CHAPTER 8
RESEARCH DESIGN AND METHODOLOGY

"The ultimate goal of all science is the search for truth."
Mouton 1996

8.1 INTRODUCTION

During the research process many critical decisions are made which could affect the nature and the validity of the results. The purpose of this chapter is thus to describe the research design and the research methodology and present the reasons why the specific research design and methodology have been selected.

The objective of the research is to identify the constraints to the employment of persons with disabilities and to develop an integrated human resource management strategy to enhance the employment of more persons with disabilities in South African organisations. This objective was attained through a literature review providing context and theory, followed by a mainly empirical research design utilising primary data gathered by means of the survey method.

A purposive sample of eighty four (84) knowledgeable persons in this field (persons with disabilities, managers and human resource management practitioners with experience in disability management) were surveyed with a semi-structured Likert-type questionnaire. The questionnaire also contained a number of open-ended (qualitative) questions and the questionnaire was specifically constructed to provide for these questions.

The data gathered by means of the survey method was analysed by using descriptive statistics to determine the breadth of the data while qualitative analysis was performed to determine the depth thereof.

The research results present the constraints that inhibit the employment of persons with disabilities and describe themes to better understand the constraints and to guide the development of an integrated strategy to enhance the employment of persons with disabilities.

8.2 RESEARCH DESIGN

Kerlinger (1986:279) explains that research design is the plan and structure of the investigation so conceived as to obtain answers to research questions. The plan is the overall scheme or programme of the research. The plan includes an outline of what the investigator will do from formulating hypotheses and their operational implications to the final analysis of data. The underlying theory shaping the research process is articulated below in order to contextualise the research decisions made.

Robscon (1993:38), states that research design is a very important part of research and that human actions can only be understood in the context of their place within different layers of social reality. The general principle in the design is that the research strategy or strategies and the method or techniques employed, must be appropriate in order for the research questions to be answered. Selltiz, Jahoda, Deutsch and Cook (1965:50) defined research design as the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

Babbie and Mouton (2001:74) and Hofstee (2006:113) distinguish between research design and research methodology. Mouton & Marais (1990:33), similar to Kerlinger (1986), indicate that the aim of a research design is to plan and structure a given research project in such a manner that the eventual validity of the research findings is maximised.

Mason (2003:30) puts it most simply that the methodological strategy is the logic by which the researcher goes about answering the research questions.

Research design occurs at the beginning of the research project and it involves all the steps of the subsequent project (Babbie and Mouton 2001:97).

8.3 PARADIGMATIC ASSUMPTIONS AND PERSPECTIVES

Cohen et al. (2001:3) in Maree and Van der Westhuizen (2007:31) state: "Research is about understanding the world, and your understanding is informed by how you view the world, what you view understanding to be and what you see as the purpose of understanding."

Researchers incorporate different types of paradigms (positivism, post-positivism, constructivism-interpretivism and critical-ideological perspectives) to conceptualise, guide and classify research (Ponterotto 2005:128). Filstead (in Ponterotto, 2005:127) adds that a paradigm not only forms a set of basic beliefs, but also a set of interrelated assumptions about the social world and provides a philosophical and conceptual framework.

Basic paradigmatic beliefs not only guide the investigation in terms of choices of design and method but also in its ontology (nature of reality and being) and epistemology (nature and scope of knowledge) (Saunders et al 1997:100).

Mason (2003) explains that ontological perspectives involve asking what the researcher sees as the very nature and essence of things in the social world. It is a difficult concept to describe precisely because the nature and essence of social things seem so fundamental and obvious.

Research is an interaction between people (with or without disabilities), their right to work and earn a living and the constraints which these people put in place resulting in persons with disabilities being a relatively underemployed group. The very nature of the response of people to disability management is influenced by the disability model which dominates the thinking of people. This perspective also relates to the critical meanings of experiences as they relate to the difficulties persons with disabilities experience in terms of social oppression. This establishes an element of "critical theory" (Jansen 2007:21) as it relates to the critical meanings of experiences relating to gender, race, class and disability status. Society reproduces inequalities from one generation to the next (reproduction theory). Increasingly the multiple identities of individuals (e.g. black, rural, third world, women) mean that these kinds

of oppression "intersect" in their effects on persons and society (Jansen 2007:21). Persons with disabilities could thus be added as another identity of individuals.

The research is conducted from the assumption that research in business and management and more particularly in the field of human resource management and labour relations management, also concern the social world in which we live and work (Saunders et al 1997:107). Disability is, amongst others, to a large extent a cause and a consequence of poverty. Persons with disabilities, in general, have little financial means, no political power, face discrimination at all levels of society and the environment in which they live, is inaccessible to them. Employment ensures economic independence which leads to equalisation of opportunities and meaningful existence with self-respect and dignity. The human resource management profession and research have an active role to play in resolving the dilemma of unemployment thus making a meaningful contribution to the social world.

The epistemological position of the researcher (what is regarded by the researcher as knowledge or evidence of things in the social world), is based thereon that views, perceptions and the constraints which result therefrom, are "knowable and it is possible to generate knowledge about and evidence for them" (Mason 2003).

8.4 DISCUSSION OF THE DIFFERENT DESIGN APPROACHES AND THE DESIGN APPROACH SELECTED FOR THIS STUDY

Cooper and Schindler (2003:146) indicate that a number of different research design approaches exist but no simple classification system defines all the variations that must be considered. These authors classify research design by using seven different descriptors are presented in Table 30 below.

Table 30: Descriptors of research design and methodological options

DESCRIPTOR	OPTIONS	DISCUSSION
The degree to which the research question has been crystallised.	➢ Exploratory. ➢ Formal.	Cooper and Schindler (2003:146) premises that a study may be viewed as exploratory or formal. Exploratory studies tend to be less structured with the objectives of discovering future research needs and tasks. The formal study begins where the

DESCRIPTOR	OPTIONS	DISCUSSION
		exploration leaves off. The goal of a formal research design is to test the hypotheses or answer the research questions posed. Babbie and Mouton (2001:80) indicate that exploratory studies would ask questions like what the case is and what the key factors are. They furthermore infer that exploratory studies usually lead to insight and comprehension rather than the collection of detailed, accurate and replicable data. Saunders et al (1997:133) defines an exploratory study as a valuable means of finding out what is happening, of seeking new insights, of asking questions and of assessing phenomena in a new light.
The method of data collection.	➢ Monitoring. ➢ Interrogation/ communication.	Data collection distinguishes between monitoring and interrogation/communication methodologies. Monitoring refers to studies where the researcher inspects the activities of a research subject. The interrogation/ communication method, on the other hand, is conducted by the researcher questioning the subjects and collecting their responses by personal or impersonal means. This includes the survey by questionnaire method. According to Fortune City (2004) data collection and analysis may assume the form of observation, interactive interviews, videotape and written descriptions by subjects.
The power of the researcher to produce effects in the variables under study.	➢ Experimental or Quasi-experimental. ➢ Ex-Post facto.	Experimental design is used when the researcher attempts to control and/or manipulates the variables in the study and then aims to determine the effect of the controlled variables on the other variables. In the *ex-post facto* design on the other hand, the researcher has no control over the variables in the sense of being able to manipulate them. In the *ex-post facto* research design the researcher only reports what is happening or what has happened.
The purpose of the study.	➢ Descriptive. ➢ Causal.	Descriptive research is concerned with finding out who, what, where, when or how much. In a causal study relationships

