather be translated as “question” (Afrikaans: “Vraag”) as the measure contains questions.</p> <p>With further evaluation, one BT member commented that “verskaf” is an odd word to use and felt that “gee” is a simpler and better word choice. Although both mean the same, “gee” sounds better. All members did not disagree and thus allowed the change.</p>	<p>Instruksies: Die doel van hierdie vorm is om die probleme wat u gehoorverlies kan veroorsaak, te identifiseer. Indien u gehoorapparaat dra, antwoord die vrae volgens hoe u kommunikeer wanneer u NIE die gehoorapparaat gebruik NIE. Gebruik een van die 5 beskrywings aan die regterkant om die vrae hieronder te beantwoord.</p>
SAC BT2	<p>Instructions: The goal of this form is to identify problems that your hearing loss can be causing you. If you use hearing aids, answer the questions as to how you would communicate when you are NOT using your hearing aids. Only use the scale on the right-hand side to answer the questions below.</p> <p>Select a number between 1 to 5 next to each question. (Please do not answer yes or no and just select one answer per question).</p>	<p>The speech therapist commented that “vir elke vraag” can be shortened to “per vraag” (per question in English), which still means the same but simplified. Thus, all members agreed to the change.</p>	<p>Kies ‘n nommer van 1 tot 5 langs elke vraag (moet asseblief nie ja of nee antwoorde gee nie en kies slegs een antwoord per vraag).</p>
SOAC BT1	<p>Instructions: The aim of this form is to identify problems that can be caused by your partner’s hearing</p>	<p>The panel feels that the backward translation does not reflect any discrepancies thus, will not be changing <u>anything big on the translation. However, small word</u></p>	<p>Instruksies: Die doel van hierdie vorm is om die probleme wat ‘n gehoorverlies vir u lewensmaat kan</p>

BT	Translations	Expert Panel review	Afrikaans pre-final version
SOAC BT2	<p>loss. If the patient uses hearing aids, answer the following questions according to his/her communication when they are NOT using their hearing aids. Use one of the 5 descriptions on the righthand side to answer the questions below.</p> <p>Choose a number from 1 to 5 next to each question (please do not give yes/no answers and only choose one answer per question).</p> <p>Instructions: The aim of this form is to identify any problems that a hearing loss can be causing for your partner. If the patient uses a hearing aid, answer the question as to how he/she would communicate when he/she is NOT using their hearing aids. Use the scale on the right-hand side to answer the questions below.</p> <p>Select a number between 1 to 5 next to each question (please do not answer yes or no and just select one answer per question).</p>	<p>changes that were done for SAC was also applied here. All members were satisfied with the translation.</p>	<p>veroorzaak, te identifiseer. Indien die pasiënt gehoorapparate dra, antwoord die vrae volgens hoe hy/sy kommunikeer wanneer hy/sy <u>NIE</u> die gehoorapparate gebruik <u>NIE</u>.</p> <p>Gebruik een van die 5 beskrywings aan die regterkant om die vrae hieronder te beantwoord.</p> <p>Kies ‘n nommer van 1 tot 5 langs elke vraag (moet asseblief geen ja of nee antwoorde gee nie en kies slegs een antwoord per vraag).</p>
Question 1			
SAC BT1	<p>Do you experience communication problems when you are talking to one other person? (At home, at work, in a social situation, with a waitress,</p>	<p>The committee reviewed the translations where the speech therapist recommended to replace "in situasies waar" with "wanneer" to make it more simplified as both basically means the same. Both BTs also translated it as "when" instead of "in situasies waar".</p>	<p>Ervaar u kommunikasieprobleme wanneer u met een ander persoon gesels? (by die huis, by die werk, in ‘n sosiale situasie, met ‘n kelnerin,</p>

BT	Translations	Expert Panel review	Afrikaans pre-final version
SAC BT2	with a store clerk, with a spouse, with your boss, etc.) Do you experience any communication problems when conversing with another person? (At home, work, social situation, with a waitress, shop clerk, with a spouse, boss, etc)	All members agreed to this change as it was also more common to use “wanneer” in the Afrikaans language. The expert panel agree that both back translations were equivalent to the original and accept the changes that were made in forward translation.	‘n winkelklerk, met ‘n eggenoot, baas, ens.).
SOAC BT 1	Does he/she experience communication problems when he/she is talking to one other person? (At home, at work, in a social situation, with a waitress, with a store clerk, with a spouse, with your boss, etc.)	All changes made in the SAC were applied to the SOAC.	Ervaar hy/sy kommunikasieprobleme wanneer hy/sy met een ander persoon gesels? (by die huis, by die werk, in ‘n sosiale situasie, met ‘n kelnerin, ‘n winkelklerk, met ‘n eggenoot, baas, ens.).
SOAC BT 2	Does he/she experience any communication problems when conversing with another person? (At home, work, social situation, with a waitress, shop clerk, with a spouse, boss, etc)		
Question 2			
SAC BT1	Do you experience communication problems when you are watching television and during other types of entertainment? (Movies, radio, plays, night clubs, musical entertainment, etc.)	The committee was satisfied with the changes made during forward translation. However, one BT recommended to replace “terwyl” with “wanneer” as it was a simpler and often used term, although both terms mean the same. The committee felt they made similar changes with the previous question, thus, decided to make the slight change as it does not affect the equivalence.	Ervaar u kommunikasieprobleme wanneer u TV kyk en in verskeie tipes vermaak? (fiekse, radio, toneelstukke, nagklubs, musikale vermaak, ens.)
SAC BT2	Do you experience any communication problems while watching television and during		

BT	Translations	Expert Panel review	Afrikaans pre-final version
	other forms of entertainment? (Movies, radio, theatre, night clubs, music entertainment etc.)		
SOAC BT1	Does he/she experience communication problems when they are watching television and during other types of entertainment? (Movies, radio, plays, night clubs, musical entertainment, etc.)	All changes made in the SAC were applied to the SOAC.	Ervaar hy/sy kommunikasieprobleme wanneer hy/sy TV kyk en in verskeie tipes vermaak? (flicks, radio, toneelstukke, nagklubs, musikale vermaak, ens.)
SOAC BT2	Does he/she experience any communication problems while watching television and during other forms of entertainment? (Movies, radio, theatre, night clubs, music entertainment etc.)		
Question 3			
SAC BT1	Do you experience communication problems in situations where you are speaking to a small group of different people? (friends/family, colleagues during meetings or social discussions, during mealtimes, during card games, etc).	<ol style="list-style-type: none"> 1. The committee agreed unanimously to change "in situasies waar" again to "wanneer" as previously done in Item 1 for simplification purposes. 2. The speech language pathologist argued that "in situasies waar u met 'n klein groep of verskeie persone gesels" basically refers to a small group of people ("klein groep mense") because a small group of people generally do contain various persons ("verskeie persone"), therefore, recommended that the translation be modified and simplified to "wanneer u met 'n klein groep mense gesels" by completely removing the "verskeie persone" phrase. The members checked the original item which states, "when conversing with a small group of several persons" and all discussed and agreed that "small group of people" was 	Ervaar u kommunikasieprobleme wanneer u met 'n klein groep mense gesels? (met vriende of familie, kollegas, in vergaderings of informele gepegsprekke, oor aandete of terwyl u kaarte speel, ens.)
SAC BT2	Does he/she experience any problems in situations where he/she interact in a small group of people or talk to more than 1 person at a time? (friends/family, colleagues during a meeting or informal conversation, during		

BT	Translations	Expert Panel review	Afrikaans pre-final version
	dinner or while playing card games, etc.).	semantically equivalent to “small group of several persons” and that examples of possible situations stated after the question allows the reader to understand which type of small group situations that the item was referring to. All members were in agreement and modified the sentence to "wanneer u met 'n klein groep mense gesels".	
SAOC BT1	Does he/she experience communication problems in situations where they are speaking to a small group of different people? (friends/family, colleagues during meetings or social discussions, during mealtimes, during card games, etc).	All changes made in the SAC were applied to the SOAC. Committee had no further questions or suggestions for this item.	Ervaar hy/sy kommunikasieprobleme wanneer hy/sy met 'n klein groep mense gesels? (met vriende of familie, kollegas, in vergaderings of informele gesprekke, oor aandete of terwyl hy/sy kaarte speel, ens.)
SOAC BT2	Does he/she experience any problems in situations where he/she interact in a small group of people or talk to more than 1 person at a time? (friends/family, colleagues during a meeting or informal conversation, during dinner or while playing card games, etc.).		
<hr/> Question 4			
SAC BT1	Do you experience communication problems when in a difficult environment? (At a	The committee evaluated the changes made in forward translation and all agreed with the synthesis.	Ervaar u kommunikasieprobleme wanneer u in ‘n moeilike luisteromgewing is? (by ‘n raserige

