

THE RELATIONSHIP BETWEEN PSYCHOLOGICAL OWNERSHIP AND EMPLOYMENT EQUITY PERCEPTIONS

By

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ABSTRACT

Psychological ownership is the psychologically experienced phenomenon that occurs when an employee develops possessive feelings towards a target (for example an organisation). However, there are several factors that influence the emergence of psychological ownership, one of them being contextual factors. Employment equity within the South African context might be considered such a contextual factor. The purpose of this study was to empirically investigate the relationship between psychological ownership (measured by the Psychological Ownership Questionnaire) and perceptions of employment equity (measured by the Employment Equity Questionnaire). A quantitative survey was conducted with a purposive sample of 202 skilled respondents employed in the mining sector. A correlation analysis and an analysis of variance were conducted, which revealed a number of significant relationships and differences between the different groups of respondents. The results of the correlation analysis indicated that a relationship exists between psychological ownership and employment equity. The results of the analysis of variance indicated that differences exist between respondents with regard to various biographical variables. The results might be used in organisations to acknowledge the effect of employment equity legislation on employees' psychological ownership.



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DECLARATION

I, Madelé Nelson, declare that this research study, titled “**The relationship between psychological ownership and employment equity perceptions**”, which I hereby submit for the degree MCom in Industrial Psychology at the University of Pretoria, is my own work and that the relevant references have been indicated in the list of references. This study has not previously been submitted by me for a degree at this or any other tertiary institution.

I further declare that this dissertation has been language edited by Mrs Rika Weiss, who is an approved academic editor.

Madelé Nelson

Date

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CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

In today's rapidly changing environment, successful organisations need to use all their resources to be competitive; they have to compete in different situations and adapt to changing situations (Denton & Vloeberghs, 2003). Olckers (2011) has stated that organisations need a workforce that is psychologically attached, not only to their work but also to their organisation as a whole. An employee's positive feeling towards an organisation or a certain position can be linked to a feeling of ownership, and this feeling of ownership, as stated by Van Dyne and Pierce (2004), is referred to as psychological ownership. Van Dyne and Pierce (2004) have described psychological ownership as the feeling that something is 'mine' or 'ours'. According to Pierce, Kostova, and Dirks (2001), psychological ownership is influenced by a number of factors, and that this ownership exists in the target and the individual which is greatly influenced through its appearance by structural and cultural concepts. Olckers (2011) pointed out that contextual factors might also influence psychological ownership and that, in the South African context, the relationship between the contextual factor of employees' perception of employment equity and psychological ownership needs to be explored.

Employment equity (EE) is "the equal employment of previously disadvantaged people into the workforce; its purpose is to implement affirmative action measures into the organisation to redress the disadvantages in employment experienced by designated groups to ensure their equitable representation in all occupational categories and levels in the workforce" (Republic of South Africa, 1998). EE can be regarded as a form of change as far as South African organisations are concerned. Human (2000) has stated

that change is handled differently by employees; for some it is satisfactory and for others it can bring pain and disadvantage. Pierce et al. (2001) have added that people can either promote or resist change, and, according to Dirks, Cummings, and Pierce (1996), the attitude towards change depends on people's ownership feelings towards the target of change. Thus, EE can elicit different feelings of change depending on the ownership feelings towards the target of change.

Pierce et al. (2001) have proposed that when change is self-initiated, evolutionary and additive, employees' psychological ownership toward the organisation or organisational factors results in the promotion of change; whereas when change is imposed, revolutionary and subtractive, employees' psychological ownership results in resistance to change. According to Iverson (1996) and Lau and Woodman (1995) employees who are more committed accept change more easily than those who are less committed. Based on the argument of Pierce et al. (2001) it seems that legislation in South Africa needs to be evolutionary and additive if the intention is to influence employees' psychological ownership so that it results in the promotion of change.

Olckers (2011) stated in her study of psychological ownership that there is a need for research that explores the relationship between psychological ownership and several contextual factors. In this research study the focus will be on determining the relationship between EE perceptions and psychological ownership.

1.2 PROBLEM STATEMENT

Employment equity (EE) is a reality in the current South African work environment due to the country's history. Pierce, Kostova, and Dirks (2003) have stated that employees who possess a higher sense of psychological ownership experience a higher degree of ownership towards the organisation, and that this can increase employees' commitment towards their organisations in the end. Olckers (2011) has confirmed that employees' psychological ownership makes a difference in organisations because it influences

employees' commitment and the ownership they take of their work. Several factors influence psychological ownership, and contextual factors are one of these. A significant contextual factor in South Africa is EE, which is legally imposed to bring about change so as to right the wrongs of the past. As mentioned previously, changes are handled differently by different people in different situations, but people who are more committed respond more positively to change (Hughes & Half, 2009). Therefore, one needs to determine if a relationship exists between psychological ownership and employees' perceptions of EE in an organisation.

1.3 PURPOSE STATEMENT

Robbins, Odendaal, and Roodt (2003) stated that commitment is a prerequisite for performance and that an organisation needs to adapt to internal and external forces of change. Therefore, if the aim is to enhance performance, account has to be taken of the finding of Hughes and Half (2009) that highly committed employees respond more positively to change. An example of an external force of change is legislation (Pfeffer, 1994), of which South Africa's Employment Equity Act (EEA), 1998 (Act No 55 of 1998) is a case in point. The EEA was enforced with the aim of promoting equal employment opportunities for and the fair treatment of all the people in the country (Republic of South Africa, 1998).

Pierce et al. (2003) identified that contextual factors have an effect on psychological ownership, and, in addition, that cultural aspects form part of these contextual factors. Olckers (2011) has stated that different groups perceive and might interpret psychological ownership differently. According to Olckers (2011), it is important for future research to determine the relationship between different contextual factors and psychological ownership. Therefore, the main purpose of this study will be to identify the relationship between psychological ownership and EE perceptions in a South African context.

1.4 RESEARCH OBJECTIVES

The objectives of this study are to investigate the following:

- To establish the relationship between respondents' perceptions of employment equity and psychological ownership
- To determine whether respondents' age, race, gender, educational level and operational level and tenure in the organisation play a role in their perceptions of employment equity and their psychological ownership.

1.5 ACADEMIC VALUE AND CONTRIBUTION OF THE PROPOSED STUDY

Existing research has established that employees' psychological ownership influences their commitment and the ownership they take of their work, and that different factors can have an influence on this psychological ownership (Olckers, 2011). Contextual factors have been identified by Pierce et al. (2003) as one of the factors that can influence psychological ownership. Therefore, the work context in South Africa – a country with a diverse and uniquely different workforce – might affect psychological ownership. The introduction in this country of the EEA in 1998 was aimed at promoting equal employment opportunities for and the fair treatment of its peoples (Republic of South Africa, 1998). However, it needs to be determined if this legislation influences employees' ownership feelings towards their organisations. In this regard this study will contribute in a unique way because its purpose is to determine the relationship between psychological ownership and EE perceptions.

More specifically, this study aims to make a contribution by examining contextual factors that influence psychological ownership in a South African context. By identifying the relationship between psychological ownership and EE perceptions, organisations could be sensitised to the nature of this relationship. Organisations could also be made aware

of how employees' age, race, gender, educational level, operational level and tenure in an organisation affect the relationship between employees' psychological ownership and EE perceptions.

1.6 DELIMITATIONS AND ASSUMPTIONS

1.6.1 Delimitations

Firstly, the study is limited because of its applicability to the South African context only. Because the aim of the study is to determine if a relationship exists between perceptions of EE and psychological ownership, and because the EEA differs from legislation in other countries, only the population of South Africa can be targeted. This entails that participants in other countries will be excluded and that the finding cannot be generalised. The researcher trusts that the sample is representative of South Africa's demographics and the country's different cultures.

Secondly, the legal context of this study will be limited to EE. Although there are other laws in South Africa that might be applicable in a labour context, this study will focus on the EEA and employees' perceptions of EE.

Thirdly, this study will focus on the perceptions of EE and psychological ownership as displayed by semi-skilled, skilled and professional employees in one organisation in the mining sector. Thus, the study's sample group is limited and the finding cannot be generalised and applied to the population of the country as a whole. This study only focuses on a company operating in the mining sector which limits the data to not be generalised.

It is important to point out that the study will focus on psychological ownership and not on legal ownership.

1.6.2 Assumptions

Hofstee (2006) has stated that assumptions are things that we assume to be true without actually having tested that they are true. Leedy and Omrod (2010) have confirmed this statement by adding that an assumption is something that is taken for granted, and that without it a research project will have no meaning; an assumption is a self-evident truth.

Several basic assumptions are made in the proposed research study:

- That the sample derived from the organisation is representative of the South African population
- That employees participating in the research have the ability to understand and answer the questionnaires
- That the studies used as part of the literature review have been done in an ethical and professional way, and that the conclusions drawn in previous research are correct
- That participants will respond to the questionnaires in an ethical and honest manner
- That the data analysis tools used will provide the researcher with accurate results
- That the established surveys that have been used, of which the reliability and validity have been tested previously, incorporate the assumptions that the measurements used as data collection tools are both reliable and valid

The assumptions mentioned above will guide the research. In the following section, key definitions and terms will be provided to assist in the understanding of this study.

1.7 DEFINITION OF KEY TERMS

The following tables respectively contain key terms and abbreviations that have been used in this study.

Table 1: Definitions of key terms

KEY TERM	DEFINITION
<i>Commitment</i>	Commitment is a desirable outcome which enables an organisation to achieve organisational performance (Luthans, Baack, and Taylor, 1987).
<i>Employment equity</i>	The South African Employment Equity Act, 1998 (Act No 55 of 1998) was enforced with the end purpose of promoting equal employment opportunities and the fair treatment of people.
<i>Ownership</i>	Ownership operates as both a psychological and a formally (objectively) experienced phenomenon and is multidimensional in nature (Pierce, Rubenfeld, and Morgan, 1991).
<i>Psychological ownership</i>	An employee's positive feeling towards an organisation or a specific position can be linked to a feeling of ownership, and this feeling of ownership is referred to as psychological ownership (Van Dyne & Pierce, 2004).

In this study three key abbreviations have been used:

Table 2: Explanation of abbreviations

ABBREVIATION	MEANING
<i>EE</i>	Employment equity
<i>EEA</i>	Employment Equity Act
<i>POS</i>	Psychological ownership

Now that the key terms have been defined and the abbreviations have been explained, the outline of the study will be presented.

1.8 OUTLINE OF THE STUDY

The study is divided into the following chapters, as displayed in Table 3.

Table 3: Outline of chapters

CHAPTER	HEADING	CONTENT OF CHAPTER
1	Introduction	Background to the study; problem statement; purpose statement; research objectives; academic value; discussion of key terms
2	Literature review	Description of EE and psychological ownership, and an in-depth literature study of each; different factors influencing psychological ownership; the role of EE as a possible contextual factor; the different forms of psychological ownership
3	Research design and methods	The research design and methods used in this study
4	Research results and findings	The results obtained from the data analysis done in accordance with the research design and methodology
5	Conclusion and recommendations	An overview of and conclusion to the research findings of the study relative to the literature reviewed and the statistical analysis; the limitations of the study; recommendations for further study

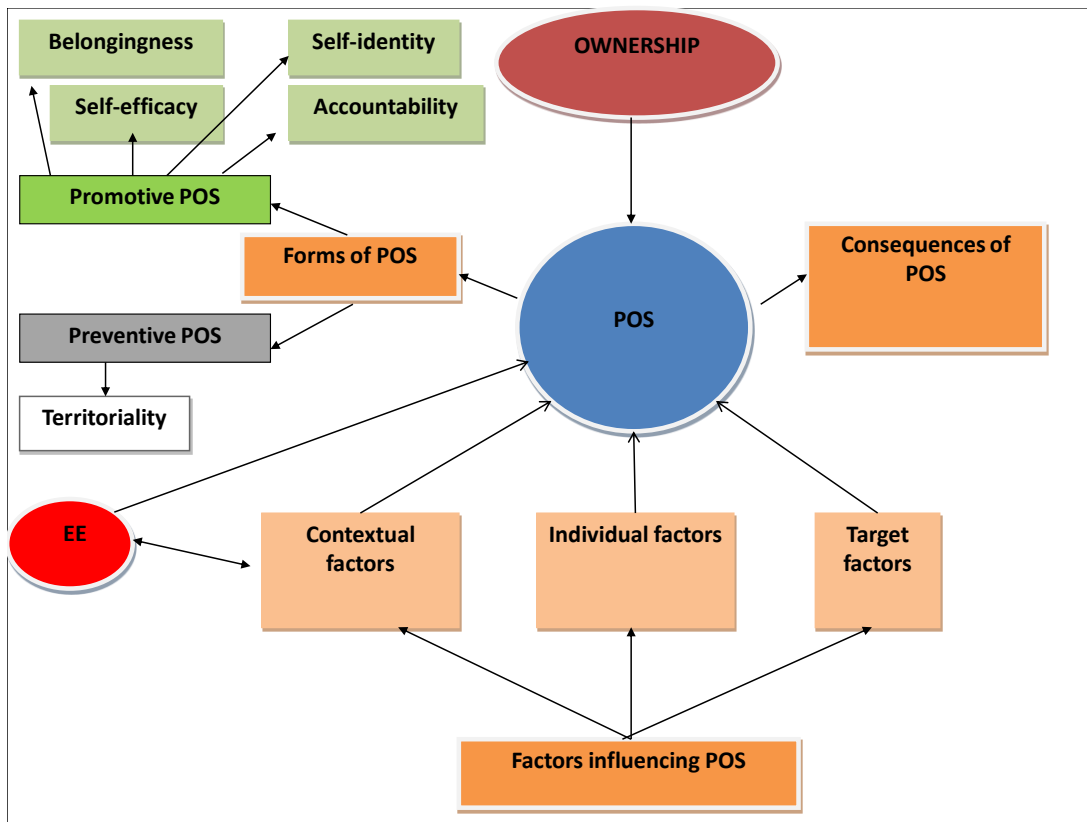
The discussion of the background to the study and the problem and purpose statements will now be followed by an in-depth literature review of the concepts employment equity (EE) and psychological ownership (POS).

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

In order to conduct a thorough research study and gain an understanding of psychological ownership and EE perceptions, an in-depth literature study is required. In the first place it is important to understand the concepts and their application in an organisational context. To this end the concepts of ownership, psychological ownership and employment equity will be defined. Furthermore, different factors influencing psychological ownership and the role of EE as a possible contextual factor will be explored. Lastly, the different forms of psychological ownership and their consequences will be reviewed. An outline of the literature review and the subsequent discussions is given in Figure 1.

Figure 1: Literature review outline



Source: Author's own

The outline above was used as a model to guide the logical flow of this study. A discussion of ownership will follow next.

2.2 OWNERSHIP

To determine the meaning of psychological ownership, the concept of ownership must first be investigated. According to a study done by Wagner, Parker, and Christiansen (2003), ownership beliefs positively relate to ownership behaviour and attitudes towards an organisation. In addition, Wagner et al. (2003) declared that ownership behaviours influence financial performance in a positive way. Druskat and Pescosolido (2002), Long (1978) and Peters (1988) expressed the opinion that when employees are owners and aware of their ownership feelings, their relationship with their organisation changes, and this relationship affects their attitude, behaviour and performance. Wagner et al. (2003) linked employee ownership plans to the encouragement of employees, resulting in improved organisational performance. Thus, ownership can influence behaviour and performance in a positive way.

Dirks et al. (1996) noted that individuals' inclination to advance or oppose change is affected by their feelings of ownership. Pierce et al. (1991) suggested that psychological ownership might create positive attitudinal and behavioural effects even without legal ownership. Legal ownership refers to the legal possession of an object, which might be a gift or something that has a financial implication; owning something means to possess it legally, or put another way, buying something means having ownership of it. The conclusion that can be drawn is that the way in which an individual handles change, as well as the individual's attitude towards an organisation, will have an effect on that individual's feeling of ownership.

2.3 PSYCHOLOGICAL OWNERSHIP

While legal ownership can be obtained financially, psychological ownership cannot. A summary of the various definitions of psychological ownership is given in Table 4.