DESCRIPTOR	OPTIONS	DISCUSSION
		between variables are explained.
The time dimension.	➢ Cross sectional. ➢ Longitudinal.	Cross-sectional studies are carried out once and represent a snapshot at a specific point in time. Longitudinal studies are repeated over an extended period of time.
The topical scope - breadth and depth of the research.	➢ Qualitative/ Case study. ➢ Quantitative study.	Quantitative studies are designed for breadth rather than depth. It attempts to capture a population's characteristics by making inferences from a sample's characteristics. Generalisations about findings are then made and presented based on the representativeness of the sample and the validity of the design. Qualitative or case studies, on the other hand, place more emphasis on a full contextual analysis of fewer events or conditions of their interrelations.
The research environment.	➢ Field setting. ➢ Laboratory research simulation.	Design also varies according to whether the research is done under actual environmental conditions (field conditions) or under staged or manipulated conditions (laboratory conditions).

Source: Cooper and Schindler (2003:147) unless stated otherwise in the table.

Babbie and Mouton (2001:75) classify research differently from Cooper and Schindler (2003). They indicate that a distinction must be made between empirical and non-empirical research questions as a classification of research designs. They describe empirical research questions as real life problems (world 1) while non-empirical problems are about the meaning of scientific concepts, questions about trends in scholarship or about competing theories (about entities in world 2). They thereafter introduce the distinction between primary and secondary empirical data. Primary data refers to data collected by the researcher while secondary data already exists when the research is undertaken. The final distinction made by Babbie and Mouton (2001:76, 77) is the type (or nature) of data sources that will be used. These authors classify data into two main categories, namely numeric data and textual data.

Hofstee (2006:113) is of the view that in the research design section, the research design and the overall approach that will be used to test the thesis statement, is

named and discussed. He also warns appropriately that details of the research methodology (implementation) should not be provided during the discussion of the research design. This distinction is not always clear, but efforts were made to clearly separate it.

The classification assists in structuring the process of research design including the techniques to be used during the research process as well as their strengths and weaknesses as they apply to the research objective and the research problems.

The research undertaken was initially exploratory by nature, especially during its starting phase. More challenging research questions evolved from the literature review and the practical experiences of the researcher. As the research progressed it became more formal and descriptive by nature.

The objective of the research was to find answers to real life problems concerning human beings (unit of analysis) generally grouped into three groups, namely:

- Persons of a working age with disabilities;
- human resource management practitioners; and
- managers.

This research can, therefore, be classified as empirical research because the research design followed was empirical by nature. However, if Mouton and Marais (1990:143 and 175 to 181) is considered, the research also had a non-empirical design element. This is mainly due to the strategy which was developed. The development of a strategy had many similarities to theory or model building. The non-empirical element was based on and arose from the empirical research. Apart from the above, the research also had a literature review element, which in turn informed the empirical as well as the non-empirical element of this research.

McMillan and Schumacher (2001:428, 429 in Maree and Van der Westhuizen 2010:33) state that the mode of enquiry informs the research design and that researchers adopt either qualitative, quantitative or multiple modes of enquiry.

In comparing the qualitative and quantitative approaches Leedy and Ormrod (2010:95) indicate that qualitative researchers seek a better understanding of complex situations. Their work is sometimes (although not always) exploratory by nature, and they may use their observations to build theory from the ground on up. Qualitative researchers on the other hand seek explanations and predictions that will generalise to other persons and places. The intent is to establish, confirm, or validate relationships and to develop generalisations that contribute to existing theories.

These authors raise the argument that quantitative studies represent the mainstream approach to research and that carefully structured guidelines exist for conducting them. Qualitative research process on the other hand is more holistic with the specific focus, design, measurement instruments and interpretations developing and possibly changing along the way.

Qualitative studies deal with naturalistic approaches to understand phenomena in context-specific settings, such as a real world setting where researchers do not manipulate the phenomena they are interested in (Patton 2002). Creswell (2007:249) defines qualitative research as an inquiry process of understanding based on a distinct methodological tradition of inquiry that explores a social or human problem, based on building a complex and holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting.

Qualitative research furthermore allows the researcher to gain insight into a field where little is known (Gillham 2000:11). According to Leedy and Ormrod (2010:94), qualitative research is used to answer questions about the complex nature of phenomena, more often with the purpose of describing and understanding the phenomena from the participant's point of view.

Qualitative researchers are primarily interested in the illumination, understanding and extrapolation of similar situations (Hoepfl 1997). Qualitative research uses various methods of capturing and analysing unstructured information, such as interview transcripts and recordings, e-mails, notes, feedback forms, photos and videos. It does not only rely on statistics or numbers, which are the domain of quantitative

researchers (Golafshani 2003). Qualitative researchers do not dissociate themselves from their roles and involvement in the research process (Winter 2000).

Quantitative researchers seek explanations and predictions that will generalise to other persons and places (Leedy and Ormrod 2010:95).

A quantitative method confirms or disconfirms a hypothesis. A qualitative study may end with tentative answers that lead to future studies while quantitative and qualitative research designs are to some extent appropriate to answer different types of questions. One is bound to learn more about the world when both quantitative and qualitative methods are used instead of adhering to one method only (Creswell, 2007, Glesne and Peshkin 1992, Moss 1996).

The use of both methods, namely a quantitative method and a qualitative method, is also referred to as concurrent triangulation (Morgan 1998, Streckler et al 1992, Denzin 1994, Kvale 1996). This research design approach makes use of separate quantitative and qualitative methods as a way of off-setting the weaknesses within one method with the strengths of the other method. The multi-method strategy will guide the collection and corroboration of data collected and will enhance the validity and credibility of the study (McMillan and Schumacher (2001:428 and 229) in Maree and Van der Westhuizen 2010:31).

Upon consideration of the aforementioned authors, the nature of the research problem and the data sources to be used, it was decided to use a qualitative and a quantitative method. These methods were selected to answer the same research questions but in different ways and from different angles. This research design is also referred to as concurrent triangulation (Morgan 1998, Streckler et al 1992, Denzin 1994, Kvale 1996).

This approach is used to add depth and detail to the research findings (Swanson and Holton 1997:93 in Maree and Van der Westhuizen 2010:33). Teddlie Tashakkari (as in Maree and Van der Westhuizen 2010:33) denotes that a lower or a higher priority can be placed on either of the two methods. The research places equal value on the results of each method, and the approach, therefore, integrated the results of the two

methods during the interpretation phase. The interpretation can either note the convergence of the findings or explain any lack of convergence that may result (Creswell 2003). According to Creswell (2003), this model is advantageous because it can result in well-validated and substantiated findings. In addition, the concurrent data collection results in a shorter data collection time period as compared to one of the sequential approaches.