BT	Translations	Expert Panel review	Afrikaans pre-final version
SAC BT2	noisy party, when there is background music playing, while you are driving in a car or bus, when someone whispers or speaks to you from a distance, etc.) Do you experience communication problems whilst in an unfavourable environment? (During a noisy party, where background music is being played, whilst in your vehicle or on a bus, when someone is whispering or talk at a distance with you, etc.)	The committee discussed the topic of audiologists that describe “unfavourable listening environments” as “difficult listening environments” (moeilike luisteromgewing) in Afrikaans (this was reported in the synthesis notes). The committee felt that both do imply the same type of situations, in addition, the question does provide examples to allow patients to understand what the term means. The committee decided by the majority to use “moeilike luisteromgewing”.	partytjie, waar daar agtergrondmusiek is, terwyl u in ‘n kar of bus ry, wanneer iemand fluister of praat oor ‘n afstand, ens.)
SAOC BT1	Does he/she experience communication problems when in a difficult environment? (At a noisy party, when there is background music playing, when they are driving in a car or bus, when someone whispers or speaks to him/her from a distance, etc.)	All changes made in the SAC were applied to the SOAC	Ervaar hy/sy kommunikasieprobleme wanneer hy/sy in ‘n moeilike luisteromgewing is? (by ‘n raserige partytjie, waar daar agtergrondmusiek is, terwyl hy/sy in ‘n kar of bus ry, wanneer iemand fluister of praat oor ‘n afstand, ens.)
SOAC BT2	Does he/she experience communication problems whilst in an unfavourable environment? (During a noisy party, where background music is being played, whilst in a vehicle or on a bus, whilst someone is whispering or talk at a distance with him/her, etc.)		

BT	Translations	Expert Panel review	Afrikaans pre-final version
SAC BT1	How often do you experience communication problems in situations where you would like to be able to hear better? Situation:	No changes were suggested. The committee agreed with all the changes and suggestions that were made during forward translation and synthesis phase and had no further comments as no further discrepancies or ambiguities were found.	Hoe gereeld ervaar u kommunikasieprobleme in die situasie waar u die graagste beter wil hoor? Situasie:
SAC BT2	How regularly do you experience communication problems in the situation that you would really like to hear? Situation:		
SOAC BT1	How often do they experience communication problems in situations where they would have liked to be able to hear better? Situation:	No changes were suggested. The committee agreed with all the changes and suggestions that were made during forward translation and synthesis phase and had no further comments as no further discrepancies or ambiguities were found.	Hoe gereeld ervaar hy/sy kommunikasieprobleme in die situasie waar hy/sy die graagste beter wil hoor? Situasie:
SOAC BT2	How regularly does he/she experience communication problems in the situation that he/she would really like to hear? Situation:		
Question 6			
SAC BT1	Do you feel that your hearing problems negatively affect your personal or social life?	No changes were suggested. The committee agreed with all the changes and suggestions that were made during forward translation and synthesis phase and had no further comments as no further discrepancies or ambiguities were found.	Voel u dat u gehoorprobleem u persoonlike of sosiale lewe negatief beïnvloed?
SAC BT2	Do you feel that your hearing problem affects your personal or social life negatively?		
SOAC BT1	Do you feel that his/her hearing problems negatively affect their personal or social life?	No changes were suggested. The committee agreed with all the changes and suggestions that were made during forward translation and synthesis phase and had	Voel u dat sy/haar gehoorprobleem sy/haar se persoonlike of sosiale lewe negatief beïnvloed?

BT	Translations	Expert Panel review	Afrikaans pre-final version
SOAC BT2	Do you feel that his/her hearing problem affects his/her personal or social life negatively?	no further comments as no further discrepancies or ambiguities were found.	
Question 7			
SAC BT1	How often are others concerned or irritated, or mention the fact that you have a possible hearing problem?	No changes were suggested. The committee agreed with all the changes and suggestions that were made during forward translation and synthesis phase and had no further comments as no further discrepancies or ambiguities were found.	Hoe gereeld is ander mense bekommerd of geïrriteerd, of stel voor dat u 'n gehoorprobleem het?
SAC BT2	How regularly are other people concerned or irritated, or suggest that you have a hearing problem?		
SOAC BT1	Are you or other people concerned or irritated that he/she has got a hearing problem?	No changes were suggested. The committee agreed with all the changes and suggestions that were made during forward translation and synthesis phase and had no further comments as no further discrepancies or ambiguities were found.	Is u of ander mense bekommerd of geïrriteerd dat hy/sy 'n gehoorprobleem het?
SOAC BT2	Are you or other people concerned or irritated he/she may have a hearing problem?		
Question 8			
SAC BT1	Are you worried, irritated or upset due to the problems that you experience with your hearing?	The committee evaluated the suggestion made in the synthesis, the majority felt that no changes was needed and that the literal translation was closer to the original. In addition, all members agreed that the backward translations received may not be exactly like the original, but it did grasp the meaning of the sentence therefore no changes were made.	Bekommer, irriteer of ontstel die probleme wat u met u gehoor ervaar, u?
SAC BT2	Are you worried, irritated or upset with the difficulties you experience with your hearing?		
SOAC BT1	Do you feel that a hearing loss is worrying, irritating or upsetting to them?	The committee was satisfied with the backward translations as it was very similar to the original therefore no further evaluations and changes were necessary.	Voel u dat 'n gehoorprobleem hom/haar bekommeer, irriteer of ontstel?
SOAC BT2	Do you feel that difficulty with hearing worries, irritate or upsets him/her?		

BT	Translations	Expert Panel review	Afrikaans pre-final version
Question 9			
SAC BT1	How often does your hearing loss affect your joy of life in a negative way?	BTs felt that “genot in die lewe” was a tough and strange term to translate and felt that the term was not an accurate description of “enjoyment of life” in Afrikaans. The speech language pathologist suggested “lewensvreugde”, it was not a literal translation, however the meaning does imply “enjoyment of life”. “Lewensvreugde” was also more simplified and well understood among the Afrikaans population. All members of the panel agreed to the new word and preferred it over the previous translation.	Hoe gereeld beïnvloed u gehoorprobleem u lewensvreugde op ‘n negatiewe wyse?
SAC BT2	How regularly does your hearing loss affect your life’s happiness in a negative way?		
SOAC BT1	How often does his/her hearing loss affect their joy of life in a negative way?	The changes made in the SAC were also applied for the SOAC. No other changes were made. The committee was satisfied with the backward translations as it was very similar to the original therefore no further evaluations and changes were necessary.	Hoe gereeld beïnvloed sy/haar gehoorprobleem sy/haar lewensvreugde op ‘n negatiewe wyse?
SOAC BT2	How regularly has his/her hearing loss affected his/her life’s happiness in a negative way?		
Question 10			
SAC BT1	If you use a hearing aid: On a normal day, how many hours do you wear your hearing aid? Hours /16=	The committee was satisfied with the backward translations as it was very similar to the original therefore no further evaluations and changes were necessary.	Indien u gehoorapparaat gebruik: Op ‘n gemiddelde dag, hoeveel ure gebruik u die gehoorapparaat? Ure /16=
SAC BT2	If you use a hearing aid: on average, how many hours per day do you use your hearing aid? Hours /16=		
SOAC BT1	If he/she use a hearing aid: On a normal day, how many hours do	Committee felt the translation was accurate after considering the original and backward translations.	Indien hy/sy ‘n gehoorapparaat gebruik: Op n gemiddelde dag,

