

# CHAPTER 1

## INTRODUCTION TO THE STUDY

### 1.1 INTRODUCTION

Chronic lower back pain (CLBP) is a prevalent condition resulting in mild to severe disability for many individuals in South Africa. That disability could ultimately lead to unemployment (Low, Morris & Grimmer-Somers, 2007; Maniadakis & Gray, 2000). Lifetime prevalence rates of 49 % - 80 % have been recorded and this has a great impact on economic burdens to the public health sector (Maniadakis & Gray, 2000). It is seen to be the leading reason for physician visits in the United States of America (Maniadakis & Gray, 2000). It is a condition most physiotherapists treat on a daily basis in outpatient facilities (Dellito, 1994). It is for this reason that it has enjoyed so much attention in research and there is vast literature written on the subject.

Because this condition is prevalent in South Africa, people suffering from lower back pain were chosen as the target population for the study at hand. Many measures exist for identifying problematic areas associated with low back pain like disability, pain severity, psychological impact etc. (Maniadakis & Gray, 2000). One such a measure is the Oswestry Disability Index (ODI) which is considered a gold standard measure of disability caused by low back pain (Finch et al., 2002). It is user friendly, self report scale and has been used in many different clinical settings and even administered over the telephone (Roland & Fairbank, 2000). It comprises of 10 questions which take approximately five minutes to answer and less than one minute to score, which were considered as valuable properties when used for research at a Government hospital in South Africa (Roland & Fairbank, 2000).

A problematic area found when conducting research at Government hospitals however, is the language barrier that exists. Accompanying this is the current situation of illiteracy or semi literacy of many individuals who are approached to participate in research. When the use of a questionnaire is needed to collect data from the participants, they often do not understand the language it is written in, are illiterate in that particular language or need a translator to aid them while filling in the questionnaire.

The evidence for this is still anecdotal however and the international trends of translating documents are being followed at present. Statistics for South Africa reveal that currently only 14 % of Africans have an education of high School or higher and this is largely owing to the Bantu Education System (1953) that was enforced during the apartheid years (Heugh, 1999). This apartheid generated form of education made schooling compulsory for less esteemed cultures from the age of seven up to Grade 7 or the age of sixteen only (Heugh, 1999).

From 1948 onwards, all high school graduates had to take both English and Afrikaans as subjects owing to the law regarding education (Heugh, 1999). These same students however would have been taught at primary school in their home languages (Heugh, 1999). This obviously left a huge gap in education as the students tried to wrestle with the new language they had to now read and write in (Heugh, 1999). It is only in 1994 however, when equality was introduced across the board and all South Africans had the right to the same level of education in any of the official languages (Heugh, 1999). There was never any provision made for textbooks and other materials however to be translated into all 11 official languages and therefore one still needs to be proficient in English or Afrikaans to complete ones schooling successfully. (Heugh, 1999) This has led to major gaps in the level of education and the language proficiency of many previously disadvantaged South Africans.

Translating of questionnaires has previously been used to try and overcome language barriers but tend to be a very costly and time consuming process not necessary yielding better results due to literacy levels. Once a questionnaire has been altered, it has to undergo validity and reliability tests before it can be used and this adds to the time and finances needed to produce these questionnaires.

## **1.2 RESEARCH QUESTION**

Is the culturally adapted English version of the ODI suitable for use in the middle to older aged Zulu speaking population in Johannesburg, South Africa?

## **1.3 AIMS**

1. To produce a culturally adapted version of the ODI for use in a Zulu speaking population for possible future research.

## **1.4 OBJECTIVES**

1. To formulate a culturally adapted version of the English ODI.
2. To establish the degree of verbal assistance needed to fill in the English ODI if the subject cannot fill it in independently.
3. To establish whether there is a relationship between the degree of assistance needed to fill in the questionnaire and the level of education of the subject.
4. To measure the internal consistency of the ODI, when verbally translated into Zulu.
5. To identify inconsistencies between verbal translations of the questions in the ODI using the same translator

## **Limitations of objectives**

The pilot study described above is not intended to produce a valid and reliable tool for the use in research using Zulu speaking subjects. The tool that will emerge will have to undergo these validation and reliability studies, as well as any other testing that may be needed before it could be utilized as a standardized questionnaire.

## **1.5 SIGNIFICANCE OF THE STUDY**

The study will give some insight into the literacy levels of the Zulu speaking population attending government hospitals in South Africa. It will introduce the reader to the cultural adaptation process and assess whether this alone is sufficient to produce good internal consistency of a questionnaire without the lengthy and expensive process of translation being added to the methodology. It will confirm whether the Oswestry Disability Index is indeed a good instrument to use in the target population.

# **CHAPTER 2**

## **LITERATURE REVIEW**

This chapter aims to review the literature available relating to the Oswestry Disability Index, give insight into the use of Cronbach's alpha to measure internal consistency of a questionnaire and to review the process and details involved regarding the use of translator and interpreters in qualitative research.

### **2.1 THE OSWESTRY DISABILITY INDEX**

#### **2.1.1 Description**

The Oswestry Disability Index (ODI) has been proven to be one of the most reliable questionnaires and arguably the gold standard when it comes to measuring disability caused by lower back pain including acute, subacute and chronic forms (Davidson & Keating, 2002; Finch et al., 2002). The questionnaire addresses disability in many spheres of life including basic activities of daily living extending to traveling and limitations regarding one's social life. It is widely used along with the Roland Morris questionnaire (Kopec, 2000). It is a standardized self report questionnaire developed in America in English, is easy to use and has good test properties (Beattie & Maher, 1997; Fairbank et al., 1980; Fairbank and Pynsent 2000).

The questionnaire is scored using values from zero to five for each option of the particular question on the questionnaire (Fairbank et al., 1980). For example in question one if the first option is ticked, the score for question one would be zero, if option six is chosen however, the score would be five for that question. Each question's score is then added, the total divided by 50 (total possible score) and the answer multiplied by 100 to give a percentage (Fairbank et al., 1980). If a

question is left out by the participant, the 'total possible score' changes to 45 and the rest of the calculation still applies (Fairbank et al., 1980). The percentage obtained is interpreted as follows: If the score is between 0-20% it indicates minimal disability, between 20-40% would be moderate disability, 40-60% means severe disability, 60-80% crippled and 80-100% means the patient is bed-ridden or exaggerating his/her symptoms (Fairbank et al., 1980). Even though the questionnaire has undergone many validations and translations, the scoring system has never been changed.

Disability is defined by Dellito (1994) as 'a restriction in a person's ability to perform socially defined roles' and the Americans with Disabilities Act uses the following definition: "Disability means, with respect to an individual, a physical or mental impairment that substantially limits one or more of the major life activities of such individual; a record of such an impairment; or being regarded as having such an impairment" ([www.ruralinstitute.umt.edu](http://www.ruralinstitute.umt.edu)).

Spenkeliink et al. (2002) describes what they call a 'deconditioning syndrome' that gives some explanation as to why low back pain can become so problematic in activities of daily living (Spenkeliink et al., 2002). Once a patient develops low back pain, fear of pain and the lack of understanding or knowledge on how to deal with the pain, results in patients avoiding movement and they tend to become inactive (Spenkeliink et al., 2002). This causes their condition to worsen and leads to tiredness and more pain with movement (Spenkeliink et al., 2002).

The vicious cycle is completed as they become increasingly fearful of movement and develop depressive characteristics (Spenkeliink et al., 2002). Physiotherapy aims to normalize activities of daily living in an attempt to improve the patient's disability, sometimes regardless of whether this has an effect on the pathology that caused the back pain initially (Spenkeliink et al., 2002). These activities may include sitting, standing, sleeping, traveling and aspects of personal care (Spenkeliink et al., 2002).

It is difficult to establish a patient's level of function or disability objectively as this may be perceived differently in all individuals (Beurskers et al., 1995). It is for this reason that subjective functional status questionnaires were developed that try and quantify disability in patients presenting with low back pain (Beurskers et al., 1995). The ODI measures the degree of pain interference with normal activities of daily living and is suitable as such a scale (Bombardier, 2000; Roland & Fairbank, 2000). The questions on the ODI are focused on pain intensity, pain during personal care, lifting, walking, sitting, standing, sleeping, during social activities and traveling (Fairbank et al., 1980). The other important advantage of using such a scale is that it has the proven ability to measure treatment effects in patients, in other words how well they respond to treatment and how it has impacted on their activities of daily living (Bombardier, 2000; Roland & Fairbank, 2000; Hagg et al., 2003).

The ODI has been proven valid and reliable in English and has been translated into twenty seven other languages thus far (Finch et al., 2002; Boscainos et al., 2003; Grotle et al., 2003; Kiraz et al., 2004; Chang et al., 2005; Osthus et al., 2006; Vigatto et al., 2007; [www.orthosurg.org.uk](http://www.orthosurg.org.uk)). The 1.0 version was modified and then an even newer version the 2.0 version was produced (Vigatto et al., 2007). The latest revised version of the ODI is version 2.1a, which will be used for research in the current study ([www.orthosurg.org.uk](http://www.orthosurg.org.uk)). From the translated versions of the ODI, English is the only language that is suitable for use in South African subjects at present. To our knowledge no Zulu or other African language version of the 2.1a version of the ODI exists.

### **2.1.2 Problematic areas in the cultural adaptation of the ODI**

Previous translations and validations of the ODI were successful but there were common difficulties that were highlighted in the translation and cross-cultural adaptation process. This phenomenon is not isolated to this questionnaire as it is

a concern with any type of translation process from one language to another. The four main difficulties that were identified for the ODI will be discussed.

Firstly was the question about sexual activities, which is problematic in the more conservative cultures around the world. In these particular cultures the question was seen as unacceptable and embarrassing as it is not a subject readily spoken about in their daily lives (Chang et al., 2005). In some translations like the Korean version, this question was completely omitted from the questionnaire with the permission from the original developers of the ODI (Chang et al., 2005).

The second problematic area was the metric system used to describe distances in the questionnaire. Kilometers and meters are more widely used in most countries but the original version of the ODI uses yards and miles as a measure of distance. Some translations including the German and Korean versions found this to be very problematic and subsequently changed it into the metric system aiming for a comparable distance between the two questionnaires (Chang et al., 2005; Osthus et al., 2006). The Koreans resolved to use 1km, 500m and 100m as substitutes for 1mile, ½ mile and 100 yards and the Germans 2km, 500m and 100m (Chang et al., 2005; Osthus et al., 2006). Both countries tried to make the distances more relevant to their culture without changing the meaning of the original questionnaire by a large margin.

The third area causing concern was the definition of social life. The meaning of social life can vary to a huge extent depending on the cultural habits and quality of life for that particular individual. This was highlighted as the main problematic area in Korea when the researchers struggled with the concept in their translated version of the ODI (Chang et al., 2005). They settled for adding 'get-together' and 'social gathering' to the option, in order for it to make better sense in the Korean culture (Chang et al., 2005).

The fourth problematic area was the word traveling in question 10 on the ODI. The Korean researchers supplemented the word 'traveling' with 'transportation' to try and clarify what was meant by the original version (Chang et al., 2005). The Germans have an alternative word that refers to shorter distances traveled and supplemented the word 'Reisen' with 'Fahrten', to explain the concept (Osthus et al., 2006). The Turkish researchers did not mention all the problematic areas they found in the translation process but they did however mention that on testing their pre-final questionnaire the concept of 'traveling' was clearly shown to be misunderstood or simply skipped by the participants (Kiraz et al., 2004). They used an alternative word meaning 'trip' or 'excursion' to replace the word meaning 'journey' or 'expedition' to facilitate better understanding (Kiraz et al., 2004).

The Germans noted in retrospect that the question on self care did not seem to have a logical progression in severity between option two and three where the pain in self care is reflected as very painful in option two and needing the individual to be slow and careful in option three (Osthus et al., 2006). They realized this too late and did not alter the wording during their translation process (Osthus et al., 2006).

### **2.1.3 The cultural adaptation process**

If one were to follow in the foot steps of previous studies and produce a culturally acceptable and translated version of the ODI for use in South Africa, Beaton et.al. (2000) gives good general guidelines to complete this objective. The process starts with a forward translation and cultural adaptation from the host language to the target language. Two bilingual translators, whose mother tongue is that of the target language, are suggested. The one translator should preferably have a medical background and should be aware of the concepts being evaluated by the questionnaire. The second translator should be blinded if possible to the purpose of the questionnaire and the concepts evaluated and

should preferably not have a medical background. This aids in identifying unexpected ambiguous meanings of translated words and phrases in the questionnaire. All verbal discussions with regards to the translation process should be recorded.

Once this stage is completed the translated versions of the ODI are merged and any discrepancies between the two translations of the questionnaire are discussed. Appropriate alternatives need to be found for problematic words or phrases with the original questionnaire used as a reference document. The next step is a back translation from the merged translated versions of the target language back to the host language (English). Two translators are once again suggested, both being bilingual in the host and the target language, with the host language as their mother tongue. The two translators should preferably be non medical persons who should be blinded to the content and purpose of the questionnaire.

An expert committee should be called upon to compose the prefinal questionnaire. Beaton et al. (2000) suggests that this committee should consist of a methodologist, two physiotherapists, language professionals for both the host and the target languages and all forward and back translators. This committee will consolidate the two versions of the questionnaire and present a prefinal questionnaire.

The last step in this process is the pretest where the prefinal questionnaire is tested on 30 to 40 subjects (the suggested minimum by Beaton et al (2000)) from the target population. Other authors have suggested that pre-testing is done on between 10 and 50 subjects depending on the author and the availability of subjects (Del Greco & Walop, 1987). This will aim to ensure that the adapted questionnaire will retain equivalence to the original version when in use. It gives some insight to the quality of the content validity of the questionnaire and will highlight obvious problematic areas (Beaton et al., 2000). The abovementioned

procedure only tests the face validity of the instrument in question and a thorough investigation into the reliability and validity (construct and content) of the questionnaire is still required before use on the target population (Beaton et al., 2000).

It is clear that this process is very time consuming, labour intensive and expensive but may be worthwhile when planning to use a questionnaire in literate subjects.

## **2.2 INTERNAL CONSISTENCY**

Cronbach's alpha is a statistical measure used in psychometric instruments to assess the consistency reliability also known as the 'internal consistency' of the particular set of items of a measuring instrument (Bland, & Altman, 1997). It gives an indication of how well the items in the instrument measures a single unidimensional construct (Bland, & Altman; 1997; Santos, 1999). It is not really considered a statistical test but more a coefficient of reliability or consistency (Bland, & Altman, 1997).

When the correlation between the items on the particular instrument increases, this means that they are measuring the same underlying construct and then the Cronbach's alpha should increase as well (Santos, 1999). An alpha is determined for each item on the questionnaire and an overall alpha is then calculated (Bland, & Altman, 1997). If one item in the scale measures a higher alpha than the overall alpha, it suggests that the particular item is not well suited to the scale and may not measure the exact same construct as the other items on the scale (Bland, & Altman, 1997). This item should ideally be left out of the scale or replaced by another more suitable item (Bland, & Altman, 1997). Alternatively, one might need to add more items to the scale as this will increase the overall alpha again (Bland, & Altman, 1997).

It is an accepted rule that reliability (alpha) of 0.70 or higher is required before an instrument should be used (Santos, 1999). Some authors state that the alpha should be more than 0.60 for a self-report scale and 0.80 for a screening instrument (Mykletun et al., 2001).

## **2.3 TRANSLATORS AND INTERPRETERS**

### **2.3.1 Description**

The use of interpreters in research has always been a contentious issue due to the influence and possible bias they introduce on the data collected for the study (Wallin & Ahlstrom, 2006; Small et al., 1999). In earlier years research that needed to be conducted with an interpreter was often avoided, resulting in certain cultural groups not being represented fairly and equally (Wallin & Ahlstrom, 2006). This was the result of the ever present language barrier most countries still face today and gave rise to a new type of research called cross-language research (Squires, 2008). There are a few ways to cross the language barrier, one of which is to ask the respondent to answer the question in his second or third language. This quite obviously has implications for the researcher and the possibility of poor quality and non reflective data is very high. Wallin & Ahlstrom (2006) reflects on a comment made by Murray & Wynne in 2001 that showed that respondents who were asked to answer questions in their second languages perceive themselves as less happy, confident and intelligent (Murray & Wynne 2001). It is important and more appropriate for the respondents to answer questions in their own language (Squires, 2008). Two alternative ways for data collection, which may be more reliable and much easier for the respondents, are those of translating and interpreting. The differences between these options are quite specific in that translating means that a person uses written forms of the source language and translates it into the target language

whereas interpreting relates to a person translating back and forth between two or more individuals having a conversation (Wallin & Ahlstrom, 2006; Squires, 2008). With translation it is always difficult to achieve an accurate translation without compromising the content or context of a questionnaire (Pitchford & Van Teijlingen, 2005). Therefore it is suggested that the most important factor be it context or accuracy, need to be decided initially and the translation done accordingly (Pitchford & Van Teijlingen, 2005).

## **2.3.2 Qualities of an interpreter**

### **2.3.2.1 Language and culture**

It is advised that the interpreter used has a good understanding of the cultural aspects of both the host language and that of the target language and be proficient in both languages (Wallin & Ahlstrom, 2006; Small et al., 1999). If it is a member of society that is respected and trusted by the study population it seems to help establish a rapport and yield good results in the study (Wallin & Ahlstrom, 2006).

### **2.3.2.2 Language**

There are four basic levels of language competence including grammatical, discourse, sociolinguistic and strategic (Squires, 2008). Squires (2008) states that interpreters and translators that are used in research, need a minimum of sociolinguistic competence (Squires, 2008). Grammatical competence refers to basic language skills where one can use the correct words and grammar when speaking and writing simple sentences (Squires, 2008). A limited vocabulary accompanies this language competency (Squires, 2008). Discourse competence refers to being able to read and write more complex sentences and having skills such as story telling and business communication (Squires, 2008). One has

some understanding of contextual factors and use appropriate words and phrases for different situations (Squires, 2008). Sociolinguistic competence is very similar to discourse competence with the added ability to integrate cultural expressions and meanings into conversation or written language (Squires, 2008). The last level, strategic competence, allows the person to adapt to unfamiliar environments and the use of slang in everyday language (Squires, 2008). There are often professional associations to verify the competence of professional translators or interpreters if needed (Squires, 2008).

### **2.3.2.3 Ethics**

There is an ethical element that exists when translators or interpreters are used in a research study (Squires, 2008). The ethical considerations include that a translator will inform the researcher if he/she is not qualified for the task at hand, translator neutrality will be maintained, translating inaccurately or introducing bias will not be done purposely, no discrimination against respondents, on the basis of social class, race or background will be made and no revealing information will be given to the public that is easily identifiable with a particular respondent (Squires, 2008).

### **2.3.2.4 Physical considerations**

The seating arrangements when using an interpreter are often not discussed in literature and this is highlighted by Wallin & Ahlstrom (2006) as a weakness in research as the seating can have specific roles to play regarding the intrusiveness of the interpreter (Wallin & Ahlstrom, 2006). When three persons are involved for instance a triangular arrangement has been proven to be more appropriate and yield the best results (Wallin & Ahlstrom, 2006).