A further determinant of the decision to use this approach, was the realisation that quantitative analysis is dependent on a large number of respondents to ensure reliability and generability. It became clear early in the research that it would not be possible to obtain a large number of respondents who are knowledgeable in disability management in South Africa.

Mason (2003:33) argues that there may be good reasons for using multiple methods and sources because research questions can be approached from a variety of angles. It may also be because the different methods corroborate each other using methodological triangulation. Mason (2003:33) mentioned, however, that the integration of different methods may not be straightforward and that to corroborate the results, may be problematic. The question will be whether the two methods yield comparable data.

Both approaches involve similar processes, namely review of the related literature, collection and analysis of the data. Yet, these processes are often combined and conducted in different ways, resulting in different research methods (Siegle date unknown). Quantitative researchers commence with a specific hypothesis, isolate variables they want to study, control extraneous variables, use standardised procedures to collect numeric data and use statistical procedures to analyse and draw conclusions from the data. Qualitative researchers on the other hand, commence with general research questions, collect extensive data from a few participants, organise data in a coherent fashion and use descriptions to portray the situations they have studied (Neill 2007).

8.5 RESEARCH METHOD

The research method deployed to identify the constraints to the employment of persons with disabilities is discussed below.

8.5.1 DEVELOPMENT OF THE QUESTIONNAIRE

When considering the different methods used when researching people, the survey method was considered the most appropriate for this research. The survey method, through the use of a questionnaire, has its limitations but also its benefits. The limitations are related to the willingness of respondents to make time available to respond, a question might not be understood properly as it may not be clear and respondent fatigue may set in. On the other hand, more respondents can be reached and it is more cost-effective than other methods of observation.

Certain aspects must be noted when conducting surveys, namely:

- Respondents may respond according to what they think the researcher wants to hear or see.
- People's descriptions of attitudes and opinions are done on the spur of the moment without giving the issue at hand much thought and may be distorted by recent events or the current context.
- Some people may give distorted facts in order to impress the researcher (Leedy and Ormrod 2010).

Upon concluding the risk/benefit analysis of using the survey method and a questionnaire, it was decided to use the survey method. The limitations identified would be addressed by means of the design of the questionnaire as well as the manner in which it was administered.

In consequence a questionnaire was developed to determine the views of persons of a working age who are knowledgeable of disability management including persons with disabilities, human resource management practitioners and managers. The questionnaire would assist in determining the views, opinions and perceptions of the

three groups of respondents regarding the status of disability management and would contribute to a greater understanding of disability management.

The questionnaire was developed following the identification of the various constraints in the employment of persons with disabilities following from the literature review. The focus of this research is disability management and employment. The development of the questionnaire was therefore directly intended to address the research problem and the research questions. The questionnaire consisted of 78 questions, numbered from 1 to 78. Several questions had subquestions (25 subquestions). Fourteen questions elicited open-ended text responses which would be interpreted by using qualitative methods (ATLAS.ti). According to Mouton (2001:108), textual data is rich in meaning (sometimes multiple meanings or surplus meanings) and is difficult to capture in a short and structured manner. Due to the nature of the research these open-ended questions could not be avoided and would provide valuable in-depth information as discussed in the design process. The questions had been grouped as presented in Table 31 below:

Table 31: Grouping of questions in the questionnaire

Section	Description	Question No.
Section 1.	Biographical information.	1 to 10.
Section 2.	Defining disability.	11 to 14.
Section 3.	Usefulness of legal and policy framework.	15 to 16 (4 sub-questions).
Section 4.	General perceptions.	17 to 27.
Section 5.	Availability of disability policy and capacity in your organisation.	28 to 35 (7 sub-questions).
Section 6.	Prevalence of employees with disabilities.	36 to 40 (14 sub-questions).
Section 7.	Human Resource Management practices.	
Subsection 7.1.	Training and Development.	41 to 44.
Subsection 7.2.	Performance Management.	45 to 49.
Subsection 7.3.	Recruitment and selection.	50 to 54.
Subsection 7.4.	Employee retention strategy.	55 to 58.
Subsection 7.5.	Exit management strategy.	59 to 63.
Subsection 7.6.	Labour relations management strategy.	64 to 68.

Section	Description	Question No.
Section 8.	Reasonable accommodation.	69 to 72.
Section 9.	General.	73 to 77.
Section 10.	Declaration.	78.

The grouping of the questions in section 7 of the questionnaire follows the same order as the discussion of the concept of talent management in Chapter 2 of this research.

The majority of questions were asked as a positive statement where respondents had to indicate their degree of agreement or disagreement. Some questions were asked in the negative mainly to break monotony and to discourage respondents from following a pattern in responding. During the statistical analysis, especially to determine internal consistency of the responses, these negatively stated questions were turned into the positive to make statistical analysis possible.

An important part of a research questionnaire is the scale used to measure the responses of respondents. According to Froehle et al (2004), scale development and the refinement of multi-item scales used to measure the constructs being studied are important to empirical research. DeVellis (1991), Foxcroft and Roodt (2001) encourage a scale development process that offers a clearer conceptualisation of what the measurement entails. Kerlinger (1986:443) describes a scale as a set of items to each of which an individual responds by expressing degrees of agreement or disagreement or some other mode of response. Scale items have fixed alternatives and place the respondent at some point of the scale.

The Likert-scale is the most frequently used variation of the interval scale that consists of statements that express either a favourable or unfavourable attitude toward the object of interest. The respondent is asked to disagree or agree with each statement. Each response is given a numerical score to reflect its degree of intensity and the scores may be totalled to provide the measure of the attitude of respondents (Cooper and Schindler 2003:250).

8.5.2 RELIABILITY AND VALIDITY OF THE QUESTIONNAIRE

Pallant (2005:90) indicates that it is important to use scales that are valid and reliable, especially scales that are internally consistent. Internal scale consistency refers to the degree to which the items making up the scale, "hang together". The question that needs to be answered is whether they are measuring the same underlying construct.

A seven point Likert-scale was selected for this research and a larger number of scale points than the traditional five point Likert-scale were used to offer respondents a wider range of response options and to produce greater accuracy in responses. Since the respondents were knowledgeable individuals this would assist to obtain more refined results.

Pretesting of the questionnaire to ensure face and content validity, was performed in two phases. The first phase consisted of the completion of the questionnaire by a group of 21 Honours degree students at the University of Pretoria. At the time the students had just attended a lecture on disability management and a related group assignment. The students were also requested to provide comments on the clarity of questions, structure of the questionnaire and the logical flow of the questions. The questionnaire was subsequently amended to incorporate the comments deemed relevant. The responses of these students were not included in the final data analysis due to the fact that they could not be regarded as sufficiently knowledgeable on disability management.

Once the questionnaire was finalised a further group of seven respondents who were particularly knowledgeable on disability management, was identified to pre-test the questionnaire. The group was also requested to indicate how long it took to complete the questionnaire and to express views on the clarity of questions, the structure of the questionnaire and the logical flow of the questions. The responses of these respondents were included in the final data analysis.