BT	Translations	Expert Panel review	Afrikaans pre-final version
	they wear their hearing aid? Hours /16=		hoeveel ure gebruik hy/sy die gehoorapparaat? Ure /16=
SOAC BT2	If he/she uses a hearing aid: on average, how many hours per day does he/she use it? Hours /16=		
Satisfaction scale			
SAC BT1	Please indicate your general satisfaction with your hearing aid:	The committee revisited the word “merk” again. The speech language pathologist suggested that "dui" is actually a more appropriate word for a health measure as it was more often used and a more formal term to use. The committee considered both words and by the majority, decided on using the word “dui”.	Dui asseblief aan u algehele tevredenheid met u gehoorapparaat:
SAC BT2	Please indicate your overall satisfaction with your hearing aid:		
SOAC BT1	Please indicate what you think his/her general hearing aid satisfaction level is:	The committee also agreed to apply the same changes as the SAC to the SOAC. No other changes were recommended or suggested.	Dui asseblief aan wat u dink sy/haar algehele tevredenheid is met sy/haar gehoorapparaat:
SOAC BT2	Please indicate what you think his/her overall satisfaction is with their hearing aid:		
Rating scale (both SAC and SOAC)			
BT1 BT2	Not satisfied at all	Committee felt the translation was accurate after considering the original and backward translations.	Glad nie tevrede nie
BT1 BT2	Slightly satisfied Partly satisfied		
BT1 BT2	Relatively satisfied Mildly satisfied	Majority of the committee felt that "redelik" was a closer translation than "matig". The backward translation of "matig" also seems inaccurate – as the literal translation is "mildly"	Redelik tevrede
BT1 BT2	Mostly satisfied Mostly satisfied		
BT1 BT2	Very satisfied Very satisfied	Committee felt the translation was accurate after considering the original and backward translations.	Baie tevrede

BT	Translations	Expert Panel review	Afrikaans pre-final version
BT1	Almost never (or never)	Committee felt the translation was accurate after considering the original and backward translations.	Amper nooit (of nooit)
BT2	Almost never (or never)		
BT1	Sometimes (about ¼ of the time)	Committee felt the translation was accurate after considering the original and backward translations.	Soms (ongeveer ¼ van die tyd)
BT2	Sometimes (approx. ¼ of the time)		
BT1	About ½ of the time	Committee felt the translation was accurate after considering the original and backward translations.	Omtrent ½ van die tyd
BT2	Approximately ½ of the time		
BT1	Regularly (about ¾ of the time)	Committee felt the translation was accurate after considering the original and backward translations.	Gereeld (ongeveer ¾ van die tyd)
BT2	Regularly (approx. ¾ of the time)		
BT1	Almost always (or always)	Committee felt the translation was accurate after considering the original and backward translations.	Amper altyd (of altyd)
BT2	Almost always (or always)		
Office use box			
BT1	For office use only	No changes	Slegs vir kantoor gebruik
BT2	For office use only		
BT1	Total	The committee evaluated the synthesis changes and the back translation, they did not feel that the word could be translated otherwise. No one was able to provide a better alternative that was appropriate and commonly used in the Afrikaans language. The rationale stated by the FTs were valid thus everyone was satisfied therefore all agreed to keep it.	Totaal
BT2	Total		

Note. BT1 refers to Backward Translator 1 and BT2 refers to Backward Translator 2

Appendix L: Raw Data of the Field Testing Responses (Aim 1, Objective 2)

Participant	Q1	Q2	Q3	Q4	Q5
No SAC1	Short questionnaire – only 10 questions to complete. Did not find the scale confusing. Everything felt clear and to the point.	Easy to understand. Thinks the translation is well translated, as if translated by an Afrikaans person.	Thinks that all questions are applicable to someone with a hearing loss. Thinks the questions are also culturally appropriate for Afrikaans population.	Nothing was confusing. Thinks the translation was well translated.	Vocabulary and word choice are satisfactory. No improvements needed on the translation.
SAC2	It was quick to complete. The scale was easy to understand and use. Didn't take me longer than 5 minutes!	The questions and instructions were easy to understand. Seems like an Afrikaans person translated the questionnaire so appropriate for Afrikaans population and culture.	Yes! The questions were very relevant to my problems. I think it should be relevant to other people with the same problem as me	I think the translation was good. The sentences made sense and was not confusing.	I think the words used are fine. I wouldn't change anything.
SAC3	Quick and easy – it was short. The scale was fine, not too complicated	Have no problems with the translation. Easy to understand and follow	Felt the questions did describe her hearing problems	No problems with the translation. Did not see any fault.	The words seemed appropriate. Would not change anything.
SAC4	The scale was not difficult to use or understand. The questionnaire is short and sweet and doesn't	The translation was good. I understand each question well.	Yes, the questions were relevant to my experience with my hearing loss	I think the translation was good. I did not find anything confusing	The words were appropriately used and suited for the Afrikaans language. One word to re-evaluate: Q2 "in"

Participant No	Q1	Q2	Q3	Q4	Q5
	take too long to complete				should be replaced with tydens as it seems like the Q is asking if you have a hearing difficulty watching TV whilst in other entertainments.
SAC5	Easy to complete. Not too many questions to answer. Scale is easy to use.	The questions were easy to understand as well. The instructions were clear	The questions did ask the problems I have with my hearing. The questions are appropriate	I don't have any issue with the sentence structures and grammar	I think the words are appropriately used. I would not change anything.
SAC6	Px felt questionnaire is easy to use. Did not struggle to complete on her own	Px felt it is easy to understand. She did not ask any questions	Px felt the questions described her problems well	Px thinks the translation was good. Did not have problem understanding	Px was satisfied with the word choices in the questionnaire.
SAC7	Doesn't take long to complete. Easy to use the scale.	Translation is good and clear	The questions were relevant to his hearing issues (only some of them)	Did not find the translation confusing. The sentences were well translated for Afrikaans people	The words used are appropriate and satisfactory. No changes are needed.
SAC8	Easy to use and complete Did not take long to complete The scale was straightforward	Easy to understand Overall translation is good Nothing felt confusing	Questions feel relevant to people with hearing problems, including his own Translation is appropriate and relevant to the culture of Afrikaans population	Have no issues with the grammar and sentence structure. Did not find anything confusing	Words that were used were satisfactory and appropriately used. No changes required.

Participant	Q1	Q2	Q3	Q4	Q5
No SAC9	Easy to use and quick to complete The scale was not difficult to understand	The translation is good. It is as if it was translated by an Afrikaans person	Questions is relevant to people with hearing loss. They are appropriate for Afrikaans culture	No problems with grammar and sentences.	Word choices are good and appropriate. No changes/ improvements needed
SAC10	Not difficult to understand. Questionnaire is short	Translation is easy to understand, and the sentences aren't confusing. Everything in the questionnaire (the translation) is appropriate to Afrikaans population	Questions are relevant to my experiences	The translation seems like is translated by an Afrikaans speaking person therefore grammar is fine.	Word choices are great and appropriate. No improvements required.
SAC11	Translation is easy to read and understand. Questionnaire is also easy to use	Easy to read and understand No confusion in translation	Yes, however does not feel that all questions apply to her since she only has a mild loss. Translation is relevant to Afrikaans culture	Grammar used is not confusing and nothing is wrong with it.	Word choices are appropriate for Afrikaans population. No improvements or changes necessary
SAC12	1 page questionnaire – short and easy to administer/complete. Clarification on questionnaire was not needed	Questionnaire was easy to understand. Feels that translation was well translated for Afrikaans population	Questions are relevant to hearing loss individuals. However, consider adding “nie van toepassing nie” for individuals that need a hearing test but may not experience any of the	Well translated sentences using correct Afrikaans grammar	Suggestions: “tydens verskeie tipes vermaak” to help with separating “TV kyk” and other entertainments. “tydens aandete” also is more appropriate in the context. Overall good translation with very

Participant No	Q1	Q2	Q3	Q4	Q5
SAC13	Easy to use therefore can complete quickly	Easy to understand (instructions, questions, scale)	scenarios in the questionnaire, Questions/content is relevant to hearing loss persons	Sentence or grammar appropriately translated for Afrikaans population	minimal (if any) alterations required. Word choices are appropriate. No improvements required.
SAC14	Short questionnaire that is easy to read, understand and complete	Translation did not cause any confusion in the questionnaire as it is well translated for Afrikaans people	The questions are relevant, especially likes that the questions provide relevant examples to allow the reader to relate their experience to the question	Sentence and grammar are well translated as if translated by Afrikaans person	Same as previous question. Appropriate. No changes required.
SAC15	Straightforward questionnaire that does not take a lot of time to complete.	Translation is appropriate to use in Afrikaans population. No clarifications were needed when going through form.	The content of the questionnaire is relevant to the intent (identifying impact of HL) the examples provide insight to different relevant scenarios	Sentences were well formed according to Afrikaans grammar	Words are well translated. No changes required.
SAC16	Easy to read and use. Only took 2 mins to complete	Questions are clear and easy to understand well translated and appropriate for Afrikaans population	Questions are relevant	Appropriate grammar and sentence structure, will be easily understandable by an Afrikaans speaking person	Appropriate word choices. No changes required. Good translation.

