

The effect of training & development on the antecedents to employee engagement in knowledge workers employed in management roles in Gauteng.

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## **ABSTRACT**

This quantitative cross-sectional association research (n = 256) explored the relationship between training and development as a meta construct with employee engagement as a separate meta construct. The relationship was further broken down to understanding how training and developmental learning as subconstructs relate to the antecedents of employee engagement; job fit, affective commitment and psychological climate.

The sample used consisted of knowledge workers, employed in managerial roles in Gauteng, South Africa. Pearson Chi Square was used to ascertain the association between the various constructs outlined above. The hypotheses were also tested using Cramer's V in order to understand the strength of the association where association was found.

Training was found to have no association with any of the antecedents to employee engagement whereas developmental learning was found to have moderate to strong association with all of the antecedents to employee engagement. Most respondents found the training to be very specific and relevant to their job, which provided an indication that the training was effective. A high percentage of respondents felt that developmental learning was very relevant to their job.

This research adds to the body of knowledge in regard to both employee engagement and training and development. This study provides practical suggestions for managers and Human Resource executives that will assist in decision making regarding training and developmental learning.

## **KEY WORDS**

Training

Development

Job Fit

Affective Commitment

Psychological Climate

Employee Engagement

## **DECLARATION**

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Pravashen Pillay

A handwritten signature in black ink, appearing to read 'Pillay', written in a cursive style.

7 November 2018

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## 1. CHAPTER 1: INTRODUCTION TO THE RESEARCH PROBLEM

### 1.1. RESEARCH TITLE

The effect of training & development on the antecedents to employee engagement in knowledge workers employed in management roles in Gauteng.

### 1.2. BACKGROUND TO THE RESEARCH PROBLEM

It is widely believed that Training and Development has a positive effect on Employee Engagement, however this relationship isn't as clear cut as it may seem. It is evident that training and development does indeed positively affect employee performance (Jehanzeb & Bashir, 2013). Jehanzeb and Bashir (2013) pose the model depicted in Figure 1 through their research into the link between training and development and employee/organisational benefits.

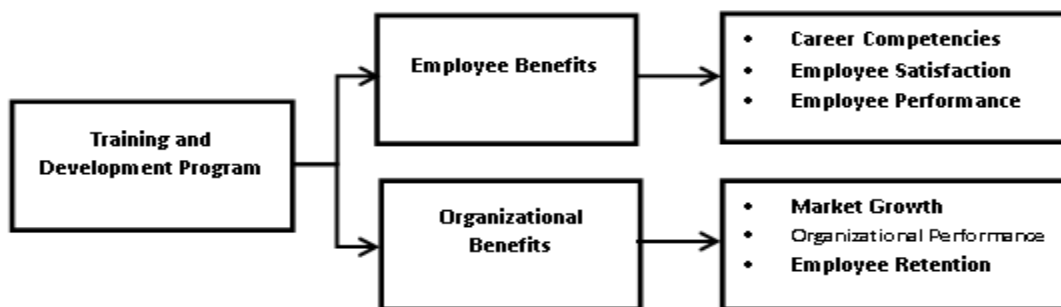


Figure 1. Jehanzeb and Bashir's Conceptual model

Training and Development is a broad term and speaks to both Developmental Learning and Training. Although job specific training may positively effect employee engagement as argued by Aguinis and Kraiger (2009), the question might be posed what effect developmental learning may have if the employee is not able to implement their learning in a rigid workplace that does not allow for innovation or change. The intention of this proposed research is to understand the effects of both training and developmental learning as separate constructs on the antecedents of employee engagement as outlined by (Shuck, Reio, & Rocco, 2011). Development inherently changes mind-sets and knowledge bases, this may affect engagement in a current role and high performers may need more of a challenge. This poses a risk of an increase in intention to turnover in employees that require growth at a pace that the organisation cannot match (Asfaw, Argaw, & Bayissa, 2015).

On the other hand, training is believed to directly increase employee engagement as training is specific to the role. The objective of training as separate to developmental learning is that it is tailored to the specific skill set required for a specific job, this does not always have to be technical in nature but may also include “soft skills” training for jobs that require that as part of the skill set. (Edralin, 2013)

### **1.3. RESEARCH PROBLEM**

Employee engagement is an important business priority, the general definition of employee engagement is that it is a measure of an employee’s commitment to and eagerness to complete their work well (Rigoni & Nelson, 2016). A study on employee engagement shows that Sub-Saharan Africa has one of the lowest rates of engagement in the world, at only 10% fully engaged, with South Africa on 9% (Crabtree, 2013). This rate of engagement has a direct influence on workplace productivity, and on the nation as a whole. Gross Domestic Product (GDP) has slowed and it seems it may be a shift in engagement that could be driving poor performance in South Africa.

Shuck, Reio and Rocco (2011) have shown that there is a significant relationship between employee engagement and the dependant variables (intention to turnover and discretionary effort). The “brain drain” and the fact that developing countries struggle to retain knowledge workers who are able to seek employment in developed countries is an indicator that the engagement percentage may yet decrease further (Dodani & LaPorte, 2005). This poses a long-term problem for the National Development Plan and the potential of 6% GDP growth.