Table 4: Definitions of psychological ownership

AUTHOR	DEFINITION
Pierce et al. (2003)	Psychological ownership (POS) replicates an individual's awareness, beliefs and thoughts regarding the target of ownership, which creates an emotional sensation.
Van Dyne & Pierce (2004)	POS is a phenomenon that occurs when employees experience positive psychological feelings towards the target.
Pierce et al. (2001)	A feeling that something is mine or ours refers to POS; it is a feeling of ownership towards a target.
Dittmar (1992)	POS replicates a relationship between an individual and a target of ownership. The object is experienced as having a close connection with the self.
Furby (1978)	The centre of POS is control. A sense of control and ownership is the centre of POS.
Van Dyne & Pierce (2004)	POS involves emotions that are experienced, and POS feelings go hand in hand with an individual's developing feelings of control towards a target.

According to Van Dyne and Pierce (2004), there is a positive link between psychological ownership and employees' attitudes and work behaviour. Avey, Avolio, Crossley, and Luthans (2009) declared that if an employee feels like an owner, the employee's work attitude is influenced positively. Vandewalle, Van Dyne, and Kostova (1995) argued that psychological ownership is a type of attachment that members of an organisation experience, which is represented by feelings of possessiveness or ownership towards an entity without the existence of any legal claims. Psychological ownership, therefore,

has an influence on employee attitudes and behaviours and can also contribute to the success of an organisation (Van Dyne & Pierce, 2004).

In the next section, different forms and dimensions of POS will be discussed.

2.4 FORMS AND DIMENSIONS OF PSYCHOLOGICAL OWNERSHIP

Higgins (1997) stated that a person has two self-regulation systems. The one system has to do with promotion goals; it controls the achievement of rewards, which include wishes, hopes and aspirations, and is representative of the 'ideal self'. The other system has to do with prevention goals; it controls the avoidance of punishment, which include duties, obligations and punishment, and is representative of the 'ought self'.

The characteristics of the two different forms of self-regulatory focus systems are summarised in Table 5.

Table 5: Self-regulatory focus characteristics

PROMOTION-ORIENTED FOCUS	PREVENTION-ORIENTED FOCUS
<p>Employees are:</p> <ul style="list-style-type: none"> - sensitive to rewards; - open to change – see it as an enhancement; - creative in problem solving; and - concerned about accomplishments. 	<p>Employees are:</p> <ul style="list-style-type: none"> - concerned about duties and obligations; - less open to change; - apply avoidance strategies; and - sensitive to punishment.

Higgins (1997) argued that both methods are important, and that the one approach is not necessarily better than the other. Higgins (1997) asserted that promotion-oriented behaviour might be needed in some instances whereas prevention-oriented behaviour might be required under different circumstances. Avey et al. (2009), who applied the two forms of self-regulatory focus to psychological ownership and distinguished between

promotion-oriented psychological ownership and prevention-oriented psychological ownership, indicated that the way promotion-oriented and prevention-oriented employees experience the target of ownership will be different depending on the circumstances.

Avey and colleagues (2009) identified two dimensions of POS, namely promotive POS, which include self-identity, self-efficacy, belongingness and accountability, and preventive POS, which include territoriality.

For the purpose of this study ***promotive POS*** will include the following:

Self-efficacy: According to Bandura (1995), self-efficacy is an individual's judgement about their own ability to perform in different situations. Pierce et al. (2001) stated that the ability to control one's environment evokes feelings of efficacy and pleasure. They proposed that one's psychological ownership is grounded on a motivation to be efficacious in one's own environment. They added that individuals explore their environments because of a need to have feelings of competence and efficacy. Furby (1980) argued that the control of objects can often foster perceptions of personal efficacy. The view of one's own ability and the need to adapt to the environment and to be in control might lead to self-efficacy.

Self-identity: Self-identity refers to a personal, cognitive connection between a person and an object, as well as a feeling of being at one with the target (Porteous, 1976). The importance of the self and the need to use ownership to define the self were highlighted by Pierce et al. (2003). Dittmar (1992) pointed out that the interaction of individuals with their possessions, as well as the meaning that these possessions have for them, reflects the individuals' sense of self-identity and self-definition.

Belongingness: According to Porteous (1976), belongingness refers to one's feeling that one is at home in an organisation. Pierce et al. (2003) added that an attachment occurs between people and objects as they develop their home base – through this they might develop a special place which is theirs and which provides personal security. When an employee feels at home and forms an attachment with an object it might influence that employee's belongingness.

Accountability: Accountability refers to an anticipation of the right to hold others and oneself accountable for influences on one's target of ownership (Lerner & Tetlock, 1999). Wood and Winston (2007) added that accountability requires a degree of ownership and acceptance of responsibility. Taking responsibility for an object will influence the level of accountability.

For the purpose of this study, ***preventive POS*** will include the following:

Territoriality: Territoriality refers to individuals' behaviour in showing their feelings of ownership towards a physical or social object (Brown, Lawrence, & Robinson, 2005). Wells (2000) argued that space for personalisation makes employees happier. Brown et al. (2005) supported this statement by adding that personalisation allows employees to express their identity. When employees personalise their environment and have a space in which to express their own identity they will experience territoriality.

Having discussed preventive and promotive POS as forms of POS, the consequences of POS will be investigated in the next section.

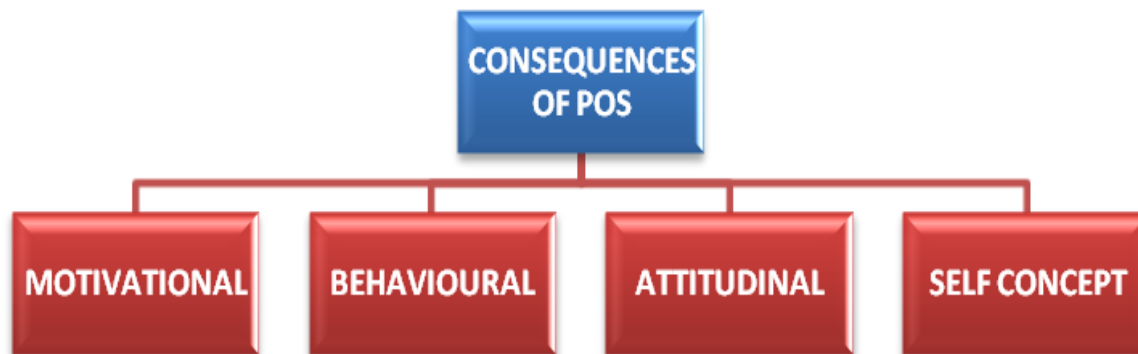
2.5 CONSEQUENCES OF PSYCHOLOGICAL OWNERSHIP

Furby (1978) outlined three outcomes that can be associated with feelings of possession, and these include:

- Positive attitudes towards the target
- An enhanced self-concept
- A sense of responsibility

Van Dyne and Pierce (2004) elaborated on this statement regarding possession by indicating that a sense of possession is the core element that can be influenced by self-concept, behaviours and work-related attitudes. Olckers (2011) concluded that psychological ownership is associated with attitudinal, behavioural, positive motivational consequences and self-concept. The following figure, derived from Olckers (2011), summarises the consequences of psychological ownership.

Figure 2: Consequences of psychological ownership



Source: Adapted from Olckers (2011, p. 63)

2.5.1 Motivational consequences

According to Long (1978), ownership is associated with motivational consequences. As stated by Pierce et al. (1991), an employee's perception of losses and gains attained in the past or the present is associated with the employee's current equity, and the employee's influence and personal rights might have motivational consequences. Bernstein (1979) found that if employees experience an object as theirs, they will make an increased effort to work hard and be motivated, and they will want to motivate others to do the same. Motivation of employees will thus be enhanced by cooperative behaviour, work group norms and peer pressure, and this will have a positive impact on ownership. Increased owner identification of an employee with an organisation will lead to increased integration with the ownership experience. This will increase the sense of responsibility and meaningfulness of work, which in turn will have a positive effect on motivation.

2.5.2 Behavioural consequences

Behaviour is regarded by Burke and Reitzes (1991) as a function of the self-identity of an individual – people maintain a sense of self by adopting patterns of behaviour that carry meaning. Olckers (2011) pointed out that when an employee experiences a feeling of ownership, that employee might engage in behaviours towards the object of ownership. When employees are taken care of and they feel their basic needs are met, they tend to make positive proactive contributions to the organisation (Van Dyne & Pierce, 2004).

According to Vandewalle et al. (1995), employees with high psychological ownership are more likely to take part in extra role activities. Extra role behaviour is behaviour outside of formal employment, and this behaviour is undertaken in the belief that it will elicit positive outcomes for the organisation (Vandewalle et al., 1995). Similarly, Mayhew, Ashkanasy, Bramble, and Gardner (2007) stated that psychological ownership

increases extra role behaviour. In a study by Vandewalle et al. (1995) a strong relationship was found between psychological ownership and extra role behaviour.

Van Dyne and Pierce (2004) stated that organisational ownership and employee performance have a positive relationship. Mayhew et al. (2007) added that employees will be encouraged to perform better if they experience psychological ownership.

2.5.3 Attitudinal consequences

Wagner et al. (2003) argued that ownership beliefs and employee attitudes toward an organisation are related in a positive manner. According to O'Driscoll, Pierce, and Coghlan (2006), psychological ownership leads to organisational attachment. This organisational attachment can also be referred to as affective commitment, as stated by Meyer and Allen (1991). O'Driscoll et al. (2006), Avey et al. (2009), and Olckers (2011) confirmed that a strong association exists between feelings of psychological ownership towards an organisation and affective commitment. Van Dyne and Pierce (2004) and Olckers (2011) have also proved that there is a positive relationship between psychological ownership and job satisfaction.

According to Vandewalle et al. (1995), psychological ownership does make a difference and is often reflected in commitment to an organisation and satisfaction.

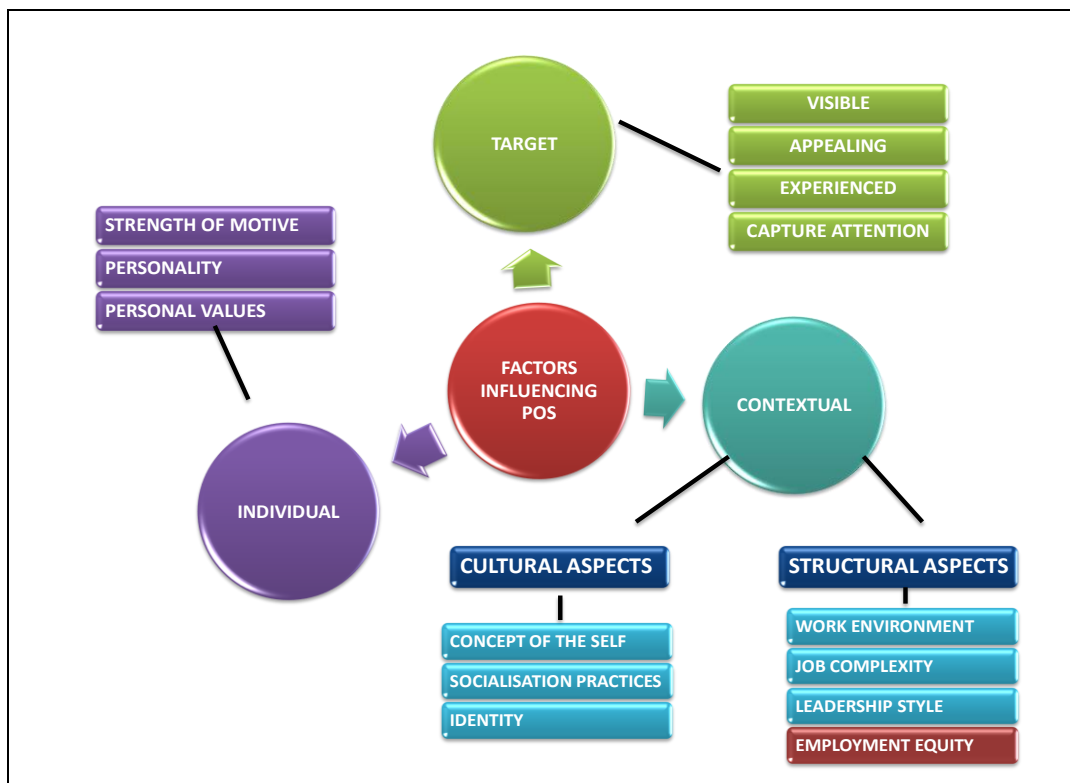
2.5.4 Self-concept

According to Pierce, Gardner, Cummings, and Dunham (1989), organisational experiences lead to the emergence of a special sense of the self that reflects employees' self-worth within the context of an organisation. Positive experiences of oneself in the organisation will occur, according to Van Dyne and Pierce (2004), when feelings of psychological property are experienced in the organisation. The above discussion about the consequences of POS will be followed by a discussion of the factors influencing POS.

2.6 FACTORS INFLUENCING PSYCHOLOGICAL OWNERSHIP

Pierce et al. (2001) pointed out that various factors influence psychological ownership. The different factors that influence psychological ownership, as identified by Olckers (2011), are displayed in Figure 3.

Figure 3: Factors influencing psychological ownership



Source: Adapted from Olckers (2011, p. 45)

There are basically three different factors that might influence psychological ownership: target, individual and contextual. These factors will be discussed below.

2.6.1 Target factors

Pierce et al. (2003) stated that the target must at least be visible and appealing, that it must capture the attention of the individual and that it must be experienced by the individual. According to Pierce et al. (2003), targets of ownership have the following characteristics: the targets are possible to control, employees should be able to get to know the targets better and employees should be able to invest themselves in the targets of ownership. According to Kamptner (1991), the possessions people value and the reasons they value these possessions change over time. Kamptner (1991) also indicated that males identify with objects that tend to include activities and physical interaction, whereas women tend to identify with objects that are more meaningful and symbolic. Items that are perceived as controlled and known are often the items towards which a psychology of 'mine' or 'ours' develops.

2.6.2 Individual factors

Individual factors that influence POS include the strength of motives, personality and personal values.

- **Strength of motives**

The individual is often prepared for psychological ownership by a motive of self-efficacy or self-identity, as stated by Pierce et al. (2003). Important to note is that there will be differences in the strength of the motives of an individual over time.

- **Personality**

Personality will also have an influence on psychological ownership (Olckers, 2011). Traits will affect how individuals select and behave towards ownership objects, as stated by Pierce et al. (2003). For example, extroverts and introverts might pursue targets in different ways. Kasser and Ryan (1993) supported this statement by adding that people with a high self-esteem might pursue intrinsic targets while people with a low self-esteem might pursue materialistic targets.

- **Personal values**

According to Pelham (1995), certain objects can be made more or less esteemed depending on personal values. According to Pierce et al. (2003), different things are important to different people, and people differ in the way they perceive certain attributes. Pierce et al. (2003) further stated that people are likely to feel ownership towards items that they personally value as important, and that people might not necessarily experience a feeling of ownership towards an object or target that they own legally. The absence of a feeling of ownership can be expected when the source is not associated with the self's identity, when the object is not a source of efficacy or effectance, or when it is not seen as a place within which to dwell. This object may be bought with 'hard cash' but the feeling of true ownership is not elicited (Pierce et al., 2003).

2.6.3 Contextual factors

According to Pierce et al. (2003), a wide spectrum of contextual elements will influence psychological ownership's appearance. They focus on two main aspects, namely structural and cultural aspects.

- **Structural aspects**

The structural aspects of a situation might influence an individual's feelings of ownership. As stated by Olckers (2011), these might include norms, rules, law and hierarchy. Pierce et al. (2003) argued that these situational factors might prevent or promote the development of ownership feelings. Mischel (1973) stated that strong situations constrain behaviour and thus affect and restrict the expression of individual differences, and that weak situations give an individual the opportunity to define meaning and elevate a response. Pierce et al. (2003) added that it is reasoned that strong and weak situations have a similar effect on the emergence of psychological ownership. Pierce et al. (2003) concluded that compared to weak situations strong situations will strain the emergence of psychological ownership.