According to Trochim (2006) depending on their philosophical perspectives, some qualitative researchers reject the framework of validity that is commonly accepted in

quantitative research. They reject the assumption that there is a reality external to our perception of it. As a result, it does not make sense to be concerned with the "truth" or "falsity" of an observation with respect to an external reality (which is a main concern of validity). These qualitative researchers rather argue for different standards for judging the quality of research.

According to Trochim (2006), Guba and Lincoln proposed four criteria for judging the soundness of qualitative research and offered these as an alternative to more traditional quantitatively-oriented criteria. They argued that the four criteria better reflected the underlying assumptions involved in qualitative research. Their proposed criteria are listed in the table below:

Table 32: Criteria used to respectively assess qualitative and quantitative research

Quantitative research	Qualitative research	Discussion
Internal validity.	Credibility.	In quantitative studies internal validity addresses the "true" causes of the outcomes observed. Strong internal validity means reliable measures of independent and dependent variables and strong justification that causally link independent variables to dependent variables. The Cronbach alpha was used as a measure to determine the internal validity of the questionnaire. The credibility criteria involved in qualitative research are the credibility or believability of the researcher doing the analysis and the respondents' knowledge of the subject matter. The use of a purposive sample is intended to ensure that the responses obtained are indeed credible. The researcher on the other hand is knowledgeable in disability management as he has been implementing and managing disability management programmes for 14 years.
External validity.	Transferability.	External validity addresses the ability to generalise the findings of the research. Transferability refers to the extent to which

Quantitative research	Qualitative research	Discussion
		the results of qualitative research can be generalised or transferred to other contexts or settings. From a qualitative perspective transferability is primarily the responsibility of the one doing the generalising. The qualitative researcher can enhance transferability by doing a thorough job of describing the research context and the assumptions that were central to the research. The person who wished to "transfer" the results to a different context is then responsible for making the judgement of how sensible the transfer is.
Reliability.	Dependability.	Reliability is based on the assumption of replicability or repeatability. It is concerned with whether we would obtain the same results if we could observe the same thing twice. The idea of dependability, on the other hand, emphasises the need for the researcher to account for the ever-changing context within which research occurs. The researcher is responsible for describing the changes that occur in the setting and how these changes affect the way the researcher approaches the study.
Objectivity.	Confirmability.	Objectivity deals with reliable knowledge, checked and controlled, undistorted by personal bias and prejudice (Kvale 1996). Qualitative research tends to assume that each researcher brings a unique perspective to the research. Confirmability refers to the degree to which the results could be confirmed or corroborated by others. There are a number of strategies for enhancing confirmability. The researcher can document the procedures for checking and rechecking the data throughout the research. Another researcher can take a "devil's advocate" role with respect to the results and this process can be documented. The researcher can actively search for and describe negative instances that contradict prior observations. After the research, the

Quantitative research	Qualitative research	Discussion
		researcher can conduct a data audit that examines the data collection and analyses procedures and makes judgements about the potential for bias or distortion (Siegle date unknown).

Source: Trochan (2006) unless indicated otherwise.

To determine the reliability of the scale used, internal scale consistency was measured. One of the most commonly used indicators of the internal consistency is Cronbach's alpha coefficient. Ideally the Cronbach alpha coefficient of a scale should be above 0,7. Should the value of the Cronbach alpha coefficient be above 0,7 the scale can be considered reliable.

The Cronbach alpha for section 2 (combined value for questions 11, 12 and 13) is 0,808011, for section 3 (combined value for questions 15.1 to 15.4) is 0,853679, for section 4 (combined value for questions 17 to 27) is 0,7142774, for section 5(a) (combined value for questions 28 to 34) is 0,883939, for section 5(b) (combined value for questions 35.1 to 35.7) is 0,916694, for section 6 (combined value for questions 45 to 48) is 0,804789, for section 7 (combined value for questions 50 to 53) is 0,739039, for section 8 (combined value for questions 55 to 57) is 0,883344, for section 9 (combined value for questions 59 to 62) is 0,875140 and for section 10 (combined value for questions 64 to 66) is 0,895056. Since the Cronbach alpha values for all sections of the questionnaire were above 0,7, the scale that was used with the sample was internally reliable.

8.5.3 POPULATION AND SAMPLING

The sampling methods are usually different for qualitative and quantitative research designs. Qualitative research uses non-probability sampling to select the research population, meaning respondents are deliberately selected to reflect certain features within the sampled population.

The nature of the research undertaken was such that respondents had to be knowledgeable in the area of disability management and non-probability sampling

would therefore not be leading to the answering of the research questions. It was therefore decided to make use of the purposive sample.

The choice of purposive sampling is guided by the research problem and is also based on the fact that respondents may be selected for inclusion in the research according to a number of criteria established by the researcher, such as their status, age, sex or occupation. The sample becomes purposive because the researcher uses judgement to select respondents that will best enable the researcher to answer research questions and to meet the set objectives (Robson 1993:143).

The purposive sample is not intended to be statistically representative but rather to be theoretically representative and suitable to small-scale, in-depth studies (Ritchie, Lewis and Elam in Ritchie and Lewis 2003).

The following criteria were set to which respondents had to comply for purposes of this research:

- Adequate knowledge of disability management;
- at least matric or a post matric qualification;
- occupy a level of decisionmaking in the organisation either in a management position or being able to influence disability management policy;
- employed in an organisation employing more than 50 employees which has the effect that the EEA is applicable to such organisation;
- at least one year or more employment with the current employer;
- being an employee with disabilities; or
- managing employees with disabilities.

It would not have been possible to find respondents that would comply with all the criteria, and it was therefore decided that compliance with three or more criteria would qualify respondents in terms of the criteria.

Snowball sampling, as a method to distribute questionnaires, entails requesting respondents who have received questionnaires to identify other persons they know who may fit the selection criteria. It is a useful approach for dispersed and small populations and the main selection criteria are characteristics which may not be widely disclosed by individuals (Ritchie, Lewis and Elam in Ritchie and Lewis 2003).

This method of questionnaire distribution supported the purposive sample as the required respondents are grouped together in various topical or professional organisations.

Since new respondents are generated through existing ones, there is a danger that the diversity of the sample may be compromised. This can be alleviated to some extent by specifying the required characteristics of new sample members. Only the compliant sample members' questionnaires were analysed.

In order to identify and obtain suitable respondents and responses, the following approach was followed: Firstly, a number of local organisations for persons living with disabilities were approached. The organisations participating were selected from a list of such organisations accessed on the internet. These organisations referred the questionnaire to a number of their members who, in their view, were experts on the subject matter. Secondly, a number of employers who are known to have a disability management programme in place were approached. These employers referred the questionnaire to a number of their employees who were knowledgeable on the subject matter. Thirdly, the questionnaire was referred to experts in the area of disability management who had not been included in the first two categories.

8.5.4 DATA COLLECTION

The survey questionnaire was either distributed personally or e-mailed to the individuals and organisations forming part of the sampled population as discussed above.

In order to obtain sufficient questionnaires from each of the two groups, a number of champions were selected and requested to assist with the timeous return of the completed questionnaires.