Employees are considered key stakeholders in any organisation; an employee refers to a person that has been hired by an organisation to perform a task or service for wages or a salary. It is crucial in the contemporary business world that voluntary development and unceasing knowledge seeking by employees occurs in all organisations, this helps drive the organisations competitive edge in the marketplace (Maurer, 2012). The need for training and development for a high-performance institute is very clear from the literature. However, it is the belief of the researcher that training, and development has a direct link to employee engagement. The workplace has become very competitive in nature and hence employees themselves must find ways in which to differentiate themselves from everyone else, training and development serves this purpose (Macey & Snyder, 2008). This research aims to provide information to employers, that will assist

in choosing the best training and development solutions for their workforce that will still drive employee engagement and culture.

#### 1.4. RESEARCH PURPOSE

Given the context noted in this chapter, organisations across the globe actively search for ways in which to ensure engagement and by extension a decrease in intention to turnover and an increase in discretionary effort. This research will be based on the conceptual model developed by Shuck et al (2011) and training and development will be introduced as a proposed antecedent as a separate meta-construct with training and developmental learning as sub-constructs. The purpose therefore, is to determine whether there is a significant relationship between training and development and the antecedents of employee engagement as postulated by Shuck et al (2011), which are job fit, affective commitment and psychological climate. This research will aim to provide business with a practical perspective on what facets of training and development they need to focus on to ensure greater employee engagement. In the same vein, this research may create awareness of the importance of training and development in strategic growth plans and to the overall wellness of any business.

Figure 2 outlines the conceptual framework designed for this research, this model is adapted from the conceptual framework developed by Shuck et al (2011) as depicted in Figure 3. It can be constructed that training and developmental learning as sub constructs effect the antecedents of employee engagement as outlined and depicted in the conceptual framework. Hence both training and developmental learning will be measured against all three antecedents of Employee Engagement.

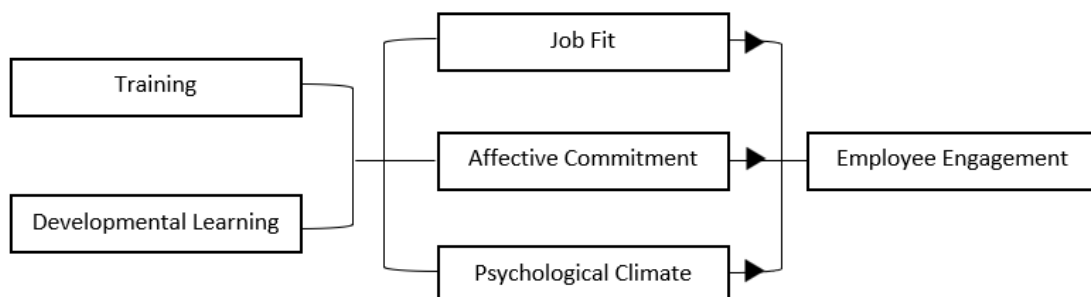


Figure 2. Adapted conceptual model of training and development and employee engagement

Most organisations deal with the need for training and development in their employees. These organisations must then make decisions on the amount, quality and quantity of training or learning carried out. This varies vastly from organisation to organisation and their decision making around this isn't clearly outlined. This proposed research aims to assist organisations in decision making around training and development, by looking at both the needs of the individual (Training vs Developmental Learning) versus the need of the organisation (Employee Engagement).

## **1.5. SUMMARY**

Bell, Tannenbaum, Ford, and Noe (2017, p. 317) state "Private and public organizations spend vast amounts of money on training and development and almost every working adult will spend hours of their lives participating in learning experiences. There is both a business and personal imperative to better understand how humans learn at work and how best to design, implement, and support training and development activities." The researcher aims to make a valued contribution to literature from a policy perspective.

The overall aim of this research is to give academic institutions the opportunity to review programmes and provide a guideline to organisations in what they could do regarding training and development to enhance employee engagement and culture. Furthermore, this research would provide a better understanding of how knowledge's workers experience training versus development. Thus, this research will assist in decision making around training and development, it will also provide a platform for understanding the role that training and development plays in building a strong corporate culture, as we can see from the literature that employee engagement speaks to the climate/culture of an organisation (Albrecht, Bakker, Gruman, Macey, and Saks, 2015).

## **2. CHAPTER 2: THEORY AND LITERATURE REVIEW**

### **2.1. THEORETICAL UNDERPINNING OF STUDY**

Research on employee engagement has long been a focus of business study, this isn't an easily quantifiable construct and hence various authors have delved into understanding employee engagement and how it fits into a business context, various authors have researched employee engagement as it relates to business (Albrecht et al., 2015) (Allen & Meyer, 1990) (Brown & Leigh, 1996) (Mone & London, 2018) (Macey & Snyder, 2008) (Mone & London, 2018) (Shuck et al., 2011) (Shuck, Twyford, Reio, & Shuck, 2014). The primary reason for the increased interest in employee engagement as a construct, is the increasingly competitive environment in which business operates. Engaged human capital may be the key to unlocking a competitive edge through efficiency. To date, the research undertaken delved into understanding the various antecedents to employee engagement as well as an understanding of employee engagement and the outcome variables to employee engagement.

Contemporary understanding of employee engagement as a construct is rooted in the work of Khan (1990), Khan looked at three subconstructs of employee engagement, physical, cognitive and emotional. Khan argued that the way in which employees engaged within these three subconstructs had a direct effect on their experiences at the workplace. Khan (1990) discussed the concept of engagement as an outward expression of the three subconstructs mentioned above in the performance of their roles. In contradistinction to engagement, Khan (1990) posited that disengagement referred to the withdrawal of one's self from work roles, whereby employees defend themselves physically, cognitively and emotionally.