Pierce et al. (2003) declared that potential targets of ownership are guided by different types of boundaries, and they refer to this phenomenon as the fence principle. Fences are structural factors, such as laws, boundaries and government structures, that inhibit the self from exercising control and investing the self, thereby in a way blocking the achievement or fulfilment of the motives of ownership (which include the motives of self-identity, self-efficacy and belongingness). The Employment Equity Act can be seen as such a structural factor that might have an impact on psychological ownership.

- **Cultural aspects**

Pierce et al. (2003) asserted that the cultural aspects of a social context will have an impact on psychological ownership. According to Hofstede (1980), culture is the difference between groups of individuals, and cultural differences arise because of the collective programming of people's minds. According to Pierce et al. (2003), there are two theories about the effects of culture on psychological ownership, namely –

- the link between POS and the concept of the self; and
- learning through socialisation practices.

Firstly, Erez, and Earley (1993) stated that psychological ownership is linked strongly to the **concept of the self** and is generally arranged and influenced by culture. Triandis (1994) added that the emergence of cross-cultural psychology and its numerous conceptualisations of the self might be the result of cultural beliefs, for example the beliefs about the autonomous and interdependent self.

Secondly, Pierce et al. (2003) stated that psychological ownership is partly learnt through **socialisation practices**, which are also culturally determined. Pierce et al. (2003) proposed that all elements of the POS framework will be influenced by culture. According to Pierce et al. (2003), culture must be examined to understand psychological ownership. The effects of culture, according to Pierce et al. (2003), are indicated in Table 6.

Table 6: The effects of culture

CULTURE REFLECTS IN	CULTURE SHAPES
Norms	Individual self-concept
Traditions	Self-identity
Customs	Self-expression
Beliefs	Ownership and property

Source: Pierce et al. (2003)

Pierce et al. (2003) expressed the opinion that culture might determine the extent to which ownership is present. From the table above it can be seen that norms, traditions, customs and beliefs are important to individuals when they want to express themselves, and these cultural aspects influence the presence of ownership. Olckers (2011) stated that the various ownership motives or roots could have an effect on differences in culture. According to Hofstede (1980), the 'having-a-place' motive differs from the 'efficacy-effectance' motive. The former is seen to be more prominent in collectivistic cultures whereas the latter is more salient in individualistic cultures. According to Kroeber and Kluckholm (1952), the above motives of 'doing' versus 'being' can be compared with the motives of a deterministic culture – a culture in which it is presumed that people have control over nature.

The research referred to above indicates that cultural aspects influence the presence of psychological ownership. Even though EE is a structural factor, it does influence different cultural groups differently, and because of the cultural differences of the people affected by EE, different people might perceive EE differently. Therefore, it is important to discuss the concept of EE in more detail.

2.7 EMPLOYMENT EQUITY

Employment equity, as defined earlier, is “the equal employment of previously disadvantaged people into the workforce; its purpose is also to implement affirmative action measures into the organisation to redress the disadvantages in employment experienced by designated groups, to ensure their equitable representation in all occupational categories and levels in the workforce” (Republic of South Africa, 1998). The EEA aims to provide a workforce that is more productive and to make companies more efficient and competitive. The EEA was implemented with the goal of enhancing equal employment opportunities, as well as the fair treatment of people. Employment equity has introduced change in South African organisations. Yousef (2000) stated that organisations are pressurised in various ways to introduce change and that they experience various frustrations regarding change. Yousef (2000) added that satisfaction with various job factors influences attitude towards change. According to Human (2000), change is handled differently by employees; for some it is satisfactory and for others it can bring pain and disadvantage.

According to Iverson (1996) and Lau & Woodman (1995), more highly committed employees accept change more easily than those with lower commitment. Thus, for South African organisations to be successful, their employees need to accept EE legislation and learn to adapt to the change that it brings.

The EEA aims to create a workforce that is more motivated, better trained and more efficient to assist the company in being more competitive. The aim of this study will be to explore the relationship between perceptions of EE and psychological ownership.

2.8 EMPLOYMENT EQUITY AND PSYCHOLOGICAL OWNERSHIP

EE in South Africa has a major impact on people, according to Janse van Rensburg and Roodt (2005), who proposed that organisational commitment is predicted by perceptions of EE. However, there are different views related to the concept of commitment. As discussed earlier, a strong positive relationship exists between psychological ownership and commitment (O'Driscoll et al., 2006; Avey et al., 2009; Olckers, 2011). Therefore, the possibility exists that there might be a relationship between perceptions of EE and psychological ownership. However, this relationship has not been explored or empirically tested. In light of this, the purpose of this study is to determine the relationship between psychological ownership and employees' perceptions of EE because EE is a reality in South Africa's work environment today.

EE in South Africa is a legal factor that brings about change; it is a contextual factor that has arisen because of the history of South Africa, and in this sense it is also a structural aspect that might have an influence on psychological ownership. As previously mentioned, changes are handled differently by different people in different situations; for instance, people who are more committed respond more positively to change. Thus, one needs to determine if employees' perceptions regarding EE are related to their psychological ownership in their organisations.

2.9 CONCLUSION

In the literature review the concept of psychological ownership and its application in an organisational context were clarified. Psychological ownership is a state in which individuals feel ownership – the feeling that something is 'theirs'. The feeling of possession is the core of psychological ownership.

The dimensions of psychological ownership, namely efficacy and effectance, self-identity, having a place, accountability and territoriality were discussed. The factors that

influence psychological ownership were also discussed. Target factors are the potential of the target to comply with the motives that are the basis of psychological ownership. Among the factors discussed were individual factors, which include the strength of the motives, personality and personal values. It was also pointed out that contextual elements would have an effect on the appearance of psychological ownership. In that regard, according to Pierce et al. (2003), the focus must be on two main aspects: structural and cultural aspects.

Next, the discussion touched on EE in South Africa; a legal factor that brings about change, but also a contextual factor, which has arisen due to the history of the country, and a structural factor that might influence psychological ownership. The conclusion was reached that it was important to explore the relationship between EE perceptions and psychological ownership. The following chapter will describe the methodology and research design followed in this study.

CHAPTER 3: RESEARCH DESIGN AND METHODS

In this chapter the research design and methods used in this study will be described. Marshall (1998) stated that a research design is the strategic plan for a research project, and that a research design includes having a broad outline of the work to be done. This outline includes the methods of collection and data analysis. Creswell (2009) proposed that a proper research design has to consider three important issues as illustrated in Figure 4. For this study the following research design was followed.

Figure 4: Research design



Source: Creswell (2009)

According to Crotty (2003), the research design of a study can be quite confusing because different studies refer to concepts differently. Therefore, the key research terms used in this study have been defined as follows (see Table 7):

Table 7: Key research terms

KEY RESEARCH TERM	DEFINITION APPLIED TO THIS STUDY
Research paradigm/philosophy	Creswell (2009) described a research paradigm/philosophy as a world view. According to Saunders, Lewis, and Thornhill (2007), research philosophy is a term that is related to the development of knowledge and the nature thereof in a specific field.
Strategy of inquiry	Procedures and guidelines for the research are set out by the strategy of inquiry (Creswell, 2009). Babbie and Mouton (2001) referred to inquiry strategies which are often categorised as qualitative, quantitative and mixed-method research approaches.

Source: Author's own

An investigation of the research paradigm and philosophy will follow the above discussion of the research design.

3.1 RESEARCH PARADIGM / PHILOSOPHY

Ponterotto (2005) stated that a research paradigm sets the context for the proposed study. The research paradigm is a world view (Creswell, 2009), which is a set of beliefs that guides and directs behaviour. To this, Kotze (2010) added that a research paradigm consists of assumptions concerning the nature of reality (ontology), the relationship between the researcher and participant (epistemology), the role the personal values of the researcher plays in the research process (axiology), the rhetorical structure and the method used. Saunders et al. (2007) expressed the view that research philosophy can be referred to as the development of knowledge in a

certain field. The statements above have influenced the researcher in this research study. Creswell (2009) asserted that there are different world views. Four world views and their main elements are summarised in Table 8.

Table 8: World views

1. Post-positivism: strength of mind, reductionism, experiential inspection and measurement, and theory confirmation
2. Constructivism: considerate, numerous participant connotation, social and historical structure, and theory production
3. Pragmatism: Consequences of action, pluralistic, problem oriented and real-world-practice oriented
4. Advocacy/participatory: Political, collaborative, change oriented and empowerment-issue oriented

Source: Creswell (2009, p. 6)

According to Ponterotto (2005), post-positivism and positivism form the basis of quantitative research. He proposed that the difference between positivism and post-positivism is that positivism involves a belief in an objective reality and post-positivism involves a belief in an objective reality that is inefficiently expected. The goal of both positivism and post-positivism is an explanation that will cause the forecasting and control of a phenomenon. According to Creswell (2009), the post-positivism approach will start with a theory, will be followed by the collection of data that supports or counter the theory, which will be followed by the necessary adjustments before additional tests are done. Post-positivism is concerned with identifying and measuring the aspects that influence outcomes and with basing knowledge on the reality of existing data out there in the world. The main characteristics of post-positivism, as described by Ponterotto (2005), are displayed in Table 9.

Table 9: Main characteristics of post-positivism

DIMENSION	DESCRIPTION	POSITIVISTIC ASSUMPTION
Ontology	Nature of reality and being	One true reality that is identifiable, measurable and apprehendable, not bound to context or time
Epistemology	Relationship between researcher and participant	Independent relationship; research does not influence participant
Axiology	Role of values in the research process	Values of the researcher have no place, must be controlled
Rhetorical structure	Language and presentation of the research	Researcher is objective, scientific
Method	Process and procedure of the research	Quantitative, strict scientific method and procedures

Source: Adapted from Ponterotto (2005, p. 130 - 132)

In this research study the post-positivism approach was followed: the researcher explored data pertaining to psychological ownership and employment equity. This was done to quantify the observable into scientific measures. The strategy of inquiry and the research design will be described next.

3.2 DESCRIPTION OF INQUIRY STRATEGY AND BROAD RESEARCH DESIGN

Creswell (2009) stated that strategies of inquiry include guidelines and procedures for the research design which include quantitative, qualitative and mixed-method strategies (see summary in Table 10).

Table 10: Alternative strategies of inquiry

STRATEGY OF INQUIRY	SUMMARY
Quantitative	- Experimental designs

STRATEGY OF INQUIRY	SUMMARY
	- Non-experimental designs (surveys)
Qualitative	- Case study - Narrative research - Phenomenology - Grounded theory studies
Mixed-method	- Mix of both quantitative and qualitative strategies

Source: Creswell (2009, p.12)

This study was based on a quantitative research method. According to Maree (2010), quantitative research is a process that is carried out in an objective and systematic way by means of using numerical data from a population subgroup with the aim of taking a broad view and generalising the results to apply to the population being studied. Babbie and Mouton (2001) supported Maree's statement by referring to quantitative research as the numerical presentation of observations which adds to the purpose of describing the results which the observations reflect.

In this quantitative study two questionnaires were used. The one assessed psychological ownership and the other assessed employees' perceptions of employment equity. The research followed a deductive approach which assisted in testing if the theoretical research problem was supported by empirical measurement and data analysis. The process which was followed in this research was non-experimental.

Suitable descriptors that best explain the broad research design of the planned study are the following:

- **Empirical research** – Empirical research was conducted: the researcher gathered and examined primary data to answer the research objectives. Saunders et al. (2007) defined primary data as data which is compiled for a specific research project.

- **Basic research** – Basic research aims to increase scientific knowledge (Fox & Bayat, 2007). Basic research as an outcome of an academic schedule is undertaken merely to understand processes and their outcomes (Saunders et al., 2007). This research was undertaken to increase the scientific knowledge of psychological ownership by exploring the relationship between a specific contextual factor within the South African context, namely employment equity and psychological ownership.
- **Cross-sectional research** – Cross-sectional research involves a meticulous study of a certain phenomenon at a particular point in time. Cooper and Schindler (2006) stated that cross-sectional research is carried out once and signifies a snapshot of one point in time. A cross-sectional survey design was used because each participant completed the questionnaire once and the data represented a snapshot of one point in time.
- **Primary data** – Primary data is data collected specifically for a research project (Saunders et al., 2007). In this study, the researcher collected empirical data to investigate the relationship between EE perceptions and psychological ownership.

3.3 SAMPLING

The process of finding or selecting individuals to participate in a research study is known as sampling (Gravetter & Forzano, 2009). It is important for the sample to be drawn in such a way that it would be valid to generalise the results of the study to the population (Maree, 2010). The data set collected in full will be referred to as the population. In describing sampling the focus will be on the target population and the sampling techniques.

3.3.1 Target population

The target population is the population from which the data will be gathered (Maree, 2010). The target population in this study will consist of a diverse group of professional, skilled and semi-skilled employees employed within a South African organisation in the mining sector. According to Mattes and Richmond (2000), skilled, highly skilled and professional employees possess special skills, knowledge or ability to perform their jobs. Mattes and Richmond (2000) provided the following descriptions of these groups of employees:

- *Skilled worker*: attended a university, college or technical school, or might have learned skills on the job
- *Highly skilled worker*: capable of working efficiently, carrying out duties with responsibility and supervising the work of skilled employees
- *Professional*: individual who typically possesses a large body of knowledge derived from extensive, specialised educational training (usually tertiary), is frequently engaged in challenging work that is intellectual and creative, and is expected to exercise independent judgement and professional ethics in carrying out his or her responsibilities

Various sampling techniques exist that ensure that the sample is representative of the whole population. The sample methods refer to the variety of ways in which participants are selected to take part in the study (Gravetter & Forzano, 2009). Sampling methods can be divided in two main categories: probability and non-probability sampling.

- **Probability sampling**: Probability sampling refers to the probability that anyone in the population has a chance of being selected because sampling is done through random selection. Therefore, each individual has the same chance of being selected for the sample. A study should not allow any human or subjective interference (Maree, 2010). Saunders et al. (2007) associated probability sampling with experiential and survey research studies.

- **Non-probability sampling:** According to Saunders et al. (2007), non-probability sampling is a technique where the chance/probability of a participant to be selected is unknown. The population is not completely known and methods for selecting a sample are based on common sense. As stated by O'Neill (2010), a non-probability sample is selected on the basis of the availability of participants.

In this study, probability sampling, and specifically random sampling, was employed since probability sampling is associated with experiential and survey research studies.

Simple random sampling requires that individuals have an equal and independent chance of being selected (Gravetter & Forzano, 2009). This method was used in this study because it gave all the professional, skilled and semi-skilled employees in the relevant organisation in the mining sector a fair and an equal chance of being selected and included in the sample. In the next section the method of data collection will be discussed.

3.4 DATA COLLECTION

Data collection for a survey method includes mainly questionnaires (Leedy & Omrod, 2010). Babbie and Mouton (2001) referred to a questionnaire as questions and various types of answers designed to gather information that is required for the analysis. Questionnaires were distributed to participants via the company's intranet and email system, and in some cases hard copies were distributed.

Consent was obtained from the organisation and participants before they resumed with the completion of the questionnaires. The use of the internet and electronic communication enabled the researcher to reach high volumes of participants in different geographical areas. Other benefits were that the questionnaires were sent back immediately and that the respondents remained anonymous. Questionnaires are not time consuming and they allow one to reach a high volume of respondents at once. A

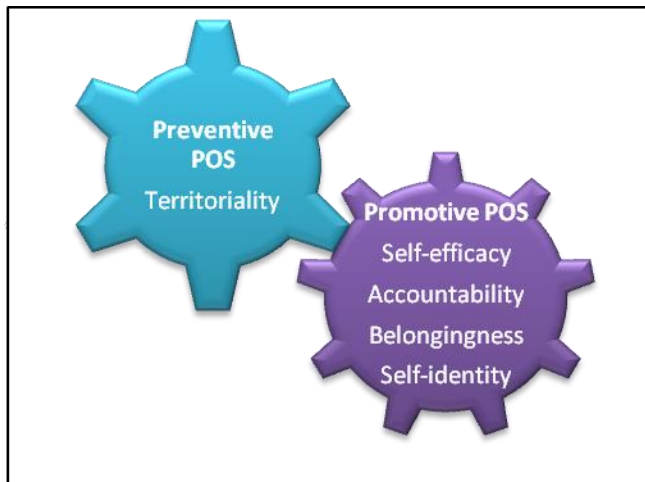
disadvantage of questionnaires is that questions are worked out beforehand and these cannot be changed or adapted after the questionnaires have been distributed. Sometimes participants interpret questions wrongly and this might impact on the study outcomes and results. The data was collected over a period of three months.