The distribution of the questionnaire started on 1 October 2008 following the process described above. A total of 72 individuals were approached. The initial deadline for submission was 15 October 2008 but on the said date only 7 completed

questionnaires had been returned. The date of submission was extended to 31 October 2008 and the questionnaire was distributed to a further 30 individuals. The initial group of respondents were reminded continuously of the importance of them returning the completed questionnaire.

The requirement that respondents had, namely to be knowledgeable on the topic of disability management, proved to be a significant challenge as there are not many such persons and no database for them exists in South Africa. To resolve this problem, more organisations working in the field of disability management were approached by e-mail. The researcher followed up with many of these organisations, especially the bigger organisations. It soon became evident that they would not respond unless their leadership authorised participation in the research. Meetings were scheduled, e-mails sent and from these it became evident that the organisations were over-burdened by all the students and research organisations wanting them to participate in their respective research projects. The organisations also indicated that they had never received feedback from the many researchers that had approached them, although such feedback was promised. The necessary undertakings for feedback by the researcher were given and two of the biggest South African organisations for persons with disabilities, distributed the questionnaire to their members.

Even this process did not lead to instantaneous success as the deadline of 15 November 2008 had to be extended again to 30 November 2008. By this date 24 responses (11 disabled and 13 not disabled) were received and it was evident that the responses were too few to be meaningful.

Feedback was received from 12 respondents who, although they were occupying positions in their respective employment organisations which would require them to be knowledgeable on disability management issues, found the questionnaire too technical and they were not able to respond to the questions in a meaningful manner. More respondents could have had the same difficulty but did not provide feedback to the researcher. This is rather significant in the development of a strategy to employ persons with disabilities as the lack of technical knowledge could be a constraint in not employing persons with disabilities.

On 16 February 2009 the researcher also featured on Radio 2000 to talk about disability management. During this talk a plea was also made for assistance with the completion of the questionnaire.

The collection of questionnaires was concluded at the end of February 2009, when a total of 84 (38 disabled and 46 not disabled) properly completed questionnaires, had been received. A number of questionnaires had also been received which had been completed poorly or the respondents were not sufficiently knowledgeable on disability management and it was decided to exclude these from the analysis.

8.5.5 CHARACTERISTICS OF THE SAMPLE

The characteristics of the sample (biographical information) are presented below. The biographical information was obtained through the questionnaire as it made up the first section of the questionnaire which consisted of ten questions.

8.5.5.1 Number of employees employed by the respondents' organisation – Question 1

Question 1 and the response categories are presented in Table 33 below:

Table 33: Questions and response categories related to the number of employees employed by respondents' organisations

NO	QUESTION/STATEMENT	RESPONSE						
1.	How many employees are employed at the organisation that you work for (Check ONE box)?	I am not seeking employment.	I am unemployed.	Fewer than 100.	101 to 500 employees.	501 to 1,000 employees.	1,001 to 5,000 employees.	More than 5,000 employees.

The responses were tabulated as follows:

Table 34: Representation of participants (respondents) from different sizes of organisations

SIZE OF ORGANISATION	DISABLED RESPONDENTS	NOT DISABLED RESPONDENTS	COMBINED
Fewer than 100 employees.	12 32%	7 15%	19 23%
101 to 500 employees.	5 13%	13 28%	18 21%
501 to 1,000 employees.	6 16%	8 17%	14 17%
1,001 to 5,000 employees.	7 18%	12 26%	19 23%
More than 5,000 employees.	7 18%	4 9%	11 13%
Missing responses.	1	2	3
Total.	38 45%	46 55%	84 100%

From Table 34 it is observed that 12 (32%) disabled respondents were employed by organisations employing fewer than 100 employees. The majority of disabled respondents namely 25 (66%) fell into the more than 100 employees category indicating that most respondents with disabilities were employed in larger organisations. Not a single disabled respondent indicated that he or she was unemployed although one respondent indicated that she is not seeking employment.

A similar trend is prevalent amongst the not disabled respondents since 37 (80%) indicated that they were employed in organisations employing more than 100 employees. Only 9 (20%) not disabled respondents indicated that they were employed in organisations with fewer than 100 employees. Two not disabled respondents indicated that they were unemployed.

Both the disabled and not disabled response groups would therefore be dominated by the perspective from larger organisations (more than 100 employees). As discussed in Chapter 5, the EEA, which is the main legislative component in the South African disability management strategy, is fully applicable to employers employing more than 50 employees (referred to as "designated employers" in section 1 of the EEA). The perspective from larger organisations would therefore be expected to be compliant with the EEA, which is ideal for research of this nature.

The first two response categories of question 1 namely "I am not seeking employment" and "I am unemployed" were included to obtain a complete picture of respondents in terms of whether they are employed or not.

8.5.5.2 Nature of the respondents' business – Question 2

The question reads as follows: "What is the nature of the business of the organisation that you work for?" This was an open-ended question and the responses were categorised during the analysis of the responses following an open-coding process. The responses were grouped into categories which belong together. These categories were then consolidated further to provide a more specific focus. The following response categories were selected following this process:

- Public Service and Municipal sector.
- Education, academic research and training sector.
- Community, social and personal services sector.
- Manufacturing, transport and media services sector.
- Finance and business services sector.

A further response category named "other" was added to include those responses which could not logically be fitted into the abovementioned categories and to cater for the respondent who indicated that employment was not sought.

The responses are presented in Table 35 below:

Table 35: Nature of the business of the organisation the respondent works for

DIFFERENT BUSINESS SECTORS	DISABLED RESPONDENTS	NOT DISABLED RESPONDENTS	COMBINED
Public Service and Municipal sector.	14 37%	12 26%	26 31%
Education, academic research and training sector.	4 11%	s6 13%	10 12%
Community, social and personal services sector.	4 11%	2 4%	6 7%
Manufacturing, transport and media services sector.	7 18%	5 11%	12 14%
Finance and business services sector.	6 16%	16 35%	22 26%
Other sector.	3 8%	5 11%	8 10%
Missing responses.	0	0	0
Total.	38 45%	46 55%	84 100%

It is observed from Table 35 that the largest number of respondents (31%) was employed in organisations within the "public service and municipal sectors" followed by the "finance and business services sector" (26%). The "manufacturing, transport and media services sector" employed 14% of the respondents, followed by the "education academic research and training sector" which employed 12% of the respondents. The category called "other sector" employed 10% while the

"community, social and personal services sector" accommodated 7% of respondents.

The public service and municipal sector is considered to be the best organised when it comes to disability management in South Africa. Due to the purposive nature of the sample it was unavoidable to have such a significant number of respondents from the public service.