Various authors have built on the foundational work done by Khan (1990), including Christian, Garza and Slaughter (2011) and Macey and Snyder (2008) who built conceptual models rooted in Khan's (1990) work and looked at various specific antecedents and outcome variables. Shuck et al (2011), built on the empirically tested multidimensional motivational framework that was developed by Khan (1990) by drawing down the number of antecedents to the three variables that had the highest influence on employee engagement. Thus, for impact, the researcher has chosen to use the conceptual model developed by Shuck et al (2011).

Shuck et al. (2011) built the conceptual model of antecedent and outcome variables to employee engagement outlined in Figure 3.

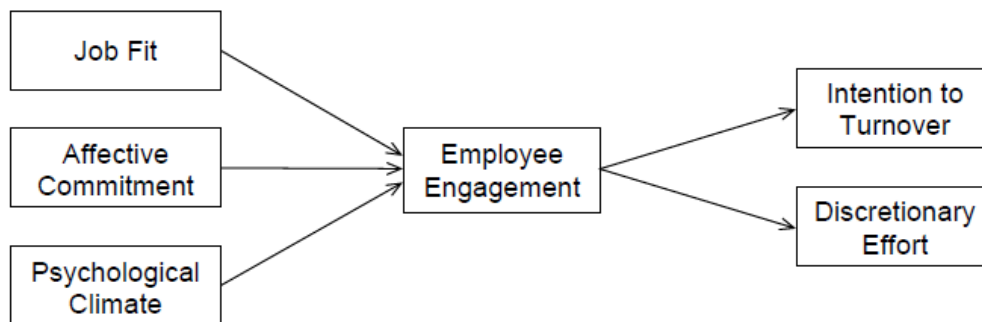


Figure 3. Conceptual model of employee engagement

This conceptual model posits job fit, affective commitment and psychological climate as antecedents to employee engagement. The two outcome variables are intention to turnover and discretionary effort. Shuck et al. (2011) believed that as long as the antecedents outlined are positive, employee engagement will increase. As employee engagement increases, intention to turnover decreases and discretionary effort increases.

On the other hand, training and development as a construct has not been studied in relation to employee engagement. Various studies and books have been done on the return on investment of training and development, however as employee engagement isn't easily quantified, this generally does not form part of the measurement. Spend on training and development tends to be the first cut in difficult economic periods as the understanding of the positive effect on the business isn't clearly understood. Bell et al. (2017), reviewed 100 years of training and development and discussed the growth of the construct and the theoretical underpinnings as it links to business. Bell et al. (2017) believe that the future of training and development lies in four key research areas: training criteria, trainee characteristics, training design and delivery. This research specifically reviews trainee characteristics as a basis to understand whether the separate subconstructs of training and developmental learning affects employee engagement.

This study aims to look at whether training and development affects an employee's engagement in their current workplace. Training and development will be further broken down into two subconstructs, training and developmental learning.

## **2.2. TRAINING AND DEVELOPMENT**

Training and development contains a wide range of different components. Training and development can be described as "an educational process which involves the sharpening of skills, concepts, changing of attitude and gaining more knowledge to enhance the performance of employees" (Dineshkumar & Vijayakumar, 2013, p. 1). Training and development in an organisational context encompass two main activities, training and development (Kulkarni, 2013). There is a clear distinction between what is considered training and what is considered development or developmental learning. The definition of training and development as posed by Aguinis and Kraiger (2009) fits the premise of this research:

Training: the systematic approach to affecting individuals' knowledge, skills, and attitudes in order to improve individual, team, and organisational effectiveness.

Developmental Learning: systematic efforts affecting individuals' knowledge or skills for purposes of personal growth or future jobs and/or roles.

Hence, this research will separate the meta construct training and development into two separate subconstructs, training and developmental learning as confirmed by literature outlined above.

### **2.2.1. TRAINING**

Training as a subconstruct of training and development refers to learning that is specific to a job role or process. Therefore training, inherently offers no developmental capacity beyond the need to learn a skill or gain knowledge that is required to complete a job or process. Asfaw et al. (2015) through their research into the impact that training and development has on employee development, found that most organisations do not plan for their training and development needs accurately and tend to go about this in an ad hoc manner. Asfaw et al. (2015) felt that organisations should set about identifying their training needs, then design and implement training activities that is suitable for their employees, and finally measure results of these interventions. Phillips (2012), believed that it was easier to measure the return on investment of training and particularly difficult to measure the return on investment of development. Hence, training spend is generally



higher in most organisations and usually done in the first few years that an employee joins the organisation. It is clear from Asfaw et al. (2015) that understanding how training and development affects an employee's engagement or job satisfaction is not understood by organisations. There are various methods for carrying out a training needs analysis, however these are generally based on either a managers or employees understanding of their training or developmental needs. This method removes the concept of engagement, and hence culture in choosing the relevant programme for a specific employee.

Sung and Choi (2013) theorised that organisational spend on training and development has a direct relationship with innovation within that organisation. In the contemporary business world, it is imperative that all organisations innovate to achieve competitive advantage and to ensure sustainable growth. Innovation in an organisation occurs by using existing knowledge and information to develop dissimilar combinations and reconfigurations (Cantner, Joel, & Schmidt, 2008). The training and development investment of an organisation creates spaces for innovation to occur via the facilitation of the exchange of ideas and knowledge among employees (Sung & Choi, 2013). Training as a construct receives considerably more investments from organisations than developmental learning, as it is easier to relate to productivity or financial performance (Phillips, 2012). However, training takes place as requisite learning to a new role or process and is very specific to a job or process. Hence, the innovation drawn from training is not as strategic as the innovation drawn from developmental learning which speaks to learning that is not specific to a job or process.