3.4.1 Measurement instruments

Data in this research was obtained by means of the Psychological Ownership Questionnaire (See Appendix A) developed by Avey et al. (2009) and the Perceptions of Employment Equity Questionnaire adapted from Martins (1999) and Janse van Rensburg and Roodt (2005). Ethical clearance and consent to use the questionnaires for the purpose of this study were obtained (Appendix B).

According to Olckers (2011) and Avey et al. (2009), POS consists of two distinctive dimensions, namely promotive POS and preventive POS (see Figure 5). The Psychological Ownership Questionnaire consists of 16 items; three items for each of the four components which measure promotive psychological ownership (self-efficacy, accountability, sense of belongingness and self-identity). The remaining four items measure the territoriality component of preventive psychological ownership. The responses are captured on a 6-point Likert-type scale ranging from 1 = strongly disagree to 6 = strongly agree. Alberts (2012) has confirmed the construct validity of the Psychological Ownership Questionnaire developed by Avey et al. (2009) within the South African context (CFI = 0.995), with reliabilities for the different dimensions ranging between 0.78 and 0.90.

Figure 5: Two components of psychological ownership



Source: Author's own

An adapted version of the Perceptions of Employment Equity Questionnaire, based on the theory of Martins (1999) and used in a study by Janse van Rensburg and Roodt (2005), was used in this study. Permission for using this adapted version was given by the authors. The EE questionnaire comprises 25 items. This questionnaire measures the perceptions of EE in the workplace, and these are assessed on a 5-point scale, ranging from 1 = to no extent, to 5 = to a very large extent.

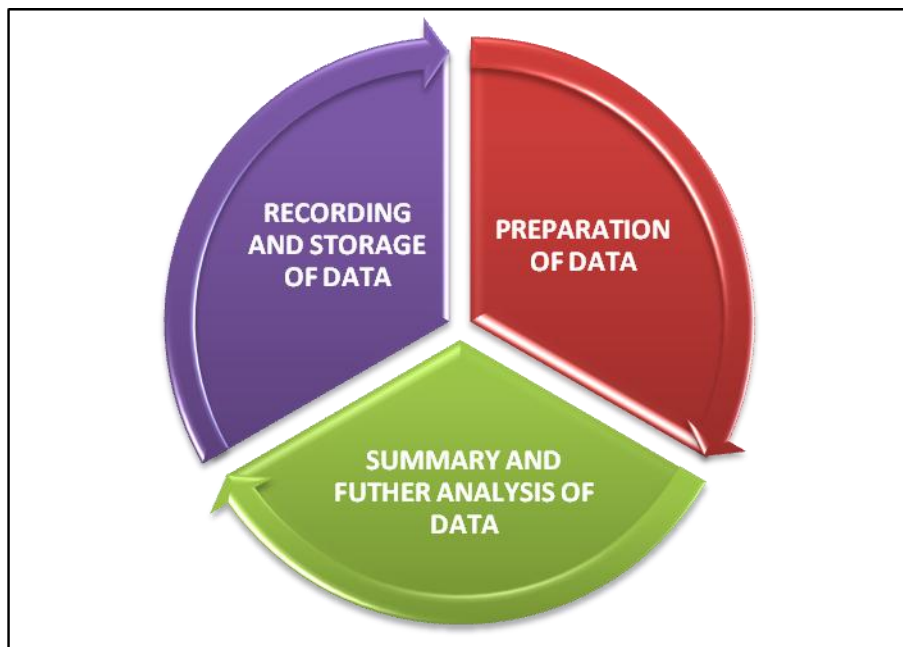
Smith and Roodt (2003) stated that the Employment Equity Questionnaire meets the requirement of construct validity and also has face validity because the instrument covers the practices as indicated in the Employment Equity Act. This statement was supported by Walbrugh and Roodt (2003). Janse van Rensburg and Roodt (2005) reported a Cronbach's alpha of 0.92 for the Perceptions of Employment Equity Questionnaire.

This discussion of the data collection method is followed by a discussion of the way in which the data was analysed.

3.5 DATA ANALYSIS

The main objective of the research study was to explore the relationship between employees' perceptions of employment equity and psychological ownership in a South African context. The secondary objective was to determine whether, based on their age, race, gender as well as educational and operational level in the organisation and tenure, employees differed significantly in terms of their perceptions of employment equity and psychological ownership. The data analysis plan followed included a discussion of certain elements which pertained to the analysis of data. The data was analysed by using quantitative measures that pertained to statistical analysis. Figure 6 shows the focus of the data analysis.

Figure 6: Data analysis



Source: Author's own

3.5.1 Recording, storage and coding of data

Responses from the questionnaires were gathered and recorded electronically. The SAS (Statistical Analysis System) programme (version 9.20) was used for the analysis

of data. A backup of the data was stored on an external hard drive and updated as work progressed.

3.5.2 Preparation of data

Field (2009) identified the first step in any data analysis process to be the exploration of data. According to Pallant (2007), it is necessary to screen and clean gathered data before it can be statistically analysed. The data was summarised and cleaned up by means of the SAS programme: distributions that were irregular, data that had been entered incorrectly, outliers which, as stated by Field (2009), might have resulted in distorted statistics, and conclusions that were incorrect were all excluded from the data.

3.5.3 Summary and further analysis of data

Quantitative techniques were used to analyse the data. Descriptions of the main types of analysis that were employed in this study are described below.

Descriptive statistics

Descriptive statistics is described by Maree (2010) as a way in which to analyse data using various statistical methods to organise and summarise data in a significant way. Pallant (2007) stated that the main reason for making use of descriptive statistics is to describe the characteristics of samples and to address the research question. The mean, standard deviation, standard error, sum, skewness and kurtosis of the sample were computed.

Morgan and Griego (1998) stated that the normality assumption anticipate skewness and kurtosis to be 2.5 times less the standard error. Field (2009), on the other hand, stated that skewness and kurtosis values within a normal distribution should be equal to 0. According to Kline (1999), the Cronbach's alpha must be above 0.7 to indicate good reliability. According to Field (2009) kurtosis are interpreted in the following way:

- Kurtosis > 3 - Leptokurtic distribution, sharper than a normal distribution, with values concentrated around the mean and thicker tails. This means high probability for extreme values.
- Kurtosis < 3 - Platykurtic distribution, flatter than a normal distribution with a wider peak. The probability for extreme values is less than for a normal distribution, and the values are wider spread around the mean.
- Kurtosis $= 3$ - Mesokurtic distribution - normal distribution for example.

Figure 7 provides a summary of the study's data analysis.

Figure 7: Data analysis summary



Source: Author's own

Correlation analysis

Correlation analysis was used to measure the strength of the relationship between two variables. In this study the Pearson's product-moment correlation was employed to determine the relationship between employment equity and psychological ownership.

Field (2009) indicated that a correlation can take a value of -1 (negative) as one variable changes another one changes in the opposite direction by the same amount, 0 as one

variable changes another one does not change at all and +1 (positive) as one variable changes another one changes in the same direction by the same amount.

The sign of the correlation coefficient determines whether the correlation is positive or negative. The magnitude of the correlation coefficient determines the strength of the correlation. Guidelines for determining strength of the relationship Cohen (1988):

$r=.10$ to $.29$ or $r=-.10$ to $-.29$ small

$r=.30$ to $.49$ or $r=-.30$ to $-.49$ medium

$r=.50$ to 1.0 or $r=-.50$ to -1.0 large

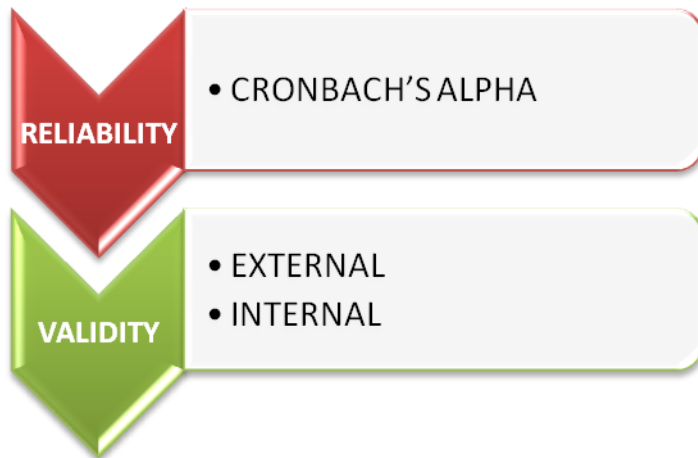
Comparing different groups

To determine whether employees differ significantly in terms of their perceptions of employment equity and psychological ownership based on their age, race, gender as well as educational and operational level in the organisation and tenure, the analysis of variance (ANOVA) technique was conducted. The significance value was set at a 95 percent confidence interval level ($p < 0.05$). Effect sizes were calculated to give an indication of the practical significance of the study results. Effect sizes were determined by calculating partial eta squared. Field (2009) reported the interpretation of effect sizes of partial eta squared as follows: 0.02 shows a small effect; 0.13 a medium effect; and 0.26 a large effect.

3.6 ASSESSING AND DEMONSTRATING THE QUALITY AND RIGOUR OF THE RESEARCH DESIGN

The quality and rigour of the research design is important and will be discussed with reference to Figure 8.

Figure 8: Quality and rigour of research design



Source: Author's own

3.6.1 Validity

The research conducted needs to be valid and reliable. Validity and reliability are developed as criteria for evaluating the quality of any measurement procedure (Gravetter & Forzano, 2009). According to Saunders et al. (2007) and Field (2009), validity can be defined in terms of data collection, and validity is achieved if the instrument measures what it is supposed to measure. In this study, face validity and construct validity were used to determine the validity of the research study.

3.6.1.1 Face validity

Face validity is the unscientific form of validity that demonstrates when a measure superficially appears to measure what it claims to measure (O'Neill, 2010). According to Avey et al. (2009), the POS questionnaire has face validity. Smith and Roodt (2003), as well as Walburgh and Roodt (2003), confirmed the face validity of the Employment Equity Questionnaire because the instrument covers the practices indicated in the Employment Equity Act.

3.6.1.2 Construct validity

According to Creswell (2009), construct validity determines if items measure hypothetical constructs or concepts. Construct validity requires that scores obtained from measurement procedures behave exactly the same as the variable itself. Smith and Roodt (2003) confirmed the construct validity of the EE questionnaire, and Alberts (2012) confirmed the construct validity of the POS questionnaire developed by Avey et al. (2009) and submitted to a South African sample.

3.6.1.3 Nomological validity

Nomological validity is a form of construct validity which shows the degree to which a construct behaves as it should within a system called a nomological network (Creswell, 2009). A nomological network is a demonstration of the constructs of interest in a study, their visible demonstrations, and the interrelationships among and between these. Nomological validity exists due to the relationship between POS and EE perceptions. In this study the relationship between POS and EE perceptions was determined by means of correlation analysis and according to the theory discussed in the literature review.

3.6.2 Reliability

Reliability refers to the consistency and stability of a measurement (Saunders et al., 2007). In this study, reliability was statistically tested by using Cronbach's alpha coefficient. According to Hair, Black, Babin, Anderson, and Tatham (2006), items with an alpha correlation of .70 and higher are viewed as acceptable. However, Cortina (1993) stated that .70 is the absolute minimum required for reliability. The Perceptions of Employment Equity Questionnaire has a Cronbach's alpha of .959 (Martins, 1999), therefore it measures employment equity perceptions reliably and consistently. The POS questionnaire's reliability was acceptable, according to Avey et al. (2009), because the measurements were: self-efficacy ($\alpha = .90$), accountability ($\alpha = .81$), sense of belongingness ($\alpha = .92$), self-identity ($\alpha = .73$) and territoriality ($\alpha = .84$).

The reliabilities obtained from this study will be discussed in Chapter 4.

3.7 RESEARCH ETHICS

In this section the ethics pertaining to this study will be discussed and mention will be made of the problems and potential problems. The study was approved by the University of Pretoria's Ethics Committee. Research ethics is defined by Saunders et al. (2007) as the researcher's behaviour regarding the rights of people affected by the work of the researcher. In order to be regarded as ethical, the study must follow a sound method and be acceptable to the people it involves.

Ethical considerations are important when conducting a research study that engages with or involves human beings. In this particular study the research involved participants who had to fill in a questionnaire which measured their perceptions of EE in the organisation as well as their psychological ownership towards their organisation.

Babbie and Mouton (2001) emphasised that the Health Professions Council of South Africa and the Professional Board for Psychology require that research be conducted from the research planning phase right through to the final phase, which is the publication of research findings.

Fair assessment practices could include the appropriate, fair and ethical use of assessment measures and results as stated by the International Test Commission Guidelines of 2000.

The above ethical issues are important considerations when conducting a research study. Figure 9 below was adapted from Olckers (2011) and highlights the ethical considerations that will be focused on in this study.

Figure 9: Ethical considerations and focus



Source: Olckers (2011, p. 158)

- **Informed consent**

According to Saunders et al. (2007), the requirement for informed consent requires the researcher to prepare a document which explains to the participants the purpose of the research, their role in it and the handling of the data obtained. In this study consent was obtained from the mining organisation as well as the respondents before commencement of the survey (Appendix B). The consent form stated that participants could withdraw from the study at any time. According to Babbie and Mouton (2001), researchers may not influence or place pressure on participants to sign this consent document. The researcher did not influence participants in any way during their participation in this study. The consent form is attached in the appendix.

- **Voluntary participation**

Saunders et al. (2007) emphasised that participation in a research study must be voluntary and participants may not be pressurised or forced by the researcher to take part in the study. Voluntary participation was indicated in the consent form and the researcher did not force respondents to complete the questionnaire.

- **Anonymity**

Anonymity means that the participant's identity must be kept secret or anonymous. Neither the names nor the backgrounds of participants may be disclosed. Information regarding participants' perceptions of EE in the organisation is sensitive and not for public information and must thus be respected. Respondents were made aware through the consent form that their participation in this study was anonymous and that their identity and participation would not be made public in any way. Babbie and Mouton (2001) pointed out that it must not be possible to trace the identity of participants and the information obtained from them.

- **Confidentiality**

All information regarding organisations and participants must be kept confidential at all times. Babbie and Mouton (2001) stated that the information obtained from the questionnaires used in a survey research must be used for no other purpose than the purpose stated prior to the study. The data obtained from this research study will only be used for the purpose as stated in the study objectives.

- **Harm**

The researcher of this study will honour the requirement that participants must not be exposed to any psychological or physiological harm through the way the study is conducted. The researcher is aware of the impact that the study might have on respondents. In accordance with the requirements set out by Babbie and Mouton (2001), the researcher did not cause any harm to the participants in this study.

- **Accountability**

Note was taken by this researcher that researchers could be held accountable for their actions in handling survey data at any stage.

- **Responsive and responsible**

The researcher ensured that numerous similar research studies and journal articles had been consulted to ensure that participants were treated in a socially responsive and responsible manner.

- **Plagiarism**

Plagiarism must not be committed, and the researcher made every effort to acknowledge all reference sources and articles correctly and to adhere to the University of Pretoria's rules relating to plagiarism.

- **Ethical reporting**

Ethical reporting requires the researcher to report findings in an ethical manner; nothing of importance must be left out, even if it differs from previous findings. Results must be reported accurately (Saunders et al, 2007).

3.8 CONCLUSION

This study will follow a post-positivism research approach, based on a quantitative research method and a cross-sectional, non-experimental survey design. The research group will be representative of a randomly selected probability sample. The participants in the study will include professional, skilled and highly skilled participants in a mining organisation operating in the coal mining industry. All ethical aspects were taken into consideration when conducting this study and respondents' consent was obtained before they completed the questionnaires.