8.5.5.3 Current position of the respondent – Question 3

The different designations were categorised as presented in Table 36 below:

Table 36: Question and response categories related to the respondents' current position/designation

NO	QUESTION/STATEMENT	RESPONSE	
3.	Please describe your current position in the organisation that you work for.	CEO/Director General/Top Management.	1
		Senior Manager.	2
		Middle Manager.	3
		Supervisor.	4
		Production worker.	5
		Specialist/professional employee.	6
		Other: Please specify.	7

The responses were tabulated as presented in Table 37 below:

Table 37: Representation of the current position/designation of respondents

DESIGNATION	DISABLED RESPONDENTS	NOT DISABLED RESPONDENTS	COMBINED
CEO/Director-General/ Top Management.	4 11%	6 13%	10 12%
Senior Manager.	4 11%	11 24%	15 18%
Middle Manager.	7 18%	14 30%	21 25%

DESIGNATION	DISABLED RESPONDENTS	NOT DISABLED RESPONDENTS	COMBINED
Supervisor.	7 18%	3 7%	10 12%
Production worker.	2 5%	3 7%	5 6%
Specialist/ professional employee.	10 26%	8 17%	18 21%
Other.	4 11%	1 2%	5 6%
Missed responses.	0	0	0
Total.	38 45%	46 55%	84 100%

The content of Table 37 shows that the position in the organisation which was most prevalent amongst 10 (26%) disabled respondents was "specialist/professional employee" while the remaining disabled respondents were distributed fairly evenly through the other position categories. To determine how influential respondents were in their respective organisations, the response categories have been collapsed into the management categories (CEO, senior manager, middle manager and supervisor). The majority of disabled respondents, namely 22 (58%) were employed in the supervisory or management category. Four disabled respondents were employed in the most senior category of "CEO" and a further four in the "senior manager" category.

Fourteen (14 - 30%) respondents in the not disabled group were "middle managers". Similarly to the disabled group the response categories were collapsed into the management categories. The majority or 34 (74%) not disabled respondents were supervisors or managers and slightly more not disabled respondents were managers than disabled respondents.

In combining the disabled and not disabled groups of respondents, 56 (66,67%) respondents were in managerial positions. This confirms that at least two-thirds of the respondents, apart from being "knowledgeable", were also in decision-making positions in their respective organisations. Employment decisions in South African organisations are normally made by persons occupying positions of middle management, senior management and CEO. More than half (55%) of respondents occupied such positions and could therefore influence employment practices.

The views expressed by the respondents are therefore credible in reflecting the current reality in respect to the employment of persons with disabilities.

8.5.5.4 Duration of employment in current position – Question 4

Question 4 and the response categories are presented in Table 38 below:

Table 38: Question and response categories related to the length of service in the respondents' current position

NO	QUESTION/STATEMENT	RESPONSE	
4.	How long have you served in your current position?	Less than 1 year.	
		1 to 2 years.	
		3 to 5 years.	
		6 to 9 years.	
		10 + years.	

The results were tabulated as follows in Table 39 below:

Table 39: Duration of employment in current position

EMPLOYMENT IN YEARS	DISABLED RESPONDENTS	NOT DISABLED RESPONDENTS	COMBINED
Less than 1 year.	3 8%	5 11%	8 10%
1 to 2 years.	11 29%	15 33%	26 31%
3 to 5 years.	7 18%	14 30%	21 25%

EMPLOYMENT IN YEARS	DISABLED RESPONDENTS	NOT DISABLED RESPONDENTS	COMBINED
6 to 9 years.	4 11	9 20%	13 15%
10 + years.	13 34%	3 7%	16 19%
Missed responses.	0	0	0
Total.	38 45%	46 55%	84 100%

From Table 39 it is evident that the most prevalent response value of the disabled respondents of 13 (34%) was "10 + years", followed closely by 11 (29%) with "1 to 2 years" in their current position. The disabled respondents therefore had either limited time in their current jobs or they had spent more than 10 years in their jobs.

The response value of the not disabled group which appeared most was "1 to 2 years" by 15 (32%) respondents which were closely followed by "3 to 5 years" of 14 (30%) respondents. The most not disabled respondents had therefore spent rather limited time in their current positions.

8.5.5.5 Geographic location of respondents – Question 5

Question 5 and the response categories are presented in Table 40 below:

Table 40: Question and response categories related to the geographic location of respondents

NO	QUESTION/STATEMENT	RESPONSE	
5.	In which province is the organisation that you work for located?	Gauteng.	
		Western Cape.	
		Eastern Cape.	
		Northern Cape.	
		Mpumalanga.	
		North West.	
		KwaZulu-Natal.	
		Limpopo.	
		Free State.	
		Other: Please specify.	

The results were tabulated in Table 41 below:

Table 41: Geographic location of respondents

GEOGRAPHIC LOCATION	DISABLED RESPONDENTS	NOT DISABLED RESPONDENTS	COMBINED
Gauteng.	25 66%	36 78%	61 73%
Western Cape.	5 13%	4 9%	9 11%
Eastern Cape.	1 3%	0	1 1%
Northern Cape.	0	0	0
Mpumalanga.	1 3%	0	1 1%
North West.	1 3%	2 4%	3 4%
KwaZulu-Natal.	4 11%	0	4 5%

GEOGRAPHIC LOCATION	DISABLED RESPONDENTS	NOT DISABLED RESPONDENTS	COMBINED
Limpopo.	1 3%	0	1 1%
Free State.	0	2 4%	2 2%
Other.	0	2 4%	2 2%
Missed responses.	0	0	0
Total.	38 45%	46 55%	84 100%

From Table 41 it is observed that most respondents (73%) were based in “Gauteng”.

8.5.5.6 Home language of respondents – Question 6

Question 6 and the response categories are presented in Table 42 below:

Table 42: Question and response categories related to the home language of respondents

NO	QUESTION/STATEMENT	RESPONSE	
6.	Please indicate your home language (Check ONE box).	Afrikaans.	
		English.	
		IsiNdebele.	
		Sepedi.	
		Sesotho.	
		SiSwati.	
		Xitsonga.	
		Setswana.	
		Tsivenda.	
		IsiXhosa.	
		IsiZulu.	
		Other: Please specify.	

The results were tabulated in Table 43 below:

Table 43: Home language of respondents

HOME LANGUAGE	DISABLED RESPONDENTS	NOT DISABLED RESPONDENTS	COMBINED
Afrikaans.	19 50%	22 48%	41 49%
English.	12 32%	12 26%	24 29%
IsiNdebele.	0	1 2%	1 1%
Sepedi.	1 3%	1 2%	2 2%
Sesotho.	0	0	0
SiSwati.	0	1 2%	1 1%
Xitsonga.	0	0	0
Setswana.	2 5%	1 2%	3 4%
Tsivenda.	1 3%	2 4%	3 4%
IsiXhosa.	1 3%	1 2%	2 2%
IsiZulu.	2 5%	5 11%	7 8%
Others.	0	0	0
Missed responses.	0	0	0

HOME LANGUAGE	DISABLED RESPONDENTS	NOT DISABLED RESPONDENTS	COMBINED
Total.	38 45%	46 55%	84 100%

From Table 43 it is observed that most respondents, 41 (49%), were Afrikaans speaking while 24 (29%) were English speaking. The remaining 19 (23%) had an African language as a home language.

8.5.5.7 Highest level of qualification of respondents – Question 7

Question 7 and the response categories are presented in Table 44 below:

Table 44: Question and response categories related to the respondents' highest level of education

NO	QUESTION/STATEMENT	RESPONSE	
7.	Please indicate your highest level of education (Check ONE box).	Standard 6/ Grade 8 or lower.	
		Standard 8/ Grade 10.	
		Matric/ Grade 12.	
		National Diploma.	
		Bachelor's Degree.	
		Honours Degree.	
		Masters or Doctors Degree.	
		Other: Please specify.	