Empirical studies within the training and development field generally focused on the effects of training on efficiency (Barrett & O'Connell, 2001), financial performance (Glaveli & Karassavidou, 2011), and employee motivation (Castellanos & Martín, 2011). Although employee motivation does speak to employee engagement in some ways, it does not encompass employee engagement. Hence the need to understand the relationship between training and employee engagement that builds on the work done previously in ascertaining a value linked to return on investment is of paramount importance. The effectiveness of training in regard to knowledge workers is generally linked back to efficiency as this is quantifiable, studies have been done to ascertain what type of training will yield the best results (Ford, 2014). These studies discuss the learning methodologies utilised while training new employees for roles versus old employees for new processes. As training is specific and distinctive from developmental learning, it is imperative that the methodology used is specific to the desired outcome.

Generally, the Human Resource department is responsible for managing the training spend. However, the responsibility regarding understanding the training required sits with the relevant line manager. As training is specific to roles and processes, the management of this spend should sit with line managers in conjunction with the human resource department (Ford, 2014). In contradistinction, developmental learning should be a strategic spend that is aimed at innovation and sustainable growth and should be managed at an executive level. (Sung & Choi, 2013).

### **2.2.2. DEVELOPMENTAL LEARNING**

Noe, Clark and Klein (2014) defined developmental learning as formal education, job experiences, coaching relationships, and personality and skill assessments that help employees prepare for future jobs or positions. As clearly differentiated from training which is job skill specific and is relevant to the current job. Most organisations tend to invest in training and not formal programmes due to time, workload demands and budget constraints (Bell et al., 2017). The drivers for these decisions are usually not in line with the organisation's culture or strategy, hence this proposed research aims to link the training or developmental learning decision making process directly to the desired outputs required by the organisation underpinned by culture and strategy.

Pollock, Jefferson and Wick (2015), felt that a holistic approach to training and development is required to ensure positive results for the organisation in the long run, hence a blend of both training and developmental learning is required. They felt that the mix and delivery should be tailored to the individual rather than be a one size fits all solution. This kind of learning and development intervention is costly and perhaps a better route would be to ascertain the benefit for the organisation and tailor programmes to offer different components that cover both training and developmental learning. This type of intervention would ensure different components appeal to the different types of learning styles of an organisation's employees, this should lead to a more engaged workforce. It is therefore important to ascertain how these constructs effect Job Fit, Psychological Climate and Affective Commitment as antecedents to the meta construct, Employee Engagement and by inference the culture of the organisation.

Ensuring that formal learning programmes are part of the training and development spread is critical in for any organisation to build a strong learning culture. Non-formal learning and tacit knowledge via experience are separate to developmental learning and have a different effect on employees (Eraut, 2000). The same can be said for training as it links to return on investment in regard to efficiency (Barrett & O'Connell, 2001), financial output (Glaveli & Karassavidou, 2011), and employee motivation (Castellanos & Martín, 2011). Nevis, DiBella and Gould (2000), believe that organisations should be viewed as learning systems that encapsulate both training and developmental learning. Nevis et al.(2000) state “With the decline of some well-established firms, the diminishing competitive power of many organisations in a burgeoning world market, and the need for organizational renewal and transformation, interest in organizational learning has grown.”. This speaks to the need for developmental learning as a key focus that should be driven from the top via strategy. The benefits of formal learning in contradistinction to non-formal learning is viewed as a critical employee value proposition that assists in developing employees for leadership roles (Becker & Bish, 2017). Informal learning is inherent in all organisations that inculcate learning into the culture and does in many ways ensure the sustainability of that culture in the face of ever-increasing employee’s turnover rates (Manuti, Pastore, Scardigno, Giancaspro, & Morciano, 2015).

Business driven action learning is a facet of developmental learning whereby measurable outcomes are achieved by employees in the form of projects that can be implemented at the workplace. This drives development and innovation through group or individual projects in a classroom setting whereby ideas and knowledge is developed and shared (Boshyk, 2016). These are formal programmes that take employees through various subjects that allow them to view the business from different perspectives, these are formal developmental learning programmes that can either be designed or offered internally or externally through a business education provider. Although the value of these types of initiatives are clear, these programmes are the first to go in an economic downturn as they are generally at a higher cost as compared to training specific programmes. However, organisations need to ensure that the benefits of developmental learning programmes are understood as the long-term implicit benefits could outweigh the short-term explicit costs. Tharenou, Saks and Moore (2007) believe that training and development should be driven by the executives of an organisation and not the human resource department as it is closely linked to organisational-level outcomes.

Developmental learning as a subconstruct of training and development is key to the growth of employees with any business. Jehanzeb and Bashir (2013), outlined the

importance of both training and developmental learning to individuals and organisations and linked this to the benefits obtained by both. Many organisations shy away from investing in developmental learning as they may feel that they will lose their employees to competitors post investment. Benefits to the environment in which a business operates is a benefit to the economy of the country in which the business operates which in turn leads to increased growth for the business (Porter & Kramer, 2011). Developmental learning ensures the development of responsible leadership within business, civil society and government. Through the nature of developmental learning, paradigms shift, and innovation occurs which drives sustainable growth forward into the future.