Participant No	Q1	Q2	Q3	Q4	Q5
SAC17	Easy to complete. Did not take long	Easy to understand each question and instructions. Translated well for the Afrikaans population	Most questions do apply and is relevant to her. However, questions that ask about socialisation – at her age she seldomly socialise	Sentence flows well and grammar is appropriate	Words seem appropriately used. However, suggestion: “tydens aandete” in context just sounds more appropriately used than “oor aandete”. Great translation overall!
SAC18	Easy to fill the form using the scale	Easy to understand. Did not need assistance to clarify any question. Appropriately translated to Afrikaans culture and population	The questions were interesting and was relevant and show px what she struggled with the most	Grammar and sentences seem well translated. Do not suggest any changes	Word choices were appropriate. No changes required.
SAC19	Easy to understand and follow	Very understandable	Questions are relevant	Formal language used. Appropriately translated for Afrikaans population	Few word suggestions: “tydens verskeie tipes vermaak” to clarify that is it two different events occurring at different times. “gehooromgewing” to consider over “luisteromgewing”. Word choices are appropriate.

Participant No	Q1	Q2	Q3	Q4	Q5
SAC20	Easy to complete. Scale was easy to use	Not ambiguous and easy to understand. Did not need clarification	Relevant questions to her hearing loss	Grammar + sentence structures appropriate to Afrikaans population. Suggest rephrasing of Q10: "Hoeveel ure gebruik u die gehoorapparaat op 'n gemiddelde dag?"	Recommend changing "tydens verskeie tipes vermaak" and "tydens aandete" as both are more appropriate in context. Overall translation is good
SAC21	Questionnaire reads well, as though written by an Afrikaans person. Easy to fill in.	Very easy to understand, questions were clear	All questions are relevant to my hearing experience as I relate to it.	Grammar and sentence structures are appropriately translated/used in Afrikaans language and culture	Wording is appropriate. Can consider a small change: "tydens verskeie tipes vermaak" just to separate the two different activities that cannot be done together.
SAC22	No difficulty in filling out the form. Px found it to be easy to complete. No questions asked about test.	No questions/clarifications were asked thus assume it is easy to understand	Questions are relevant to his experience with hearing loss. Appropriate to Afrikaans	Appropriate use of Afrikaans language in translation.	Recommend to using "tydens anndete" as it seems more appropriate for context of question. Otherwise, questionnaire translation is good.

Participant No	Q1	Q2	Q3	Q4	Q5
SOAC1	Questionnaire was not difficult to complete Scale was not confusing	The translation was good and easy to understand Nothing made him confused	The problems described wife's problem well. Translation relevant to Afrikaans population and culture	Grammar and sentences translated well	Words are satisfactory. Do not have any suggestions.
SOAC2	Easy to use, including the scale. Short questionnaire, quick administration	Translation is concise and clear Easy to understand	Questions are relevant and appropriate to hearing impaired individuals Also relevant to Afrikaans culture and language (translation)	Grammar and sentence structure are well translated according to Afrikaans language	Words used are appropriate and accurate. Translation is 100% satisfactory
SOAC3	Easy to use and quick to complete	Translation is easy to understand	Questions are relevant to my husband's hearing loss	Language use is appropriate for Afrikaans culture (the grammar and sentences)	Word choices are satisfactory. The whole translation is appropriate for Afrikaans population.
SOAC4	Easy to use and quick to administer	Easy to understand Translation is good	Questions describes hearing loss impact and is relevant Appropriate translation for Afrikaans population	No issues with grammar and sentences. All are satisfactory	Word choices are appropriately used for Afrikaans culture and population. Suggestion to change "lewensmaat" to "naasbestaande" which is more accurate for her relationship with px.

Participant No	Q1	Q2	Q3	Q4	Q5
SOAC5	Quick and easy to complete Scale wasn't confusing – clearly stated	Instructions were clear as well as the questions. Easy to understand and follow	Questions do show what I feel my mother is experiencing due to her hearing loss and I think it is relevant. The translation is appropriate for Afrikaans people	Grammar and sentence structures are well used in Afrikaans	Vocabulary used is appropriate. I do suggest changing “Lewensmaat” to “Naasbestaande” as I take care of her and speak to her the most + I am not her life partner
SOAC6	Easy to use (scale) and quick to administer	Easy to understand and follow instructions	Questions are relevant to people with hearing loss like her mother. The translation was appropriately translated to Afrikaans culture	Grammar and sentence are pretty good. No changes required.	Recommend changing “lewensmaat” to “naasbestaande” as it best describes her as a daughter but can also be used for life partners too. No other changes required.
SOAC7	Questionnaire did not take long to complete because it was easy to complete	Translation was easy to understand and did not cause any confusion. Appropriately translated for Afrikaans population	Questions are relevant to her mom	Grammar and sentence structure well translated as no issues were detected	“lewensmaat” preferred word is “naasbestaande” for other family members. No other suggested word choices/changes.
SOAC8	Easy to complete and understand	The translation was good and easy to understand. There was no confusion	The questions are relevant to his wife. The translation is relevant to Afrikaans population	No changes are necessary in terms of grammar and	Word choices are appropriate. No changes required.

Participant No	Q1	Q2	Q3	Q4	Q5
SOAC9	The scale was easy to use Easy to use	Easy to understand Well translated Good examples given	Relevant questions asked Relevant examples given Translation is appropriate for use with Afrikaans speaking people	sentence structure as it is appropriate Good Afrikaans grammar used. No improvements required	No word choice issues. Appropriate Afrikaans words used. No change required.
SOAC10	Easy questionnaire. Doesn't take long to complete	Easy to understand. Instructions and questions were clear. No clarification necessary	Content is relevant. Translated questionnaire is appropriate for Afrikaans speaking people	Questionnaire well translated into Afrikaans i.t.o grammar, sentence structures and general language used	Re-evaluate: Q2: "en in verskeie tipes vermaak" to "tydens verskeie tipes vermaak" Q3: "oor aandete" to "tydens aandete". The word is just a more appropriate word to in the context.
SOAC11	Easy to use. No confusion	Easy to understand (scale, instructions and questions)	Questions are relevant to a person with a hearing problem.	Translation of the questionnaire is well translated, taking into account the Afrikaans grammar and language used.	Word choices are appropriate Afrikaans commonly used words

Participant	Q1	Q2	Q3	Q4	Q5
No SOAC12	Quick to complete Easy scale to use	Translation is good. Did not need to ask for clarification	Questions are clear and concise, especially with the extension of examples at the end; makes it more relevant and understandable	The Afrikaans grammar and language that is used is appropriate and correct. Would not change anything	Word suggestions: “Naasbestaande” instead of “lewensmaat” as partner is just a friend. “tydens” in Q2 can replace the word “in” in the phrase “in verskeie tipes vermaak” to separate the two activities.
SOAC13	Quick and easy to complete	Very easy to understand each question. Sounds as though an Afrikaans person wrote it	Relevant questions that described wife’s hearing difficulties accurately	Appropriate Afrikaans grammar and wording used which will be appropriate to use for Afrikaans speaking people	Would not change any wording
SOAC14	The questionnaire is simple and easy to use	Translation was good, appropriate for Afrikaans population to use	Content is relevant. Interesting to see how SO perspectives can differ with the person that has the hearing loss	Grammar is appropriately used in the translation	Few word suggestions: “naasbestaande” SO has a few people in her family with HL (e.g., her father) and felt that if she were to bring her father, he would not be a “lewensmaat”. “tydens” replacing “in” in Q2 (in verskeie tipes vermaak)

Participant No	Q1	Q2	Q3	Q4	Q5
					and “tydens” replacing “oor” in “oor aandete”
SOAC15	Easy to read and complete. Did not require extra time to complete	Easy to understand. Did not require clarification	All questions are relevant to her husband. The examples are great in the questionnaire and appropriate	No changes in grammar will be necessary. Translation is well translated for Afrikaans people with hearing loss	Same as previous question
SOAC16	Easy to use (scale) and quick to complete.	Easy to understand (scale, instructions and questions) as if translated by Afrikaans person	Questions are relevant to the person in questions. The examples after the questions helps readers to understand better.	Grammar is good according to Afrikaans language and grammar. Would not change anything	Word choices are appropriate. No improvement is required in translated questionnaire.

Appendix M: Witrand Hospital Approval Letter



POLICY, PLANNING, RESEARCH, MONITORING AND EVALUATION

Name of researcher : Ms. C.J. Liu
University of Cape Town

Physical Address _____
(Work/ Institution) _____

Subject : **Research Approval Letter- Translation and adaption of the Self-Assessment of Communication (SAC) and Significant Other Assessment of Communication (SOAC) to Afrikaans.**

This letter serves to inform the Researcher that permission to undertake the above mentioned study has been granted by the North West Department of Health. The Researcher is expected to arrange in advance with the chosen facilities, and issue this letter as proof that permission has been granted by the Provincial office.