The age, gender and general profile of the interpreter has been briefly discussed in literature as ideally one could aim to 'match' the interpreter to the study

population (Wallin & Ahlstrom, 2006). This however may be extremely difficult or completely inappropriate depending on the qualities of the particular study design. When using a non-familiar interpreter it may result in the respondents not trusting the person which may in turn influence the results (Wallin & Ahlstrom, 2006). The same bias may be introduced when using a familiar person however (Wallin & Ahlstrom, 2006). It has been shown that background characteristic of the interpreter will have an impact on psychological factors like attitudes and expectations of the respondent, which could lead to a change in behaviour and thus influence the results (Pitchford & Van Teijlingen, 2005).

### **2.3.3 Interpretation styles**

There are different styles of interpreting ranging from very passive responses by the interpreter to a very dominant role played during the interview (Wallin & Ahlstrom, 2006). Baker (1981) however, concludes that the ideal interpreter falls somewhere between the two extremes (Baker, 1981). Methodologically a verbatim translation would seem ideal but this is problematic as pointed out by Murray and Wynne (2001) and they suggest that it is decided beforehand what concepts need to be conveyed and for the translations to be as close to verbatim as possible without construing the meanings (Murray & Wynne, 2001). The meaning of the word or phrase however, takes precedence over the form of language used and this is why a verbatim translation is often difficult to attain (Wallin & Ahlstrom, 2006)

Another point to highlight within the different styles of interpreting is the use of consecutive or simultaneous styles (Wallin & Ahlstrom, 2006). When using the consecutive style, only one person speaks at a time whereas in simultaneous translation the interpreter speaks concurrently with another person (Wallin & Ahlstrom, 2006). The simultaneous style can be very distracting and is not recommended for situations where only two people are involved (Wallin & Ahlstrom, 2006).

The usual pitfalls when dealing with an interpreter will always tend to be problematic. These include translating in such a way as to lead the respondent, feeling that the respondent needs protecting and ultimately being selective of what they translate and even going so far as to answer the question on behalf of the respondent (Bowling, 2005; Wallin & Ahlstrom, 2006). In the end the competence of the interpreter referring to his/her previous experience and the respect they are given by respondents, is imperative to reliable data collection (Wallin & Ahlstrom, 2006). Small et al (1999) even suggests performing a language assessment on potential interviewers to try and ensure a reliable result (Small et al., 1999).

Even when all recommendations are followed and the utmost care is taken with preparation for the data collection process, one will always have issues to sort out during the data collection period as human emotions and errors are always a contributing factor (Small et al., 1999). It is important to keep diaries and discuss these issues with interpreters and mention them as limitations to the research study (Small et al., 1999; Pitchford & Van Teijlingen, 2005; Squires, 2008).

### **2.3.4 Recommendations when using interpreters and translators**

Wallin & Ahlstrom (2006) recommend that meetings be held where an explanation of all objectives and the content of the questionnaire are discussed with the interpreter prior to the research being conducted (Small et al., 1999; Wallin & Ahlstrom, 2006). The rationale behind this is firstly that it improves their skill in translating words in a specific context when doing the interview (Wallin & Ahlstrom, 2006). This makes it easier for the respondent to give accurate and relevant responses. Secondly it involves the interpreter in the research and once they feel involved, they develop a sense of ownership and the task will be performed with more vigor (Wallin & Ahlstrom, 2006). The interpreter needs to know exactly what is expected from him/her and trial runs or a pilot study is recommended (Small et al., 1999; Pitchford & Van Teijlingen, 2005). The

researcher is after all using an interpreter as a research tool and therefore need to prepare him/her as much as possible for the job at hand. (Wallin & Ahlstrom, 2006) Interpreters and translators have an epistemological role to play, meaning that they are part of the data-generating process (Squires, 2008).

It is advisable to familiarize the interpreter with research methods and analysis of the data so that it provides a framework from which the interpreter works (Wallin & Ahlstrom, 2006). Some authors suggest that the interpreter should always interpret in the first person where possible and use the same gestures and non-verbal cues as the interviewer (Wallin & Ahlstrom, 2006). Other authors disagree however, and advise that interpreters should use the third person while translating as this shows the inability of the respondent to answer the questions without assistance (Wallin & Ahlstrom, 2006).

To ensure trustworthiness of the collected data 'member checks' are suggested. This refers to the process of confirming the data collected with the respondent to ensure that it is indeed what they meant to say in the interview (Wallin & Ahlstrom, 2006). Making use of the same interpreter to help with transcriptions also adds to trustworthiness as he will recollect the interview and ensure the content is translated correctly. Im et al (2004) suggest five specific criteria for trustworthiness of qualitative data. These include cultural relevance, contextuality, appropriateness, mutual respect between researcher and respondent and flexibility (Im et al., 2004).

## **2.4 CONCLUSION**

This literature review serves to give some insight into the epidemic problem that is low back pain in many societies across the world. In South Africa epidemiological studies are limited but a point prevalence of 20 % was recorded in factory floor workers in 1995 by Schierhout et al. (Cited by Vollinn, 1997). It is a significant problem address by physiotherapists on a daily basis and affects

many spheres of the individual's lives that are affected by it. A useful tool for measuring the disability caused from low back pain is the Oswestry Disability Index (ODI). An in depth look at the ODI was presented as well as the difficulties found in the process of translating the questionnaire and adapting it to different cultures.

There seems to be a need for reliable and valid cross-culturally adapted outcome measures to facilitate research in the South African population. Cultural adaptation, translation and the validation process of a questionnaire is a lengthy and time consuming procedure and it may not be necessary to follow all these steps. The challenge in South Africa is quite unique due to the eleven official languages spoken in the country. In the 2001 Census done in South Africa, isiZulu was still the most widely spoken language in South African homes and this was not very different from findings in the Census of 1996 (Statistics South Africa, 2001). Therefore this language was chosen as suitable for this research project. The other challenge is of course different meanings of the same words in the different languages. There is anecdotal evidence that the level of literacy in the middle to older aged population in South Africa is problematic when conducting research.

The importance of internal consistency was stressed as it forms the basis for one of the objectives of the current study and a basic explanation was given. Finally the process of using translators and interpreters was discussed highlighting the specific roles, advantages and disadvantages and finally giving some recommendations from the literature to improve qualitative research choosing to use this method.

# **CHAPTER 3**

## **METHODOLOGY**

An overview and explanation of the exact methods used within this pilot study will be presented in this chapter. This chapter will consider both the qualitative and quantitative part of the pilot study and give a description of the study population, instrumentation used as well as the procedure for data collection that took place.

### **3.1 STUDY DESIGN**

The abovementioned pilot study was an exploratory cross-language study with both qualitative and quantitative components within it.

### **3.2 STUDY POPULATION**

#### **3.2.1 Sample selection**

The participants for the study were recruited at the physiotherapy out patient department, the spinal out patient clinic and the laundry department at Chris Hani Baragwanath Hospital in Soweto, Johannesburg. Only patients attending these clinics and the laundry staff were targeted. Any eligible person meeting the inclusion and exclusion criteria were asked to partake in the study.

#### **3.2.2 Sample size**

It is an accepted norm to include 10 subjects for each item on the instrument which would have resulted in a minimum of 100 subjects for this study. Due to the research assistant not being able to continue with the data collection process,

data from 56 participants were analyzed and the results are presented as a pilot study.

### **3.2.3 Inclusion criteria**

- All patients above the age of 25
- Females and males
- Chronic lower back pain (>3 months) must be the main complaint.
- Patients were selected from the spinal or physiotherapy out patient clinics or at the laundry department at Chris Hani Baragwanath.
- Patients who spoke Zulu as their mother tongue.

### **3.2.4 Exclusion criteria**

- No other joints were allowed to be equally as painful as the lower back.
- Patients that presented with permanent neurological deficits.

### **3.2.5 Ethical considerations**

Ethical clearance from the committee of research on human subjects from the University of the Witwatersrand was obtained prior to commencement of this pilot study. Informed consent was obtained from each participant for participation in the study, use of the data obtained and for recordings made during the course of the data collection period. The consent form as well as the procedure was explained and / or translated where necessary to ensure informed consent was given by the participants.

Participants were treated in the same manner as if they had not participated in the study and no interference with their usual medical care resulted from participation in this study. Participants had the right to withdraw from the study at

any moment until such time that all the questionnaires had been completed and handed in to the researcher. The names of all participants were kept on a separate sheet to blind the researcher and maintain confidentiality

Written permission was obtained from Chris Hani Baragwanath Hospital as well as the separate departments where necessary.

### **3.3 RESEARCH TOOLS**

#### **3.3.1 Demographic questionnaire**

(See appendix F)

A demographic questionnaire was developed to gather information surrounding gender, age, home language, level of education and schooling for each participant. The process used to develop this questionnaire is discussed in section 3.4.

#### **3.3.2 Culturally adapted version of the Oswestry Disability Index**

(See appendix E)

The ODI was taken through a process of cultural adaptation for use in the Zulu culture as set out in 3.4.1. The questionnaire was not translated but left in English in order to measure the degree of assistance the participants needed when filling in a questionnaire that was not written in their mother tongue.

#### **3.3.3 Degree of assistance scale**

(See Appendix G)

A scale was developed by the researcher to establish the level of assistance needed when the participant filled in the culturally adapted ODI. The research assistant used this scale to score the participant depending on how many and

what type of questions were asked when needing assistance with answering the questionnaire. The scores ranged from zero to four and a participant would score zero if no assistance was needed at all for that particular question or a four if he/she needed most of the question translated or explained. An overall average could then be worked out of how much assistance was needed for the whole questionnaire as well as problematic questions identified.

### **3.3.4 Digital voice recorder**

A digital voice recorder was used to record the conversation between the research assistant and the participant. The recordings were transcribed and translated in order to gain knowledge about the specific items on the instrument that were problematic and to assess the reliability and consistency of the research assistant during the data collection process.

## **3.4 PROCEDURE**

### **3.4.1 Cultural adaptation of the ODI**

The cultural adaptation of the ODI was done following recommendations published by Beaton et al. (2000). A committee of field and language experts was recruited to formulate a culturally accepted version of the ODI that could be used in a Zulu speaking population. The experts consisted of a physiotherapist and a physiotherapy assistant with a minimum of three years clinical experience. Language experts for both English and Zulu were present to ensure linguistic accuracy where word choices and sentence construction were concerned. One Zulu speaking patient that was currently being treated for lower back pain was also included in this expert group to highlight possible problematic phrases from the patients' point of view. The research assistant represented the younger Zulu

speaking patient and assisted in producing an acceptable instrument. The researcher was also part of the committee with a key role in guiding discussions. The length, content, word choices and applicability of each item was scrutinized and investigated during this process. Changes to sentence construction, word choices and inclusion or elimination of sections were made when deemed necessary and unanimously agreed upon by the group. A summary of changes that were decided upon can be viewed in the Results chapter.

### **3.4.2 Development of the assistance scale**

The same group was used to review the assistance scale that was developed by the researcher for the purpose of measuring the degree of assistance needed when answering each question of the culturally adapted English version of the ODI. Minor changes were made to this scale and can be viewed in chapter 4.

### **3.4.3 Development of the demographic questionnaire**

The researcher prepared a list of questions that would obtain the necessary information needed, to draw some conclusions regarding levels of education and literacy of the subjects in association with their ability to answer the questionnaire. The expert group reviewed the demographic questionnaire prepared by the researcher and made minor adjustments where necessary. Overall the questions were appropriate and the group did not feel the need to add anything to the questionnaire. The changes that were needed are discussed in chapter 4.

### **3.4.4 Process of data collection**

Data was collected from January until April 2009 at Chris Hani Baragwanath Hospital and 58 participants were included in the pilot study. All subjects that met

the inclusion and exclusion criteria and who were able to sign informed consent to partake in the pilot study were included. The research assistant gave a brief description of the study and explained what is expected from the participant. The demographic questionnaire was filled in by the research assistant to save time and the questions were posed to the participant. The subjects were given the culturally adapted English version of the ODI and asked to score the questions as instructed on the questionnaire. Subjects were informed beforehand that they were allowed to ask for assistance from the research assistant during this time, if they did not understand a certain question or phrase on the instrument.

The research assistant was present while the subjects filled in the questionnaire and answered questions relating to translation or explanation of the items on the questionnaire as necessary. The research assistant scored each participant on how much assistance was needed for each question on the given questionnaire, using the assistance scale previously mentioned. The names of the participants were kept on a separate sheet to ensure confidentiality throughout the research process. The data collection was done in the waiting areas of the physiotherapy department and the spinal clinic and in a quiet section of the laundry at Chris Hani Baragwanath Hospital. The research assistant and the participant were the only people allowed to hear and discuss and the questionnaires being filled in. The same research assistant was used for all participants.

### **3.4.5 DATA ANALYSIS**

Data analysis was predominantly descriptive.

From the demographic questionnaires the information was presented in a table comparing the independent and assisted groups. The data presented included gender representations, average age of participants and their ability to read and write in Zulu. The participants' level of education and language they were

schooled in, were represented as graphs and tables and compared between the independent and assisted groups.

Each participant was scored on how much assistance they needed to fill in the questionnaire using the degree of assistance scale mentioned in section 3.4.2. The total score of the participant was divided by 36 (the highest possible score) and then multiplied by 100 to give the assistance needed as a percentage. These percentages were represented in a table for all the participants in the assisted group. The questions that the participants needed most assistance with were noted. The number of participants that needed assistance with a particular question was added and then the total was divided by the total number of participants in the assisted group. This answer was then multiplied by 100 to give the amount of assistance needed for each question as a percentage. The percentage assistance needed for each question was then represented in a table form.

A recording was made during the time that the questionnaire was filled in to collect data about the type of questions each participant asked as well as the researcher's answers and explanations given. These recordings were transcribed by the same research assistant and checked by an independent bilingual person to establish trustworthiness. (Krefting, 1991) The Zulu transcriptions were then translated into English by a professional translating company to ensure the researcher could understand all that was said on the recordings. The translated transcriptions were then analyzed using a deductive approach to identify inconsistencies between translations of the same questions by the researcher (Thomas, 2006). This was done as follows: The data was subdivided into groups with each question's transcriptions grouped together. Therefore all translated data pertaining to the same option on the modified ODI was grouped together to facilitate analysis. The back translated version for each translation of the same option was added as comparison data. From this grouping method a clear picture

emerged regarding the consistency with which the research assistant verbally translated each question on the modified ODI (See Appendix J).

To simplify analysis of the data and for better understanding, percentages were used to depict consistency. Firstly the percentage for consistency in translation was calculated. For each option there may have been different numbers of translations done, depending on whether the participant needed assistance with that particular option on the questionnaire. The number of translations that were exactly the same for each option were then added up and divided by the total number of translations available for that option. The result was multiplied by 100 to give a percentage of consistency with which the research assistant provided the same translation for a specific option on the modified ODI.

The second percentage that was calculated referred to the consistency with which the research assistant was able to provide the participant with a translation that had the same meaning as the original option on the modified ODI. The total number of translations that had the same meaning as the original option was calculated and divided by the total number of translations for that particular option. The result was multiplied by 100 to give a percentage reflecting the consistency with which the research assistant was able to relay the same meaning to the participant albeit using different sentences for that option.

All the calculated percentages for each option were added up and then divided by the total number of options for that question (7). The result was multiplied by 100 to give an average percentage for both consistencies relating to each question on the modified ODI.

The internal consistency of the questionnaire was measured by Cronbach's alpha. The statistical test was performed on the total sample as well as for the independent and assisted groups respectively. An alpha of above 0.70 indicates a good internal consistency.

### **3.5 CONCLUSION**

This chapter described the processes needed to develop the different instrumentation used during the course of the study. The sample population was described and the venues for data collection identified. The data collection process was described and 56 subjects' data was analyzed and will be presented in the next chapter.

# **CHAPTER 4**

## **RESULTS**

The following chapter will present the demographic data collected and how these results correlated with the level of assistance needed in answering the questionnaire. The data is presented in tables and graphs and a description of the statistical analysis is given where applicable.

### **4.1 CULTURAL ADAPTATION OF THE ODI**

When translating or adapting a questionnaire into another language, certain difficulties will always arise. This was indeed the case when attempting to adapt the ODI to the Zulu culture. The description of certain activities and explanation of that activity was found to be problematic, especially where distances were concerned and owing to the fact that a Likert type scale was used. We will consider the changes that were necessary for each item on the questionnaire.

(See appendix D for original ODI & appendix E for modified ODI)

The phrase 'please answer every section' in the instruction part of the questionnaire was taken out as it was found to elicit pressure on the subject to answer all sections even when he/she was not comfortable with it. The committee unanimously agreed that eliminating this sentence would not influence how many questions were answered as the research assistant would be with the patient while filling in the questionnaire.

## **The following changes were made in each section:**

### **Question 1**

The phrase 'I have no pain at the moment' was changed to 'I have had no pain today'. Subsequently all other options were changed to relate to today instead of the present moment. It was agreed by the committee that these replacement phrases were more easily understood and gave a more accurate description of a person's pain. The question was also phrased in past tense instead of the present.

### **Question 2**

In option 2 the phrase 'I can look after myself normally but it is very painful' was changed to 'I can look after myself normally but because of the pain it is difficult'. The committee felt that on a Likert scale the words 'very painful' was too strong to use as a second option and would confuse the reader. It was not a logical progression to jump from 'very painful' in option two to 'slow and careful' in option three.

In option 3 the phrase 'It is painful to look after myself and I am slow and careful' needed a word shuffling to 'The pain causes me to be slow and careful when I am looking after myself'

In option 4 the phrase 'I need some help but manage most of my personal care' was changed to 'I need some help because of the pain but I manage most of my personal care.' The term 'help' might be understood as any help around the house instead of in the context of personal care and was enough justification to include 'because of the pain'.

In option 5 the phrase 'I need help every day in most aspects of self-care was changed to 'I need help every day in most of my personal care.' The committee

felt that the same phrase was needed to describe the activity otherwise it may be mistaken for a new activity or concept in question 2.

In option 6 the phrase 'I do not get dressed, wash with difficulty and stay in bed' was changed to 'I can't get dressed, wash with difficulty and stay in bed.' The verb was changed in order to highlight that it reflects the person's inabilities and not their wishes or resources.

### **Question 3**

For option 1 the word 'weights' was changed to 'objects' throughout the question as it was found that the Zulu speaking population will understand the word in terms of weight lifting in sporting or gym activities and not in daily activities.

In option 3 the words 'off the floor' were omitted when describing the activity as this is implied in the phrase and is understood as that in the Zulu culture.

Option 6 was changed to 'I cannot carry anything at all.' instead of 'I cannot lift or carry anything at all.' The words 'lift' and 'carry' have very different meanings to a Zulu speaker than to an English speaker. A more appropriate word for 'lifting' is the word 'carry' which is used by Zulu speakers to describe any lifting activity especially in daily activities.

### **Question 4**

This question proved challenging due to the distances that are represented in miles. The following changes were made:

In Option 2 'more than 1 mile' was changed to 'far.'

In Option 3 'more than ½ mile' was changed to 'middle distances (not too far).'