### **2.3. EMPLOYEE ENGAGEMENT**

Employee engagement is a property of the relationship between an organisation and its employees. An engaged employee is defined as “one who is fully absorbed by and enthusiastic about their work and so takes positive action to further the organisation's reputation and interests” (Shuck et al., 2011). Engagement drives performance in the workplace and is an important phenomenon to understand, to ensure and build a high performing organisation. An engaged employee has a positive attitude towards the organisation and its values (Paul, 2017). Employee engagement has been well researched and the antecedents for engagement reviewed holistically, however training and development was not looked at as an antecedent to employee engagement (Ward & Shuck, 2011). Hence, this research adds to the body of knowledge. Figure 3 outlines the model developed by Shuck et al (2011). This gives an indication of the antecedents and outcomes. For the purposes of this study we are looking at the antecedents of employee engagement specifically.

Mone and London (2018) stated that employee engagement can be reached via continual engagement with the employee by the employer. They felt that the performance management process and coaching was the key to effective employee engagement. Their model for employee engagement removes various key antecedents that were outlined by Shuck et al (2011). Although coaching does speak to developmental learning, it isn't clear from their study how they controlled for the factors discussed by Shuck et al (2011).

The theoretical underpinning regarding each of the antecedents will be discussed in this section, namely job fit, affective commitment and psychological climate. **Job fit** is an

indication of employee attitudes and organisational commitment (Resick, Baltes, & Shantz, 2007). Correct job fit allows employees to feel part of the organisation and their values and interests are aligned with those of the organisation. Job fit has been proven to link to attitudes towards work, employee engagement (Resick et al., 2007). **Affective commitment** is defined as a sense of belonging, an emotional connection with one's job, organisation, or both (Rhoades, Eisenberger, & Armeli, 2001). This construct refers to an emotional bond that an employee has with their job and/or their organisation, this is a determining element of commitment and loyalty. **Psychological climate** is defined as the perception and interpretation of an organisational environment in relation to an employee's perception of well-being (Brown & Leigh, 1996). This factor is very important as it is wholly in the control of the organisation and is a strong determining factor for employee engagement.

Employee engagement is a key driver of organisational climate, job demands, job resources, the psychological experiences of safety, meaningfulness and availability at work. (Albrecht et al., 2015). Albrecht et al (2015) outlined four key Human Resource functions that directly affect employee engagement and the organisational climate (culture of the organisation), Socialisation, Performance Management, Recruitment and Selection and Training and Development. Within the training and development space, they outlined the following three interventions (Albrecht et al, 2015):

- (1) providing the optimal mix of job demands and resources;
- (2) optimizing personal resources through training; and
- (3) encouraging employees to engage in job crafting.

However, their study looks at training and development as a holistic solution and not as a complex component within the Human Resource arsenal. Hence, they have not reviewed what types of training or developmental learning will positively or negatively affect employee engagement in the long run. Their research was developed on the premise that all training and development interventions will lead to an increase in employee engagement. This study will hence add to the body of knowledge in unfolding the facets of training and development and measuring this against employee engagement directly.

### **2.3.1. PHYSICAL ENGAGEMENT**

Physical engagement refers to an employee's behaviour and activities representing vigour and responsibility. Physically engaged employees will explicitly portray a sense of urgency when they conduct their roles (Macey & Snyder, 2008). Employees that are physically engaged tend to engage with their roles intensely and make every effort to ensure the task at hand is completed well.

Khan (1990) postulates that physical engagement requires physical energy, strength and readiness that are portrayed as on-verbal signs of engagement in the workplace. Khan (1990) believed that an employee was never fully engaged or disengaged and went through periods of both based on current circumstance and personal engagement levels, which he termed "self-in-role". Hence, Khan (1990) believed that physical engagement levels within the workplace were dependant both on the workplace and the employee personally. Both internal and external factors affect physical engagement, hence if you had not had sleep you will be physically disengaged the next day. In contradistinction, if you had a good sleep and were well rested and energetic, you may be highly physically engaged. These examples speak to factors that are relevant to self, on the other hand workplace factors such as workload, colleagues and culture may also affect physical engagement in the workplace.

Saks (2006) believed that employees respond to the employer's actions. Saks (2006) postulated that individual employees do not necessarily engage and disengage at work but rather exchange their engagement for resources and benefits provided by their organisation. In regard to physical engagement, employees require an efficient work space, automated procedures, clearly defined roles and a culture that encourages this at all levels (Saks, 2006). Rich, Lepine and Crawford (2010) built on this and posited that engagement mediates this exchange discussed by Saks (2006), however they also felt that the individual's self as postulated by Khan (1990) was key to this exchange and played a major role in the overall engagement of an employee.

Physical engagement is very important in the workplace as it speaks to the way people are viewed. In the contemporary business context, physical engagement is key as it is generally the performance measure used for evaluating performance via processes such as key performance indicators. Physical engagement forms a part of personal engagement but can also be driven by organisations by providing the space for physical engagement to thrive.

### **2.3.2. EMOTIONAL ENGAGEMENT**

Emotional engagement refers to an employee's ability to connect with their job emotionally through personal resources such as pride, confidence in and knowledge of their work (Shuck et al., 2011). Employees that are emotionally connected to their organisations and jobs tend to feel passionate, interested and generally positive about their roles.