CHAPTER 4: RESEARCH RESULTS AND FINDINGS

4.1 INTRODUCTION

This chapter presents the results obtained from the data analysis done by means of the SAS programme (version 9.20) in accordance with the research design and methodology discussed in Chapter 3.

The objectives of this study were to investigate the following empirically:

- The relationship between respondents' perceptions of employment equity and psychological ownership
- Whether the respondents differed significantly in terms of their perceptions of employment equity and psychological ownership based on their age, race and gender as well as their educational and operational level in the organisation and tenure

The demographics of the sample will be presented, followed by the descriptive statistics, the results of the correlation and the results of the ANOVA analysis of the data.

4.2 SAMPLE DEMOGRAPHICS

This section deals with the demographics of the sample group used in this study based on the biographical information supplied by the respondents. Semi-skilled, skilled and professional employees within a large South African mining house were identified as the units of analysis for this study. The specific characteristics and attributes of the units of analysis were collected through primary data collection.

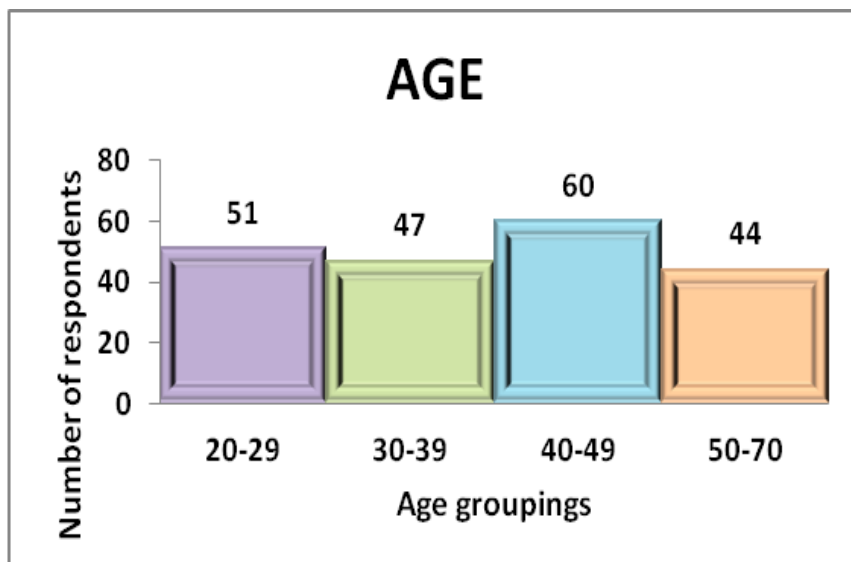
A diverse sample group was obtained through random sampling. Four hundred and eleven (411) questionnaires were sent out to respondents in a large South African

mining house. Some of the questionnaires were sent by email and some were distributed as hard copies. Two hundred and twenty-one (221) responses were received at first, giving a response rate of 53.8 percent. However, a number of questionnaires were incomplete and only 202 were useable, giving a final response rate of 49 percent. The age, race, gender, educational level, operational level in the organisation and tenure of the respondents formed the biographical composition of the target group. The biographical data is discussed in more detail below.

4.2.1 Age

The sample group ($n = 202$) consisted of participants in different age groups (see Figure 10). The largest number of respondents ($n = 60$), which accounted for 30 percent of the sample, fell in the 40 to 49 age group. The age group 20 to 29 was the second largest response group ($n = 51$), accounting for 25 percent of the sample, followed by the age group 30 to 39 ($n = 47$), which accounted for 23 percent, and the age group 50 to 70 ($n = 44$), which accounted for 22 percent of the sample.

Figure 10: Age distribution of sample group

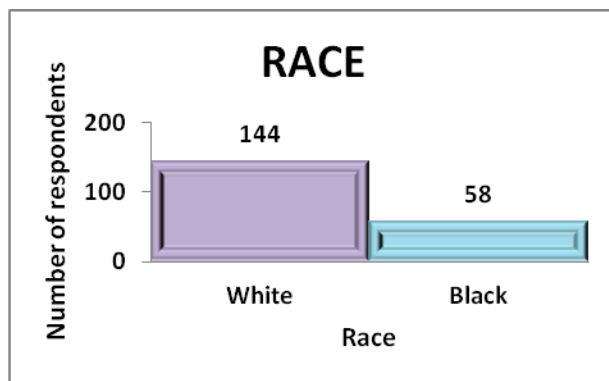


Source: Author's own

4.2.2 Race

Respondents of different race groups completed and returned their questionnaires. Of these only a small number were Indian ($n = 12$) and coloured ($n = 4$), and the rest were black and white respondents. In order to be able to compare groups of data of more or less the same size, the Indian and coloured respondents were excluded from the data set. White respondents ($n = 144$) represented 71 percent of the sample and black respondents ($n = 58$) represented 29 percent of the sample (see Figure 11).

Figure 11: Race distribution of sample group

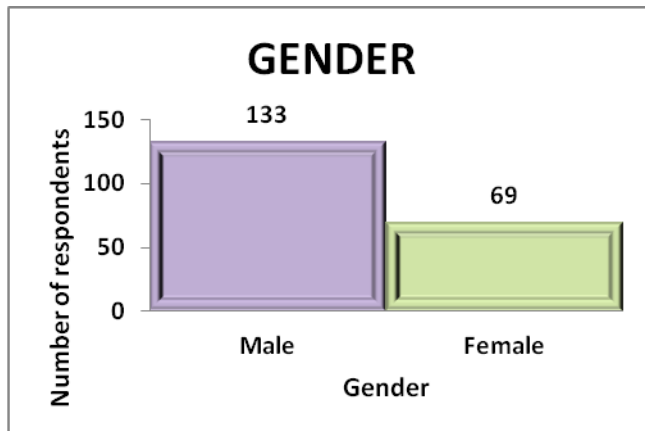


Source: Author's own

4.2.3 Gender

The sample group for this study was obtained from an organisation in the mining sector, a sector in which mainly males are employed, although there is a drive to employ more women. Male respondents ($n = 133$) represented 66 percent of the sample group and female respondents ($n = 69$) represented 34 percent of the sample group (see Fig 12).

Figure 12: Gender distribution of sample group

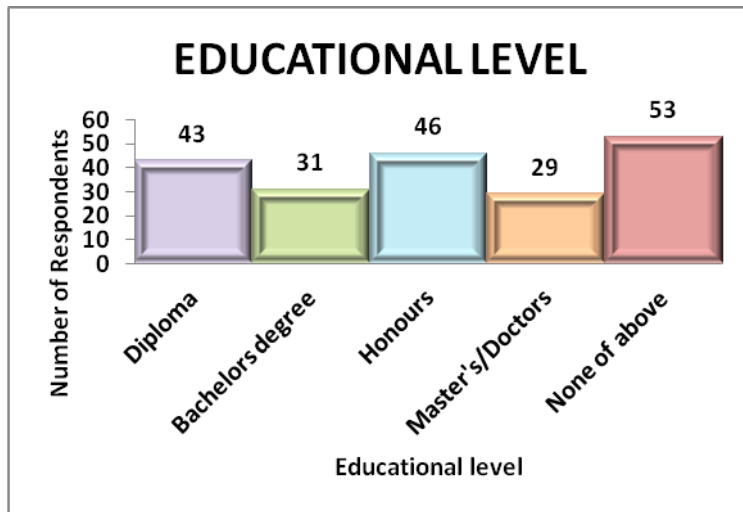


Source: Author's own

4.2.4 Educational level

The questionnaire required respondents to be at a skills level that enabled them to understand the different concepts. The distribution of the various educational levels of the respondents is shown in Figure 13. A large number of respondents had obtained honours degrees ($n = 46$), which represented 23 percent of the sample. Respondents with a diploma ($n = 43$) represented 21 percent of the sample group. Thirty-one respondents had a bachelor's degree (15 percent) and twenty-nine respondents had obtained master's or doctoral degrees (15 percent). The majority of the respondents ($n = 53$) had completed Grade 12 and they represented 26 percent of the sample group. This group included respondents who had qualifications in different trades (at least at N3 level) and had completed learnerships at accredited training centres.

Figure 13: Educational level distribution

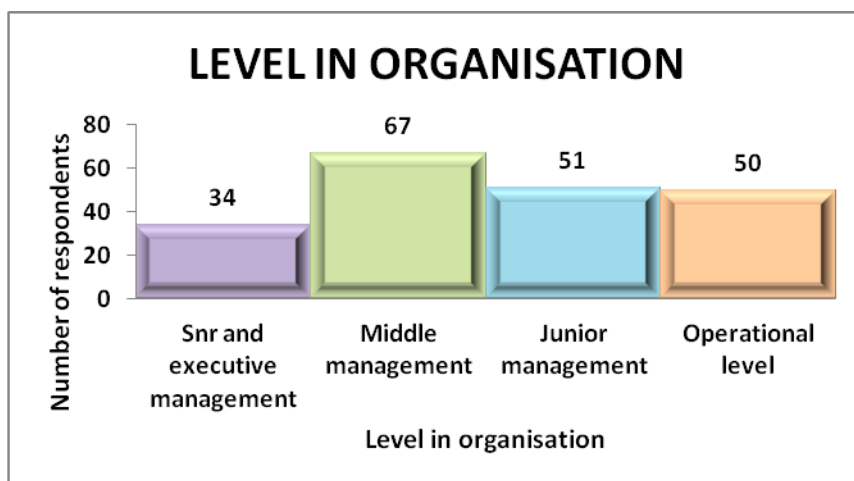


Source: Author's own

4.2.5 Operational level in organisation

The sample group participating in this study represented different levels in the organisation (see Figure 14). The largest group consisted of 33 percent middle management respondents ($n = 67$), followed by junior management respondents ($n = 51$) who represented 25 percent. Operational level respondents ($n = 50$) represented 25 percent of the sample group and senior and executive management level respondents ($n = 34$) represented 17 percent of the respondents.

Figure 14: Level in organisation

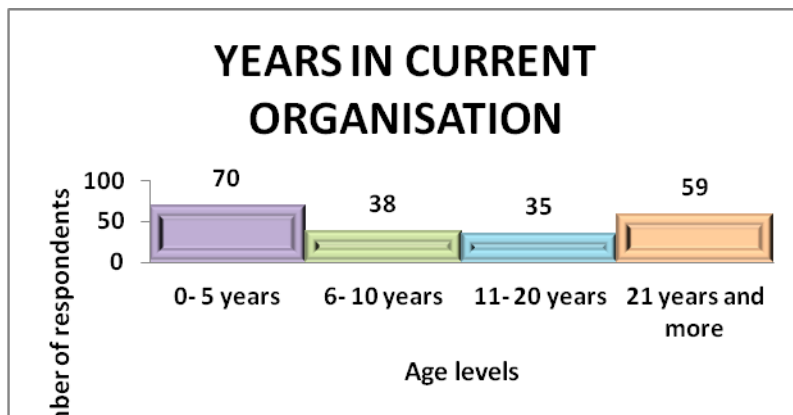


Source: Author's own

4.2.6 Tenure

The number of years that the participants in the sample group had been employed in the organisation differed (see Figure 15). The largest group ($n = 70$) had been working in the organisation for a period of five years or shorter than that, and they represented 35 percent of the respondents. The second largest group ($n = 59$) had been employed in the organisation for 21 years or more, and they represented 29 percent of the group. Respondents employed for 6-10 years consisted of 38 of the sample group. The smallest group ($n = 35$) had been employed between 11 and 20 years, and they represented 17 percent of the sample.

Figure 15: Number of years in current organisation



Source: Author's own

4.3 DESCRIPTIVE STATISTICS AND INTERNAL CONSISTENCY

The data set was explored by using descriptive statistics. The results of the descriptive statistics for the sample group who completed the POS and EE questionnaires are set out in Table 11. The mean, standard deviation, standard error, skewness and kurtosis of the sample were computed. Descriptive statistics were used to describe the results obtained in terms of psychological ownership, which consisted of promotive POS (self-

identity, self-efficacy, belongingness, accountability) and preventive POS (territoriality) as well as employment equity perceptions.

Results obtained for the promotive POS dimension (mean = 4.90) and standard deviation ($SD = 0.80$) indicated an agreement with promotive POS statements. The standard error (0.05) indicated a small degree of dispersion. Promotive POS was negatively skewed (-2.04) with a kurtosis of 6.84, which indicated a high probability of extreme values and a Leptokurtic distribution. The Cronbach's alpha coefficient for promotive POS ($\alpha = 0.93$) was higher than the required 0.7 (Kline, 1999) which indicated good reliability.

The results of the use of descriptive statistics on the individual dimensions representing promotive POS are set out below:

- **Self-efficacy** – (mean = 5.30; $SD = 0.80$), standard error (0.06), negatively skewed (-2.69). Kurtosis of 11 indicated a high probability for extreme values and a leptokurtic distribution. A Cronbach's alpha of 0.90 indicated high reliability.
- **Accountability** – (mean = 4.70; $SD = 0.90$), standard error (0.06), negatively skewed (-1.12). The kurtosis value was 2.69, which indicated the values were wider spread around the mean, and a platykurtic distribution of Cronbach's alpha 0.79 indicated good reliability.
- **Belongingness** – (mean = 4.90; $SD = 1$), standard error (0.07), negatively skewed (-1.56). A kurtosis value of 3.23 illustrated a high probability for extreme values and indicated a leptokurtic distribution. A Cronbach's alpha value of 0.94 indicated high reliability.
- **Self-identity** – (mean = 4.80; $SD = 1$), standard error (0.07), positively skewed (0.17). A kurtosis value of 0.34 indicated that the values were wider spread around the mean and represented a platykurtic distribution. A Cronbach's alpha value of 0.85 indicated high reliability.

The results of the descriptive statistics used on preventative POS comprising the one dimension of territoriality (mean = 2.60; *SD* = 1.10) indicated that respondents disagreed as regards their territorial statements and that they were less preventive in terms of the mean score. The standard error indicated a small degree of dispersion. Preventative POS was positively skewed (0.71) and had a kurtosis of 0.06, which indicated that the values were wider spread around the mean and that the distribution was platykurtic. The Cronbach's alpha for preventative POS ($\alpha = 0.82$) indicated good reliability.

The results of the descriptive statistics used to describe the respondents' perceptions of employment equity (mean = 3.60; *SD* = 0.60) showed a positive perception of EE in terms of the mean score. EE was negatively skewed (-0.61) with a kurtosis of 0.71, indicating that the values were wider spread around the mean and that the distribution was platykurtic. EE's Cronbach's alpha ($\alpha = 0.93$) was higher than 0.70, which indicated high reliability.

Table 11: Descriptive statistics

	N	Mean	Std dev	Std error	Skew-ness	Skew-ness error	Kurtosis	Kurtosis error	Cronbach's alpha
Territoriality (preventive POS)	205	2.60	1.10	0.07	0.71	0.17	0.06	0.34	0.82
Self-efficacy	205	5.30	0.8	0.06	-2.69	0.17	11	0.34	0.90
Accountability	205	4.70	0.9	0.06	-1.12	0.17	2.69	0.34	0.79
Belongingness	205	4.90	1	0.07	-1.56	0.17	3.23	0.34	0.94
Self-identity	205	4.80	1	0.07	0.17	2.15	0.34	0.34	0.85
Promotive POS	205	4.90	0.80	0.05	-2.04	0.17	6.84	0.34	0.93
EE	205	3.60	0.60	0.04	-0.61	0.17	0.71	0.34	0.93

4.4 CORRELATION

The relationship between respondents' perceptions of employment equity and psychological ownership was analysed by performing a Pearson product-moment correlation.