In Option 4 'more than 100 yards' was changed to 'short distances.'

### **Question 5**

In Option 2 'my favorite chair' was changed to 'a comfortable chair' due to the socioeconomic status of many of the target population. There may only be a minimal amount of chairs in the house and therefore 'favorite' is not really appropriate. A comfortable chair would not limit the chair to a specific household but could possibly be found anywhere.

The word 'about' was added to each subsequent phrase before the time slot was given, as exact time frames when sitting is sometimes difficult to determine.

### **Question 6**

The word 'about' was added to each phrase before the time slot.

### **Question 7**

The word 'about' was added to each phrase before the time slot.

### **Question 8**

This question was omitted because the topic of sex is not readily discussed in the Zulu culture and the research assistant was very young. It would have been completely inappropriate for an older male or female subject to answer questions pertaining to sex in such a young female's presence. This has been done in previous studies and carries the permission of the authors of the ODI.

### **Question 9**

In option 1 'activities you enjoy doing' was added in brackets to explain the concept of 'Social life' as this is not a commonly used word in the Zulu culture.

### **Question 10**

In this question a large debate ensued among committee members as the word 'travel' in the Zulu culture is associated with long trips like traveling from Johannesburg to Durban, which would take a minimum of 6 hours. The word 'travel' was replaced by 'go' and is very well understood in terms of any traveling arrangement in the Zulu culture.

The word 'about' was once again added to each subsequent phrase before the time slot.

The changes made to the questionnaire have an influence on the face validity and content validity of the questionnaire. Therefore it cannot be assumed that this modified version of the ODI is in fact reliable and valid. The proper procedures for testing reliability and validity as set out by Beaton in 2000 would have to be performed in order to establish that. This was however not the purpose of this particular study and was excluded in the process of developing this questionnaire.

## **4.2 CHANGES MADE TO THE ASSISTANCE SCALE**

Very few changes were necessary for the assistance scale. These included adding the word 'explanation' to description of each level of assistance because 'translation' was not necessarily the only outcome. Therefore in the key, 1 would equal 'needed 1-5 words translated / or explained.' This phrase '/ or explained' was added to the key for level 1 through 4. For level 4 assistance a small typing

error was corrected. The phrase 'the entire' was replaced with 'most of the' for level 4. See appendix G)

### **4.3 CHANGES MADE TO THE DEMOGRAPHIC QUESTIONNAIRE**

See appendix F

The question pertaining to level of education was changed from 'Highest level of education?' to 'Highest level of education achieved?' The options that followed were all changed to a South African context:

- a) 'Less than standard 3' changed to 'Less than standard 3 / Grade 5'
- b) 'Primary school (Standard 3-4 )' changed to 'Standard 3-4 / Grade 5-6'
- c) 'Junior Secondary (standard 5-7)' changed to ' Standard 5-7 / Grade 7-9'
- d) 'Senior Secondary (Standard 8-9)' changed to ' Standard 8-9 / Grade 10-11'
- e) 'Matric/ High School graduate/ vocational training diploma' did not need to be changed.
- f) '1-2 yrs College/ Technicon' changed to ' College / Technicon'
- g) '3-4 yrs University' changed to 'Undergraduate University'
- h) 'Ph.D., M.D., J.D., D.D.S., or other doctoral degree' changed to ' Postgraduate University'

The last option on the questionnaire 'Can you read and write in your home language?' was changed to 'Can you read and write in your first language?'

## 4.4 PARTICIPANTS

Results obtained from 56 questionnaires were divided into the two groups that emerged; the Assisted (participants needing some translation or explanation of the questionnaire) and the Independent (participants who were able to fill in the questionnaire unassisted) groups. All participants answered all the questions on the questionnaire. On analysis of the data subject 2 and 16 were found ineligible for the study as they did not meet all inclusion criteria. This data was omitted in the analysis of data presented below. The number of participants in the Independent group was 36 compared to 20 in the assisted group. Table 4.4.1 gives an overview of the demographic factors for each group.

**Table 4.4.1 Demographic data for the Independent and Assisted groups.**

	<b>Independent (n=36)</b>	<b>Assisted (n=20)</b>
<b>Ave Age</b>	51	54
<b>Males</b>	14%	5%
<b>Females</b>	86%	95%
<b>Ave ODI score</b>	40%	39%
<b>Could read and write Zulu</b>	94%	95%

For both the independent and the assisted groups the average age of the participants were very similar, with the assisted group having a slightly higher average age of 54 compared to 51 in the independent group. The majority of the population was female but there were a few more males in the independent group. This group had the most participants overall though, which could account for the difference. The independent group had a slightly elevated average ODI score but this was marginal. In both groups however a significant majority reported that they could both read and write in Zulu which is their home language.

**Table 4.4.2 Level of assistance needed for each participant**

<b>Partici pant</b>	<b>Q1</b>	<b>Q 2</b>	<b>Q 3</b>	<b>Q 4</b>	<b>Q 5</b>	<b>Q 6</b>	<b>Q 7</b>	<b>Q 9</b>	<b>Q10</b>	<b>Total</b>	<b>Percentage</b>
<b>1</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>36</b>	<b>100%</b>
<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>36</b>	<b>100%</b>
<b>6</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>36</b>	<b>100%</b>
<b>7</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>11%</b>
<b>11</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>36</b>	<b>100%</b>
<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>8%</b>
<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>3%</b>
<b>24</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>28</b>	<b>78%</b>						
<b>28</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3%</b>						
<b>30</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>24</b>	<b>67%</b>
<b>31</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>26</b>	<b>72%</b>
<b>32</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>3%</b>
<b>34</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>32</b>	<b>89%</b>
<b>49</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>33</b>	<b>92%</b>
<b>50</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>3%</b>
<b>51</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>36</b>	<b>100%</b>
<b>53</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3%</b>						
<b>56</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>6%</b>
<b>57</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>13</b>	<b>36%</b>
<b>58</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>8%</b>						

**Key**

0 = no assistance needed

1 = needed 1-5 word translated/explained

2 = needed more than 5 words translated/explained

3 = needed whole sentences translated/explained

4 = needed most of the questionnaire translated/explained

Table 4.2.2 shows the degree of assistance each participant in the assisted group needed. Five out of the twenty participants (25%) needed 100% assistance which means that for each question on the modified ODI, they needed a full explanation or translation of the options. The lowest score on the table is 3% and was also scored by five (25%) of the participants. This means that these individuals needed very little help when filling in the questionnaire and were almost independent in doing so.

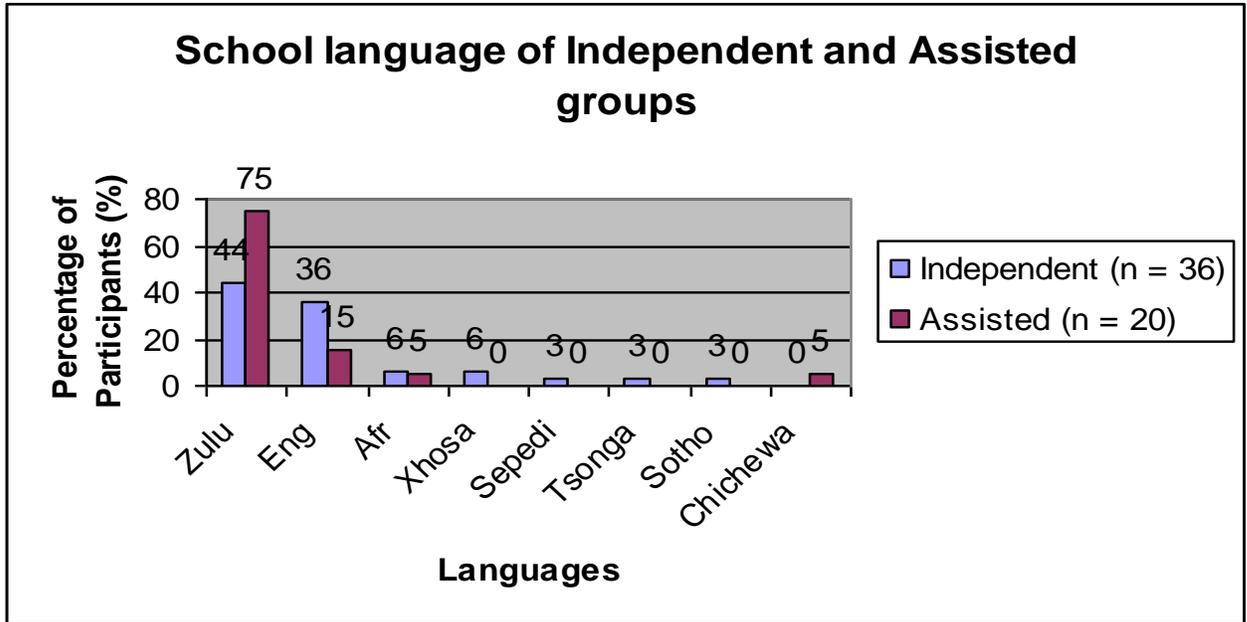
**Table 4.4.3 Percentage assistance needed for each question on the ODI**

<b>Question on ODI</b>	<b>Percentage of assisted group needing assistance</b>
1	60 %
2	55 %
3	55 %
4	50 %
5	50 %
6	40 %
7	55 %
9	65 %
10	55 %

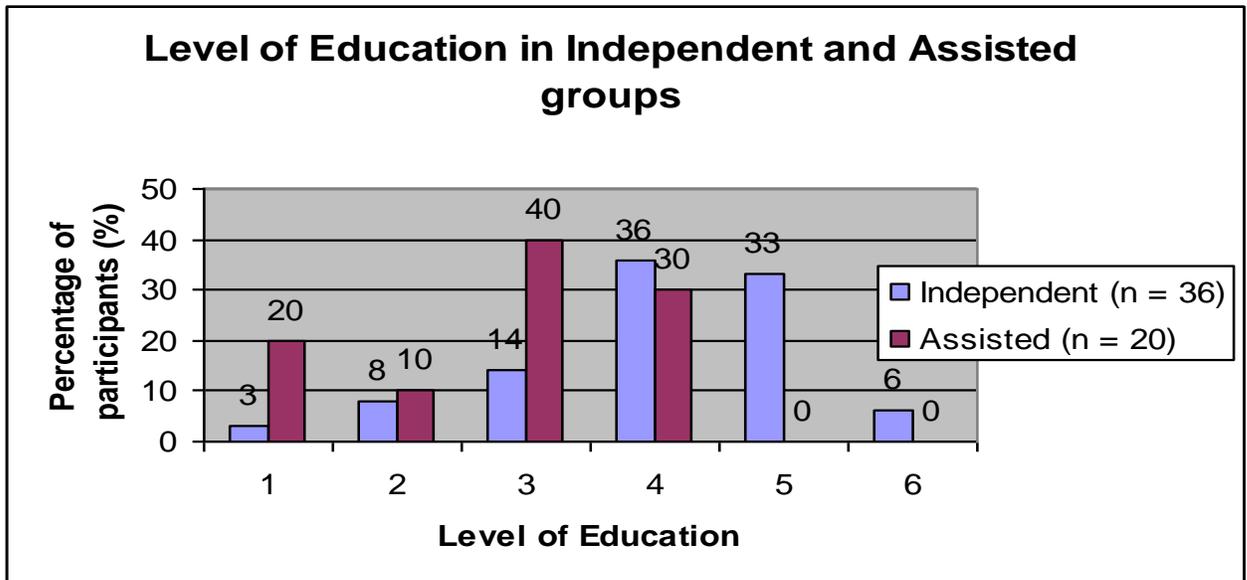
When considering the questions on the modified ODI that needed to be translated or explained most frequently as seen in table 4.4.3, question 9 scored the highest at 65 % followed by question 1 at 60 %. Question 9 referred to social life and question 1 referred to pain intensity. These two questions can be considered most problematic on the ODI and possibly least understood. Questions 2, 3, 7 and 10 follow, with 55 % of participants needing assistance with these questions. Question 2 enquires about pain with personal care activities and question 3 deals with pain experienced when lifting objects. Question 7 asks about pain when sleeping and question 10 deals with pain when traveling. Questions 4 and 5 were problematic for 50% of the group where question 4 deals with pain associated with walking, question 5 with pain experienced with sitting and question 6, which was least problematic (40%) deals with pain experienced in standing. The results given above only give an indication off the questions that participants needed assistance with and do not indicate the reasons for that.

## **4.5 LANGUAGE AND LITERACY**

Within the Independent group 44 % of participants were taught in Zulu followed by 36 % being taught in English. The other languages on the graph only represent a very small part of the group. In the Assisted group 75 % of participants were educated in Zulu and only 15 % in English. The whole group needed some assistance with the questionnaire but in varying degrees.



**Figure 4.5.1 Languages the Independent and Assisted group was educated in**



**Figure 4.5.2 Levels of education in the Independent and Assisted group**

**Key**

Levels of education:

1= &lt; Grade 5

2= Grade 5-6

3= Grade 7-9

4= Grade 10-11

5= Matric

6= College/ Technicon

The results shown in figure 4.5.2 reflect the level of education of the participants in the independent and assisted groups. It shows that the majority of the independent group had at least a Grade 10 – 11 or matric at high school level and two participants had some form of tertiary education. The level of education in the assisted group reflects a different picture than that of the independent group. The highest level of education achieved in this group is senior secondary (level 4) with no participant having a matric qualification. The majority of the group had a senior level of education but this was mostly in Zulu. (Table 4.5.2) A much larger number of participants in this group had only a primary school level of education.

**Table 4.5.1 Table depicting characteristics of participants with a LOE 4 or higher in the Independent group**

<b>School language</b>	<b>LOE</b>	<b>Number of participants</b>	<b>Average Age</b>
Zulu	6	1	34
	5	4	37
	4	4	42
Eng	6	0	0
	5	6	50
	4	6	59

Taking into consideration only the participants with a level of education 4 (grade 10-11) or higher, table 4.5.1 shows that for the Independent group, most of these participants were educated in English and appear to be of an older age compared to those educated in Zulu.

**Table 4.5.2 Table depicting characteristics of participants with a LEO 4 or higher in the assisted group**

<b>School Language</b>	<b>LOE</b>	<b>Number of participants</b>	<b>Average Age</b>
Zulu	4	4	48
Eng	4	2	51

When considering the participants of the assisted group that had a level of education of 4 (Grade 10-11) or higher, it is interesting that the languages are the same as in the Independent group. The majority of participants in this category however, were educated in their home language.

## **4.6 INTERNAL CONSISTENCY**

Chronbach's alpha was used to determine the internal consistency of the modified ODI.

When alpha was performed for our modified ODI, the Cronbach's alpha of all the item scores was found to be 0.8183. When assessing the independent group the alpha was found to be 0.7834 and the assisted group had an alpha of 0.8663. These scores show clearly that the assisted group had a better internal consistency of test scores but since all the groups were above 0.700; the overall internal consistency is considered high

**Table 4.6.1 Cronbach's alpha for all groups**

Question	Alpha for Independent group	Alpha for Assisted group	Overall alpha
1	0.7798	0.8593	0.8114
2	0.7797	0.8567	0.8142
3	0.7798	0.8575	0.8107
4	0.7583	0.8464	0.7936
5	0.7564	0.8460	0.7927
6	0.7617	0.8601	0.8029
7	0.7775	0.8494	0.8077
8	0.7223	0.8369	0.7705
9	0.7415	0.8550	0.7927
<b>Average alpha</b>	<b>0.7834</b>	<b>0.8663</b>	<b>0.8183</b>

None of the questions for all three groups resulted in a higher alpha than the average for that group. This is considered a good result in that all items on the questionnaire measure exactly what they should be measuring every time it is measured. From this statistical analysis it can be concluded that the culturally adapted version of the ODI for the Zulu speaking population has a good internal consistency.

#### **4.7 TRANSCRIPTIONS AND TRANSLATIONS**

In general the consistency in meaning was higher than the consistency of translation which is a satisfying result keeping in mind that the research assistant was not given clear instructions regarding the choice of translations for each option on the questionnaire in order to meet the objectives of this pilot study.

Table 4.7.1 below gives an average for each of these consistencies calculated in Appendix J..

From the summary presented in Table 4.6.1 it can be seen that the research assistant was not very consistent with using the exact same translations for each option in the questions. Only question one, four and six scored 50 % or above. This is however is only an average score taken from the original table. (See appendix J)

**Table 4.7.1 Summary of consistency of research assistant**

Question	Ave consistency in translation	Ave consistency in meaning
1	63.3 %	84.0 %
2	23.2 %	41.1 %
3	22.5 %	60.8 %
4	54.7 %	70.9 %
5	47.0 %	67.3 %
6	55.9 %	74.6 %
7	33.7 %	59.9 %
9	8.3 %	68.6 %
10	45.3 %	62.4 %

In question one for example, the assistant was able to translate option four to six with 100% consistency and five out of seven options resulted in the same meaning as the modified ODI. (See appendix J) This was the question with the shortest sentences that needed translating. The increase in length of the sentence seems to have an inverse relationship to the consistency with which it was translated. For example questions two, three, seven and nine all consists of very long sentences that needed translating and scored much lower in consistency than question one. (See appendix J)

When examining the consistency of the research assistant to explain the option with a similar meaning as the original, the figures are more impressive. All of the questions except for question two, scored above 50 % with question one being as high as 84 %. This means that even though the research assistant did not use the exact same words to describe the parts of the questions, she was able to convey the same meaning to the participant most of the time. The length of sentences once again seems to have played a role as both question one and four (highest scores) consisted of shorter sentences needing translation.

Referring back to table 4.4.3 where 65 % of participants in the assisted group struggled with question nine, the assistant was able to convey the same meaning in translations in 68.6 % of translations. Question one was problematic for 60 % of the assisted group and the assistant provided similar meanings to the original text of 84%.

## **4.8 CONCLUSION**

A culturally adapted version of the ODI for the Zulu speaking population was done and a summary of the changes that were necessary was presented. A summary of the degree of assistance needed by each participant to fill in the questionnaire was provided in Table 4.2.2. The degree of assistance that was needed for each question on the modified ODI was recorded for each participant and a summary presented in Table 4.4.3. The level of education of the participants were presented in table form and compared between the independent and assisted groups. The Internal consistency for the modified ODI was measured and scored above 0.70 which is an indicator of good internal consistency for the questionnaire. Inconsistencies between translations of the questions on the modified ODI were recorded and analysed as in appendix J. The results were summarized in Table 4.7.1.

# **CHAPTER 5**

## **DISCUSSION**

### **5.1 CULTURAL ADAPTATION OF THE ODI**

The process of cultural adaptation will always present the researcher with challenges. In the above pilot study, guidelines proposed by Beaton et al. (2000) were followed with the aim to produce a modified version of the ODI for use in a Zulu speaking population. The problems encountered were anticipated as languages often have different meanings for the same word or don't have an appropriate word or phrase to explain what is being said in the original document. These findings are evident in the results chapter and are in line with other research findings. An example of this are the changes necessary in question four as a result of the metric system and were found necessary in other cultural adaptations like the Korean, German and Norwegian ones (Chang et al., 2005; Grotle et al., 2003; Osthus et al., 2006).