Job satisfaction refers to pleasurable or positive emotional state resulting from the self-appraisal of one's job or job-related experiences (Rich et al., 2010). Rich et al (2010) specifically refer to emotional engagement as separate to job satisfaction, they believe job satisfaction to be a narrow explanation of the "self-in-role" paradigm. They believe that emotional engagement is an active search by individuals for the value in which they bring to their workplace and vice versa the value they receive from their workplace. Saks (2006) believed that this relationship was one of exchange whereby the employee exchanged their engagement for the values the organisation stood for and practiced as well as the overall brand image of the organisation.

Knowledge of one's work is of paramount importance to the building of emotional engagement, this is specifically where training is important (Shuck et al., 2011). Training ensures that knowledge required to complete a specific task as part of a role is understood, this would ensure the employee is capable in their role and ensure that one component of emotional engagement is in place. People display higher levels of engagement when they are physically involved in tasks and are connected to their work and to others in the service of their work (Khan, 1990). Simply put, engagement refers to investing "hands, head and heart" in one's job or organisation (Ashforth, Harrison, & Corley, 2008). Emotional engagement refers to the heart in this metaphor.

The workplace and employees have shifted and organisations need to realise that to ensure higher levels of engagement and specifically emotional engagement, it is imperative that the employee value proposition does not only include physical items but an understanding of how employee view the organisation emotionally (Gursoy, Chi, & Karadag, 2013) .

### **2.3.3. COGNITIVE ENGAGEMENT**

Cognitive engagement refers to the way in which employees perceive their work, this speaks to whether they believe their work to be meaningful, safe and whether they have access to the required implements to do the task at hand at the desired outcome level (Shuck et al, 2011). The consequences of cognitive engagement in employees is that they tend to be highly focused, attentive and absorbed in the work they are currently completing.

In the metaphor regarding “hands, head and heart” (Ashforth et al., 2008), cognitive engagement speaks to the head. Macey and Schneider (2008) believed that each state of engagement built into the next, hence once an employee achieved physical, emotional and cognitive engagement, they would then be fully engaged at the workplace. Cognitive engagement must be developed through the organisation providing the resources to ensure the employee is able to do their job well. This speaks to discretionary effort, as discretionary effort is the actual indicator that an employee is cognitively engaged (Macey & Snyder, 2008). Shuck et al (2011) postulated discretionary effort as an outcome to employee engagement. This is key as it provides a clear link between cognitive engagement and the outcome variables of employee engagement.

In contrast to physical engagement, developmental learning is key to driving cognitive engagement as developmental learning provides employees with different perspectives and allows for personal growth. As with physical and emotional engagement, cognitive engagement at the workplace does depend on the organisation, Saks (2006) believes that the amount of cognitive engagement an individual is willing to devote in the completion of one’s work role is dependent on the economic and socioemotional resources received from the organisation.

Khan (1990) felt that employees become cognitively vigilant whether they work alone or not. Khan (1990) also believed that employees needed to feel connected to others in the service of their work regardless of whether they worked alone or not, this was based on their level of creativity in completing the work, their personal beliefs and values and how this linked to their work and an understanding of the overall value they provide not only to the business but the part they played in the value provided to society.



## **2.4. VARIABLES THAT POTENTIALLY AFFECT EMPLOYEE ENGAGEMENT, TRAINING AND DEVELOPMENTAL LEARNING**

Age, gender and tenure have been found to be control variables that may affect employee engagement (Sonnentag, 2003) and hence the antecedents of employee engagement (Shuck et al., 2011). Quareshi (2016) believed that age and tenure were key factors to the way in which training and development was adopted by employees. An exploration of the literature was done to understand how these three variables may affect each of the constructs being measured.

### **2.4.1. AGE**

Khan (1990), Saks (2006), Macey & Snyder (2008) and Shuck et al. (2011) all looked at age as a potential variable that may affect employee engagement, however this was not done to the depth that James, McKechnie and Swanberg (2011). James et al. (2011) researched how variables such as level of education, marital status, employment status (part-time vs permanent), gender and age affected the outcome of their results. They analysed over 6000 employees in the retail sector and found that age has a noteworthy influence on the level of engagement portrayed by an employee. Their research found that younger employees were generally less engaged than older employees.

Gursoy et al.(2013) reported that each succeeding generation seemed to be less engaged at the workplace with generation y and z having the lowest levels of engagement in the workplace. However, the study also found that the workplace, processes and management was viewed as archaic by generations y and z. Most employees at senior managerial positions were baby boomers and partly by generation x. Managers in contemporary business need to understand that the manner in which they deal with and hire employees that are generation x may not be as effective for generations y and z (Gursoy et al., 2013). However, their research clearly identified age as a major factor in regard to the levels of engagement in any workplace as the opposite is also true for baby boomers and generation x employees being led by generations y and z.

Training is affected by age as well, firstly as employees employed in a firm for a long time and are generally older tend to resist change (Qureshi, 2016). Training is required to ensure all employees learn new roles, jobs and processes as efficiently as possible with the minimum downtime possible. Yeatts, Folts and Knapp (2000) believe that older

employees resist changing processes and jobs as they perceive this as a loss of control. Lim, Yoon and Song (2018) believe that older employees actually require more training than their younger counterparts due to the rate of change of the contemporary business environment. The perception of older employees in the current business context is that they do not keep up with technology, lack creativity and are not innovative (Lim et al., 2018). Zwick (2015) feels training at most organisations is aimed at younger employees and is less effective on older employees, hence the perception that they are resisting change. His research reviews the type of training that would be effective for older employees (Zwick, 2015). It is clear from the literature that age is a factor that does affect the way in which employees interact with training as a construct.