Preventive POS (territoriality) and promotive POS were negatively correlated ($r = -0.04$; $p < 0.01$). The negative correlation between preventive POS and promotive POS was expected due to the fact that they are two opposite forms of POS (Avey et al., 2009; Olckers, 2011). When promotive POS increases, preventive POS decreases. The correlation between preventive POS and each of the promotive POS dimensions were determined. As illustrated in Table 12 below, the correlation between preventive POS (territoriality) and self-efficacy was positively correlated ($r = 0.02$; $p < 0.01$). When self-efficacy increased, territoriality increased. This might be due to the fact that employees who are self-efficient in the way they do things might be more territorial in their approach to the object. Preventive POS (territoriality) correlated negatively with accountability ($r = -0.04$; $p < 0.01$), belongingness ($r = -0.04$; $p < 0.01$) and self-identity ($r = -0.08$; $p < 0.01$). The correlations above indicate a small relationship ($r = .10$ to $.29$ or $r = -.10$ to $-.29$ small).

Employees who feel accountable towards the organisation, who feel that they belong and who identify strongly with the self are less protective of their ideas and are more open to share; therefore, they are less territorial.

EE perceptions refer to the way respondents react to employment equity in the organisation. Respondents who had a positive perception of employment equity scored higher than respondents who had a negative perception of employment equity. Promotive POS and EE perceptions showed a positive correlation ($r = 0.46$; $p < 0.01$). A positive correlation existed between EE and each of the promotive POS dimensions: self-efficacy ($r = 0.34$; $p < 0.01$), self-identity ($r = 0.39$; $p < 0.01$), accountability ($r = 0.32$;

$p < 0.01$) and belongingness ($r = 0.47$; $p < 0.01$). EE and promotive POS as well as the different POS dimensions had a medium effect ($r > 0.30$). This indicated that when promotive POS increased, EE perceptions increased. Respondents who were open to share ideas experienced change as positive. These respondents seemed to perceive employment equity, which is a form of change, as positive. However, EE and preventive POS (territoriality) correlated negatively ($r = -0.30$; $p < 0.01$). This correlation indicates a medium relationship ($r = .30$ to $.49$ or $r = -.30$ to $-.49$ medium).

This might be due to the fact that a more negative perception of EE might be ascribed to increased feelings of territoriality and a sense of protection towards ideas or things. Employees might see EE as a threat to their position in the organisation, and the more negative perception of EE could then result in increased feelings of territoriality.

Table 12: Pearson correlation analysis

	T	S-E	A	B	S-I	P-POS	EE
Territoriality (Preventive) (T)	1.00						
Self-efficacy (S-E)	0.02	1.00					
Accountability (A)	-0.04	0.52	1.00				
Belongingness(B)	-0.04	0.66	0.45	1.00			
Self-identity (S-I)	-0.08	0.58	0.47	0.79	1.00		
Promotive POS (P POS)	-0.04	0.82	0.73	0.89	0.87	1.00	
EE	-0.30	0.34	0.32	0.47	0.39	0.46	1.00

$p < 0.01$

From the correlations described above and listed in Table 12 it is apparent that preventive POS was negatively correlated with promotive POS, EE, accountability, belongingness and self-identity. Promotive POS was positively correlated with EE perceptions, self-identity, belongingness, accountability and self-efficacy.

In the above section the correlation between the different factors was determined. Next, the significant differences between the respondents' age, race, gender, educational level and operational level and tenure in the organisation will be analysed by performing the analysis of variance (anova) technique.

4.5 DIFFERENCES BETWEEN GROUPS

The analysis of variance (ANOVA) technique was used to test for significant mean differences in the dependent variables of territoriality, belongingness, accountability, employment equity, self-efficacy and self-identity, and the independent variables consisting of the biographical data.

The data did not comply with the assumptions of ANOVA, namely normality of residuals and equality of variances. To correct the data that did not comply with the assumptions of normality and equality, a normal Blom transformation was done. Post-hoc comparisons were done using least-square t-tests.

4.5.1 Promotive psychological ownership

Comparisons were drawn using respondents' biographical data, respondents' responses and the differences with regard to promotive ownership. From the results obtained when using the ANOVA technique (see Table 13), it was evident that no significant ($p < 0.05$) difference existed with regard to biographical data and promotive ownership. The different subscales of promotive POS (accountability, belongingness, self-identity and self-efficacy) will also be discussed.

Table 13: ANOVA: Promotive POS

Source	F-value	Sig.	Subgroups	N	Mean	Standard deviation	Partial eta squared

Source	F-value	Sig.	Subgroups	N	Mean	Standard deviation	Partial eta squared
Age	0.49	0.69	<20-29	51	4.84	0.65	0.01
			30-39	47	4.73	1.03	
			40-49	60	5.04	0.52	
			50-70	44	5.07	0.87	
Gender	0.82	0.37	Male	133	5.01	0.71	0.00
			Female	69	4.77	0.88	
Race	0.04	0.84	Black	58	4.77	1.04	0.00
			White	144	4.99	0.64	
Gender/Race	0.12	0.73	Male/Black	39	4.83	1.01	0.00
			Male/White	94	5.08	0.54	
			Female/Black	19	4.64	1.11	
			Female/White	50	4.82	0.78	
Educational level	1.39	0.24	Diploma	43	4.87	0.89	0.03
			Bachelor's	31	4.88	0.64	
			Honours	46	4.87	0.48	
			Master's or doctor's	29	5.10	0.70	
			None of the above	53	4.95	1.00	
Operational level in organisation	0.68	0.56	Operational	50	4.75	1.09	0.01
			Jnr management	51	4.85	0.55	
			Middle management	67	5.02	0.77	
			Snr/exec management	34	5.12	0.44	
Years employed in current organisation	0.53	0.66	0-5	70	4.72	0.93	0.01
			6-10	38	4.98	0.53	
			11-20	35	5.05	0.58	
			21 or more	59	5.06	0.79	

*p<0.05

4.5.2 Accountability

The ANOVA results displayed in Table 14 shows a significant difference ($F(df) = 2.94$; $p = 0.02$; $\eta^2 = 0.06$; $p < 0.05$) between accountability and different educational levels. The “none of the above” range refers to employees who completed Grade 12 or obtained an N3 technical qualification.

A post-hoc test was conducted to determine where the difference lay. Respondents with a master’s or a doctoral degree (mean = 5.05) seemed to be more accountable compared to respondents at other educational levels: none of the above (mean = 4.72), bachelor’s degree (mean = 4.69), diploma (mean = 4.56), honours degree (mean = 4.46).

The reasons for respondents with a master’s or a doctor’s degree possessing higher accountability might be ascribed to their normally occupying higher positions and having more responsibility and accountability compared to respondents occupying lower-level positions. Brass (1985) supported this statement when observing that respondents who are exposed to more job autonomy experience more control than their counterparts who are exposed to less autonomy. Ashforth and Saks (2000) added that postgraduates are more likely to be employed in higher management positions where they have the freedom to schedule their own work and determine when it is done.

Partial eta squared (η^2) indicated a relatively small effect size with a value of 0.06 with regard to accountability. As regards groups with respondents who had obtained honours degrees and groups who had obtained master’s or doctor’s degrees, the effect sizes were high $d = .694$. In terms of accountability, respondents with master’s or doctor’s degrees differed from respondents in the “none of the above” bracket (medium effect size $d = .369$).

Table 14: ANOVA: Accountability

Source	F-value	Sig.	Subgroups	N	Mean	Standard deviation	Partial eta squared
Age	0.31	0.82	<20-29	51	4.39	0.83	0.01
			30-39	47	4.59	1.07	
			40-49	60	4.87	0.71	
			50-70	44	4.80	0.95	
Gender	0.38	0.54	Male	133	4.76	0.85	0.00
			Female	69	4.50	0.99	
Race	1.77	0.19	Black	58	4.46	1.05	0.01
			White	144	4.75	0.82	
Gender/Race	0.27	0.61	Male/Black	39	4.54	1.02	0.00
			Male/White	94	4.85	0.75	
			Female/Black	19	4.30	1.13	
			Female/White	50	4.57	0.93	
Educational level	2.94	0.02*	Diploma	43	4.56	0.93	0.06
			Bachelor's	31	4.69	0.82	
			Honours	46	4.46	0.88	
			Master's or doctor's	29	5.05	0.82	
			None of the above	53	4.72	0.96	
Operational level in organisation	2.09	0.10	Operational	50	4.51	1.00	0.03
			Jnr management	51	4.37	0.83	
			Middle management	67	4.87	0.91	
			SNR/exec management	34	4.97	0.64	
Years employed in current organisation	0.38	0.77	0-5	70	4.45	1.00	0.01
			6-10	38	4.75	0.79	
			11-20	35	4.75	0.79	
			21 or more	59	4.82	0.88	

*p<0.05

4.5.3 Belongingness

According to the ANOVA results presented in Table 15 below ($F(df) = 2.95$, $p = 0.03$, $\eta^2 = 0.05$, $p < 0.05$), there was a significant difference between the belongingness dimension of the different age groups. A post-hoc comparison was conducted to determine where the difference lay. Employees in the age group 50 to 70 (mean = 5.14) seemed to have a greater sense of belongingness than employees in the age groups 20 to 29 (mean = 5.03) and 40 to 49 (mean = 5.01). Employees in the age group 30 to 39 (mean = 4.62) had the lowest sense of belongingness.

The effect size was determined by partial eta squared with a value of 0.05, which indicated a small effect size. However, the calculation of the effect sizes between the different groups showed that belongingness differed in respect of the different age groups as follows: medium effect size ($d = .372$) between respondents aged from 20 to 29 and those aged from 30 to 39; a small effect size ($d = .023$) between respondents aged from 20 to 29 and those aged from 40 to 49; a small effect size ($d = .114$) between those aged from 20 to 29 and those aged from 50 to 70.

The reason for this stronger sense of belongingness within the 50 to 70 year age group might be that respondents were inclined to change jobs less often and to stay with their current employer. According to Deal (2007), older employees are more likely than younger employees to stay with an organisation due to older employees' loyalty towards the organisation.

Table 15: ANOVA: Belongingness

Source	F-value	Sig.	Subgroups	N	Mean	Standard deviation	Partial eta squared
Age	2.95	0.03*	<20-29	51	5.03	0.92	0.05
			30-39	47	4.62	1.26	
			40-49	60	5.01	0.85	
			50-70	44	5.14	1.00	
Gender	0.19	0.67	Male	133	5.02	0.94	0.00
			Female	69	4.83	1.15	
Race	0.53	0.47	Black	58	4.76	1.26	0.00
			White	144	5.03	0.90	
Gender/ Race	0.08	0.78	Male/Black	39	4.80	1.29	0.00
			Male/White	94	5.11	0.75	
			Female/Black	19	4.67	1.23	
			Female/White	50	4.89	1.12	
Educational level	1.00	0.41	Diploma	43	4.84	1.12	0.02
			Bachelor's	31	4.83	0.97	
			Honours	46	5.00	0.71	
			Master's or doctor's	29	5.13	0.92	
			None of the above	53	4.98	1.24	
Operational level in organisation	0.46	0.71	Operational	50	4.71	1.35	0.01
			Jnr management	51	5.01	0.83	
			Middle management	67	5.02	1.00	
			Snr/exec management	34	5.08	0.68	
Years employed in current organisation	1.78	0.15	0-5	70	4.70	1.22	0.03
			6-10	38	4.94	0.86	
			11-20	35	5.18	0.68	
			21 or more	59	5.12	0.97	

*p<0.05

4.5.4 Self-efficacy

Different groups were compared with regard to self-efficacy. From the ANOVA results displayed in Table 16, it is evident that no significant ($p < 0.05$) difference existed as regards to self-efficacy based on biographical data.

Table 16: ANOVA: Self-efficacy

Source	F-value	Sig.	Subgroups	N	Mean	Standard deviation	Partial eta squared
Age	0.26	0.86	<20-29	51	5.26	0.90	0.00
			30-39	47	5.23	0.92	
			40-49	60	5.40	0.52	
			50-70	44	5.27	0.99	
Gender	0.91	0.34	Male	133	5.37	0.74	0.00
			Female	69	5.15	0.96	
Race	0.02	0.88	Black	58	5.16	1.17	0.00
			White	144	5.35	0.64	
Gender/Race	0.15	0.70	Male/Black	39	5.23	1.13	0.00
			Male/White	94	5.43	0.50	
			Female/Black	19	5.00	1.28	
			Female/White	50	5.21	0.82	
Educational level	0.09	0.99	Diploma	43	5.35	0.92	0.00
			Bachelor's	31	5.27	0.54	
			Honours	46	5.38	0.49	
			Master's or doctor's	29	5.47	0.52	
			None of the above	53	5.11	1.18	
Operational level in organisation	0.27	0.85	Operational	50	5.09	1.21	0.00
			Jnr management	51	5.32	0.62	
			Middle management	67	5.33	0.75	
			Snr/exec management	34	5.50	0.47	
Years employed in current organisation	0.44	0.72	0-5	70	5.22	0.99	0.01
			6-10	38	5.36	0.65	
			11-20	35	5.45	0.52	
			21 or more	59	5.25	0.88	

* $p < 0.05$

4.5.5 Self-identity

Biographical data and the differences that existed with regard to self-identity were compared. From the results of the ANOVA technique applied (see Table 17) it was evident that no significant ($p < 0.05$) differences were indicated between the variables and self-identity.

Table 17: ANOVA: Self-identity

Source	F-value	Sig.	Subgroups	N	Mean	Standard deviation	Partial eta squared
Age	1.01	0.39	<20-29	51	4.70	0.84	0.02
			30-39	47	4.50	1.37	
			40-49	60	4.87	0.83	
			50-70	44	5.08	0.84	
Gender	0.09	0.77	Male	133	4.87	0.92	0.00
			Female	69	4.62	1.13	
Race	0.20	0.66	Black	58	4.71	1.23	0.00
			White	144	4.82	0.90	
Gender/Race	0.01	0.94	Male/Black	39	4.76	1.20	0.00
			Male/White	94	4.92	0.78	
			Female/Black	19	4.60	1.30	
			Female/White	50	4.63	1.07	
Educational level	1.64	0.17	Diploma	43	4.75	1.06	0.03
			Bachelor's	31	4.75	0.93	
			Honours	46	4.63	0.77	
			Master's or doctor's	29	4.77	1.08	
			None of the above	53	4.97	1.12	
Operational level in organisation	0.30	0.83	Operational	50	4.69	1.28	0.00
			Jnr management	51	4.71	0.89	
			Middle management	67	4.86	0.99	
			Snr/exec management	34	4.91	0.66	
Years employed in current organisation	0.83	0.48	0-5	70	4.50	1.19	0.01
			6-10	38	4.86	0.82	
			11-20	35	4.84	0.93	
			21 or more	59	5.04	0.82	

* $p < 0.05$

4.5.6 Territoriality

The ANOVA results displayed in Table 18 shows a significant ($F(df) = 4.1, p = 0.04, \eta^2 = 0.02, p < 0.05$) difference in territoriality (preventive POS) between the races.

A least-square test was conducted to determine where the difference lay. White people (mean = 2.65) seemed to be more territorial than black people (mean = 2.46). Therefore, in terms of POS black people are less preventive than white people.

Partial eta squared value of 0.02 indicated a small effect size. A small effect size ($d = 0.17$) was calculated between black and white employees in terms of preventive POS.

White people can be assumed to be more territorial because of their culture and historical background. Black people on the other hand have a culture of sharing (e.g. living together and sharing money with the family). This might point to a general cultural difference between white and black employees. Mare (2009) indicated that white South Africans are individualistic in nature, whereas black South Africans are cohesive in their approach. Olckers (2011) supported this statement by indicating that black people might follow a more collectivistic approach. Therefore, because the black and the white races entertain different perceptions of territoriality, they might also have different perceptions of the EEA, which was introduced to give opportunities to previously disadvantaged groups (i.e. black and coloured people).