The process was simple to follow but produced an English document that may be well understood in the Zulu culture, but may not necessarily be 'good' English. Certain words like 'go' to explain traveling in terms of everyday activities may not be ideal but a more suitable word could not be found by our expert group. Once again the Germans and Koreans encountered the same problem with this concept and chose alternative words to better suit the description of traveling (Chang et al., 2005; Osthus et al., 2006).

Following from the observation the Germans made in retrospect, regarding the lack of logical progression of severity in pain in question two, which relates to personal care, we decided to alter the options slightly to facilitate better understanding in the Zulu speaking participants (Osthus et al., 2006).

Overall the target population in this pilot study seemed to understand the questionnaire well as can be seen by the ease in which the majority of subjects completed the questionnaire. Problematic words that emerged from the transcriptions were 'occasional', 'social life' and 'traveling'. Finding more suitable words or explanations for these concepts may be useful in future research. The high percentage of Zulu speakers that were taught in English may account for the ability of the participants to fill in the questionnaire unaided. The large percentage of Zulu speakers taught in their home language obviously had significant skills in English and were able to fill in an English questionnaire with ease.

The problematic questions may not be due to the English phrases chosen by the expert committee but may be problematic simply due to illiteracy, level of education, unfamiliarity with a questionnaire, or behavioral change in an interview type setting. The results reflected in figure 4.3.2 shows that the majority of the Independent group had at least a matric at high school level and two participants had some form of tertiary education. This may account for the independence of the group compared to the assisted group. The participants that had less than a senior secondary level of education possibly found other means than formal schooling to improve their literacy in their adult lives, which enabled them to complete the questionnaire without any assistance. The pilot study did not assess or account for any of these contributing factors and further research may have to be done to understand the difficulties surrounding each question on the culturally adapted ODI.

## **5.2 DEGREE OF ASSISTANCE NEEDED TO FILL IN MODIFIED ODI**

The degree of assistance needed by the participants in the assisted group vary considerably. The number of participants needing 100 % assistance is 5 out of the 20. This is a large part of the group that needed all the questions on the modified ODI either translated or fully explained. In contrast, another 5 out of 20 needed only minimal assistance of 3% during the process of completing the

questionnaire. These participants could have possibly answered the questionnaire completely on their own but may have felt that while the assistant was there, they should ask questions even if they had the slightest of doubt about a word's meaning.

### **5.3 DEMOGRAPHIC INFLUENCE AND LEVEL OF EDUCATION**

The demographic data recorded could possibly be generalized to the majority of patients attending the clinics at the government hospitals in South Africa.

On observation the researcher found anecdotal evidence of the inability to answer questionnaires appropriately or follow instructions given on the questionnaire. Even when the participants needed no assistance with the content of the questionnaire or the language it was written in, the research assistant often needed to show the participants to turn the page and continue until the questionnaire is finished or show them how to indicate their choices. This was not due to a lack of instructions as it was written at the top of the questionnaire and a brief explanation was given verbally to each participant when given a questionnaire.

These findings are in line with previous studies done in South Africa and reported by Yazbek (2007). The author translated and tested self report scales in the Tswana population and found the participants had low functional health literacy (Yazbek, 2007). This is defined as a person's ability to function in the health care setting using their skills in literacy and numeracy (Teutsch, 2003 as cited by Yazbek 2007). This could be a potential problem for all questionnaires being tested in this kind of population as it limits a person's ability to understand, retain, recall and act on written health care measures (like the scales or questionnaires being tested). The scales affected by low functional literacy could have both literary and numerical content (Teutsch, 2003 as cited by Yazbek 2007). This

pilot study did not assess the reason for difficulty experienced with each question which could be due to numerous factors like, literacy, social background, level of education, lack of understanding or even psychological factors that play a role when filling in a questionnaire.

Considering the results and the average level of education achieved in the target population, the question of whether translating documentation into the different languages in South Africa is appropriate, should be asked. It may not be relevant in which language the documentation is written, as the literacy level may not be of a sufficient standard to be able to answer questions give in a written form or a questionnaire. There is once again anecdotal evidence to confirm this with researchers incurring the enormous cost of translating questionnaires and still having to explain the content or give some assistance to the participant when given the questionnaire. The results show that the majority of the target population indicated that they can read and write in their home language. The level of education owing to the previous apartheid government however, may limit research using documentation written in the target language.

It must be stated however, that each member of society does have the right to documentation and communication in their chosen language but maybe researchers should find an alternative avenue for data collection instead of utilizing questionnaires.

## **5.4 INTERNAL CONSISTENCY**

Using Cronbach's alpha as a measure of internal consistency is common in research methodology (Chang et al., 2005). The culturally adapted ODI showed a good internal consistency meaning that it could possibly be used in future research to establish the disability caused from lower back pain in the Zulu speaking population. It shows that the modified questionnaire measures the same constructs across the board and is possibly comparable to the original

version of the ODI. Further studies are needed however to test the validity and the reliability of the questionnaire compared with its original counterpart.

## **5.5 TRANSCRIPTIONS AND TRANSLATIONS**

The results pertaining to the consistency with which the assistant translated the options for each question was shown to be poor. Only question one, four, six and ten scored a consistency of 50 % or above. These were all questions that had simple concepts like pain intensity, walking, standing and traveling. The options for each question were not very long and may be the reason it was easier to translate consistently. The longer sentences proved more problematic as shown by the results in table 4.7.1.

The most important goal when using a translator though is to achieve the same meaning in the verbal translation compared to the original document. The results for this were more impressive with most questions scoring above 50 %. This means that even though the research assistant did not use the exact same words to describe the parts of the questions, she was able to convey the same meaning to the participant most of the time. It must be emphasized at this time that the research assistant was not given any guidelines or written translations to work from, she was only asked to try and explain the questions the same way each time. Keeping this in mind, the assistant was quite consistent. The researcher is not Zulu speaking either which may have an influence on the criteria against which the translations were measured. The researcher was unable to pick up subtle differences in translations and used a 'word for word' approach to score consistency. There may be words in Zulu with the same or very similar meanings that would have otherwise been acceptable to the researcher when measuring consistency in translation.

## 5.6 LIMITATIONS OF THE STUDY

Firstly it must be noted that the study was done between languages and the use of interpreters and translators are in itself a limitation to the study. These assistants have a data-generating role and therefore will always introduce some sort of bias. One can however try to limit the amount of bias by following the recommendations mentioned in the literature review of this study.

Another limitation to the study is that the researcher is not from the Zulu culture and all the details concerning cultural behavior, mannerisms and language use that may have contributed to the results may not have been represented adequately in this pilot study.

The logistical problems associated with the research assistant not being able to continue the data collection process, with ultimately less participants recruited in the study resulted in it being presented in a pilot form. Future research will have to be done to confirm and strengthen these results even though a strong trend has emerged from the data collected.

Future research studies should consider focusing on the need for translation taking into account the target population for much of the research currently being done in South Africa. The results of Murray and Wayne (2001) indicated that participants presented with questionnaires in their second language perceived themselves as less happy, confident and intelligent and this is an important psychological aspect to remember when doing research pertaining to other cultures (Murray & Wayne, 2001). The use of questionnaires or alternative forms of data collection methods needs further exploration and future recommendations need to be made concerning this in order to respect the individual's constitutional rights.

# **CHAPTER 6**

## **CONCLUSION**

### **6.1 CONCLUSION**

The main aim of this pilot study was to establish whether the Oswestry Disability Index was an appropriate assessment tool for use in the Zulu speaking population in South Africa. As a result a culturally adapted English version of the ODI emerged which was found to have a good internal consistency. The level of education and literacy in the home language of the target population was established. The assisted group represented 36 % of the study population with six of the twenty participants having an education of level 4. The assisted group were mostly schooled in Zulu (75%) followed by Eng (15%). Afrikaans and Chichewa (a language spoken in South-Central Africa) was the school language of only 5 % of the group. The degree of assistance needed to complete the modified ODI varied substantially within the group with only 25 % of the participants needing 100% assistance. The consistency with which the research assistant translated the options in exactly the same way was poor with the highest scoring question being one (63.3%) but the original meaning of each option was conveyed to the participant most of the time with the highest score for question one too (84%).

### **6.2 Recommendations**

Further research is needed regarding the use of translators/interpreters when collecting data generated from a questionnaire developed in a first world country like the ODI.

Researchers may want to investigate the value of using an interpreter that was given clear instructions or specific translated material when administering the ODI.

Investigations into literacy levels and the value of translation as well as the costs involved, may be needed to justify this trend in research where participants are approached from previously disadvantaged back grounds. Reliability and Validation studies are needed before the culturally adapted version of the ODI used in this study could be used in Zulu speaking subjects. One may want to investigate the psychological impact (as suggested by Murray and Wayne 2001) on these individuals when using an English questionnaire as it will not be in their mother tongue (Murray & Wayne, 2001).

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**Appendix A: Copy of Ethical clearance form**

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

R14/49 Grebe

CLEARANCE CERTIFICATE

PROTOCOL NUMBER M080951

PROJECT

An investigation into the Use of the  
Oswestry Disability Index in a Zulu  
Speaking Population

INVESTIGATORS

Ms C Grebe

DEPARTMENT

Physiotherapy Department

DATE CONSIDERED

08.09.26

DECISION OF THE COMMITTEE

Approved unconditionally

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE 08.09.29

CHAIRPERSON

*[Signature]*  
P (Professor P E Cleston Jones)

\*Guidelines for written 'informed consent' attached, where applicable

cc: Supervisor: W Wood

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University.

I/We fully understand the conditions under which I am/we are authorized to carry out the above mentioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. I agree to a completion of a yearly progress report.

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

0921 211 110

P:118

TEL: 011 6633349

4-DEC 2008 14:25 HUMANITIES-RESEARCH OFFICE BLDG 717 1185



**Appendix B: Information sheet and permission form for clinical director of CHBH**

Dear CEO/Superintendent  
Chris Hani Baragwanath Hospital  
Soweto

Re: Permission for my research study

*The relationship between depression and pain-related disability, in female patients with non-specific chronic lower back pain, at a government hospital in South Africa.*

Dear Sir/Madam

I would like to request permission for the above-mentioned study to be carried out at the orthopaedic and spinal clinics and in the physiotherapy department at Chris Hani Baragwanath Hospital over a maximum of four months in 2008.

The aim of this study is to assess the disability that chronic low back pain causes in patients and to establish whether other aspects of their health like their emotional well being has been affected by their constant pain. I will be looking at the relationship between depression and chronic pain in the results from the questionnaires filled in by the participants. The results from this study will help physiotherapists gain a better understanding of the dimensions within chronic low back pain and will enable them to refer patients to the appropriate health care professionals more effectively. It will also give important information for developing of a screening tool for depression in the abovementioned population which could be used on a daily basis.

Ethical clearance from the committee of research on human subjects has been obtained to carry out this study.

Participating in this study will not interfere with patients' current medical treatment at all and no discrimination will take place based on the results obtained from this study. The results are for the use of this study only and will not be distributed to any other person not related to the study.

Yours sincerely  
Christelle Grebe  
082 4488 594

**Appendix C: Information sheet and permission form for the manager of the laundry at CHBH**

01/05/2009

Dear Simon  
Manager Laundry: Chris Hani Baragwanath hospital

Re: Permission to do Masters Research at the laundry department.

*Title: An investigation into the use of the Oswestry Disability Index in a Zulu speaking population.*

My research report will determine whether the Oswestry Disability Index is an appropriate tool for use in a Zulu speaking population with lower back pain. I have chosen Chris Hani Baragwanath Hospital, as both institutions treat a great number of patients complaining of lower back pain. My data collection will not interfere much with any staff duties and should only take 15 minutes of their time.

I hereby ask permission from the Laundry department to do my research. Ethical clearance has been obtained for the abovementioned research study.

If you have any queries, please do not hesitate to contact me.

Kind Regards  
Christelle Grebe  
082 4488 594  
djgrebe@absamail.co.za

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I/We hereby give permission for the abovementioned study to be carried out at the Laundry, Chris Hani Baragwanath Hospital.

Signed

---

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Print name

## Appendix D: Original ODO 2.1a

# ODI version 2.1a

This questionnaire is designed to give us information as to how your back (or leg) trouble affects your ability to manage in everyday life. Please answer every section. Mark one box only in each section that most closely describes you today.

### Section 1 - Pain intensity

- I have no pain at the moment.
- The pain is very mild at the moment.
- The pain is moderate at the moment.
- The pain is fairly severe at the moment.
- The pain is very severe at the moment.
- The pain is the worst imaginable at the moment.

### Section 2 - Personal care (washing, dressing, etc.)

- I can look after myself normally without causing extra pain.
- I can look after myself normally but it is very painful.
- It is painful to look after myself and I am slow and careful.
- I need some help but manage most of my personal care.
- I need help every day in most aspects of self care.
- I do not get dressed, wash with difficulty and stay in bed.

### Section 3 - Lifting

- I can lift heavy weights without extra pain.
- I can lift heavy weights but it gives extra pain.
- Pain prevents me from lifting heavy weights off the floor but I can manage if they are conveniently positioned, e.g. on a table.
- Pain prevents me from lifting heavy weights but I can manage light to medium weights if they are conveniently positioned.
- I can lift only very light weights.

- I cannot lift or carry anything at all.

#### Section 4 - Walking

- Pain does not prevent me walking any distance.
- Pain prevents me walking more than one mile.
- Pain prevents me walking more than a quarter of a mile.
- Pain prevents me walking more than 100 yards.
- I can only walk using a stick or crutches.
- I am in bed most of the time and have to crawl to the toilet.

#### Section 5 - Sitting

- I can sit in any chair as long as I like.
- I can sit in my favourite chair as long as I like.
- Pain prevents me from sitting for more than 1 hour.
- Pain prevents me from sitting for more than half an hour.
- Pain prevents me from sitting for more than 10 minutes.
- Pain prevents me from sitting at all.

#### Section 6 - Standing

- I can stand as long as I want without extra pain.
- I can stand as long as I want but it gives me extra pain.
- Pain prevents me from standing for more than 1 hour.
- Pain prevents me from standing for more than half an hour.
- Pain prevents me from standing for more than 10 minutes.
- Pain prevents me from standing at all.

#### Section 7 - Sleeping

- My sleep is never disturbed by pain.
- My sleep is occasionally disturbed by pain.
- Because of pain I have less than 6 hours sleep.
- Because of pain I have less than 4 hours sleep.

- Because of pain I have less than 2 hours sleep.
- Pain prevents me from sleeping at all.

#### Section 8 - Sex life (if applicable)

- My sex life is normal and causes no extra pain.
- My sex life is normal but causes some extra pain.
- My sex life is nearly normal but is very painful.
- My sex life is severely restricted by pain.
- My sex life is nearly absent because of pain.
- Pain prevents any sex life at all.

#### Section 9 - Social life

- My social life is normal and causes me no extra pain.
- My social life is normal but increases the degree of pain.
- Pain has no significant effect on my social life apart from limiting my more energetic interests, e.g. sport, etc.
- Pain has restricted my social life and I do not go out as often.
- Pain has restricted social life to my home.
- I have no social life because of pain.

#### Section 10 - Traveling

- I can travel anywhere without pain.
- I can travel anywhere but it gives extra pain.
- Pain is bad but I manage journeys over two hours.
- Pain restricts me to journeys of less than one hour.
- Pain restricts me to short necessary journeys under 30 minutes.
- Pain prevents me from traveling except to receive treatment

## Appendix E: Modified version of the ODI 2.1a

# ODI version 2.1a (modified)

This questionnaire is designed to give us information as to how your back (or leg) trouble affects your ability to manage in everyday life. Mark one box only in each section that most closely describes you today.

## Section 1 - Pain intensity

- I have had no pain today.
- The pain has been mild today.
- The pain has been moderate today.
- The pain has been severe today
- The pain has been very severe today.
- The pain has been the worst imaginable today.

## Section 2 - Personal care (washing, dressing, etc.)

- I can look after myself normally without causing extra pain.
- I can look after myself normally but because of the pain it is difficult.
- The pain causes me to be slow and careful when I am looking after myself.
- I need some help because of the pain but I manage most of my personal care.
- I need help every day in most of my personal care.
- I can't get dressed, wash with difficulty and stay in bed.

## Section 3 - Lifting

- I can lift heavy objects without extra pain.
- I can lift heavy objects but it gives extra pain.
- Pain prevents me from lifting heavy objects but I can manage if they are conveniently positioned, e.g. on a table.
- Pain prevents me from lifting heavy objects but I can manage light to medium objects if they are conveniently positioned.
- I can lift only very light objects.

- I cannot carry anything at all.

#### Section 4 - Walking

- Pain does not prevent me walking any distance.
- Pain prevents me walking far.
- Pain prevents me walking middle distances (not too far).
- Pain prevents me walking short distances.
- I can only walk using a stick or crutches.
- I am in bed most of the time and have to crawl to the toilet.

#### Section 5 - Sitting

- I can sit in any chair as long as I like.
- I can sit in a comfortable chair as long as I like.
- Pain prevents me from sitting for more than about 1 hour.
- Pain prevents me from sitting for more than about half an hour.
- Pain prevents me from sitting for more than about 10 minutes.
- Pain prevents me from sitting at all.

#### Section 6 - Standing

- I can stand as long as I want without extra pain.
- I can stand as long as I want but it gives me extra pain.
- Pain prevents me from standing for more than about 1 hour.
- Pain prevents me from standing for more than about half an hour.
- Pain prevents me from standing for more than about 10 minutes.
- Pain prevents me from standing at all.

#### Section 7 - Sleeping

- My sleep is never disturbed by pain.

- My sleep is occasionally disturbed by pain.
- Because of pain I have less than about 6 hours sleep.
- Because of pain I have less than about 4 hours sleep.
- Because of pain I have less than about 2 hours sleep.
- Pain prevents me from sleeping at all.

#### Section 9 - Social life

- My social life (activities you enjoy doing) is normal and causes me no extra pain.
- My social life is normal but increases the degree of pain.
- Pain has no significant effect on my social life apart from limiting my more energetic interests, e.g. sport, etc.
- Pain has restricted my social life and I do not go out as often.
- Pain has restricted social life to my home.
- I have no social life because of pain.