Developmental learning on the other hand is a bit more complicated, the notion is that new, younger employees need more training than developmental learning as they may not be mature enough or are not ready for a senior management position within the organisation. However, research has found that younger employees feel they learn faster and are able to master their job (Deaconu, Rasca, & Celarel, 2016). They tend to exhibit higher intention to turnover based on their feeling of being boxed in and not able to develop into a leadership role (Deaconu et al., 2016). Learning potential is also a factor as developmental learning speaks to formal programmes that are generally academically rigorous. Zwick (2015) also noted that older employees tended to demonstrate lower levels of both engagement and learning potential in training. However, James et al. (2011) found that older employees had significantly higher levels of engagement in developmental programmes.

Literature in this field has clearly shown age to be a variable that does affect employee engagement, training and developmental learning.

#### **2.4.2. GENDER**

Literature has shown that in some studies, gender was shown to be a key control variable and that it does influence employee engagement (Sonnentag, 2003) (James et al., 2011) (Gursoy et al., 2013). Sonnentag (2003) looked at recovery and leisure time spent at home and the effect this had on an employee's engagement levels the next day. Sonnentag (2003) found that women tended to do more at home than men did, which allowed men the requisite amount of day-level recovery time compared to women that spent more time with children and cooking. Hence, he felt that gender was a key control variable when looking at employee engagement levels. Sonnentag (2003) also noted

that men tended to spend more time on work activities at home than women which negatively affected their recovery times. This may be shifting in contemporary society women and men alike are breaking the stereotypical gender roles of the past, hence it would be interesting to note whether there are any differences in regard to employee engagement across the gender groups. James et al.(2011) also found gender to have a significant effect on their results, this was reviewed across different age groups as well.

As training is specific to a job or process, this would be necessary for all employees to do at some point, regardless of gender. However, a study done by the United Kingdom Commission for Employment and Skills in the United Kingdom found that organisations are 18% more likely to send male employees on work related training than female employees (UK Commission for Employment and Skills, 2015). The study found that a 39% of female employees were offered equality and diversity training rather than work-related training in comparison to 24% of men. The study found this was mainly due to the fact that the training was specific to a new job or promotion which may also indicate that the female employees were being left behind (UK Commission for Employment and Skills, 2015). It would therefore be interesting to note the difference in engagement amongst females and males the did and did not do any training initiative. Schuller (2011) found that women participated in training more than men across different age groups and showed more enthusiasm to be trained.

Research in the neuroscience field tells us that the male brain is larger than the female brain, but female brains grow faster than male brains (Tan, Ma, Vira, Marwha, & Eliot, 2016). It was widely believed that this affected learning styles and interests, however new studies have shown that environment and upbringing have a significant impact on the way both males and females learn (Lin-Siegler, Dweck, & Cohen, 2016). However, there is a consensus that females and males do have differing learning styles, due to various factors.

### **2.4.3. TENURE**

Tenure is a bit more complicated than the previously discussed control variables, as tenure has many other factors included within the construct, such as age, gender and culture. Tenure as a control variable can also be linked to one of the outcome variables of the Shuck et al. (2011) model, intention to turnover. As postulated by Shuck et al (2011), higher levels of employee engagement will lead to lower levels of intention to turnover which in turn equates to more employees with longer tenure. We can infer that

an organisation that has a high number of employees with shorter tenure will have a lower overall level of employee engagement. Tenure is a variable that should affect employee engagement at the organisational level but cannot be equated to a personal level as the culture may have changed and shorter tenured employees may have higher levels of engagement.

In their study regarding employee engagement in an age diverse workforce, James et al. (2011) found that tenure did not have a significant effect on employee engagement, they surveyed 6047 respondents across various fields and used social exchange theory as a basis of their framework. This was interesting as their study reviewed a diverse group and found that tenure was not significant as a control variable. Opposing this finding, Teclaw, Osatuke, Fishman, Moore and Dyrenforth (2014) in a study looking at tenure and employees' attitudes to their work found that tenure was indeed a significant variable as it related to the employee's attitudes. They generally found employees with longer tenure to have positive attitudes.

If an older employee has just joined an organisation, the employee will have to undergo training as a requisite component to the role. However, Zwick (2015) postulated that training was aimed at younger employees and that older employees would not be engaged by the types of training being offered. Zwick (2015) found that older employees that had shorter tenure engaged with training in a similar way that a younger employee with the same shorter tenure did. Quareshi (2016) theorised that older employees tend to be resistant to change and feel as though they are losing control of their environment when asked to make changes or attend training.

Tenure has a major effect on whether an employee would go for training or developmental learning at most organisations around the world (Bell et al., 2017). Most human resource departments prescribe a specific tenure at which an employee may apply to do specific developmental learning programmes in contrast to training which is specific and usually compulsory. Tenure is an important control variable to review as this does affect employee engagement as well as training and development decisions both at an operational and strategic level.

## 2.5. ANTECEDENTS TO EMPLOYEE ENGAGEMENT

Shuck et al. (2011) proposed three antecedent variables to their conceptualised employee engagement framework, job fit, affective commitment and psychological climate. Each of these variables have been researched in depth by various researchers. This section will review the development of these antecedent variables as well as provide a critical analysis of each. The conceptual model in regard to the antecedents postulated by Shuck et al. (2011) is depicted in Figure 4.