The results were tabulated in Table 45 below:

Table 45: Highest level of qualification of respondents

HIGHEST QUALIFICATION	DISABLED RESPONDENTS	NOT DISABLED RESPONDENTS	COMBINED
Standard 6/ Grade 8 or lower.	0	0	0
Standard 8/ Grade 10.	2 5%	0	2 2%

HIGHEST QUALIFICATION	DISABLED RESPONDENTS	NOT DISABLED RESPONDENTS	COMBINED
Matric/ Grade 12.	14 37%	3 7%	17 20%
National Diploma.	6 16%	6 13%	12 14%
Bachelor's Degree.	3 8%	6 13%	9 11%
Honours Degree.	6 16%	18 39%	24 29%
Masters or Doctors Degree.	7 18%	13 28%	20 24%
Total.	38 45%	46 55%	84 100%

Emanating from Table 45, it appears that the value which appeared most for disabled respondents was "Matric/Grade 12" namely 14 (37%) respondents, followed by "Masters or Doctors Degrees" 7 (18%) respondents. A total of 22 (58%) of the disabled respondents were in possession of a post-matric qualification.

The value which appeared most for the not disabled respondents was 18 (39%) "Honours Degree", followed by 13 (28%) "Masters or Doctors Degree". A total of 43 (93%) of the not disabled respondents were in possession of a post-matric qualification.

8.5.5.8 Gender of respondents – Question 8

Question 8 requested respondents to indicate their gender as either male or female. The results were tabulated in Table 46 below:

Table 46: Gender distribution of respondents

GENDER	DISABLED RESPONDENTS	NOT DISABLED RESPONDENTS	COMBINED
Male.	26 68%	18 39%	44 52%
Female.	12 32%	28 61%	40 48%
Missed responses.	0	0	0
Total.	38 45%	46 55%	84 100%

Table 46 indicates that 26 (68%) respondents were males with disabilities, while 12 (32%) were females with disabilities. A further 18 (39%) respondents were males and 28 (61%) were females without disabilities. The overall distribution by gender was 44 (52%) male and 40 (48%) female.

8.5.5.9 Disability status of respondents – Question 9

Question 9 requested respondents to indicate whether they were disabled or not. The results are presented in Table 47 below:

Table 47: Disability status of respondents

STATUS	DISABLED	NOT DISABLED	COMBINED
Disability status.	38 45%	46 55%	84 100%
Missing responses.	0	0	0
Total.	38 45%	46 55%	84 100%

According to Table 47, 38 (45%) respondents were disabled while 46 (55%) respondents were not disabled.

8.5.5.10 Management of persons with disabilities by respondents– Question 10

Question 10 and the response categories are presented in Table 48 below:

Table 48: Questions and response categories related to whether respondents were managing employees with disabilities

NO	QUESTION/STATEMENT	RESPONSE		
10.	Are you managing employee/s with disabilities?	Yes.	No.	Not applicable.

The results were tabulated in Table 49 below.

Table 49: Management of persons with disabilities by respondents

MANAGEMENT OF PERSONS WITH DISABILITIES	DISABLED RESPONDENTS	NOT DISABLED RESPONDENTS	COMBINED
Yes.	8 21%	15 33%	23 27%
No.	30 79%	31 67%	61 73%
Not applicable.	0	0	0
Missing responses.	0	0	0
Total.	38 45%	46 55%	84 100%

Table 49 reveals that 8 (21%) disabled respondents indicated that they managed disabled employees while 30 (79%) disabled respondents indicated that they did not manage disabled employees. Fifteen (15) (33%) not disabled respondents indicated that they managed disabled employees, while 31 (67%) indicated that they did not

manage disabled employees. A total of 23 (27%) respondents overall managed disabled employees while 61 (73%) respondents did not manage disabled employees.

Upon analysis of the foregoing biographical information, the question which requires an answer was whether the sample was purposive and suitable for the purposes of the research. Since the research analysis and discussion which follows were based on the questionnaire completed by the sample of 84 respondents, it was important to ensure that the sample was adequate.

The respondents were selected on the basis of the criteria set out above. It would not have been possible to find respondents that would comply with all the criteria, and it was therefore decided that compliance with three or more criteria would qualify respondents in terms of the criteria. The respondents who did not qualify with at least three of the criteria were excluded from the sample.

Following this approach it was concluded that the sample was indeed purposive. The reasons for reaching this conclusion were the following:

- 67% of the respondents were in managerial positions which are decision-making positions;
- 98% of all respondents were in possession of a matric/grade 12 qualification and 58% of the disabled respondents and 93% of the not disabled respondents were in possession of a post-matric qualification;
- the gender representation of respondents was evenly distributed;
- adequate knowledge of disability management was difficult to determine directly but it is assumed that a combination of position at the employer (level of decision-making in the organisation either in a management position or being able to influence disability management policy), number of employees employed by the employer (employed in an organisation employing more than 50 employees which has the effect that the EEA is applicable to such organisation), length of employment in the current position of employment (at least one year or more employment with the current employer) and being an employee with disabilities, would qualify as being knowledgeable; and

- 27% of respondents manage employees with disabilities.

In addition to the above the following characteristics of the sample should also be pointed out:

- 38 disabled and 46 not disabled respondents are sufficient in number for the nature of this study; and
- the respondents represent different sectors in the South African economy which could be broadly categorised into six sectors.

8.5.6 DATA PROCESSING AND ANALYSIS

The presentation of statistical data is often constrained by two conflicting goals, namely that the researcher attempts to provide the reader with the fullest degree of detail, but the detail is not presented in a manageable form (Babbie and Mouton 2001:427). Efforts were made to select and interpret only the most relevant statistics resulting in the exclusion of certain statistics which were not relevant or significant in the research.

As a first step in analysing the research results frequency analysis was conducted for descriptive purposes. The descriptive statistics mainly served the purpose of describing the characteristics of the sample and of addressing some specific research questions (Pallant 2005:49). The most pertinent results are discussed in detail below and, where relevant, are presented in tabular format. The frequency analysis was always calculated by using the number of respondents who completed the question in a particular group (disabled or not disabled) or overall, as the case may be. Missing responses were therefore not included in the specific statistical analysis. A respondent who missed a particular response was only excluded during the analysis of that response and not for the other responses which were completed. This method was followed to ensure that percentages can be compared meaningfully but that the highest number of responses could be utilised.

The analysis of data would be performed by utilising quantitative and qualitative techniques. The techniques are discussed separately below.

8.5.6.1 Quantitative analysis

The statements were grouped in sections dealing with a specific topic as can be seen in the "description" column of Table 31 above. The analysis of these questions would also be done per topic.

The questionnaire was developed in such a manner that the coding of the questions followed a simple pattern. The value 1 was allocated to the first response per question and values increased by 1 to the last option per question, which was the value 7.

The capture and analysis of data were completed in two distinct phases. The first phase was the analysis of data obtained from the survey and the second phase was the analysis of qualitative data.