#### Section 10 - Traveling

- I can go anywhere without pain.
- I can go anywhere but it gives extra pain.
- Pain is bad but I manage journeys about two hours.
- Pain restricts me to journeys of about one hour.
- Pain restricts me to short necessary journeys less than 30 minutes.
- Pain prevents me from traveling except to receive treatment

## **Appendix F: Demographic questionnaire**

### DEMOGRAPHIC QUESTIONNAIRE

Age: \_\_\_\_\_

Sex: F / M

Highest level of education achieved? (Please circle)

- a) Less than standard 3/Grade 5
- b) Standard 3-4 / Grade 5 - 6
- c) Standard 5-7/ Grade 7 - 9
- d) Standard 8-9/ Grade 10 - 11
- e) Matric/ High School graduate/ vocational training diploma
- f) College/Technicon
- g) Undergraduate University
- h) Postgraduate University

What is your home language? (Please circle)

- a) Zulu
- b) English
- c) Afrikaans
- d) Other \_\_\_\_\_

What language did you get taught in at school? (Please circle)

- a) English
- b) Afrikaans
- c) Zulu
- d) Other \_\_\_\_\_

Can you read in your home language? (Please circle)

- a) Yes
- b) No
- c) Partly

Can you write in your first language? (Please circle)

- a) Yes
- b) No
- c) Partly

## **Appendix G: Degree of assistance scale**

RATING SCALE FOR ASSISTANCE NEEDED

no: \_\_\_\_\_

Participant

*Please score each participant on how much assistance is needed for each question on the ODI2.1a (modified)*

Key: 0 = no assistance needed  
1 = needed 1-5 word translated/explained  
2 = needed more than 5 words translated/explained  
3 = needed whole sentences translated/explained  
4 = needed most of the questionnaire translated/explained

1)	0	1	2	3	4
2.)	0	1	2	3	4
3)	0	1	2	3	4
4)	0	1	2	3	4
5)	0	1	2	3	4
6)	0	1	2	3	4
7)	0	1	2	3	4
8)	0	1	2	3	4
9)	0	1	2	3	4
10)	0	1	2	3	4

**Appendix H: Information sheets to participants and consent forms**

**An investigation into the use of the Oswestry Disability index in a Zulu speaking population.**

Dear Sir/Madam

I, Christelle Grebe, am doing research on the use of the Oswestry Disability Index (ODI) in a Zulu speaking population. With this research I would like to find out whether the ODI is a good questionnaire to use when interviewing people about their lower back pain.

I am inviting you to take part in this research study.

The study is to see if the questionnaire can be used for research in a Zulu speaking population. If you agree to participate in this study, you will be asked to complete two questionnaires; one asking about your lower back pain and the other asking general information including age, schooling etc. It will probably take about 15 minutes of your time to complete these questionnaires.

There are no risks when you take part in this study and the information that you give will be kept completely private and confidential. You may withdraw from the study at any point without any discrimination and your participation is voluntary.

If you agree to participate in this study, the research assistant will give you clear instructions on what to do next.

Thank you kindly  
Christelle Grebe (Researcher)  
082 4488594

No: \_\_\_\_\_

**CONSENT TO PARTICIPATE**

*An investigation into the use of the Oswestry Disability index in a Zulu speaking population.*

I have read the information letter and understood the contents of it. I hereby give my consent to participate in the study.

Signed \_\_\_\_\_

Date \_\_\_\_\_

**No:** \_\_\_\_\_

CONSENT FORM FOR RECORDING

An investigation into the use of the Oswestry Disability Index in a Zulu speaking population.

I have read and understood the information about recording during the time I will be filling in the questionnaires.

I hereby give my consent to be recorded for research purposes.

Signed \_\_\_\_\_

Date \_\_\_\_\_

## **Appendix I: Transcriptions and translations**

Key:

A: Assistant

T: Translator

## **Question 1**

### **Pain intensity**

3: A: unathi yincane, ikahlenyana noma ikakhulu?

T: ugnathi yincane, imaphakathi noma inkulu?

Can you say it is slight, medium or severe?

6: A: Ungathi lobuhlungu buncane, bukhudlwana noma buhlunukakhulu

T: Ungathi lobu buhlungu buncane, bukhudlwana noma bukhulu kakhulu

Can you classify the pain as minor, medium or severe?

11: A: Lombuzo ubuza ukuthi uyeweswa ubuhlungu namhlanje.

T: Lombuzo ubuza ukuthi uke wezwa ubuhlungu namhlanje.

This question asks if you have felt any pain today.

28: A: Kusho ukuthi pain ikangakanani

T: Kusho ukuthi i-pain ingakanani

It means how much the pain is

34: A: Kusho ukuthi pain ikangakanani namhlanje

T: Kusho ukuthi i-pain ingakanani namhlanje

It means how much the pain is today

49: A: Kusho ukuthi leyo kuqala bengingena pain namhlanje, elandelayo ithi

kancanyana, enye ithi inkulu ipain, le ithi inkulugakhulu , then le kusho ukuthi l

awukwazi nokuyipha amazwi the way kubuhlungu ngakhona. Njengana nje

ngingathi khona manje

T: Kusho ukuthi leyo kuqala bengingena pain namhlanje, elandelayo ithi

kancanyana,  
enye ithi inkulu i-pain, le ithi inkulu kakhulu , bese le isho ukuthi awukwazi  
nokuyichaza ngamagama ngendlela ibuhlungu ngakhona. Njenga manje  
ngingathi  
khona manje?

It means this one first I did not experience any pain today, the next one  
says a little, the other one say the pain is high, this one says it is severe,  
and this one says you are unable to express it because of the severity of  
the pain. As of now I can say now?

51: A: Kusho ukuthi pain ikangakanani

T: Kusho ukuthi i-pain ingakanani

It means how much the pain is

### **I have had no pain today**

24: A: Kushukuthi ayibangi , ayikubangeli i pain

T: Kusho ukuthi ayikubangeli i-pain.

This means that it does not cause you any pain

34: A: Kusho ukuthi anginayo ipain namhlanje

T: Kusho ukuthi angizwa pain namhlanje

It means I do not feel any pain today

### **The pain has been mild today**

24: A: Kusho ukuthi le pain ikhona kancane

T: Kusho ukuthi le-pain ikhona kancane.

It means that the pain is there slightly

34: A: Kusho ukuthi ipain incane

T: Kusho ukuthi i-pain incane  
It means the pain is little

51: A: Kusho ukuthi ipain incane

T: Kusho ukuthi i-pain incane  
It means the pain is little

57: A: Kusho ukuthi kancanyana

T: Kusho ukuthi kancane  
It means small

### **The pain has been moderate today**

34: A: Kusho ukuthi ipain ikancanyana

T: Kusho ukuthi i-pain imaphakathi  
It means the pain is medium

51: A: Kusho ukuthi ipain ikancanyana

T: Kusho ukuthi i-pain imaphakathi  
It means the pain is medium

53: A: Kusho ukuthi epain ikahle ayikho nkulu ayikho ncane.

T: Kusho ukuthi i-pain imaphakathi, ayikho nkulu ayikho ncane  
It means the pain is medium; it is not severe nor slight

58: A: Kusho ukuthi epain ikahle nje, ayikho nkulu kakhulu.

T: Kusho ukuthi i-pain imaphakathi nje, ayikho nkulu kakhulu  
It means the pain is medium, it is not very high

### **The pain has been severe today**

34: A: Kusho ukuthi inkulu ipain

T: Kusho ukuthi i-pain inkulu kakhulu

It means the pain is severe

51: A: Kusho ukuthi inkulu ipain

T: Kusho ukuthi i-pain inkulu kakhulu

It means the pain is severe

56: A: Kusho ukuthi epain inkulu.

T: Kusho ukuthi i-pain inkulu.

It means the pain is high.

58: A: Kusho ukuthi epain inkulu namhlanje, okwa manje

T: Kusho ukuthi i-pain inkulu namhlanje, okwamanje

It means the pain is high today, currently

### **The pain has been very severe today**

34: A: Kusho ukuthi inkulugakhulu

T: Kusho ukuthi inkulu kakhulu

It means it is severe

56: A: Kusho ukuthi epain inkulu kakhulu.

T: Kusho ukuthi i-pain inkulu kakhulu

It means the pain is severe.

### **The pain has been the worst imaginable today**

34: A: Kusho ukuthi lepain awukwazi nokuyipha amazwi

T: Kusho ukuthi i-pain awukwazi nokuyichaza ngamagama.

It means that the pain is inexpressible

51: A: Kusho ukuthi lepain awukwazi nokuyipha amazwi

T: Kusho ukuthi i-pain awukwazi nokuyichaza ngamagama  
It means the pain is beyond expression

## **Question2**

### **Personal care (washing, dressing etc.)**

11: A: Okay, mama lombuzo ubuza ngokuzinakekela ukuthi, err, wena uyakwazi ukuthi uzinakekele, njengokuzi washela, ukupheka, ukushanela endlini ngaphandle ukuthi uzizwise ubuhlungu?

T: Okay, mama lombuzo ubuza ngokuzinakekela ukuthi, err, wena uyakwazi ukuthi uzinakekele, njengokuzi washela, ukupheka, ukushanela endlini ngaphandle kokuthi uzizwise ubuhlungu?

Okay, mom this question asks about looking after yourself, err, are you able to look after yourself, for example, washing clothes, cooking, sweeping the house without causing more pain to yourself?

49: A: Okay kusho ukuthi ukhuma ngokuzinakekela, ukugeza, nokugcoba.

T: Lokhu kusho ukuthi ikhuluma ngokuzinakekela, ukugeza, nokugcoba.  
Okay this means it talks about looking after oneself, washing and applying ointments.

### **I can look after myself normally without causing extra pain**

24: A: Kushukuthi ayibangi , ayikubangeli i pain

T: Kusho ukuthi ayikubangeli i-pain.

This means that it does not cause you any pain

49: A: kushu kuthi leyokuqala ithi ngiyakwazi ukuzinakekela ngingazibangeli ipain.

T: Lokhu kusho ukuthi eyokuqala ithi ngiyakwazi ukuzinakekela

ngingazibangeli i-  
pain.

It means the first one says I am able to look after myself without causing pain for myself

51: A: Kusho ukuthi ngiyakwazi ukuzinakekela ngingazibangeli ipain.

T: Kusho ukuthi ngiyakwazi ukuzinakekela ngingazibangeli i-pain.

It means I am able to look after myself without causing pain to myself.

57: A: Ummh lana bathi, I can look after myself normally without causing extra pain,

Kusho ukuthi ngiyakwazi ukuzi nakekela ngingazibangeli ubuhlungu.

T: Ummh lana bathi, "I can look after myself normally without causing extra pain",

kusho ukuthi ngiyakwazi ukuzinakekela ngingazibangeli ubuhlungu.

Mhh...here they say, I can look after myself normally without causing extra pain, means I can look after myself without causing pain to myself

### **I can look after myself normally but because of the pain it is difficult**

1: A: then lena isho ukuthi uyakhona ukuzinakekela but because of the pain kuba difficult

T: Lokhu kusho ukuthi uyakwazi ukuzinakekela kodwa ngenxa yobuhlungu kuba lukhuni.

Then this one means that you are able to look after yourself but because of pain, it becomes difficult

6: A: Manje Gogo uyakwazi ukuzinakekela, err, lobuhlungu bungabi khona noma uyazinakekela kodwa lobuhlungu bubakhona

T: Manje Gogo uyakwazi ukuzinakekela, err, lobu buhlungu kungenzeka ukuba bungabi khona noma uyakwazi ukuzinakekela noma i-pain ikhona?

Now Grandma, are you able to look after yourself, err, this pain may not be there or are you able to look after yourself and the pain remains

24: A: Kusho ukuthi uyakwazwi ukuzinakekela ngenjwayelo kodwa epain ukuyenza nzima.

T: Kusho ukuthi uyakwazwi ukuzinakekela ngenjwayelo kodwa i-pain yenza kube lukhuni.

This means that you are able to look after yourself as usual but the pain makes it difficult.

30: A: ushuthi ikwenza lukhuni?

T: Usho ukuthi ikwenza lukhuni?

It means it makes it difficult?

31: A: kusho ukuthi ngiyakwazi ukuzinakekela kodwa ipain yenza kube nzima.

T: Kusho ukuthi ngiyakwazi ukuzinakekela kodwa i-pain yenza kube lukhuni.

It means that I am able to look after myself but the pain makes it difficult.

34: A: kusho ukhuthi ngiyakwazi ukuzinakekela kodwa nginale pain ikwenza nzima

T: Kusho ukuthi ngiyakwazi ukuzinakekela kodwa uma nginale pain, ikwenza kube lukhuni

It means that I am able to look after myself but with this pain, it becomes difficult.

49: A: Elandela yo ithi ngiyakwazi ukuzinakekela kodwa nginale pain ikwenza nzima

T: Elandelayo ithi ngiyakwazi ukuzinakekela kodwa nginale pain ikwenza lukhuni

The next one says I am able to look after myself but with this pain, it becomes difficult

51: A: kusho ukhuthi ngiyakwazi ukuzinakekela kodwa nginale pain ikwenza nzima

T: Kusho ukuthi ngiyakwazi ukuzinakekela kodwa nginale pain ikwenza nzima

It means I am able to look after myself but with this pain, it is difficult

**The pain causes me to be slow and careful when I am looking after myself**

49: A: leyesithathu ithi yona ipain yenza ukuthi ngibe slow ungenze kancane, yah ukuthi ngikwazi ukuzinakekela

T: eyesithathu ithi yona i-pain yenza ukuthi ngenze kancane, yebo ukuthi ngikwazi Ukuzinakekela

the third one says it makes me slow to look after myself

51: A: kusho ukuthi lobuhlungu lobu bungiyenza ukuthi ngiyenze kancane ngibhekisise ngenze kancane

T: Kusho ukuthi lobuhlungu lobu bungenza ukuthi ngenze kancane nginake kakhulu

It means that the pain slows me down and be careful when doing

**I need some help because of the pain but I manage most of my personal care.**

3: A: ikwenzanzima nova akekhomuntu onginakekelayo kufanele giziyenzele

T: Ikwenza kube nzima noma akukho muntu onginakekelayo kufanele Ngizenzele ngokwami.

It makes difficult or there is no one to attend to me I need to do things by myself

49: A: eyesine kusho ukuthi ngidinga uncedo ukuthi ngizi nakekele ngoba ipain

buyangivikela kwenze kube nzima ukuthi ngizinakekele

T: eyesine kusho ukuthi ngidinga uncedo ukuthi ngizinakekele ngoba i-pain iyangivimbela yenza kube lukhuni ukuthi ngizinakekele

the fourth one says I need help to look after myself because the pain makes it difficult for me to look after myself

51: A: kusho ukuthi ngidinga uncedo ngoba lobuhlungu buyangivikela ukuthi ngizinakekele

T: Kusho ukuthi ngidinga uncedo ngoba lobuhlungu buyangivimbela ukuthi ngizinakekele

It means I need help because the pain prevents me from looking after myself

**I need help everyday in most of my personal care.**

30: A: kusho ukuthi ngidinga usizo uma uzinakekela ngoba le pian lena iyakuvikela ukuthi uzinakekele ngokwakho

T: Kusho ukuthi ngidinga usizo uma uzinakekela ngoba le-pain iyakuvimbela Ukuthi uzinakekele ngokwakho.

It means I need help if you look after yourself because the pain prevents you from being able to look after yourself

49: A: kusho ukuthi ngidinga uncedo njalo, njalo hhayi lapha nalapha but njalo.

T: kusho ukuthi ngidinga uncedo njalo, njalo hhayi lapha nalapha kodwa njalo

it means I need help always not here and there, but always

51: A: kusho ukuthi ngidinga uncedo njalo ukuthi ngizinakekele

T: Kusho ukuthi ngidinga uncedo njalo nje ukuthi ngizinakekele

It means I need help always to look after myself

**I can't get dressed, wash with difficulty and stay in bed.**

31: A: Angikwazi ukuziqokisa, kunzima manje ngahlala ngise mbhedeni

T: Angikwazi ukuzigqokisa, kunzima manje ngihlala ngisembhedeni.

I am unable to dress myself, it is difficult now and I am always in bed.

49: A: Eyesithupha yona Angikwazi ukuzigeza, kunzima manje ngahlala ngise mbhedeni ngikhathele

T: Eyesithupha yona, angikwazi ukuzigeza, kunzima manje ngihlala ngisembhedeni ngikhathele

The sixth one, I am unable to wash, it is difficult now I am always in bed I am tired

51: A: kusho ukuthi Angikwazi ukuzigeza, Angikwazi ukuziqokisa, kunzima manje ngahlala ngise mbhedeni.

T: Kusho ukuthi angikwazi ukuzigeza, angikwazi ukuzigqokisa, kunzima manje ngahlala ngisembhedeni.

It means I am unable to wash myself, unable to dress myself, it is difficult now as I am always in bed.

**Question 3**

**Lifting**

3: A: An than olandelayo Ukhulumangezinto ezinzima, uyakwazi ukukuka izito ezinzima

T: Okulandelayo ukuntu ukhuluma ngrezinto ezilukhuni, ingabe uyakwazi ukuziphakamisa izinto ezisindayo?

And the following one talks about difficult things, are you able to lift up heavy things?

24: A: kusho ukuthi Ukuphakamisa

T: Kusho ukuthi ukuphakamisa

It means to lift up.

34 : A: kusho ukuthi ukuphakamisa

T: Kusho ukuphakamisa

It means to lift up.

49 :A: kusho ukuphakamisa

T: Kusho ukuphakamisa

It means to lift up.

51: A: kusho ukuthi ukuphakamisa

T: Kusho ukuthi ukuphakamisa

It means to lift up.

### **I can lift heavy objects without extra pain**

6: A: Manje Gogo uyakwazi ukuphakamisa izinto ezinzima

T: Manje Gogo uyakwazi ukuphakamisa izinto ezisindayo?

Now Grandma, are you able to lift heavy things

7: A: Lombuzo ubuza ukuthi uyakwazi Na ukuphakamisa izinto ezinzima?

T: Lombuzo ubuza ukuthi uyakwazi yini ukuphakamisa izinto ezisindayo?

. This question asks if you are able to lift heavy things.

11: A: Err, Izinto ezinzima zona uyakwazi ukuziphakamisa?

T: Err, Izinto ezisindayo zona uyakwazi ukuphakamisa?

Err, are you able to lift up heavy things?

24: A: kushukhuthi uyakwazi ukuphakamisa izinto ezinzima kodwa ungazibangeli

epain.

T: Kusho ukuthi uyakwazi ukuphakamisa izinto ezisindayo kodwa ungazibangeli i- pain.

It means you are able to lift heavy things without causing pain to yourself.

31: A: kusho ukuthi ngiyakwazi ukuphakamisa izinto ezilula ngingazibangeli ipain

T: Kusho ukuthi ngiyakwazi ukuphakamisa izinto ezilula ngingazibangeli i- pain.

It means I am able to lift light things up without causing pain to myself

34: A: kusho ukuthi ngiyakwazi ukuphakamisa izinto ezinzima ngingazibangeli ipain.

T: Kusho ukuthi ngiyakwazi ukuphakamisa izinto ezisindayo ngingazibangeli i-pain.

It means I am able to lift up heavy things without causing pain to myself.

49: A: kusho ukuthi ngiyakwazi ukuphakamisa izinto ezinzima ngingazibangeli ipain.

T: Kusho ukuthi ngiyakwazi ukuphakamisa izinto ezisindayo ngingazibangeli i-pain.

It means I am able to lift heavy things up without causing pain to myself.

51: A: kusho ukuthi ngiyakwazi ukuphakamisa izinto ezinzima ngingazibangeli ipain.

T: Kusho ukuthi ngiyakwazi ukuphakamisa izinto ezisindayo ngingazibangeli i-pain.

It means I am able to lift heavy things up without causing pain to myself.

### **I can lift heavy objects but it gives me extra pain**

24: A: kushukhuthi uyakwazi ukuziphakamisa izinto ezinzima Kodwa akuyenzi

ipain iphele.