This letter of permission should be signed and a copy returned to the department. By signing, the Researcher agrees, binds him/herself and undertakes to furnish the Department with an electronic copy of the final research report. Alternatively, the Researcher can also provide the Department with electronic summary highlighting recommendations that will assist the Department in its planning to improve some of its services where possible. Through this the Researcher will not only contribute to the academic body of knowledge but also contributes towards the bettering of health care services and thus the overall health of citizens in the North West Province.

Kindest regards



Dr. F.R.M. Reichel
Director: PPRM&E



15/01/2020
Date



Researcher

20/01/2020
Date

Appendix N: Audiologist Participant Informed Consent Letter (Aim 2)

UNIVERSITY OF CAPE TOWN
Faculty of Health Sciences
Department of Health and Rehabilitation Sciences



Divisions of Communication Sciences and Disorders,
 Nursing and Midwifery, Occupational Therapy,
 Physiotherapy; and Disability Studies

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 www.dhrs.uct.ac.za

1 September 2019

Dear Sir/ Madam

My name is Juoe Liu. I am an Audiology Master's degree student (MSc Audiology by dissertation) at the University of Cape Town under the guidance and supervision of Lucretia Petersen and Christine Rogers. The reason for this letter is to inform you about my study and to ask for your consent to participate in my research study (HREC REF: 344/2018). It is important that you have a good understanding of the study, the procedure that will be followed and understand your role in the study before making a decision to participate or not. I am looking for bilingual, registered (HPCSA registered) audiologists that are proficient in English and Afrikaans to participate in the study.

The study:

This study is aiming to translate and adapt an audiological self-assessment tool (the Self-Assessment of Communication (SAC) and Significant Other Assessment of Communication (SOAC)) that can be used for rehabilitation of patients with hearing aids. Furthermore, it also aims to determine whether the tool is clinically useful, scored and judged by audiologists within the province.

The researcher:

I am a former UCT student currently a qualified audiologist. I have decided to study my Master's degree by dissertation in Audiology with the University of Cape Town this year. My supervisors and co-supervisors are Lucretia Petersen and Christine Rogers respectively.

Purpose and scope of the research:

South Africa is a multilingual and multicultural country. Studies have shown that there is a lack of tools in Audiology that are available and meaningful to use in the South African context. Most tools that are developed for audiology use are in English that are mainly developed within the context of a first world country. In South Africa, we do not have tools that are developed in the South African context and there are minimal translated tools that are available to use to accommodate the 11 official languages that exist in this country. Therefore, a tool was selected that may be appropriate to use in South African based private practices for translation. The translations developed may be used by you or other audiologists in the country as part of your services. This will help to improve the quality of care and services provided to the patients that seek audiological care.

What is your role in the study?

Your role in the study will be to administer the tool pre- and/or post- fitting (whichever will be convenient for you) for one month. The SAC is used for the hearing-impaired individual and the SOAC is for the significant other. Each client must sign a consent form to participate in the study due to ethical purposes. You can send/ give them the letter before the appointment date to save time. You may administer either one of them or both if the communication partner is present. You do not need to go through the questionnaire with them, unless needed, it will take less than 5 minutes for the patient to complete. After one month, it will be required that you complete the questionnaire attached to rate the usability of the tool. Your feedback is important and will add value to this study. This will only require 10 minutes of your time dependent on the length of your feedback.

Voluntary nature of participation and right to withdrawal

It is a personal decision whether you take part in the study or not. You may accept the invitation to join. If you change your mind later and decide to withdraw from the study, please let me know so that I can find an alternative as soon as possible.

Confidentiality

The standard practice for clinical research is confidentiality. Your personal details and data collected by you will be protected at all times. The data will be kept secure in locked cabinets.

Feedback

If you would like to know the findings of the study, I am happy to share these findings with you and you are welcome to use the tool as well. This will take approximately 1.5 years to obtain and the findings will be emailed to you. Please ask me any questions about anything you do not understand or if you would like more information.

Statement of Consent

Ihave read the information letter . I understand the content of the information letter and the role that I am required to full fill in the research study. An opportunity was given to me to ask questions and my questions were answered. I understand that my participation in the research study is completely voluntary, of my own free will and that I can withdraw at any time without affecting me in anyway.

.....
Participant Date and place

.....
Researcher Date and place

Appendix O: Letter to the Practice Patients (Aim 2)

UNIVERSITY OF CAPE TOWN
Faculty of Health Sciences
Department of Health and Rehabilitation Sciences



Divisions of Communication Sciences and Disorders,
 Nursing and Midwifery, Occupational Therapy,
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 www.dhrs.uct.ac.za

1 September 2019

Dear Sir/ Madam

My name is Juoe Liu. I am an Audiology Master's degree student (MSc Audiology by dissertation) at the University of Cape Town under the guidance and supervision of Lucretia Petersen and Christine Rogers. I have translated an audiology outcome measure/ questionnaire called the Self-Assessment of Communication and Significant Other Assessment of Communication from English to Afrikaans. These questionnaires are useful to identify communication difficulties that is experienced by the hearing-impaired individual, which in essence will give more information to your audiologist so that your hearing needs are addressed.

The reason for this letter is to inform you of the study and to assure you that confidentiality of your personal details will be held highly. I am recruiting audiologists to administer the aforementioned questionnaire to the Afrikaans population with the purpose of collecting subjective opinions of the translated questionnaire from an audiological point of view. This is essential to determine the potential use of the Afrikaans translated questionnaire among all South African audiologists nationwide.

Should you wish not to answer the questionnaire, please inform your audiologist. Please note that you will not be charged for any extra time to complete the questionnaire.

Thank you for your time

Kindest regards,

Juoe Liu

Patient's signature

Appendix P: Afrikaans SAC

SELF- ASSESSERING VAN KOMMUNIKASIE (SAC)

Naam: _____

Datum: _____

Instruksies: Die doel van hierdie vorm is om die probleme wat u gehoorverlies kan veroorsaak, te identifiseer. Indien u gehoorapparate dra, antwoord die vrae volgens hoe u kommunikeer wanneer u **NIE die gehoorapparate gebruik NIE**. Gebruik een van die 5 beskrywings aan die regterkant om die vrae hieronder te beantwoord.

- | |
|--------------------------------------|
| (1) Amper nooit (of nooit) |
| (2) Soms (ongeveer ¼ van die tyd) |
| (3) Omtrent ½ van die tyd |
| (4) Gereeld (ongeveer ¾ van die tyd) |
| (5) Amper altyd (of altyd) |

Kies 'n nommer van 1 tot 5 langs elke vraag (*moet asseblief nie ja of nee antwoorde gee nie en kies slegs een antwoord per vraag*).

(1) Ervaar u kommunikasieprobleme wanneer u met een ander persoon gesels? (by die huis, by die werk, in 'n sosiale situasie, met 'n kelnerin, 'n winkelklerk, met 'n eggenoot, baas, ens.)
(2) Ervaar u kommunikasieprobleme wanneer u televisie kyk en in verskeie tipes vermaak? (fieks, radio, toneelstukke, nagklubs, musikale vermaak, ens.)
(3) Ervaar u kommunikasieprobleme wanneer u met 'n klein groep mense gesels? (met vriende of familie, kollegas, in vergaderings of informele gesprekke, oor aandete of terwyl u kaarte speel, ens.)
(4) Ervaar u kommunikasieprobleme wanneer u in 'n moeilike luisteromgewing is? (by 'n raserige partytjie, waar daar agtergrondmusiek is, terwyl u in 'n kar of bus ry, wanneer iemand fluister of praat oor 'n afstand, ens.)
(5) Hoe gereeld ervaar u kommunikasieprobleme in die situasie waar u die graagste beter wil hoor? Situasie: _____
(6) Voel u dat u gehoorprobleem u persoonlike of sosiale lewe negatief beïnvloed?
(7) Hoe gereeld is ander mense bekommerd of geïrriteerd, of stel voor dat u 'n gehoorprobleem het?
(8) Bekommer, irriteer of ontstel die probleme wat u met u gehoor ervaar, u?
(9) Hoe gereeld beïnvloed u gehoor u lewensvreugde op 'n negatiewe wyse?
(10) Indien u gehoorapparate gebruik: Op 'n gemiddelde dag, hoeveel ure gebruik u die gehoorapparate? Ure _____/16= _____%