The questionnaire had been adequately designed and pre-coded to facilitate data entry directly into an excel spread sheet. The excel spread sheet consisted of two workbooks. Responses were grouped into "Disabled" (participants who are disabled) and "Not disabled" (participants who are not disabled), in accordance with the response to question 9 of the questionnaire. The statistical analysis was done with SASS Version 8.2. The statistical analysis was conducted according to the interpretation key (following a consistent pattern) as set out in Table 50 below.

Table 50: Meaning attached to the various response values (interpretation key)

RESPONSE VALUE	MEANING	MEANING OF COLLAPSED CATEGORIES
1	Disagree strongly.	Disagreement.
2	Disagree.	
3	Slight disagreement.	
4	Neutral.	Neutral.
5	Slight agreement.	Agreement.
6	Agree.	
7	Agree strongly.	

As presented in Table 50 scores or response values of 1, 2 and 3 would be regarded as "disagreement" with the particular statement while response values 5, 6 and 7 would be regarded an "agreement" with the particular statement. The basis on which this interpretation key was developed was on logical and rational grounds based on the following arguments:

- Disagreement with a statement whether slight disagreement or strong disagreement indicates that a constraint has been identified. It should be noted that most of the statements have been phrased positively and those statements that have been phrased negatively have been turned into positive statements during analysis.
- Agreement with a statement indicates that a constraint has not been identified.
- Neutral responses have been interpreted that the respondent does not have a view on the specific matter and is undecided.

Arising from the above arguments it was decided that those topics where the average score (mean) is less than 5, are, for purposes of this research, indicative of a constraint which requires to be addressed as an element of a disability management strategy.

As a result of the nature of the research, mainly descriptive statistics were performed to interpret the research results. Descriptive statistics have a number of uses (Pallant 2005:49) namely to:

- Describe the characteristics of the sample;
- check the variable for any isolation of the assumptions underlying the statistical techniques that will be used to address the research question; and
- address specific research questions.

Pallant (2005:90) also adds that frequencies should be used to obtain descriptive statistics for categorical variables.

Jansen (2007:19) states that descriptive statistics are about summaries of data in three ways:

- Through location of centrality (means, modes and median) referred to as "measures of centrality".
- Through dispersion (the range, the variance and standard deviation) referred to as the spread of data around the average.
- Through measures of shape (skewness and kurtosis).

Consideration had to be given to the utilisation of the standard deviation in the interpretation of the results. The standard deviation indicates how responses deviate from the average value of the responses. Due to the relatively small sample utilised, the interpretive value of the standard deviation was very limited and it was subsequently decided not to present the standard deviation for each question. The analysis per question was therefore based on the mean for such question.

8.5.6.2 Qualitative analysis

According to Ritchie, Spencer and O'Connor in Ritchie and Lewis (2003), data management usually involves a decision on the themes or concepts to be used for labelling, sorting and comparison of data. The researcher first gained an overview of the data covered, became familiar with the data set and focused on the data set that pertains to the objectives of the research. The researcher then identified recurring themes and ideas using the ATLAS.ti programme.

Participants in the research are experienced in disability management. The development of the strategy originates from the literature reviewed and it is generated or "grounded" in data from respondents (Strauss and Corbin 1990). The strategy is, therefore, developed by following a deductive (originating from the literature review) and inductive (originating from the data from respondents) approach.

The researcher generated a general explanation of a process, action or interaction shaped by the views of participants (Strauss and Corbin 1990, Creswell 2007), due to the fact that current theories are inadequate in explaining the constraints persons with disabilities face to find employment.

The ATLAS.ti package was developed to enable a grounded theory approach (Silverman 2005). The researcher used the ATLAS.ti in order to analyse data derived from the questionnaire, both to extract themes during the pilot study and to obtain a wider understanding of constraints experienced by persons with disabilities. The ATLAS.ti is utilised to perform analysis on large amounts of textual, graphical and audio data that cannot be analysed by formal, statistical approaches in meaningful ways (Muhr 1997).

Open coding (Strauss and Corbin 1990, Muhr (1997) and Borgatti 2007) is the part of the analysis concerned with identifying, naming, categorising and describing phenomena found in the text. Essentially, each line, sentence and paragraph is read in search of the answer to the repeated question "what is this about? What is being referred to here?" Coding can be done very formally and systematically or quite informally. In grounded theory it is done informally and new categories are invented when required. The researcher organised the responses received into distinct units of meaning per line of text and then identified key words or phrases of the phenomenon in question.

The researcher focused on the constraints persons with disabilities faced in finding employment and the context in which these barriers manifest, the strategies used to overcome the constraints and the consequences of these strategies. The researcher thus moved back and forth among data collection and open coding and continually refined the categories and their interconnections as more data was collected.

8.6 ETHICAL CONSIDERATIONS

Saunders et al (1997:178) emphasise that it is important to ensure that the way in which the research is designed should both be methodologically sound and morally defensible to all those who are involved in it. To ensure this the researcher needed to obtain consent from respondents, ensure confidentiality of their responses, and inform them about the character of the research and their right to withdraw at any time to avoid harmful consequences.

McGuigan (1983:107) provides a general guideline in ethical principles in the conduct of research with human participants, namely that the researcher assumes responsibility for the welfare of research participants and should seriously evaluate each aspect of the research in order to maintain the dignity and welfare of the participants. The ultimate broader aim of this research was to endeavour to positively effect the employment of more persons with disabilities.

The respondents participating in this research would not be at risk in any manner. Concealment or deception would not be used at any time during the research to gather information.

The purposive sample of managers, human resource management practitioners and persons with disabilities were fully informed of the purpose of the research and their written consent to use their responses for research purposes were obtained. The respondents would also be free to choose whether or not to complete the questionnaire and they would be provided with sufficient time to make a considered decision (Olivier 2003:27). The respondents would also be provided with an article which emanates from the research. No negative personal consequences resulting from the feedback are foreseen.

The information obtained through the completed questionnaire will be kept confidential and will be stored in the format required by the University of Pretoria for the time period required.

8.7 SUMMARY

The research was initially exploratory by nature, especially during its starting phase. As the research progressed, more depth was required to the exploratory study and the research became more formal and descriptive of nature.

The research design selected for this study is mainly empirical. Primary data was gathered by means of the survey method and the questionnaire was specifically designed for purposes of this research. It contains both structured Likert-type questions and open-ended textual questions.

Although the research was mainly empirical it also had a non-empirical design element due to the strategy which will be developed.

The complexity of disability management and the issues which cause this complexity, led to the decision to follow both a qualitative and a quantitative research design. The research design approach is referred to as concurrent triangulation as it integrates the results of the two methods during the interpretation phase.

Descriptive and inferential statistical methods were used to analyse the participants' quantified scores while the qualitative method of Content Analysis (ATLAS.ti) was applied to analyse the respondents' answers to the open-ended questions.

The sample used for the research was found to be purposive as respondents complied with at least three of the criteria set. The internal validity of the questionnaire was determined through the use of the Cronbach alpha. The results indicated that all the sections of the questionnaire had a Cronbach alpha value above 0,7 which led to the conclusion that the questionnaire was internally valid.

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