T: Kusho ukuthi uyakwazi ukuziphakamisa izinto ezisindayo kodwa akwenzi  
Ukuthi i-pain iphele.

It means you are able to lift up heavy things and that does not put an end  
to the pain.

51: A: kusho ukuthi ngiyakwazi ukuphakamisa izinto ezinzima kodwa  
ziyangibangela ubuhlungu.

T: Kusho ukuthi ngiyakwazi ukuphakamisa izinto ezisindayo kodwa  
ziyangibangela ubuhlungu.

It means I am able to lift heavy things up but they cause me pain

**Pain prevents me from lifting heavy objects but I can manage if they are  
conveniently positioned, e.g. on a table**

7: A: Lombuzo olandelayo ubuza ukuthi ubuhlungu bakho buyakuvimbela ukuthi  
phakhamise izito ezinzima kodwa uyakho ukuthi uphakhamise  
enzinzimanyana?

T: Lombuzo ubuza ukuthi ubuhlungu bakho buyakuvimbela na ukuthi  
uphakamise izinto ezisindayo, kodwa uma zise tafuleni uyakwazi na?

This question asks if the pain you feel is preventing you from lifting up  
heavy things, but when they on the table you are able

51: A: Kusho ukuthi ngiyakwazi ukuphakamisa izinto ezinzima mezi bekiwe  
kahle, njengaphezu kwetafela.

T: Kusho ukuthi ngiyakwazi ukuphakamisa izinto ezisindayo uma zibekwe  
kahle, njengaphezu kwetafela.

It means I am able to lift heavy things up if they are placed well, like on top  
of the table.

57: A: kusho ukuthi ubuhlungu buyangivikela kuthi ngiphakamise izinto ezinzima

kodwa mezi bekiwe phezulu ketafela ngiyakwazi ukuzi phakamisa.

T: Kusho ukuthi ubuhlungu buyangivimbela kuthi ngiphakamise izinto Ezisindayo kodwa uma zibekwe phezulu kwetafela ngiyakwazi ukuziphakamisa.

It means the pain prevents me from lifting up heavy things but when they are put on the table I am able to lift them up.

### **I can lift only very light objects**

7: A: Lombuzo wona ubuza ukuthi ukhona ukuphakamisa ezilula zodwa na.

T: Lombuzo wona ubuza ukuthi uyakwazi ukuphakamisa ezilula zodwa na.

This question asks if you are able to lift light things only

30: A: La ithi, I can lift only very light objects, without extra pain kusho ukuthi nalezi ezilula , ukwazi ukuphakanisa izinto ezilula zodwa?

T: La ithi, "I can lift only very light objects, without extra pain" kusho ukuthi Nalezi ezilula , ukwazi ukuphakanisa izinto ezilula zodwa?

Here it says, I can lift only very light objects, without extra pain means that and this light, you are able to lift light things only?

34: A: kusho ukuthi ukwazi ukuphakamisa izinto ezilula njekuphela

T: Kusho ukuthi ukwazi ukuphakamisa izinto ezilula nje kuphela.

It means you are able to lift up light things up only.

49: A: kusho ukuthi ukwazi ukuphakamisa izinto ezilula

T: Kusho ukuthi ukwazi ukuphakamisa izinto ezilula

It means ability to lift light things up

51: A: kusho ukuthi ukwazi ukuphakamisa izinto ezilula njekuphela.

T: Kusho ukuthi ukwazi ukuphakamisa izinto ezilula nje kuphela.

It means you are able to lift up light things up only.

### **I cannot carry anything at all**

7: A: Lona ubuza ukuthi awukwazi ukuphakamisa lutho nje

T: Lona ubuza ukuthi awukwazi ukuphakamisa lutho nje

This question asks if you are unable to lift anything up

11: A: Kushukhuthi azikho izinto ezinzima wena oziphakamisayo?

T: Kusho ukuthi azikho izinto ezisindayo wena oziphakamisayo?

This means that there are no heavy things that you lift up?

51: A: kusho ukuthi ukwazi ukuphakamisa izinto ezilula njekuphela.

T: Kusho ukuthi awukwazi ukuphakamisa lutho

It means you are not able to lift anything up.

### **Question 4**

#### **Walking**

34: A: Kusho ukuthi ukuhamba ngezi nyawo.

T: Kusho ukuthi ukuhamba ngezinyawo.

It means walking on foot.

51: A: Kusho ukuthi ukuhamba ngezi nyawo.

T: Kusho ukuthi ukuhamba ngezinyawo.

It means walking on foot.

### **Pain does not prevent me walking any distance**

1: A: kusho kuthi .. ngizokuchazela le, kusho ukuthi le pian ayikuvikeli ukuthi uhamba noma ikuphi, nje I distance, kusho ukuthi ugayihamba noma iyiphi

idistance.

T: Lokhu kusho ukuthi .. ngizokuchazela lokhu. Kusho ukuthi izinhlungu azikuvimbeli ukuba uhambe ibanga thize, lokhu kusho ukuthi ungahamba noma iliphi ibanga.

This means ...I will explain to you this, this means that this pain does not prevent you from walking/travelling any distance, this means that you can walk/travel any distance.

3: A: Mohamba uyakwazi ukuhamba idistance endeyana, noma awusambi kangakho ngobalepain le ikhona.

T: Uma uhamba uyakwazi ukuhamba ibanga elidana, noma awusahambi kangako ngoba le-pain ikhona.

If you walk/travel, are you able to walk/travel a longer distance, or are you not walking/ travelling any more because of the pain.

6: A: Okay, err, manje Gogo mawuhamba lobuhlungu buya kuvumela ukuthi uhambe indlela ende

T: Okay, err, manje Gogo uyakwazi ukuhamba ibanga elide unaleli-pain?

Okay, err, now Grandma are you able to walk/travel long distances with your pain

24: A: kushukhuthi ipain yakho ayikuvikeli ukuhamba noma eyiphi edistance, so kushukhuthi ungahamba nomakukuphi.

T: Kusho ukuthi i-pain yakho ayikuvimbeli ukuhamba noma ngiliphi ibanga, so Kusho ukuthi ungahamba noma ngiliphi ibanga.

It means that your pain does not prevent you from walking/travelling any destination, so this means you can walk/travel any destination.

34: A: Kusho ukuthi lobuhlungu abukuvikeli ukuthi uhambe noma eyiphi ndawo.

T: Kusho ukuthi lobuhlungu abukuvimbeli ukuthi uhambe noma iyiphi ndawo.

It means this pain does not prevent you from travelling anywhere.

49: A: Kusho ukuthi lobuhlungu abukuvikeli ukuthi uhambe noma eyiphi ndawo.

T: Kusho ukuthi lobuhlungu abukuvimbela ukuthi uhambe noma iyiphi indawo.

It means the pain does not prevent you from walking/ travelling anywhere you like.

51: A: Kusho ukuthi lobuhlungu abukuvikeli ukuthi uhambe noma eyiphi ndawo.

T: Kusho ukuthi lobuhlungu abukuvimbela ukuthi uhambe noma iyiphi ndawo.

It means this pain does not prevent you from travelling anywhere.

### **Pain prevents me walking far**

1: A: I far isho ukuthi kude , so masesi khuluma ngayo yoinke le sentence,sithi ubuhlungu buyakuvikela ukuthi uhambe I distance ende .

T: Ukuthi, “far” kusho ukuthi kude , ngalokho-ke uma sikhuluma ngako emushweni ogcwele, sithi i-pain- ikuvimbela ekuthini uhambe ibanga elide.  
Far means a long distance, therefore when we talk about it in this whole sentence, we say the pain prevents you from travelling a long distance.

11: A: Mawuhamba khona uyakwazi ukuhamba indlela ende noma kushokuthi ubuhlungu bakho abukuvimbela ukuthi uhambe?

T: Uma uhamba khona uyakwazi ukuhamba ibanga elide noma ubuhlungu bakho buyakuvimbela ukuthi uhambe?

Are you able to walk/travel long distances or this means the pain prevents you from walking/travelling?

34: A: kusho ukuthi ubuhlungu buyakuvikela ukuthi uhambe kude.

T: Kusho ukuthi ubuhlungu buyakuvimbela ukuthi uhambe amabanga amade.

It means the pain prevents you from walking/travelling long distances.

51: A: kusho ukuthi ubuhlungu buyakuvikela ukuthi uhambe kude.

T: Kusho ukuthi ubuhlungu buyakuvimbela ukuthi uhambe amabanga amade.  
It means the pain prevents you from walking/travelling long distances.

56: A: Kusho ukuthi awukwazi ukuhamba indlela ende.

T: Kusho ukuthi awukwazi ukuhamba amabanga amade.  
It means you are not able to walk long distances

### **Pain prevents me walking middle distances (not too far)**

1: A: yah...so kusho ukuthi lobuhlungu lobu buyakuvikela ukuthi uhambe  
idistance mhlambe nokuthi ufike emnyango or esitolo( middle distance)

T: Yes... lokhu kusho ukuthi izinhlungu zikuvimbela ukuba uhambe ibanga  
elide kanye nokuthi mhlawumbe ungakwazi ukufinyelela emnyango noma  
esitolo (ibanga elimaphakathi).

Yes...so this means that the pain prevents you to walk/travel a long  
distance and perhaps to reach the door or the shop (middle distance)

31: A: Kusho ukuthi I pain iyakuvumela ukuthi uhambe I distance ekahle nje

T: Kusho ukuthi i-pain iyakuvumela ukuthi uhambe ibanga elimaphakathi nje.  
It means that the pain does not prevent you from travelling medium  
distances.

34: A: kusho ukuthi ubuhlungu buyakuvikela ukuthi uhambe kudenyanana.

T: Kusho ukuthi ubuhlungu buyakuvimbela ukuthi uhambe amabanga amade  
kakhudlwana.

It means the pain prevents you from walking/travelling longer distances.

51:A: kusho ukuthi ubuhlungu buyakuvikela ukuthi uhambe kudenyanana.

T: Kusho ukuthi ubuhlungu buyakuvimbela ukuthi uhambe amabanga amade  
kakhudlwana.

It means the pain prevents you from walking/travelling longer distances.

### **Pain prevents me walking short distances**

34: A: kusho ukuthi ubuhlungu buyakuvikela ukuthi uhambe indlela emfishane.

T: Kusho ukuthi ubuhlungu buyakuvimbela ukuthi uhambe amabanga amafushane.

It means the pain prevents you from walking/travelling shorter distances

51:A: kusho ukuthi ubuhlungu buyakuvikela ukuthi uhambe indlela emfishane.

T: Kusho ukuthi ubuhlungu buyakuvimbela ukuthi uhambe amabanga amafushane.

It means the pain prevents you from walking/travelling shorter distances

### **I can only walk using a stick or crutches**

51: A: kusho ukuthi ngikwazi ukuhamba ngisebenzisa induku.

T: Kusho ukuthi ngikwazi ukuhamba ngisebenzisa induku.

It means I am able to walk using a walking stick.

### **I am in bed most of the time and have to crawl to the toilet**

1: A: yah , uyahluleka ukuhamba

T: Yebo, awukwazi ukuhamba

Yes, you are unable to walk/travel

51: A: kusho ukuthi ngihlala ngise mbhedeni isikhathi esiningi futhi ngiya khokhoba

mengiya endlini encane.

T: Kusho ukuthi ngihlala ngisembhedeni isikhathi esiningi futhi ngiya khokhoba uma

ngiya endlini encane..

It means I am always in bed much time and I struggle to walk to the toilet.

### **Question 5**

#### **Sitting**

51: A: kusho ukuthi ukuhlala

T: Kusho ukuhlala

It means to sit

#### **I can sit in any chair as long as I like**

1: A: njeng la kuthi “ ngiyakazi ukuhlala kunoma isiphi isihlalo, for leskhathi lesi kuze kufike lesikhathi engisifunayo( maybe as long as I like) ,kuze kufike la until mina ngize ngizwe ukuthi ngi right

T: Lapha kuthiwa “ ngiyakwazi ukuhlala kunoma yisiphi isihlalo, isikhathi engisithandayo (isikhathi sonke engithanda ngaso), ngize ngizwe ngenelisiwe.

This one says “I am able to sit on any chair, for this time until my desired time (perhaps as long as I want), until when I feel I am satisfied.

3: A: Err, Mowuhleli kushukuthi ungahlala kunoma isiphi isihlalo, epain ingabikhoba noma ukuhlala kunoma isiphi isihlalo Kodwa epain ibakhona?

T: Err, Uma uhleli kusho ukuthi ungahlala kunoma yisiphi isihlalo, i-pain ingabikho noma ukuhlala kunoma isiphi isihlalo, kodwa i-pain iba khona?

Err, if you sit, it means you can sit at any chair, without pains or sit at any chair and suffer pain.

6: A: Mawuhleli uyakwazi ukuhlala kunoma isiphi isihlalo kuze kufike isikhathi wena osifunayo

T: Uma uhleli phansi, uyakwazi ukuhlala kunoma yisiphi isihlalo kuze kufike

isikhathi wena osifunayo?

When you are sit down, are you able to sit on any chair as long as you want to sit

11: A: Mara mawuhleli kwa manje, mawuhleli kunoma isiphi isihlalo uyezwa ubuhlungu noma ca?

T: Ingabe uhlezi kunoma isiphi isihlalo uyezwa ubuhlungu noma cha?  
As you are seated in any chair, do you fel any pain or nothing?

24: A: Kushukhuthi uyakwazi ukuhlala kunoma isiphi isihlalo kuze kufike kulesikhathi wena osifunayo.

T: Kusho ukuthi uyakwazi ukuhlala kunoma isiphi isihlalo kuze kufike kulesi Sikhathi wena osifunayo.  
It means that you are able to sit on any chair as long as you want.

49: A: kusho ukuthi ngingahlala kunoma isiphi isihlalo ukufikela lesi khathi engisifunayo.

T: Kusho ukuthi ngingahlala kunoma yisiphi isihlalo ukufikela lesi sikhathi engisifunayo.  
It means I can sit on any chair as long as I want.

51: A: kusho ukuthi ngingahlala kunoma isiphi isihlalo ukufikela lesi khathi engisifunayo.

T: Kusho ukuthi ngingahlala kunoma yisiphi isihlalo ukufikela lesi sikhathi engisifunayo.  
It means I can sit on any chair as long as I want.

**I can sit in a comfortable chair as long as I like**

24: A: kushukhuthi uyakwazi ukuhlala kusihlalo esicomfortable kuze kufike lesikathi wena osifunayo.

T: Kusho ukuthi uyakwazi ukuhlala kusihlalo esihlalisa kamnandi kuze kufike lesikathi wena osifunayo.

It means you are able to sit on a comfortable chair as long as you want.

51: A: kusho ukuthi uyakwazi ukuhlala kunoma isiphi isihlalo esikuphatha kahle.

T: Kusho ukuthi uyakwazi ukuhlala kunoma yisiphi isihlalo esikuphatha kahle.

It means I can sit on any comfortable chair.

### **Pain prevents me from sitting for more than about an hour**

3: A: Eyo, kushukhuthi angekheuhlale I hour yodwa

T: Yebo, kusho ukuthi angeke uhlale ihora lodwa.

Yes, this means you will not be able to sit for 1 hour.

11: A: Kushukuthi uyakhona ukuhlala ne hora elinye?

T: Kusho ukuthi uyakhona ukuhlala nehora linye?

It means you are able to sit even one hour.

30: A: kusho ukuthi le pain iyakuvikela ukuthi uhlale ihora elodwa nje

T: Kusho ukuthi le-pain iyakuvimbela ukuthi uhlale ihora elilodwa nje.

It means that the pain prevents you from sitting only just an hour.

31: A: kusho ukuthi iyakuvimbela ukuthi uhlale ihora elodwa.

T: Kusho ukuthi i-pain iyakuvimbela ukuthi uhlale ihora elilodwa.

It means that it prevents you from sitting an hour.

34: A: kusho ukuthi ukuhlala even ihora elilodwa?

T: Kusho ukuthi ukuhlala ngisho ihora elilodwa?

It means sitting for just an hour?

51: A: kusho ukuthi lobuhlungu buyakuvikela ukuthi uhlale ihora elodwa.

T: Kusho ukuthi lobuhlungu buyakuvimbela ukuthi uhlale ihora elilodwa.  
It means that the pain prevents you from sitting one hour.

**Pain prevents me from sitting for more than about a half an hour**

51: A: kusho ukuthi lobuhlungu buyakuvikela ukuthi uhlale imizuzwane eyishumi  
nantathu.

T: Kusho ukuthi lobuhlungu buyakuvimbela ukuthi uhlale imizuzu eyishumi  
nantathu.

It means that the pain prevents you from sitting thirteen minutes.

**Pain prevents me from sitting for more than about 10 minutes**

34: A: kusho ukuthi lobuhlungu buyakuvikela ukuthi uhlale ihora elodwa noma I  
ten minutes?

T: Kusho ukuthi lobuhlungu buyakuvimbela ukuthi uhlale ihora elilodwa noma  
imizuzu eyishumi?

It means this pain prevents you from sitting just one hour or ten minutes.

51: A: kusho ukuthi buhlungu buyakuvikela ukuthi uhlale imizuzwane eyishumi

T: Kusho ukuthi buhlungu buyakuvimbela ukuthi uhlale imizuzu eyishumi.

It means that the pain prevents you from sitting ten minutes.

**Pain prevents me from sitting at all**

51:A. kusho ukuthi ubuhlungu buyakuvikela ukuthi uhlale.

T: Kusho ukuthi ubuhlungu buyakuvimbela ukuthi uhlale.

It means that the pain prevents you from sitting

## **Question 6**

### **Standing**

30: A: Ukuma

T: Ukuma

Standing

34: A: Kusho ukuthi ukuma.

T: Kusho ukuthi ukuma.

It means standing.

49: A: sikhuluma ngokuma manje eh standing

T: Sikhuluma ngokuma manje.

We are talking about standing

51: A: Kusho ukuthi ukuma.

T: Kusho ukuthi ukuma.

It means standing.

### **I can stand as long as I want without extra pain**

3: A: Monomial ke uyakwazi ukuma epain ingabi khona, noma I khona.

T: Monomial uyakwazi ukuma i-pain ingabi khona, noma ikhona.

Monomial you are able to stand without pain even if it is there.

11: A: Mowumile mama, bukhona ubuhlungu?

T: Uma umile Mama, bukhona ubuhlungu obuzwayo?

If you are standing mom, do you feel any pain?

24: A: kushu kuthi I can stand as long as I want without extra, Kushukhuthi

uyakwazi ukuma isikhathi osifunayo ungazibangeli epain  
Kushukhuthi uyakwazi ukuma isikhathi osifunayo kodwa eyakubangela  
epain

T: Kusho ukuthi ngingema ngokuthanda ngaphandle kwe-extra, kusho ukuthi  
uyakwazi ukuma isikhathi osifunayo ungazibangeli i-pain  
Kusho ukuthi uyakwazi ukuma isikhathi osifunayo kodwa eyakubangela i-  
pain

It means I can stand as long as I want without extra, it means you are  
able to stand as long as you want without causing any pain.