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

1	2	3	4	5
---	---	---	---	---

Dui asseblief aan u algehele teveredenheid met u gehoorapparate:

- Glad nie tevrede nie (0%)
 Effens tevrede (25%)
 Redelik tevrede (50%)
 Meestal tevrede (75%)
 Baie tevrede (100%)
 _____%

<p>SLEGS VIR KANTOOR GEBRUIK TOTAAL: (V1-9) _____ (/9) _____ -1 _____ x 25 = _____ % D: (V1-5)/5= _____ - 1 x 25 = _____ % H: (V6-9)/4 = _____ - 1 x 25 = _____ % QoL: V9= _____ - 1 x 25 = _____ %</p>
--

Appendix Q: Afrikaans SOAC

NAASBESTAANDE ASSESSERING VAN KOMMUNIKASIE (SOAC)

Naam van pasiënt: _____ **Datum:** _____

Naam van persoon wie die vorm voltooi: _____ Verhouding tot pasiënt: _____

Instruksies: Die doel van hierdie vorm is om die probleme wat 'n gehoorverlies vir u naasbestaanende kan veroorsaak, te identifiseer. Indien die pasiënt gehoorapparate dra, antwoord die vrae volgens hoe hy/sy kommunikeer wanneer hy/sy **NIE die gehoorapparate gebruik NIE**. Gebruik een van die 5 beskrywings aan die regterkant om die vrae hieronder te beantwoord.

- | |
|--------------------------------------|
| (1) Amper nooit (of nooit) |
| (2) Soms (ongeveer ¼ van die tyd) |
| (3) Omtrent ½ van die tyd |
| (4) Gereeld (ongeveer ¾ van die tyd) |
| (5) Amper altyd (of altyd) |

Kies 'n nommer van 1 tot 5 langs elke vraag (*moet asseblief nie ja of nee antwoorde gee nie en kies slegs een antwoord per vraag*).

1) Ervaar hy/sy kommunikasieprobleme wanneer hy/sy met een ander persoon gesels? (by die huis, by die werk, in 'n sosiale situasie, met 'n kelnerin, 'n winklerk, met 'n eggenoot, baas, ens.)

1	2	3	4	5
---	---	---	---	---

2) Ervaar hy/sy kommunikasieprobleme wanneer hy/sy televisie kyk en in verskeie tipes vermaak? (fleks, radio, toneelstukke, nagklubs, musikale vermaak, ens.)

1	2	3	4	5
---	---	---	---	---

3) Ervaar hy/sy kommunikasieprobleme wanneer hy/sy met 'n klein groep mense gesels? (met vriende of familie, kollegas, in vergaderings of informele gesprekke, oor aandete of terwyl hy/sy kaarte speel, ens.)

1	2	3	4	5
---	---	---	---	---

4) Ervaar hy/sy kommunikasieprobleme wanneer hy/sy in 'n moeilike luisteromgewing is? (by 'n raserige partytjie, waar daar agtergrondmusiek is, terwyl hy/sy in 'n kar of bus ry, wanneer iemand fluister of praat oor 'n afstand, ens.)

1	2	3	4	5
---	---	---	---	---

5) Hoe gereeld ervaar hy/sy kommunikasieprobleme in die situasie waar hy/sy die graagste beter wil hoor?

situasie: _____

1	2	3	4	5
---	---	---	---	---

6) Voel u dat sy/haar gehoorprobleem sy/haar se persoonlike of sosiale lewe negatief beïnvloed?

1	2	3	4	5
---	---	---	---	---

7) Is u of ander mense bekommerd of geïrriteerd dat hy/sy 'n gehoorprobleem het?

1	2	3	4	5
---	---	---	---	---

8) Voel u dat 'n gehoorprobleem hom/haar bekommer, irriteer of ontstel?

1	2	3	4	5
---	---	---	---	---

9) Hoe gereeld beïnvloed sy/haar gehoor sy/haar lewensvreugde op 'n negatiewe wyse?

1	2	3	4	5
---	---	---	---	---

10) Indien hy/sy gehoorapparate gebruik: Op 'n gemiddelde dag, hoeveel ure gebruik hy/sy die gehoorapparate?? Ure _____ /16= _____ %

Dui asseblief aan wat u dink sy/haar algehele tevredenheid is met sy/haar gehoorapparate:

- Glad nie tevrede (0%)
 Effens tevrede (25%)
 Redelik tevrede (50%)
 Meestal tevrede (75%)
 Baie tevrede (100%)
 _____ %

SLEGS VIR KANTOOR GEBRUIK SCORING: (V1-9) _____ (/9) _____ -1 _____ x 25 = _____ % D: (V1-5)/5 = _____ - 1 x 25 = _____ % H: (V6-9)/4 = _____ - 1 x 25 = _____ % QoL: V9 = _____ - 1 x 25 = _____ %

Appendix R: Audiologist Participant’s Survey (Aim 2)

Please find attached:

1. A copy of and Afrikaans Self-Assessment of Communication (SAC) and Significant Other Assessment of Communication (SOAC)
2. A questionnaire on the usability of the SAC and/or SOAC

What is the SAC and SOAC?

The SAC and SOAC are self-report tools used to identify a hearing loss, to identify the issues related with the hearing loss, to determine whether these issues have been addressed by means of amplification and aural rehabilitation, to assist with fine tuning hearing aids and lastly to determine the patient’s level of hearing aid satisfaction. It is a 10-item questionnaire with a 5-point response scale.

Instructions:

Please first obtain consent from the client before administering the tool. Inform the researcher if you require more consent letters. Please use the SAC and/or SOAC as part of your routine clinical work with patients over a one-month period. The SAC is designed for the hearing-impaired individual, where the individual can complete independently. Alternatively, you or a family member may assist with completing the questionnaire verbally. Please indicate this on the questionnaire. It is preferable that the SAC be administered to individuals that are Afrikaans first language speakers. The SOAC is designed for the hearing-impaired individual’s communication partner (family member, friend or spouse). You may use the SAC and SOAC on existing patients or new patients. At the end of the time frame, please complete the questionnaire regarding the usability of the SAC and SOAC. It will be appreciated to email the questionnaire and completed SAC and SOACs back to me. You are also welcome to WhatsApp pictures of it back to me.

Please comment on the usability of the SAC and/or SOAC:

Name: _____ First language: _____

Town/City: _____

Afrikaans patient load compared to other languages:

Number of patients administered using the SAC: _____

SOAC: _____

Simultaneously: _____

Is the tool practically easy to administer (looking at the response scale, the length of the measure and ease of administration)? If not, please elaborate.

Comment on the content of the measure – do you think it is relevant? If not, please elaborate.

What were the patient's overall view of the tool?

What were the challenges (if any) when administering the tool?

Did you find the tool useful? In other words, did it assist you with fine tuning and identifying problem areas

Would you use the Afrikaans SAC and SOAC again? Yes No

Please provide reason for your answer:

Do you have any suggestions on improving the Afrikaans SAC and SOAC?

Thank you for your time!

Appendix S: Raw Data of Survey Responses (Aim 2)

Participant number:	Audiologist 1	Audiologist 2	Audiologist 3	Audiologist 4	Audiologist 5	Audiologist 6
First language	Afrikaans	Afrikaans	English	Afrikaans	English	Afrikaans
Afrikaans patient load	>50%	DNR	>50%	>50%	>50%	<50%
Count: SAC	3	0	3	2	0	3
Count: SOAC	0	0	0	0	0	0
Count: SAC + SOAC together	3	2	1	0	1	1
Is the tool practically easy to administer (looking at the response scale, the length of the measure and ease of administration)? If not, please elaborate.	Yes	Yes, it was very easy to administer	Yes	Yes	Yes, it is easy to use	Yes
Comment on the content of the measure – do you think it is relevant? If not, please elaborate.	Q7 + 8 "bekommer, irriteer en onstel" is almal verskillende emosies en kan eerder een elk in aparte vrae gestel word.	Yes	Yes, relevant	Yes	Content is relative	Yes
What were the patient's overall view of the tool?	Good	Very positive	Easy to complete, not much other feedback	Good, no complaints	Overall patients were happy to complete the tool, significant others enjoyed their opinion and feedback being important	They didn't really comment but found it easy. The significant others mentioned it's interesting that her and patient's answers are so different
What were the challenges (if any) when administering the tool?	No challenges faced	None	None	No	None	None