Table 18: ANOVA: Territoriality

Source	F-value	Sig.	Subgroups	N	Mean	Standard deviation	Partial eta squared
Age	0.18	0.91	<20-29	51	2.69	1.12	0.00
			30-39	47	2.56	0.99	
			40-49	60	2.66	1.14	
			50-70	44	2.44	0.93	
Gender	0.05	0.83	Male	133	2.61	1.08	0.00
			Female	69	2.57	1.00	

Source	F-value	Sig.	Subgroups	N	Mean	Standard deviation	Partial eta squared
Race	4.10	0.04*	Black	58	2.46	1.13	0.02
			White	144	2.65	1.02	
Gender/Race	1.72	0.19	Male/Black	39	2.40	1.13	0.01
			Male/White	94	2.70	1.06	
			Female/Black	19	2.59	1.16	
			Female/White	50	2.56	0.94	
Educational level	0.41	0.80	Diploma	43	2.58	1.10	0.01
			Bachelor's	31	2.43	0.97	
			Honours	46	2.50	0.85	
			Master's or doctor's	29	2.56	0.98	
			None of the above	53	2.81	1.24	
Operational level in organisation	0.54	0.65	Operational	50	2.68	1.06	0.01
			Jnr management	51	2.69	1.06	
			Middle management	67	2.57	1.17	
			Snr/exec management	34	2.39	0.37	
Years employed in current organisation	0.82	0.48	0-5	70	2.72	1.12	0.01
			6-10	38	2.44	0.78	
			11-20	35	2.74	1.22	
			21 or more	59	2.47	1.00	

* $p < 0.05$

4.5.7 Employment equity

The ANOVA test was done to determine the difference between the scores that measured employment equity perceptions. The results in Table 19 show that people employed at different levels in the organisation differed in their perceptions of employment equity ($F = 3.29$, $p = 0.02$, $\eta^2 = 0.05$, $p < 0.05$).

A post-hoc test was conducted to determine where the difference lay. Respondents at senior and executive management levels (mean = 3.85) had a more positive perception of EE than did those at middle management level (mean = 3.72), junior management level (mean = 3.59) and operational level (mean = 3.20). This last group had the most negative perception of EE.

The above confirms the finding of Janse van Rensburg et al., (2005) that the higher the management position that an individual occupies in an organisation, the more positive that individual's perception of EE will be.

The effect size was determined with partial eta squared and it was found to be small ($\eta^2 = 0.05$). With regard to EE, a large effect size ($d = 0.64$) was indicated between respondents functioning on an operational level and respondents functioning on a junior management level. A large effect size existed between respondents on an operational level and those on a middle management level ($d = 0.89$), as well as between respondents on an operational level and those on an executive management level ($d = 1.28$).

Table 19: ANOVA: Employment Equity

Source	F-value	Sig.	Subgroups	N	Mean	Standard deviation	Partial eta square
Age	1.21	0.31	<20-29	51	3.45	0.60	0.02
			30-39	47	3.29	0.64	
			40-49	60	3.70	0.49	
			50-70	44	3.89	0.47	
Gender	0.04	0.85	Male	133	3.58	0.58	0.00
			Female	69	3.58	0.62	
Race	3.20	0.08	Black	58	3.26	0.69	0.02
			White	144	3.71	0.49	
Gender/Race	2.32	0.13	Male/Black	39	3.28	0.69	0.01
			Male/White	94	3.71	0.48	
			Female/Black	19	3.22	0.70	
			Female/White	50	3.71	0.53	

Source	F-value	Sig.	Subgroups	N	Mean	Standard deviation	Partial eta square
Educational level	1.60	0.18	Diploma	43	3.61	0.61	0.03
			Bachelor;s	31	3.80	0.36	
			Honours	46	3.66	0.47	
			Master's or doctor's	29	3.69	0.55	
			None of the above	53	3.29	0.70	
Operational level in organisation	3.29	0.02*	Operational	50	3.20	0.62	0.05
			Jnr management	51	3.59	0.59	
			Middle management	67	3.72	0.54	
			Snr/exec management	34	3.85	0.36	
Years employed in current organisation	1.97	0.12	0-5	70	3.42	0.58	0.03
			6-10	38	3.33	0.69	
			11-20	35	3.68	0.47	
			21 or more	59	3.88	0.47	

*p<0.05

4.6 CONCLUSION

This chapter reported on the data obtained from a randomly selected sample of respondents ($N= 202$) employed in a large mining house. Data were analysed using the SAS programme (version 9.20). Furthermore, a correlation analysis was conducted to determine the relationship between promotive psychological ownership (comprising self-efficacy, accountability, belongingness and self-identity), preventive psychological ownership (comprising territoriality) and employees' perceptions of employment equity.

The ANOVA test showed differences between variables in terms of belongingness and age; accountability and educational level; territoriality and race; and employment equity and operational level in the organisation.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

Chapter 1 investigated the possibility that a contextual factor such as the implementation of the EEA had an effect on psychological ownership. The chapter discussed the importance of the study by highlighting the problem statement and research objectives. The chapter concluded with a list of definitions and abbreviations frequently used in the study.

Chapter 2 discussed the literature relating to the constructs of psychological ownership and employment equity.

Chapter 3 reviewed the rationale for the research and included the research design, research methodology and strategy. The chapter provided an overview of the research paradigm and philosophy of the study. A discussion of the sampling strategy and techniques followed, and the manner in which data was collected was described. The chapter concluded with the reliability, validity and the ethics pertaining to the study.

Chapter 4 provided the results and the findings of the research study.

This chapter, **Chapter 5**, gives an overview of the research findings of the study relative to the literature reviewed and the statistical analysis. The limitations of the study and recommendations for further study are also addressed in this chapter.

5.2 ACHIEVEMENT OF STUDY OBJECTIVES

The objectives of the study were to investigate the following:

- To determine the relationship between respondents' perceptions of employment equity and psychological ownership
- To determine whether respondents' age, race, gender, educational level and operational level and tenure in the organisation play a role in their perceptions of employment equity and their psychological ownership.

The study objectives were achieved, as discussed in the section to follow.

5.3 CONTRIBUTION OF THE STUDY

The study explored the relationship between two independent forms of psychological ownership, namely promotive and preventive POS, and a contextual factor, namely employment equity (EE). From the results it was evident that the respondents' perceptions of employment equity were related to psychological ownership. Therefore, it seems that EE as a contextual factor might have an influence on employees' psychological ownership; however, more advanced research, such as the implementation of structural equation modelling (SEM), is proposed to investigate this influence.

A strong positive relationship ($r = 0.46$) was found to exist between promotive POS and EE perceptions. It seemed that employees who were open to share ideas experienced change as positive and perceived a contextual factor of change, such as employment equity, as positive. Ferreira (2012) has stated that employees who are committed display a higher sense of ownership towards the organisation. In addition, Janse van Rensburg and Roodt (2005) found that employees' organisational commitment can be predicted by their perceptions of employment equity. According to this study's correlation results between EE and promotive POS, employees who experienced a high degree of ownership towards an object tended to display more positive perceptions of employment equity. Furthermore, a positive relationship was found to exist between EE perceptions and self-efficacy ($r = 0.34$). This corroborates the statement of Bandura

(1995) that the way in which efficacy experiences are interpreted are influenced by various factors, including situational factors. Therefore, people's presumptions about what they can do, the complexity of their tasks, their physical and emotional states, the amount of outer support they receive, and the situational conditions under which they perform will influence the extent to which accomplishments will change perceived efficacy (Olckers, 2011).

A positive relationship was measured between EE perceptions and self-identity ($r = 0.39$). This finding confirms the statement by Olckers (2011) that progression in an organisation will improve an employee's level of self-identity. Employees within a higher position view EE more positively. If employees feel that they have opportunities for growth, training and promotion, their self-identity is enhanced, and according to this research, enhanced self-identity might lead to a positive perception of EE.

Accountability and EE perceptions were positively correlated ($r = 0.32$) in this study. Reference can be made here to the statement of Avey et al. (2009), individuals who experience psychological ownership and accountability in an organisation might challenge the leadership of the organisation to validate their decisions regarding the management of the organisation. Avey et al. (2009) add that these employees' accountability will be elicited because they feel they have the 'right to know' what is happening with the object of ownership for which they feel accountable. It can therefore be said that employees who accept accountability have more positive EE perceptions because they feel they can voice an opinion about decisions relating to the management of their object of psychological ownership.

A positive relationship was found between EE perceptions and belongingness ($r = 0.47$), and this confirmed the statement by Olckers (2011) that EE perceptions will influence employees' feelings of belongingness in an organisation. Employees who have a positive perception of EE will thus experience that they belong in the organisation. They feel that the organisation treats all employees fairly and provide them with equal opportunities, and this will enhance their feeling of belongingness in the organisation.

Preventive POS (territoriality) and promotive POS correlated negatively ($r = -0.04$; $p < 0.01$) in this study. Therefore this study confirmed the negative correlation between promotive and preventive POS found by Higgins (1997) and Olckers (2011). The implication is that as promotive POS increases, preventive POS decreases. When employees are open to sharing ideas they seem to see change as an enhancement, tend to be creative in problem solving, are highly concerned about accomplishments, and seem to be less territorial and protective of their own ideas.

EE perceptions and territoriality correlated negatively ($r = -0.30$; $p < 0.01$) in this study. Employees who were found to be more territorial and protective of their space had a more negative perception of EE. However, all employees saw themselves growing in an organisation and moving into higher positions. According to Olckers (2011) employees get protective and territorial about their envisioned positions, and Brown et al. (2005) argued that territorial behaviour, which occurs because envisioned positions are threatened, might translate into negative behaviour. This can relate to respondents who are negative about the EEA because of the way certain race groups will be advantaged by it. Thus, employees who are not part of these groups might feel protective of their current and envisioned positions, and this might translate into a negative perception of EE.

The ANOVA test was conducted to determine the differences between dependent variables (self-identity, self-efficacy, belongingness, accountability, EE and territoriality) and independent variables (biographical data). No significant differences were found between the groups as far as *self-efficacy*, *self-identity* and *promotive POS* were concerned.

However, the different age groups differed in terms of their feelings of *belongingness*. Reference can be made here to the statement by Deal (2007) that older employees are more likely than younger employees to stay with an organisation due to older employees' loyalty towards an organisation.

In this study, different race groups differed significantly in terms of *territoriality*. This confirmed the finding of Mare (2009) that white South Africans are representative of an individualistic style whereas black South Africans follow a more cohesive approach. Olckers (2011) supported this by saying that black people seem to follow a more collectivistic approach. Mare (2009) added that white people can be assumed to be more territorial because of their culture and historical background. The EEA was implemented to give opportunities to previously disadvantaged individuals (people of colour), and because white people fear they might lose their jobs and/or become unemployed, the white respondents in this study might have displayed a greater sense of territoriality than the black respondents.

A significant difference was found to exist between the perceptions of *accountability* of respondents from different educational levels. Respondents with a doctoral degree displayed a higher sense of accountability, and this could be ascribed to the fact that these respondents normally occupy higher positions that require more responsibility and accountability, compared to respondents who occupy lower positions (Brass, 1985). Ashforth and Saks (2000) added that postgraduates are more likely to be employed in higher management positions that give them the freedom to schedule their own work and determine when it is done.

In this study, respondents on different operational levels differed in terms of their perceptions of *employment equity*. The results showed that the higher the occupation levels of respondents in the organisation, the higher and more positive the perceptions of EE. This confirmed the finding of Janse van Rensburg and Roodt (2005) that the higher the level of management, the more positive the perception of EE. In addition, Brass (1985) indicated that employees who are more exposed to job autonomy, experience more control and more freedom to make choices. Therefore, employees occupying high-level management positions will have more positive perceptions of EE because they have more control.

From the results discussed above it seems that EE is a contextual factor that is related to POS. Legislation affects employees and organisations and the way they take ownership of an object, and this might be the reason why differences between the groups have been found.

- A strong positive relationship was found to exist between EE perceptions and promotive POS, self identity, belongingness .
- Preventive POS (territoriality) correlated negatively with promotive POS and EE perceptions.
- The ANOVA test showed a significant difference between variables with regards to belongingness and age; accountability and educational level; territoriality and race; and employment equity and operational level in the organisation.

5.4 LIMITATIONS OF THE STUDY

This study was restricted to a single organisation in a specific industry, therefore the results cannot be generalised. To determine the external validity of the findings, further research needs to be performed across different organisations in a similar context. The sample consisted of professional, highly skilled and skilled employees in the South African mining sector. This is a limitation for the results cannot be generalised to the whole population and unskilled workers were not part of the sample group.

Common method bias existed because of the use of self-reports which limited responses to the items used in the scale. A variety and different depths of responses could thus not be captured. A mixed-method approach can be advised for further research. The sample comprised a high number of white employees ($n = 144$), representing 77 percent of the sample group, which might have influenced the outcomes of the results. Further studies should include a broader spectrum of employees that are more representative of the general population.

5.5 SUGGESTIONS FOR FUTURE RESEARCH

The results of this study provided valuable insight into the relationship between psychological ownership and EE perceptions. Advanced research, such as the implementation of structural equation modelling, is needed to determine the extent of the relationship between the concepts, as well as the impact of employment equity on psychological ownership. This study was conducted in a mining organisation and the sample used was limited. To be able to generalise the results, different organisations and a culturally diverse sample representative of the population need to be included in any future study.

A further suggestion would be to expand the study to other industries in order to generalise results and arrive at more meaningful conclusions.

Another recommendation would be to use a mixed-method approach. This would enhance the depth of the study in that it would not be limited to a set of questions compiled beforehand and would allow respondents to go into depth when they answer the questions.

5.6 FINAL CONCLUSION

This study aimed to determine if a relationship existed between EE perceptions and psychological ownership. The key contribution of the study was the finding that a relationship did indeed exist between EE perceptions and psychological ownership. Therefore, EE can be regarded as an additional contextual factor that has an effect on POS. It can be described as a contextual factor that has come to the fore because of the history of South Africa, and in this sense it is also a structural factor that can influence psychological ownership.

It has been found that the creation of a sense of psychological ownership can enhance workplaces, production and efficiency (Janse van Rensburg & Roodt, 2005). Thus, the implication of finding that a relationship exists between POS and EE perceptions means that if a greater sense of psychological ownership can be created the perceptions of EE will be higher and more positive. The results also showed that a difference existed between territoriality, belongingness, accountability and EE perceptions with regard to the biographical data. By addressing the factors influencing POS, especially contextual factors (which include a structural influence), through EE legislation it could enhance organisational performance, sustainable performance and staff retention.

6. LIST OF REFERENCES

- Alberts, C. (2012). *Confirmatory factor analysis of the psychological ownership questionnaire for the South African context*. Unpublished master's dissertation, University of Pretoria, Pretoria, South Africa.
- Ashforth, B. E., & Saks, A. M. (2000). Personal control in organizations: a longitudinal investigation with newcomers. *Human Relations*, 53, 311-339.
- Avey, J. B., Avolio, B. J., Crossley, C. D., & Luthans, F. (2009). Psychological ownership: theoretical extensions, measurement and relation to work outcomes. *Journal of Organizational Behavior*, 30(2), 173-191. doi:10.1002/job.583
- Babbie, E., & Mouton, J. (2001). *The practice of social research*. Oxford: Oxford University Press.
- Bandura, A. (1995). *Self-efficacy in changing societies*. New York: Cambridge University Press.
- Bernstein, P. (1979). *Workplace democratization: it's internal dynamics*. New Brunswick, NJ Transaction books
- Brass, D. J. (1985). Technology and the structuring of jobs: employee satisfaction, performance, and influence. *Organisational Behaviour and Human Decision Processes*, 35, 216-240.
- Brown, G., Lawrence, T. B., & Robinson, S. L. (2005). Territoriality in organizations. *Academy of Management Review*, 30, 577-594.
- Burke, P. J., & Reitzes, D. C. (1991). An identity theory approach to commitment. *Social Psychology Quarterly*, 54, 239-51.
- Cohen, J. W. (1988). *Statistical power analysis for the behavioral sciences* (2nd edn).

Hillsdale, NJ: Lawrence Erlbaum Associates.

Cooper, D. R., & Schindler, P. S. (2006). *Business Research Methods* (9th ed.). New York, NY: McGraw-Hill.

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78(1), 98-104.

Creswell, J. W. (2009). *Research design: qualitative, quantitative, and mixed-method approaches*. (3rd ed.) Thousand Oaks: Sage.

Crotty, M. (2003). *The foundations of social research*. London: Sage.