It means you are able to stand as long as you want without causing any  
pain

49: A: kusho ukuthi ngingama isikhathi kleso engisifunayo ngingazibangeli ipain.

T:Kusho ukuthi ngingama isikhathi leso engisifunayo ngingazibangeli i-pain.

It means I can stand as long as I want without causing pain to myself.

51: A: kusho ukuthi ngiyakwazi ukuma lesi khathi engisifunayo ngingazibangeli  
ubuhlungu.

T: Kusho ukuthi ngiyakwazi ukuma lesi khathi engisifunayo ngingazibangeli  
ubuhlungu.

It means I am able to stand as long as I want without causing pain to  
myself.

### **I can stand as long as I want but it gives me extra pain**

3: A: Kodwa ungama isikhathi osifunayo

T: Ingabe uyakwazi ukuma isikhathi osifunayo?

Are you able to stand as much time as you like

49: A: kusho ukuthi ngingama lesi khathi engisifunayo kodwa ngiyayizwa ipain.

T: Kusho ukuthi ngingama lesi sikhathi engisifunayo kodwa ngiyayizwa i-

pain.

It means I can stand as long as I want, however, feeling the pain.

51: A: kusho ukuthi ngiyakwazi ukuma lesi khathi engisifunayo kodwa kungibangela ubuhlungu.

T: Kusho ukuthi ngiyakwazi ukuma lesi khathi engisifunayo kodwa Kungibangela ubuhlungu.

It means I am able to stand as long as I want but experiencing pain.

### **Pain prevents me from standing for more than about 1 hour**

11: A: Kushukhuthi ungama ihora elodwa?

T: Kusho ukuthi ungama ihora elilodwa?

This means that you can stand one hour.

31: A: kusho ukuthi ubuhlungu buyangivikela ukuthi ngime ihora elodwa.

T: Kusho ukuthi ubuhlungu buyangivimbela ukuthi ngime ihora elilodwa.

It means pain prevents me from standing an hour.

34: A: kusho ukuthi ubuhlungu buyangivikela ukuthi ngime ihora elodwa.

T: Kusho ukuthi ubuhlungu buyangivimbela ukuthi ngime ihora elilodwa.

It means pain prevents me from standing an hour.

51: A: kusho ukuthi ubuhlungu buyangivikela ukuthi ngime ihora elodwa.

T: Kusho ukuthi ubuhlungu buyangivimbela ukuthi ngime ihora elilodwa.

It means pain prevents me from standing an hour

### **Pain prevents me from standing for more than about half an hour**

31: A: kusho ukuthi ihafu ye hora

T: Kusho ukuthi isigamu sehora

It means half an hour

34: A: kusho ukuthi ubuhlungu buyangivikela ukuthi ngime imizuzwane eyishumi nantathu.

T: Kusho ukuthi ubuhlungu buyangivimbela ukuthi ngime imizuzu eyishumi nantathu.

It means the pain prevents me from standing thirteen minutes.

51: A: kusho ukuthi ubuhlungu buyangivikela ukuthi ngime imizuzwane eyishumi nantathu.

T: Kusho ukuthi ubuhlungu buyangivimbela ukuthi ngime imizuzu eyishumi nantathu.

It means the pain prevents me from standing thirteen minutes

### **Pain prevents me from standing for more than about ten minutes**

34: A: kusho ukuthi lobuhlungu buyangivikela ukuthi ngime imizuzwane eyishumi.

T: Kusho ukuthi lobuhlungu buyangivimbela ukuthi ngime imizuzu eyishumi

It means the pain prevents me from standing ten minutes.

51: A: kusho ukuthi lobuhlungu buyangivikela ukuthi ngime imizuzwane eyishumi.

T: Kusho ukuthi lobuhlungu buyangivimbela ukuthi ngime imizuzu eyishumi.

It means the pain prevents me from standing ten minutes.

### **Pain prevents me from standing at all**

51: A: kusho ukuthi ubuhlungu buyangivikela kuthi ngime

T: Kusho ukuthi ubuhlungu buyangivimbela kuthi ngime.

It means the pain prevents me from standing.

### **Question 7**

## **Sleeping**

30: A: kusho ukuthi ukulala

T: kusho ukuthi ukulala

It means sleeping

34: A: kusho ukuthi ukulala

T: Kusho ukulala

It means to sleep

51: A: kusho ukuthi ukulala

T: Kusho ukulala

It means to sleep

## **My sleep is never disturbed by pain**

3: A: Mowulele kebaba uyapazamiseka epain mowu lele?

T: Uma ulele ke-baba, ingabe le-pain iyakuphazamisa?

If you are asleep daddy, are you being disturbed by the pain

11: A: Mowulele uyaphazamiseka ubuhlungu bakho noma ca?

T: Uma ulele ingaba i-pain iphazamisa ubuhlungu bakho noma cha?

If you are asleep, does the pain disturb you or not?

24: A: kushukuthi mawulele epain ayikuphazamisi.

T: Kusho ukuthi uma ulele i-pain ayikuphazamisi.

It means when you are asleep you are not disturbed by the pain.

31: A: kusho ukuthi ubuhlungu abuphazamisi ubuthongo bami.

T: Kusho ukuthi ubuhlungu abuphazamisi ubuthongo bami.

It means the pain does not disturb my sleep.

34: A: kusho ukuthi ubuhlungu abuphazamisi ubuthongo bami.

T: Kusho ukuthi ubuhlungu abuphazamisi ubuthongo bami.

It means the pain does not disturb my sleep.

49: A: kusho ukuthi kulala kwami akuphaza nyiswa I pain

T: Kusho ukuthi ukulala kwami akuphazanyiswa yi-pain.

It means my sleep is not disturbed by pains.

51: A: kusho ukuthi ubuhlungu abuphazamisi ubuthongo bami.

T: Kusho ukuthi ubuhlungu abuphazamisi ubuthongo bami.

It means the pain does not disturb my sleep.

57: A: ukulala kwami kuya phazamiseka ilobuhlungu lobu.

T: Ukulala kwami kuphazanyiswa ilobuhlungu lobu.

My sleep is being disturbed by this pain.

### **My sleep is occasionally disturbed by pain**

1: A: hhayi kusho ukuthi uyalala kodwa iyakuphazamisa?

T: Hhayi kusho ukuthi uyalala kodwa (i-pain) iyakuphazamisa?

No it means that you sleep but it disturbs you.

3: A: Laphonapho?

T: Lapho nalapho?

Here and there?

6: A: Mowulele khona uyaphazamiseka

T: Uma ulele khona uyaphazamiseka

When you are asleep do you get disturbed?

24: A: kushukhuthi mawulele lapha nalapha iyakuphazamisa ipain.

T: Kusho ukuthi uma ulele lapha nalapha iyakuphazamisa i-pain

It means when you are asleep here and there the pain disturbs you

31: A: kusho ukuthi lapho nalapho iyangiphazamisa

T: Kusho ukuthi lapho nalapho iyangiphazamisa

It means it disturbs me here and there

34: A: kusho ukuthi ubuhlungu buyaphazamisa ubuthongo bami lapho na lapho.

T: Kusho ukuthi ubuhlungu buyabuphazamisa ubuthongo bami lapho  
nalapho.

It means the pain disturbs my sleep here and there.

49: A: Okey, so kusho ukuthi I occasionally , shuthi ialpgha nalapha

T: Ok, “occasionally” kusho ukuthi lapha nalaphaya.

Okay, occasionally, means here and there.

51: A: kusho ukuthi ubuhlungu buyaphazamisa ubuthongo bami lapho na lapho.

T: Kusho ukuthi ubuhlungu buyabuphazamisa ubuthongo bami lapha  
nalapho.

It means the pain does disturb my sleep here and there.

57: A: Kusho ukuthi lapho na lapho hayi njalo

T: Kusho ukuthi lapho nalapho hayi njalo

It means here and there and not always

### **Because of pain I have less than about 6 hours sleep**

3: A: Okay , kusho ukuthi ama hour awu six sawamaningi kakhulu

T: Okay, kusho ukuthi amahora ayisi- 6 awamaningi kakhulu.

Okay, it means six hours are not too much

11: A: Kodwa kahle kahle, uyakwazi ukulala mahora ayisithupha ungaphazamsekhi?

T: Kodwa kahle kahle, uyakwazi ukulala amahora ayisithupha ungaphazamiseki?

Really, are you able to sleep six hours without interruption?

51: A: kusho ukuthi ubuhlungu buyangivimbela ukuthi ngilale amahora ayisithupha.

T: Kusho ukuthi ubuhlungu buyangivimbela ukuthi ngilale amahora ayisithupha.

It means the pain does prevent me to sleep six hours.

### **Because of pain I have less than about 4 hours sleep**

6: A: manje Gogo uyakwazi ukulala amahora amane

T: manje Gogo uyakwazi ukulala amahora amane

Now Grandma are you able to sleep for four hours

51: A: kusho ukuthi ubuhlungu buyangivimbela ukuthi ngilale amahora amane.

T: Kusho ukuthi ubuhlungu buyangivimbela ukuthi ngilale amahora amane.

It means the pain does prevent me to sleep four hours

### **Because of pain I have less than about 2 hours sleep**

30: A: kusho ukuthi ubuhlungu buyangivimbela ukuthi ngilale amahora amabili.

T: Kusho ukuthi ubuhlungu buyangivimbela ukuthi ngilale amahora amabili.

It means the pain prevents me from sleeping two hours

51: A: kusho ukuthi ubuhlungu buyangivimbela ukuthi ngilale amahora amabili.

T: Kusho ukuthi ubuhlungu buyangivimbela ukuthi ngilale amahora amabili.

It means pain prevents me from sleeping two hours.

**Pain prevents me from sleeping at all**

1: A: so ok lena kusho ukuthi ubuhlungu lobu buyakuvikela ukuthi ulale nje noma ini iyakuvikela ukuthi ulale?

T: So ok, lena isho ukuthi ubuhlungu lobu buyakuvimbela ukuthi ulale nje noma yinini.

So this one means that the pain prevents you from sleeping, at any time

51: A: kusho ukuthi ubuhlungu buyangivimbela ukuthi ngilale

T: Kusho ukuthi ubuhlungu buyangivimbela ukuthi ngilale.

It means pain prevents me from sleeping.

**Question 9**

**Social life**

24: A: kushukhuthi izinto othanda ukuzi yenza

T: Kusho ukuthi izinto othanda ukuzi yenza

It means the things you enjoy doing

30: A: ok lana gogo, kushukuthi I social life

T: Ok lapha Gogo, kusho ukuthi impilo yakho yezokuhlalisana (i-social life)

Ok, here Grandma, it means social life

31: A: kusho ukuthi I social life izinto othanda ukuzenza, mhlampe ingadi

ukuhlala nje noma ukubukula I tv , I social life ukuhamba noma ukuvakashela abomzala.

T: Kusho ukuthi i-social life yizinto othanda ukuzenza, mhlawumbe ukwenza

Ingadi ukuhlala nje noma ukubukela i-tv , i-social life ukuhamba noma

ukuvakashela abomzala.

It means social life are things you enjoy doing, for example gardening, relaxing or watching tv, social life is travelling or visiting your cousins.

49: A: kusho ukuthi izinto engoithanda ukuzenza

T: Kusho izinto engithanda ukuzenza

It means things that I like to do.

50: A: Kusho ukuthi izinto othanda ukuzenza, njengoba like ukuzikhipha.

T: Kusho ukuthi izinto othanda ukuzenza, njengokuzikhipha.

It means the things that you enjoy doing, like going out.

**My social life (activities I enjoy doing) is normal and causes me no extra pain**

3: A: Manje baba wena uyakwazi ukuphuma mhlawumbhe uyekuzihlobeni zakho, bakho kushukhuthi uyakwazi ukuqubeka wenza lezintio kaduzenza?

T: Manje baba wena uyakwazi ukuphuma mhlawumbe uye ezihlobeni zakho, bakho, kusho ukhuthi uyakwazi ukuqhubeka wenza lezinto ekade uzenza?

Now dad, are you able to walk/travel to visit your relations, that means are you able to continue doing what you use to do?

11: A: Err, ebese izinto othanda ukuzenza mhlabhe kunabantu abathanda ukuzikhipha, noma ukuyenza ingadi, wena ungathi uyakhona ukuzenza izinto ozthandayo noma ubuhlungu buyakuvimbela

T: Err, bese izinto othanda ukuzenza, mhlawumbe kunabantu abathanda ukuzikhipha, noma ukwenza ingadi, wena ungathi uyakhona ukuzenza izinto ozithandayo noma ubuhlungu buyakuvimbela ukwenza lokho.

Err, regarding what you enjoy doing, perhaps there are people who like visiting, like doing gardening, are you able to do what you like or the pain prevents you doing that?

- 24: A: kushukhuthi uyakwazi ukuyenza izinto ozithandayo nje ngenjwayelo ungazibangeli epain.  
T: Kusho ukuthi uyakwazi ukuyenza izinto ozithandayo nje ngenjwayelo ungazibangeli i-pain.  
It means you enjoy doing as usual, without causing yourself pain
- 30: A: kusho ukuthi izinto obuthanda ukuzenza nge njwayelo usakhona ukuzenza na?.  
T: kusho izinto obuthanda ukuzenza ngenjwayelo ngesikhathi usakhona ukuzenzela?.  
It means things that you enjoy doing as usual when you were able to do things on yourself?
- 34: A: kusho ukuthi ubuhlungu abungiphazamisi ukuthi ngenze lezinto engizi thandayo.  
T: Kusho ukuthi ubuhlungu abungiphazamisi ukuthi ngenze lezinto engizithandayo.  
It means the pain does not prevent me from doing the things I enjoy doing.
- 49: A: kusho ukuthi ngingakhona ukwenza lezinto engizi thandayo ngiyakwazi ukuzenza and ayingiphazamisi kuyona.  
T: Kusho ukuthi ngingakhona ukwenza izinto engizithandayo kanti futhi ayingiphazamisi kuzona.  
It means I am able to do the things I like and it does not disturb.
- 51: A: kusho ukuthi ubuhlungu abungiphazamisi ukuthi ngenze lezinto engizi thandayo.  
T: Kusho ukuthi ubuhlungu abungiphazamisi ukuthi ngenze lezinto engizithandayo.  
It means the pain does not prevent me from doing the things I enjoy doing.

57: A: kusho ukuthi lezinto engithanda ukuzenza, err azingibangeli ipain,  
azibangi lobuhlungu lobu

T: Kusho ukuthi lezinto engithanda ukuzenza, err azingibangeli i-pain,  
Azibangi lobuhlungu lobu.

It means the things that I enjoy doing, err they do not cause me pain, they  
do not cause this pain.

### **My social life is normal but increases the degree of pain**

1: A: then lena yona ithi yona lenzinto ozithandayo uyakhona ukuzenza, koda  
iyabuphakamisa lobuhlungu lobu mabathi (increase) bathi iyabuphakamisa

T: Lena isho ukuthi izinto lezo ozithandayo uyakwazi ukuzenza, kodwa  
kuyokwenza ukuba i-pain yande, uma kukhulunywa ngo-increase.

Then this one says the very things you like you are able to do, but it will  
make the pain be more when they say increase.

24: A: kushukhuthi uyakwazi ukuyenza izinto ozithandayo kodwa kuphakamisa  
ukuzwakwami epain

T: Kusho ukuthi uyakwazi ukuzenza izinto ozithandayo kodwa kuphakamisa  
ukuzwa kwami i-pain khudlwana

It means you are able to do what you enjoy doing, but this increases pain  
to you

51: A: kusho ukuthi ngiyakwazi ukwenza izinto engizi thandayo kodwa  
ziphakamisa ubuhlungu bami.

T: Kusho ukuthi ngiyakwazi ukwenza izinto engizithandayo kodwa  
Ziphakamisa ubuhlungu.

It means I am able to do the things I enjoy doing but they increase the  
pain.

**Pain has no significant effect on my social life apart from limiting my more energetic interests, e.g. sport etc.**

1: A: unamba 3 yena uthi lobuhlungu lobu abuna...abukuphazamisi mabethi (no effect) shuthi abukuphazamisi kule zinto engiziyenzayo empilweni, engizithandayo then ma bethi ' apart from limiting needs my more energetic needs' e. g. I sport buyafika lobuhlungu lobu kusho ukuthi mele ngenze izinto okumele ngigujime noma iyakuphazamisa?

T: Inombolo yesi-3 ithi le-pain ayina...ayiphazamisa uma kuthiwa, "no effect", kusho ukuthi ayingiphazamisi kulokho engikwenzayo empilweni, lokho engikuthandayo uma kuthiwa ngaphandle kokunciphisa izidingo zami zamandla, isib. kumdlalo i-pain lena iyavela ngesikhathi ngifuna ukwenza izinto ezifana nokugijima noma ingiphazamise.

Number 3 says this pain has no...does not disturb when they say no effect, it means that it does not disturb me from what I do in life, that I like then when they say apart from limiting needs my more energetic needs, e.g. in sport this pain comes when I want to do things such as running or it disturbs you.

51: A: kusho ukuthi ubuhlungu abungivikeli ukuthi ngenze lezinto engizi thandayo ngaphandle kwesport, nalezi ezidinga ukuthi ngigijime.

T: Kusho ukuthi ubuhlungu abungivimbeli ukuthi ngenze lezinto engizithandayo ngaphandle kwemidlalo, nalezi ezidinga ukuthi ngigijime. It means that pain does not prevent me from doing the things I enjoy doing, except sport, and those that requires me to run.

**Pain has restricted my social life and I do not go out as often**

1: A: ok le isho ukuthi ubuhlungu sebukuvikele ukuthi u enjoye , uzwe ubumnandi ngalezinto obujwayele ukuzenza, and then awukwazi ukuphuma izinsuku eziningi meaning I can not go out without pain ,awuphumi izinsuku eziningi,

angithi kwezinye isikhathi uya kwi society, mhlambe uya e Meadowlands uhlala e Orlando, mhlampe nihlangana kayi 4 enyangeni wena uya nini nje?

T: Ok lokhu kusho ukuthi i-pain ingivimbela ekuzijabuliseni, ukuthokozela izinto ozithandayo, kanti futhi awukwazi ukuzikhipha ezinsukwini eziningi, lokhu kusho ukuthi angikwazi ukuhamba ngaphandle kwe-pain, awukwazi ukuzikhipha amalanga amaningi, angisho kwezinye izinsuku uya emihlanganweni, mhlawumbe uya eMeadowlands kanti uhlala e-Orlando, mhlawumbe nihlangana ka-4 ngenyanga nangesikhathi oya ngaso?

Ok this means that the pain prevents you from enjoyment, you enjoy things you used to do, and then you are not able to move out many days, meaning that I cannot go without pain, you are not able to move out many days, isn't it in some days you go to the association, perhaps you go to Meadowlands and you live in Orlando, perhaps you meet 4 times a month and when do you go there?