Participant number:	Audiologist 1	Audiologist 2	Audiologist 3	Audiologist 4	Audiologist 5	Audiologist 6
Did you find the tool useful? In other words, did it assist you with fine tuning and identifying problem areas	Yes	Yes, especially Q5 in the SAC and the question in rating their satisfaction with H/Aid	Not really fine tuning, but it definitely provided insight into problem areas and possibly additional hearing aid programs/ accessories needed	Insight into emotional aspect of patient	It was useful, I was able to understand their situations better which led to me asking more insightful hearing-related questions which in turn affected the fine -tuning session positively	Not really. It is just interesting to see and would be useful if you do it before and after fitting and in-between fine tunings to see if it improves
Would you use the Afrikaans SAC and SOAC again?	Yes	Yes, it helps to guide the patients in giving more effective feedback during follow up sessions	Useful, especially at intake interview, to identify hearing aid patient's main problem areas. Also helps their self-awareness about hearing loss effects	Yes, maybe for comparison - at first fit and then 6 months later to see if acceptance has improved	Yes, any extra information (especially when questions are guided by a relevant questionnaire) rounds out the appointment and patients leave feeling better understood.	Yes, please refer to previous question/
Do you have any suggestions on improving the Afrikaans SAC and SOAC?	Yes - Recommend "Naam van persoon wat die vorm voltooi" instead of "wie". To separate the three emotions ("bekommer", "irriteer" and "ontstel") as separate questions as they are different emotions. Overall, the SAC and SOAC is a good translated outcome measure.	None	Lots of grammar errors, recommend that a professional Afrikaans translator looks at the wording. Make this a before fitting and after fitting questionnaire so that we have a metric for improvements with hearing aids (maybe 3 months after fitting)	None	None	No

Participant number:	Audiologist 7	Audiologist 8	Audiologist 9	Audiologist 10	Audiologist 11	Audiologist 12
First language Afrikaans patient load	Afrikaans >50%	Afrikaans >50%	Afrikaans >50%	Afrikaans >50%	Afrikaans >50%	Afrikaans <50%
Count: SAC	6	0	0	0	5	1
Count: SOAC	1	0	0	0	1	0
Count: SAC + SOAC together	1	2	6	7	5	2
Is the tool practically easy to administer (looking at the response scale, the length of the measure and ease of administration)? If not, please elaborate.	Yes, very easy to understand and is user friendly. Questions were also easy to explain should a patient be unsure about the question	Very easy and user friendly	Yes, it is easy to administer. I just find that it is difficult during the first consultation, seeing that patients have so much admin to do like that patient information form, in house lifestyle questionnaire, etc that they are slightly overwhelmed.	Yes	Yes, very user friendly and the patient found it easy to understand. For me as clinician it was also very convenient to explain, and questions were straight forward	Yes, it was. It was quick to complete, and patients found it easy to fill in.
Comment on the content of the measure – do you think it is relevant? If not, please elaborate.	Yes, very relevant as it addressed most of the challenging listening environment that one can face with a hearing loss. The content was also not too long.	Yes, it is relevant and can provide valuable information about perception of hearing loss	Yes, it is relevant	Yes, absolutely	Yes, very relevant and covered a lot of bases regarding aspects of the hearing loss as well as the different challenging communication environments	I think it is very relevant as I ask most of the questions in the measure during my case history session with my patients. It is also relevant to get the opinion of the patient's partner on these questions, as a lot of patients do not always think they have a hearing/communication problem.

Participant number:	Audiologist 7	Audiologist 8	Audiologist 9	Audiologist 10	Audiologist 11	Audiologist 12
What were the patient's overall view of the tool?	Overall feelings were good. Patients found it interesting to complete the assessment and was also very eager to take part in the study. Although, some of my patients felt that some of the questions such as nr. 6 and nr. 9 meant the same thing and confused them.	easy to use	In some cases that tool helped patients to identify difficult listening environments and helped them focus their attention on the specific needs they have. No more, I sometimes struggle to hear, more elaboration was given regarding where, when, etc.	Very easy to use and applicable questions	They were pleased. They enjoyed reflecting on which situations where most challenging to listen to and got them thinking of how much the hearing aids actually help them. The spouses also enjoyed sharing their experiences.	They were happy to fill it in. The patients also reported that it was easy to use.
What were the challenges (if any) when administering the tool?	Some of my patients first language was English and did not understand the questions clearly but when translated to them, they were able to answer the questions. As mentioned above, some of my patients felt that some of the questions such as nr 6 and nr 9 mean the same thing and confused them	No challenges	Like mentioned above, there is not always enough time, or some people felt that there was too much admin to be done on the day. Other than that, even though we do specify that a significant other is welcome to attend the first consultation, very few patients came with someone. Mostly came on their own.	None	No challenges at all	I only had to explain the rating scale to one patient

Participant number:	Audiologist 7	Audiologist 8	Audiologist 9	Audiologist 10	Audiologist 11	Audiologist 12
Did you find the tool useful? In other words, did it assist you with fine tuning and identifying problem areas	Yes	Yes, it was useful	Yes, it gave more in depth idea of the effect the hearing loss is having on the patient earlier on in the assessment.	Yes	Yes absolutely	Yes, I did. It gave me more insight regarding the problem areas of my patients as well as the thoughts of their partners
Would you use the Afrikaans SAC and SOAC again?	Yes, quick and easy assessment to complete and assist the clinician to identify problem areas. Can also be used to motivate patients to wear hearing aids for longer periods as it may help them in certain environments that they struggle in.	Yes, easy to use and assisted with counselling of patients	Yes, any insight into the difficult pertaining to a patient's hearing loss and the negative effect it is having on their quality of life aids me into provide a more tailored hearing solution	Yes, gives me as audiologist valuable information	Yes. It assists me in identifying the person with a hearing loss' state of mind when it comes to a hearing loss and to identify which communication situations are most important	Yes, it allows our patients to identify problem areas which they might not even know is affecting their daily life. It also gives patient's partners the ability to give us feedback on the patient's communication difficulties
Do you have any suggestions on improving the Afrikaans SAC and SOAC?	No, as it is a very easy and straightforward assessment to understand and complete.	No	No really, I feel it is sufficient	No	No very thorough and covers relevant aspects	No, it was easy and straightforward to use.

Participant number:	Audiologist 13	Audiologist 14	Audiologist 15	Audiologist 16
First language	English	English	English	English
Afrikaans patient load	>50%	>50%	>50%	>50%
Count: SAC	2	0	1	1
Count: SOAC	0	0	0	1
Count: SAC + SOAC together	0	2	0	2
Is the tool practically easy to administer (looking at the response scale, the length of the measure and ease of administration)? If not, please elaborate.	Very easy to administer - only 10 questions which were clear and comprehensive. The Likert scale was explained well in terms of what each number (1-5) means practically	Easy to administer, self-explanatory. Approx. 10mins to complete	Pretty easy, patient takes 2 mins to read through and answer	
Comment on the content of the measure – do you think it is relevant? If not, please elaborate.	Very relevant as it touches on environments that are typically very challenging for hearing-impaired individuals	Yes, it highlights certain situations in which patients struggle the most - good counselling tool and indicator of which area to focus on (Hearing aid fittings)	Good content - enough in brackets to ensure clarity)	
What were the patient's overall view of the tool?	Positive, they were very willing to complete it and found it interesting	Easy to understand. Patient says they didn't really think of how they hearing loss may affect other people. Patients liked that examples were given in questionnaire	No difficulties filling out	

Participant number:	Audiologist 13	Audiologist 14	Audiologist 15	Audiologist 16
What were the challenges (if any) when administering the tool?	None	I had to fill in a questionnaire if patient cannot write anymore due to finger dexterity/arthritis. Not all patients come into practice with communication partner.	None	
Did you find the tool useful? In other words, did it assist you with fine tuning and identifying problem areas	I found it useful in that it helped my patients admit hearing difficulties in certain situations which I could then incorporate into my counselling	Yes, definitely. It helped with focus areas and in return patient satisfaction as issues that were important to them will be addressed and focused on	A little bit - confirmed giving patient programs for difficulty situations. I would have most likely given the programs in any case	
Would you use the Afrikaans SAC and SOAC again?	Yes, patients are often reluctant to admit that they are aware of any hearing difficulties. However, when completing the questionnaire, I found that patients started admitting hearing difficulties in environments mentioned in the questionnaire.	Yes. It is easy to use and guides therapy and hearing aid discussions/fine tuning. The scale is also a good indicator of importance of issue to patient.	Yes, maybe for a patient in denial - but otherwise case history	
Do you have any suggestions on improving the Afrikaans SAC and SOAC?	None - I thought the questions were clear and relevant	No	Quick and easy - no suggestions	

Appendix T: Transcription of Verbal Feedback Interviews (Aim 2)***Interview 1***

Interviewer: Thank you so much for agreeing to this interview! I really appreciate your contribution to my study and to take some time off to speak with. Um, so what's going to happen is that I will be asking you similar questions, um, that you have already answered on the survey, so please just answer the questions as honest as possible as you can.