Deal, J. J. (2007). *Retiring the generation gap: how employees young and old can find common ground*. San Francisco: Jossey-Bass.

Denton, M., & Vloeberghs, D. (2003). Leadership challenges for organisations in the New South Africa. *Leadership and Organization Development Journal*, 24(2), 84-95. doi:10.1108/01437730310463279.

Dirks, K. T., Cummings, L. L., & Pierce, J. L. (1996). Psychological ownership in organizations: conditions under which individuals promote and resist change. In R. W. Woodman, & W. A. Pasmore (Eds.), *Research in organizational change and development* (Vol. 9, pp. 1-23). Greenwich, CT: JAI.

Dittmar, H. (1992). *The social psychology of material possessions: to have is to be*. New York: St. Martin's.

Druskat, V. U., & Pescosolido, A. T. (2002). The content of effective teamwork mental models in self managing teams: ownership, learning and heedful interrelating. *Human Relations*, 55, 283-314.

Erez, M., & Earley, C. P. (1993). *Culture, self-identity, and work*. New York: Oxford University Press.

- Ferreira, N. (2012). Hardiness in relation to organisational commitment in the Human Resource Management field. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 10(2), Art. #418, 10 pages. Retrieved from <http://dx.doi.org/10.4102/sajhrm.v10i2.418>
- Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). London: Sage.
- Fox, W. & Bayat, M.S. (2007). *A Guide to Managing Research*. Cape Town: Juta.
- Furby, L. (1978). Possession in humans: an exploratory study of its meaning and motivation. *Social Behavior and Personality*, 6, 49-65.
- Furby, L. (1980). The origins and early development of possessive behavior. *Political Psychology*, 2(1), 30-42.
- Gravetter, F., & Forzano, L. (2009). *Research methods for the behavioral sciences*. (3rd ed.). Wadsworth: Cengage Learning.
- Hair, J. F. Jr., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis*. (6th ed.). New Jersey: Pearson Prentice Hall.
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52(12), 1280-1300.
- Hofstede, G. (1980). *Culture's consequences: international differences in work-related values*. Beverly Hills, CA: Sage.
- Hofstee, E. (2006). *Constructing a good dissertation: a practical guide to finishing a Masters, MBA or PhD on schedule*. Sandton, Johannesburg: EPE. (Chapter 1 titled "The Literature Review" is available online at: <http://www.exactica.co.za/book-chapters.htm>).
- Hughes, L., & Half, R. (2009). *The war of talent*. Retrieved May 14, 2009, from <http://www.globalexpertbase.com/wp-8-212.html>

- Human, L. (2000). Equity and efficacy: The business case for employment equity. *Talk delivered at the IPM Eastern Cape regional conference, Port Elizabeth..*
- Iverson, R.D. (1996). Employee acceptance of organizational change: the role of organizational commitment. *International Journal of Human Resource Management*, 7(1), 122-149.
- Janse van Rensburg, K., & Roodt, G. (2005). The perceptions of employment equity and Black Economic Empowerment as predictors of organisation-related commitment. *South African Journal of Human Resource Management*, 3(3), 49-60.
- Kamptner, N. L. (1991). Personnel possessions and their meanings: a live-span perspective. In F. W. Rudmin (Ed.), *To have possessions: a handbook on ownership and property. Special issue: Journal of Social Behavior and Personality*, 6(6), 209-228.
- Kasser, T., & Ryan, R. M. (1993). A dark side of the American dream: correlates of financial success as a central life interest. *Journal of Personality and Social Psychology*, 65, 410-422.
- Kline, P. (1999). *The handbook of psychological testing*. (2nd ed.). London: Routledge.
- Kotze, T. (2010). *Theme 8: Choosing an appropriate strategy of inquiry*. Unpublished course notes: EBW 801, 1-57. Pretoria: University of Pretoria.
- Kroeber, A., & Kluckholm, F. (1952). Culture: a critical review of concepts and definitions. *Peabody Museum Papers*, 47:1. Cambridge, MA: Harvard University Press.
- Lau, C. M. & Woodman, R. W. (1995) Understanding organizational change, a schematic perspective, *Academy of Management Journal*, 38, 537–554.

- Leedy, P., & Omrod, J. (2010). *Practical research planning and design* (9th ed.). New Jersey: Pearson Education.
- Lerner, J. S., & Tetlock, P. E. (1999). Accounting for the effects of accountability. *Psychological Bulletin*, 125, 255–275.
- Long, John B. Jr. (1978). The market valuation of cash dividends: a case to consider. *Journal of Financial Economics*, 6, (2/3), 235–264.
- Luthans, F., Baack, D., & Taylor, L. (1987). Organizational commitment: analysis of antecedents. *Human Relations*, 40(4), 219–236.
- Mare, Y. (2009). Exploratory structural equation modelling: *Validating the OCP*. Unpublished Master's dissertation. University of Pretoria. South Africa.
- Maree, K. (2010). *First steps in research*. Pretoria: Van Schaik.
- Marshall, G. (1998). *A dictionary of sociology*. (2nd ed.). New York: Oxford University Press.
- Martins, N. (1999). *Questionnaire on employment equity in association with Ernest and Young*. Unpublished document. Johannesburg: Organisational Diagnostics.
- Mattes, R., & Richmond, W. (2000). The brain drain: what do skilled South Africans think? In Crush, J. (Ed.), *Losing our minds: skills migration and the South African brain drain*, Migration Policy Series No. 18. Cape Town: Idasa/Southern Africa Migration Project.
- Mayhew, M. G., Ashkanasy, N. M., Bramble, T., & Gardner, J. (2007). A study of the antecedents and consequences of psychological ownership in organizational settings. *Journal of Social Psychology*, 147, 477–500.
- Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1, 61–89.

- Mischel, W. (1973). Toward a cognitive social learning reconceptualization of personality. *Psychological Review*, 80, 252-283.
- Morgan, G. A., & Griego, O. V. (1998). *Easy use and interpretation of SPSS for Windows: Answering research questions with statistics*. London: Lawrence Erlbaum.
- O'Driscoll, M. P., Pierce, J. L., & Coghlan, A. (2006). Work environment structure, organizational commitment, and citizenship behaviors. *Group and Organization Management*, 31, 388–416.
- Olckers, C. (2011). *A multi-dimensional measure of psychological ownership for South African organisations*. Published doctoral thesis. Pretoria: University of Pretoria. Retrieved March 15, 2012, from <http://upetd.up.ac.za/thesis/available/etd-06132002-085415>
- O'Neill, S. (2010). *Basic Research Methodology Reader*.
- Pallant, J. (2007). *SPSS Survival Manual*, 3rd Edition, Crows West, New South Wales, 2007
- Pelham, B. (1995). Self-investment and self-esteem: evidence for a Jamesian model of self-worth. *Journal of Personality and Social Psychology*, 69, 1141–1150.
- Peters, T. (1988). *The leadership alliance*. Schaumburg, IL: Video publishing house.]
- Pfeffer, J. (1994). *Competitive advantage through people: unleashing the power of the work force*. Boston, MA: Harvard Business School Press.
- Pierce, J. L., Gardner, D. G., Cummings, L. L., & Dunham, R. B. (1989) Organization based self-esteem: construct definition, measurement and validation. *Academy of management journal*, 32(2), 622–648.

- Pierce, J. L., Kostova, T., & Dirks, K. T. (2001). Toward a theory of psychological ownership in organizations. *Academy of Management Review*, 26(2), 298-310. Academy of Management. doi:10.2307/259124
- Pierce, J. L., Kostova, T., & Dirks, K. T. (2003). The state of psychological ownership: integrating and extending a century of research. *Review of General Psychology*, 7(1), 84–107. Educational Publishing Foundation. doi:10.1037/1089-2680.7.1.84
- Pierce, J. L., Rubenfeld, S. A., & Morgan, S. (1991). Employee ownership: a conceptual model of process and effects. *Academy of Management Review*, 16, 121–144.
- Ponterotto, J. G. (2005). Qualitative research in counselling psychology: a premier on research paradigms and philosophy of science. *Journal of Counselling Psychology*, 52(2) 126–136.
- Porteous, J. (1976). Home: the territorial core. *Geographical Review*, 66(4), 383–390.
- Republic of South Africa. (1998). Employment Equity Act, No. 55 of 1998. *Government Gazette*, 450 (22209). Pretoria: Government Printers.
- Robbins, S.P., Odendaal, A., & Roodt, G. (2003). *Organisational behaviour: global and Southern African perspectives*. Cape Town: Pearson Education.
- Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research methods for business students*. (4th ed.). Harlow, Essex: Pearson Education.
- Smith, H. & Roodt, G. (2003). Are industries' responding differently to the employment equity challenge? *SA Journal of Human Resource Management*, 1 (1), 32–41.
- Triandis, H. (1994). *Culture and social behavior*. New York: McGraw-Hill.
- Vandewalle, D., Van Dyne, L., & Kostova, T. (1995). Psychological ownership: an empirical examination of its consequences. *Group Organization Management*, 20(2), 210–226. doi:10.1177/1059601195202008.

- Van Dyne, L., & Pierce, J. L. (2004). Psychological ownership and feelings of possession: three field studies predicting employee attitudes and organizational citizenship behavior. *Journal of Organizational Behavior*, 25(4), 439-459. doi:10.1002/job.249
- Wagner, S. H., Parker, C. P., & Christiansen, N. D. (2003). Employees that think and act like owners: effects of ownership beliefs and behaviors on organizational effectiveness. *Personnel Psychology*, 56, 847–871.
- Walbrugh, A., & Roodt, G. (2003). Different age groups' response to employment equity practices. *SA Journal of Human Resource Management*, 1(2), 28–39.
- Wells, M. M. (2000). Office clutter or meaningful personal displays: the role of office personalization in employee and organizational wellbeing. *Journal of Environmental Psychology*, 20, 239–255.
- Wood, J. A., & Winston, B. E. (2007). Development of three scales to measure leader accountability. *Leadership and Organization Development Journal*, 28(2), 167–185.
- Yousef, D. A. (2000). Organizational commitment and job satisfaction as predictors of attitudes toward organizational change in a non-Western setting. *Personnel Review*, 29(5), 567–592.

APPENDIX A
- Data collection instruments -

Psychological ownership in the workplace

Q1: Please indicate your opinion about each of the following statements

	Strongly disagree (1)	Disagree (2)	Disagree somewhat (3)	Agree somewhat (4)	Agree (5)	Strongly agree (6)
<i>Territoriality</i>						
1. I feel I need to protect my ideas from being used by others in my organisation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I feel that people I work with in my organisation should not invade my workspace.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Self- efficacy</i>						
5. I am confident in my ability to contribute to my organisation's success.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I am confident that I can make a positive difference in my organisation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Accountability</i>						
8. I would challenge anyone in my organisation if I thought something was done wrongly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I would not hesitate to tell my organisation if I saw something that was being done wrongly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Belongingness</i>						
11. I feel I belong in this organisation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I feel at home in my organisation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>Self-identity</i>						
14. I feel this organisation's success is my success.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. I feel being a member of this organisation helps define who I am.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Due to copyright on the instrument, only a few examples of the items have been provided. The complete questionnaire comprising 16 items can be obtained from the original authors as stated in the letter of consent.

Q2: Please indicate your opinion about each of the following questions.

	Not at	Very	Moderately	Quite a	To a very
--	--------	------	------------	---------	-----------

	all (1)	little (2)	(3)	lot (4)	great extent (5)
1. Are you given the opportunity to use your skills and talents in your job?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Does management take action to train designated groups to become supervisors and managers?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Do you believe that top management will lead the organisation successfully beyond the year 2015?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Do all employees in the organisation have the same opportunities for promotion?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Does recruitment in the organisation take place without discrimination?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Do you feel important as an employee of the organisation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Do you think males and females in supervisory and management positions in the organisation perform equally well?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Are the organisation's employees encouraged to improve their own abilities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Does the organisation accommodate the culture and beliefs of all the employees in the workplace?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Do the organisation's rules and regulations keep up with changes in the labour law?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Does your job allow you to make use of your abilities and skills?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Are employees in your department involved in decisions that affect them?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q3: Please click to answer the questions.

	Not at all (1)	Very little (2)	Moderately (3)	Quite a lot (4)	To a very great extent (5)
14. Do your co-workers and you communicate openly with one another?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Are employees of the various race groups assisted by supervisors/managers to develop their full potential?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Do you feel that affirmative action in the organisation is justified?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Do employees make friends with members of	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

other race groups in the organisation?					
18. Is promotion in the organisation based on merit?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Does the organisation achieve equal opportunities for all race groups?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Are training programmes provided by the organisation to help employees improve their skills?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Do you feel discriminated against in the organisation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Is the remuneration fair that you receive from the organisation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Are you fully informed about employment equity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Does a relationship of trust exist between employees and managers in the organisation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Do you think the above questions relate to your view of employment equity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4: Please indicate your age.

- 20-29 (1)
- 30-39 (2)
- 40-49 (3)
- 50-59 (4)
- 60-69 (5)
- 70+ (6)

Q5: Please indicate your gender.

- Male (1)
- Female (2)

Q6: Please indicate your race.

- Black (1)
- Coloured (2)
- Indian (3)
- White (4)

Q7: Please indicate your highest level of education.

- Diploma (1)
- Bachelor's degree (2)
- Honours degree (3)
- Master's degree (4)
- Doctor's degree (5)
- None of the above (6)

Q8: Indicate at what level you operate in your organisation.

- Operational level (1)
- Junior management level (2)
- Middle management level (3)
- Senior management level (4)
- Executive level (5)

Q9: How many years have you been with your current organisation?

- 0-5 years (1)
- 6-10 years (2)
- 11-20 years (3)
- 21 or more years (4)

Q10: How many years have you been working in your current job?

- 0-5 years (1)
- 6-10 years (2)
- 11- 20 years (3)
- 21 or more years (4)

Thank you very much for your time and for participating in this survey!

APPENDIX B
- Informed consent form -



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Economic and
Management Sciences

Informed consent for participation in an academic research study

Department of Human Resource Management

THE RELATIONSHIP BETWEEN PSYCHOLOGICAL OWNERSHIP AND EMPLOYMENT EQUITY PERCEPTIONS

Research conducted by:

Ms. M. Nelson (04383192) Cell: 0713654176

Dear Respondent

You are invited to participate in an academic research study conducted by Madelé Nelson, a Master's student from the Department of Human Resources at the University of Pretoria.

The purpose of the study is to explore the influence of contextual factors on psychological ownership, and your participation in the study will be valuable. This survey is anonymous and the answers you give will be treated as strictly confidential. The results of the study will be used for academic purposes only, and the information will be aggregated and not reported individually.

If you are willing to participate in the study, please start the survey on the next page. If you are interrupted while completing the survey, you can access the survey again using the same link. This should not take more than 15 minutes of your time.

[Please click here to start the survey](#). If you continue you give the author consent to use the data obtained for the purpose of this study.

If you have any queries about the study, you may contact my study leader, Dr. C. Olckers at chantal.olckers@up.ac.za or 012 420 3435.

Your participation is appreciated very much!

**Agreement for Permission to Use the Psychological Ownership
Questionnaire
(POQ - Version 1.0) 2007**

James B. Avey, Ph.D. & Bruce J. Avolio, Ph.D.

You stated that you would use the POQ for the following research project:

Main Focus of your Research (Include main theories/models being examined): To determine the relationship between psychological ownership and employment equity perceptions of employees.

Theories used are Pierce (2001, 2003) and Olckers (2011) as well as various others.

To whom it may concern,

This letter is to grant permission for Madelé Nelson to use the following copyright material:

Instrument: Psychological Ownership Questionnaire (POQ) by

Authors: Dr. James B. Avey & Dr. Bruce J. Avolio.

Copyright: Copyright © 2007 Psychological Ownership Questionnaire (POQ) by Dr. James B. Avey &
Dr. Bruce J. Avolio.

All rights reserved in all medium for his/her thesis research.

Three sample items from this instrument may be reproduced for inclusion in a proposal, thesis, or
dissertation.

The entire instrument may not be included or reproduced at any time in any other published material.

Sincerely,

Mind Garden