6: A: manje Gogo uyahamba uyovakasha ngesikhathi sakho, ubone umakhelwane, noma uGogo akasaphumi kangakho

T: Manje Gogo uyahamba uyovakasha ngesikhathi sakho sokuphumula, isibonelo, ubone omakhelwane, noma uGogo akasaphumi kangakho kulezi zinsuku?  
Now Grandma you go and visit during your leisure time, for example, visit your neighbours or you do not go out that much to visit these days

34: A: kusho ukuthi ubuhlungu buyangivikela ukuthi ngenze lezinto engizithandayo.

T: Kusho ukuthi ubuhlungu buyangivimbela ukuthi ngenze ezinto engithandayo ukuzenza.

It means that pain does prevent me from doing the things I enjoy doing.

49: A: kodwa ngingathi uMa izinto azithandayo like ukuvakasha, so ngingathi ipain yenza ukuthi ngingathi uyaku vikela ukuthi uphume kahle.

T: Kodwa ngingathi uMama izinto azithandayo njengokuvakasha, so ngingathi i-pain iyakuvimbela ukuthi uzikhiphe.

But I could say, Mom what you like visiting, does the pain prevents you from going out well

51: A: kusho ukuthi ubuhlungu buyangivikela ukuthi ngenze lezinto engizithandayo.

T: Kusho ukuthi ubuhlungu buyangivimbela ukuthi ngenze ezinto engithandayo ukuzenza.

It means that pain does prevent me from doing the things I enjoy doing.

### **Pain has restricted social life to my home**

1: A: ok la kusho ukuthi le pain ayisakuvumeli nokuthi uphume endlini, uphelela endlini?

T: Ok lapha kusho ukuthi i-pain ayikuvimbela ngisho ukuba uphume endlini, uhlala endlini.

Ok here it means that the pain does not allow you even to move out of the house, you are confined to the house.

3: A: Manje kushukhuthi isikathisakho sicitha usendlini?

T: Manje kusho ukhuthi isikathisakho esiningi usicitha usendlini?

Now it means you spend most of your time in house?

32: A: Kushukuthi lepain seyenza ukuthi uhlale ekhaya wenze lezinto ozithandayo ekhaya.

T: Kusho ukuthi i-pain seyenza ukuthi uhlale ekhaya wenze lezinto ozithandayo ekhaya.

It means this pain has made you always be at home to do the things you like at home.

34: A: Kushukuthi epain seyenza ukuthi uwenze lezintio ozithandayo ekhaya.

T: Kusho ukuthi i-pain yenza ukuthi wenze izinto ozithandayo usekhaya.

It means that pain makes you do things you like from home.

49: A: Shuthi usaba ngumuntu walapha ekhaya nje

T: Kusho ukuthi sewaba ngumuntu walapha ekhaya nje na?

Have you been confined to the house as a result?

51: A: Kushukuthi epain seyenza ukuthi uwenze lezintio ozithandayo ekhaya.

T: Kusho ukuthi i-pain yenza ukuthi wenze izinto ozithandayo usekhaya.

It means that pain makes you do things you like from home.

### **I have no social life because of pain**

1: A: Kusho kuthi ubuhlungu buyangivikela ukuthi ngenze lezinto ebengizithanda.

T: Lokhu kusho ukuthi ubuhlungu buyangivimbela ukuthi ngenze lezinto ebengizithanda.

This means that the pain prevents me from doing what I enjoy doing.

51: A: Kusho kuthi ubuhlungu buyangivikela ukuthi ngenze lezinto engizithandayo

T: Kusho kuthi ubuhlungu buyangivimbela ukuthi ngenze lezinto engizithandayo.

It means that pain prevents me from doing the things I enjoy doing.

### **Question 10**

#### **Traveling**

1: A: kusho ukuthi uhambo.

T: Kusho ukuthi uhambo  
This means traveling

24: A: kushukhuthi uhambo

T: Kusho ukuthi uhambo  
This means travelling

30: A: Then la bakhuluma ngohambo, kusho ukuthi mhlampe uhambe  
uyovakasha uthekweni, iyakwazi ukuhlala mhlambe thirteen days...

T: Lapha-ke bakhuluma ngohambo, kusho ukuthi mhlawumbe uhambe  
uyovakasha uthekweni, iyakwazi ukuhlala mhlambe thirteen days...  
Then here, they talk about travelling, it means, say you travel to visit in  
Durban, you are able to stay, perhaps for thirteen days...

31: A: kusho ukuthi uhambo, iyabuza ukuthi , lana izokuthela

T: Kusho ukuthi uhambo, iyabuza, lana izokuthela  
It means traveling, it asks, here it will tell you

34: A: kusho ukuthi uhambo.

T: Kusho ukuthi uhambo  
This means traveling

51: A: kusho ukuthi uhambo.

T: Kusho ukuthi uhambo  
This means traveling

### **I can go anywhere without pain**

1: A: kusho ukuthi unghamba uyenomakuphi ungzibangeli ubuhlungu.

T: Lokhu kusho ukuthi ungangahamba uye noma yikuphi ungangazibangeli \ ubuhlungu.

This means that you can go anywhere and not cause yourself pain.

12: A: so kusho ukuthi ungangabhala uthi i can go anywhere without pain

T: So lokhu kusho ukuthi ungangabhala uthi, "I can go anywhere without pain."

This means that you can write this: " I can go anywhere without pain"

24: A: kushukhuthi uyakwazi ukuya noma kuphi ungangazibangeli epain.

T: Kusho ukuthi uyakwazi ukuya noma kuphi ungangazibangeli i-pain.

It means you are able to go anywhere without causing pain

31: A: Ikusho ukuthi ungangahamba uyenomakuphi ngenena pain.

T: Kusho ukuthi ungangahamba uye nomakuphi ngingenayo i- pain.

It means you can travel to anywhere without pain

34: A: kusho ukuthi ungangahamba uyenomakuphi ungangayizwa ipain.

T: Kusho ukuthi ungangahamba uye nomakuphi ungangayizwa i-pain.

It means that you can go/travel anywhere without feeling the pain.

49: A: then la babuza ukuthi I can go anywhere without pain, kusho ukuthi

Ungangahamba uyenomakuphi mhlampe e drobheni ungangayizwa I pain mhlampe ungena emotweni, uhlale

T: Lapha-ke babuza ukuthi "can I go anywhere without pain?" bafuna ukwazi

Ukuthi uma ungangaya nomaphi, mhlawumbe edolobheni ngaphandle kokuzwa i-pain, isibonelo uma ungena futhi uhlala emotweni.

Then where they ask if I could go anywhere without pain, they mean if you could go anywhere, perhaps to town without feeling the pain, for example when entering the car and sitting

51: A: kusho ukuthi ungangahamba uyenomakuphi ungangazibangeli ubuhlungu.

T: Kusho ukuthi ungangahamba uye noma kuphi ungangazibangeli ubuhlungu.  
It means you can walk/travel to anywhere without causing pain to yourself.

**I can go anywhere but it gives extra pain**

1: A: kusho ukuthi ungangahamba uyenomakuphi kodwa ubuhlungu buzwakale kakudlwane.

T: Lokhu kusho ukuthi ungangahamba uye noma yikuphi kodwa ubuhlungu buyozwakala kakhudlwana.

This means that you can go anywhere but the pain will be more.

24: A: kushukhuthi uyakwazi ukuya noma kuphi kodwa eyakubangela epain.

T: Kusho ukuthi uyakwazi ukuya noma kuphi kodwa kukubangele i-pain.  
It means you are able to go anywhere but causing pain to yourself

51: A: kusho ukuthi ungangahamba uyenomakuphi kodwa ubuhlungu buzwakale kakudlwane.

T: Kusho ukuthi ungangahamba uye noma kuphi kodwa ubuhlungu buzwakale kakhudlwane.

It means you can walk/travel to anywhere but the pain will increase.

**Pain is bad but I manage journeys of about two hours**

1: A: kusho ukuthi ubuhlungu bukhona kodwa uyakhona ukuhamba amahora amabili.

T: Lokhu kusho ukuthi ubuhlungu bukhona kodwa uyakwazi ukuhamba amahora amabili.

This means that there is pain but you are able to walk/travel two hours.

11: A: Okay, eyokucina mama, lombuzo ubuza ukuthi mawuhamba, ikhona indlela ongayihamba laungacitha mahora amabili, mhlambhe ukuya

eNewcastle, noma uyazihambhlea ngezi nyawo.

T: Okay, owokugcina Mama, lombuzo ubuza ukuthi uma uhamba, ikhona indlela ongayihamba la ungachitha khona amahora amabili, mhlawumbe njengokuya eNewcastle, noma uyazihambhela ngezi nyawo.

Okay, last Mom, this question asks if you walk/travel, can you take any \ journal of about two hours like going to Mewcastle, for example or walking on foot.

12: A: I answere in terms of awuboni ukuthi ungayia traveler I two hours.

T: Impendulo ngokuya kokuthi awuboni ukuthi ungawahamba amahora amabili.

So if they say, “manage” they want to know if you could take two hours.

51: A: kusho ukuthi ubuhlungu bukhona kodwa uyakhona ukuhamba amahora amabili.

T: Kusho ukuthi ubuhlungu bukhona kodwa uyakhona ukuhamba amahor amabili.

It means there is pain but you are able to walk/travel for two hours.

### **Pain restricts me to journeys of about one hour**

1: A: kusho ukuthi ubuhlungu benza ukuthi ngihambe imizuzwane eyishumi.

T: Lokhu kusho ukuthi ubuhlungu benza ukuthi ngihambe imizuzu eyishumi.

This means that the pain makes me walk/travel for ten minutes.

3: A: Manje mowunabo uyakwazi ukucitha I hour?

T: Uma unabo, uyakwazi ukuqeda ihora ninabo?

If you are with them, are you able to spend an hour with them?

11: A: Kushukuthi angeke ukhona ukuhamba indlela ezokuththatha ihora elodwa

T: Kusho ukuthi angeke ukhona ukuhamba indlela ezokuthatha ihora elilodwa

This means that you are unable to walk/travel a destination that will take you an hour.

51: A: kusho ukuthi ubuhlungu benza ukuthi ngihambe imizuzwane eyishumi.

T: Lokhu kusho ukuthi ubuhlungu benza ukuthi ngihambe imizuzu eyishumi.

This means that the pain makes me walk/travel for ten minutes.

### **Pain restricts me to short necessary journeys less than thirty minutes**

1: A: kusho ukuthi ubuhlungu benza ukuthi ngihambe imizuzwane eyishumi nantathu.

T: Lokhu kusho ukuthi ubuhlungu benza ukuthi ngihambe imizuzu eyishumi nantathu.

This means that the pain makes me walk/travel for thirteen minutes.

49: A: so kusho ukuthi i-pain yenza ukuthi uhambe amadistance amafishanyana nje

T: So lokhu kusho ukuthi i-pain yenza ukuthi uhambe ibanga elifushane kuphela.

So this means that the pain makes you walk/travel short distances only

51: A: kusho ukuthi ubuhlungu benza ukuthi ngihambe imizuzwane eyishumi nantathu.

T: Lokhu kusho ukuthi ubuhlungu benza ukuthi ngihambe imizuzu eyishumi nantathu.

This means that the pain makes me walk/travel for thirteen minutes.

### **Pain prevents me from traveling except to receive treatment**

1: A: kusho ukuthi ubuhlungu buyangivikela ukuthi ngihambe ngaphandle kokuthi ngilande imithi noma amapilisi.

T: Lokhu kusho ukuthi ubuhlungu buyangivimbela ukuthi ngihambe ukuyothatha imithi noma amapilisi.

This means that the pain prevents me to walk/travel and collect medicine and pills.

18: A: Lombuzo uthi epain iyakuvikela ukhuti uhambe except ukuthi uzolanda imithi yakho, ngaphandle kwalokho mongeke uhambe?

T: Lombuzo uthi i-pain iyakuvimbela ukuthi uhambe ngaphandle uma uyolanda imithi yakho, ngaphandle kwalokho ubungeke uhambe?

This question says the pain prevents you from travelling except to collect your medicine, if it were not for that, you would not travel.

24: A: kusho ukuthi usuhamba nje ukuthi uthole ukuwelashwa.

T: kusho ukuthi usuhamba nje ukuthi uthole ukwelashwa.

It means as you travel, have you already received treatment.

31: A: kusho ukuthi awuhambi kodwa uma kumele auhambe uyolashwa Esibhedlela uyonda I treatment, ila ohamba khona kuphela.

T: Kusho ukuthi awuhambi kodwa uma kumele uhambe uyolashwa noma uyolanda imithi esibhedlela, ilapho ohamba khona kuphela.

It means you do not travel but if you have to go for treatment or collect medicine at the hospital that is when you travel only

34: A: kusho ukuthi uyahamba uyoyhola I treatment , angaphandle kwalokho bungeke nje uhambe? ngaphandle kokuthi ngilande imithi noma amapilisi.

T: Kusho ukuthi unghamba uyothola ukwelashwa, ngaphandle kwalokho ubungeke uhambe. Ngaphandle kokuyokuthatha imithi noma amapilisi.

It means that you can go get treatment except that, you would not walk/travel. Except collecting medicine or pills.

51: A: kusho ukuthi ubuhlungu buyangivikela ukuthi ngihambe ngaphandle

kokuthi ngilande imithi noma amapilisi.

T: Kusho ukuthi ubuhlungu buyangivimbela ukuthi ngihambe ngaphandle kokuthi kuphela uma ngilande imithi noma amapilisi.

It means pain prevents me from walking/travelling except, collecting medicine or pills.

**Appendix J: Consistency of translations done by research assistant**

Q	Option	How many translations are the same for the option (consistency)	%	Meaning of translation similar to English modified ODI (Consistency)	%	How many back translations are the same as original translation
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1	Pain intensity	3/7	43 %	6/7	86 %	4/7
	I have had no pain today	0/2	0 %	2/2	100 %	2/2
	The pain has been mild today	2/4	50 %	4/4	100 %	4/4
	The pain has been moderate today	2/4	50 %	4/4	100 %	0/4
	The pain has been severe today	4/4	100 %	4/4	100 %	2/4
	The pain has been very severe today	2/2	100 %	0/2	0 %	2/2
	The pain has been the worst imaginable today	2/2	100 %	2/2	100 %	0/2
2	Personal care(washing, dressing etc.)	1/2	50 %	2/2	100 %	2/2
	I can look after myself normally without causing extra pain	3/4	75 %	4/4	100 %	2/4
	I can look after myself normally but because of the pain it is difficult	3/8	37.5 %	7/8	87.5 %	2/8
	The pain causes me to be slow and careful when I am looking after myself	0/2	0 %	0/2	0 %	0/2
	I need some help	0/3	0 %	0/3	0 %	1/3

	because of the pain but I manage most of my personal care.					
	I need help everyday in most of my personal care.	0/3	0 %	0/3	0 %	2/3
	I can't get dressed, wash with difficulty and stay in bed.	0/3	0 %	0/3	0 %	3/3
3	Lifting	4/5	80 %	4/5	80 %	4/5
	I can lift heavy objects without extra pain	3/8	37.5%	5/8	62.5 %	5/8
	I can lift heavy objects but it gives me extra pain	0/2	0 %	1/2	50 %	1/2
	Pain prevents me from lifting heavy objects but I can manage if they are conveniently positioned, e.g. on a table	0/3	0 %	3/3	100 %	2/3
	I can lift only very light objects	2/5	40 %	5/5	100 %	5/5
	I cannot carry anything at all	0/3	0 %	1/3	33 %	2/3
4	Walking	2/2	100 %	2/2	100 %	2/2
	Pain does not prevent me walking any distance	3/7	43 %	5/7	71.4 %	3/7

	Pain prevents me walking far	2/5	40 %	5/5	100 %	0/5
	Pain prevents me walking middle distances (not too far)	0/4	0 %	1/4	25 %	0/4
	Pain prevents me walking short distances	2/2	100 %	2/2	100 %	0/2
	I can only walk using a stick or crutches	1/1	100 %	1/1	100 %	1/1
	I am in bed most of the time and have to crawl to the toilet	0/2	0 %	0/2	0 %	0/2
5	Sitting	1/1	100 %	1/1	100 %	1/1
	I can sit in any chair as long as I like	2/7	29 %	5/7	71 %	4/7
	I can sit in a comfortable chair as long as I like	0/2	0 %	1/2	50 %	1/2
	Pain prevents me from sitting for more than about an hour	0/6	0 %	6/6	100 %	5/6
	Pain prevents me from sitting for more than about a half an hour	1/1	100 %	0/1	0 %	1/1
	Pain prevents me from sitting for more than about 10 minutes	0/2	0 %	1/2	50 %	1/2

	Pain prevents me from sitting at all	1/1	100 %	1/1	100 %	1/1
6	Standing	2/4	50 %	4/4	100 %	4/4
	I can stand as long as I want without extra pain	0/5	0 %	4/5	80%	4/5
	I can stand as long as I want but it gives me extra pain	0/3	0 %	2/3	67 %	0/3
	Pain prevents me from standing for more than about 1 hour	3/4	75 %	3/4	75 %	3/4
	Pain prevents me from standing for more than about half an hour	2/3	66.7 %	1/3	0 %	2/3
	Pain prevents me from standing for more than about ten minutes	2/2	100 %	2/2	100 %	2/2
	Pain prevents me from standing at all	1/1	100 %	1/1	100 %	1/1
7	Sleeping	3/3	100 %	3/3	100 %	1/3
	My sleep is never disturbed by pain	2/8	25 %	6/8	75 %	6/8
	My sleep is occasionally disturbed by pain	1/9	11 %	4/9	44 %	7/9
	Because of pain I	0/3	0 %	0/3	0 %	1/3

	have less than about 6 hours sleep					
	Because of pain I have less than about 4 hours sleep	0/2	0 %	0/2	0 %	2/2
	Because of pain I have less than about 2 hours sleep	2/2	100 %	2/2	100 %	2/2
	Pain prevents me from sleeping at all	0/2	0 %	2/2	100 %	2/2
9	Social life	0/5	0 %	5/5	100 %	2/5
	My social life (activities I enjoy doing) is normal and causes me no extra pain	2/8	25 %	5/8	63 %	5/8
	My social life is normal but increases the degree of pain	0/3	0 %	3/3	100 %	1/3
	Pain has no significant effect on my social life apart from limiting my more energetic interests, e.g. sport etc.	0/2	0 %	1/2	50 %	1/2
	Pain has restricted my social life and I do not go out as often	0/5	0 %	0/5	0 %	0/5

	Pain has restricted social life to my home	2/6	33.3 %	4/6	67 %	3/6
	I have no social life because of pain	0/2	0 %	2/2	100 %	2/2
10	Traveling	5/6	83 %	6/6	100 %	5/6
	I can go anywhere without pain	0/7	0 %	7/7	100 %	6/7
	I can go anywhere but it gives extra pain	0/3	0 %	3/3	100 %	3/3
	Pain is bad but I manage journeys of about two hours	2/4	50 %	3/4	70 %	2/4
	Pain restricts me to journeys of about one hour	2/4	50 %	0/4	0 %	3/4
	Pain restricts me to short necessary journeys less than thirty minutes	2/3	67 %	0/3	0 %	2/3
	Pain prevents me from traveling except to receive treatment	0/6	67 %	4/6	67 %	1/6