Interviewee: No problem [interviewer]. I am happy to help!

Interviewer: OK, great. So, let's start with...um...the practicality part of the SAC and SOAC. So, like talking about the administration part of it, but looking at all the aspects of the tool. What are your thoughts?

Interviewee: Well, I found the tool to be quite **easy to use**, like it was pretty **user-friendly**... um...because it **wasn't a very long questionnaire**, and **the scale wasn't difficult to use and understand**. And I also felt that even the **questions were not difficult to explain** like if a patient asked me about something then I wouldn't struggle to explain it, I think. So, I pretty enjoyed how practical it was!

Interviewer: Ok, but did anyone ask questions though?

Interviewee: No, not at all, I just meant that if anyone did, it wouldn't have been a difficult task to do.

Interviewer: Ooooh I see. That's great to hear! Ok, so if we were to look at the content of the SAC and SOAC, like, you know, the questions, do you think that its relevant to the patients we see? [hearing-impaired patients]

Interviewee: **Most definitely!** I think what's really great about this tool is that it includes the partner because it really **gives you insight on how they perceive** everything and um makes you realize as an audiologist that it's important to include them because they are actually the ones that encourage, you know, the person with the [hearing] loss to come and see me. And that support is what they need.

Interviewer: I totally agree with you, and it completely makes sense. But what about the questions that are asked in the tool, how relevant is it and would it actually help you in your consultations?

Interviewee: **Yes, 100%.** I mean the questions are very **typical for people with hearing loss**, and yes it **definitely helps with my consultations**, like I could **easily use it to counsel a patient** when I am explaining the results or something.

Interviewer: Ok, great. I know helping me collect my data is time consuming and you had to take extra of your time to implement it in your practice, and I really appreciate you for doing that. Which leads to my next question, did you have any difficulties, or challenges, when you were using the SAC and SOAC in your practice?

Interviewee: No man, it was not a lot of effort at all, and you are very welcome. But, to answer your question, I actually **did not have any difficulty using it**. I really felt it was **easy and quick**...um... yeah.

Interviewer: Ok, I am really glad to hear that. So, I am gathering that you liked the SAC and SOAC, um so in what way is the SAC and SOAC useful to you as an audiologist? Or do you actually find it useful?

Interviewee: No, of course **it was useful!** I think it was useful in a way that it **allowed me to understand my patient's hearing problems** so that I can focus on it to make it better. And I think it actually **helped them to also become more aware**, you know. And most times when patients become more aware, then they slowly **open up to the idea of hearing aids**, which is great.

Interviewer: So, does that mean you would use the Afrikaans SAC and SOAC again?

Interviewee: **Yup I would**, because **it gave me a lot of information about my patient's hearing** and it gave me a good idea of what I am working with and what to expect in the session.

Interviewer: Great! Any other suggestions that you would to give me to improve the Afrikaans SAC and SOAC?

Interviewee: **Nope, not at all!**

Interviewer: Ah, thank you [interviewee]. I have no other questions for you. Thank you for taking some time out to do this interview with me. I really appreciate it so much!

Interviewee: You are so welcome [interviewer].

Interview 2

Interviewer: Ok, so I am going to start, but first I want to thank you for joining me in this interview. I really appreciate that you are using your own personal time to do this with me. Thank you! Um, so, what's going to happen now is that I am going to be asking you questions and all you need to do is answer me as honest as possible, ok?

Interviewee: Got it!

Interviewer: Great! So, the first question is... is going to just be about how practical it is. So basically, talking about the ease of administration, and the length and all of that. What do you think?

Interviewee: Okay, um, I think the SAC and SOAC is **very easy to fill in** and also **very easy to understand**. So, yeah, like **very user-friendly**. I enjoyed using it.

Interviewer: Ok, maybe you can tell me more about the content, like is there any relevance to anything?

Interviewee: Yeah, **I do think it's relevant** to use as audiologist, because it like **provides valuable information on the patient's perception of their hearing loss** and it's **very straightforward**. Like, I can use that information to focus on how to improve the situation like when you are doing a fitting or follow up or something. And ya, **the questions really cover the typical problems that a person with a hearing loss would experience**.

Interviewer: Okay, and was there any difficulties or challenges when you were using the tool in your practice?

Interviewee: Um... I think the only challenge I had was that *not every patient came in with a partner*, or what this measure calls it, a significant other. But I can see how it can benefit having the partner involved. In my previous experience, I have seen **patients purchasing hearing aids from us because the partner encouraged it**.

Interviewer: Ah yes, because the partner is also struggling to communicate with him/her. So, you said that not every patient comes in with a partner, do you know what the reasons are?

Interviewee: To be honest hey, I have never really thought about it or asked, I literally just see whoever is booked. But... I would think that some partners can't take time off from work, and plus we are not open after 5[pm] or weekends... Or it could just be they are not lus to sit and wait in the room. It could be anything.

Interviewer: So, would you say that this tool is a useful tool to have? That's only if you do think that [laugh]. But if you don't, it's also okay, I would love to hear what you think though!

Interviewee: No, **I do feel it was useful**. One of my patients was able to **identify how his hearing loss was affecting him mentally** or uh... emotionally, which I think is great and important, because it makes **them realize how the hearing loss is actually affecting their quality of life** and then it also makes the sessions go smoother.

Interviewer: I am glad to hear! So, would you say you'd use the Afrikaans SAC and SOAC again?

Interviewee: **Most definitely**. I really do think this is a great addition to South African Audiology!

Interviewer: I sure hope so! Before we do that, any improvements that I need to know about?

Interviewee: **Um not really... I think this is a great measure**.

Interviewer: Thank you [interviewee] for the feedback you have given to me today. I am so happy that you agreed to do this interview with me! Really appreciate it.

Interviewee: All good! Good luck!

Interview 3

Interviewer: Okay, so let me first thank you for taking your time to speak to me. I really appreciate your willingness to do this interview! It means a lot to me. But let's move on, [laugh], so basically how it's going to work is that I am going to ask questions that you have answered before, so all you need to do is answer them and to provide me as much information as possible. Are you ready to start?

Interviewee: Yeah, sure! And you are welcome.

Interviewer: Ok, so, first question is about the practicality of the Afrikaans SAC and SOAC. And what I mean by practicality, I mean the ease of administration and the scale that's used in there and all that. What are your views?

Interviewee: Ok... well firstly, I liked the scale design, **it was straight forward and easy to use**. Like it wasn't rocket science at all. But in general, the **tool is really short** because I know some other outcome measures generally have more than 10 questions, so... it doesn't take more than 5 minutes to complete - which is great! **Saves time!**

Interviewer: That's really a nice, positive answer. But then what about the relevance of the questions? Like yes it easy to use and quick, but how relevant is the content?

Interviewee: I would say **pretty relevant** hey, because the **questions relate a lot to the person with a hearing loss**, which is all typical situations that they would actually experience. Plus, it has to be relevant right? Because what's even the point of it if it doesn't provide valuable information for the audiologist? Anyway, that's just what I think [laughs].

Interviewer: [laughs] you do have a point there! Did you have any challenges while using the Afrikaans SAC and SOAC?

Interviewee: Not at all, I like this tool; **I didn't find any challenges with it.**

Interviewer: That's great to hear! Can you tell me a little more about when you said it provided valuable information? What do you mean by that?

Interviewee: Sure, um I think that if an audiologist is able to understand the patient's needs and problems through this questionnaire, then it can **be used to improve fine tunings.** So, for example, the patient struggles in background noise, then you would make some adjustments on the features on the hearing aid, but at the same time **counsel** them on communication strategies and more importantly on realistic expectations!

Interviewer: Ok I get you, so does that mean you would use the Afrikaans SAC and SOAC again?

Interviewee: **Absolutely**, I feel that having something extra to work with to **understand the patient's perspective of their hearing has helped so much** and it made them feel more understood.

Interviewer: Ah, that's great to hear! Well, then, do you have anything that you feel needs to be improved on the Afrikaans SAC and SOAC?

Interviewee: **Not really hey. I think it's great as it is!**

Interviewer: Ok, this the end of the interview. Thank you so much for your time. I cannot express enough how thankful I am.

Interviewee: It's a pleasure!