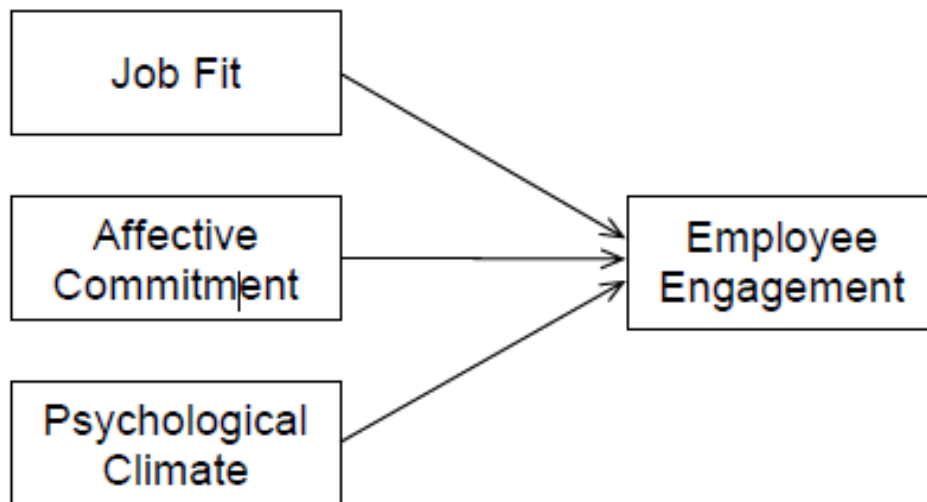


Figure 4. Conceptual model of antecedent variables to employee engagement

### 2.5.1. JOB FIT

The most prevalent forms of job fit can be classified into three categories; person environment (P-E), person-organisation (P-O) and finally person-job (P-J) (Kristof, 1996). His research showed that P-O and P-J fit relate positively to the attitudes of employees as well as employee well-being. As employee attitudes and well-being are related to motivation, job fit as equated to P-O fit, is included as an antecedent to employee engagement as per the research done by Shuck et al. (2011). For the purpose of the current research, the term Job Fit will be defined as "the congruence between personal and organisational values." (2011). Resick et al.(2007) postulated that job fit directly correlated with employee engagement and motivation.

Job fit speaks to the perception of an employee in regard to the meaning of the work they do as part of their job and the value this brings to the organisation and society as a whole (Khan, 1990). Shuck et al. (2011) posited that job fit drives commitment and

performance. Further research has shown that specific tasks within a role can affect job fit as a whole, hence it is important that relevant tasks are done at specific levels within an organisation (Resick et al., 2007).

Employees that perceive themselves as having a strong job fit, develop a psychological bond with their work and become both emotionally and physically engaged (Khan, 1990). Cable and Judge (2006) did research into the personal perceptions of employees on their lives, they found that an employee's perception of their current position in life as to compared to peers, as well personal matters affected the outcome of job fit and employee engagement.

### **2.5.2. AFFECTIVE COMMITMENT**

Organisational commitment is the overall meta construct within which three subconstructs represented by affective commitment, continuance commitment and normative commitment fall (Allen & Meyer, 1990). The definition of affective commitment in an organisation is; "refers to employees' emotional attachment to identification with and involvement in the organisation." (Allen & Meyer, 1990, p. 1). Continuance commitment "refers to commitment based on the costs that employees associate with leaving the organisation." (Allen & Meyer, 1990, p. 1) and normative commitment "refers to employees' feelings of obligation to remain with the organisation." (Allen & Meyer, 1990, p. 1). The focus in this study was only on the affective commitment facet of organisational commitment as an antecedent to employee engagement as affective commitment can be linked to an employee's desire or want to stay at an organisation that fits well with employee engagement that is seen as a motivational concept (Shuck et al., 2011).

Affective commitment is about valuing employees' contributions and caring about their wellbeing (Rhoades et al., 2001). Rhoades et al. (2001) found that affective commitment was related to employee turnover. Building on their work, Poon (2013) argued that when organisations care for their employees' career needs, their employees tend to be affectively committed. Poon (2013) further showed that affective commitment does have the ability to predict employee engagement.

Affective commitment is the outcome of the emotional link that an employee has with their organisation. Hence, affective commitment relates to emotional engagement as described by Khan (1990). This is an emotive response to the way in which an employee

perceives their organisation and is key to building strong affective commitment. Rhoades et al (2001) and Saks (2006) postulated that the antecedent variables to affective commitment included; reward, recognition, procedural justice and supervisor support. Organisations must ensure that these factors are driven in order to build the affective commitment of their employees.

### **2.5.3. PSYCHOLOGICAL CLIMATE**

Brown and Leigh (1996, p. 359) define Psychological Climate as "how organisational environments are perceived and interpreted by their employees.". They joined six separate and specific dimensions to the model of Psychological Climate, supportive and flexible management, role clarity, freedom of self-expression, perceived contribution by the employee, recognition from the organisation and job challenge. Four of the six dimensions have been hypothesised to relate to employee engagement and these four will thus be used for this research, these four dimensions were empirically tested by Brown and Leigh (1996) and Shuck et al. (2011) . The four dimensions are: supportive management, contribution, recognition and challenge. The higher-level construct psychological climate can be broken down into two further lower level constructs: psychological safety and psychological meaningfulness. Supportive management falls under the lower level construct of psychological safety whereas contribution, recognition and challenge falls under the lower level construct, psychological meaningfulness.

An important aspect of psychological safety that is related to employee engagement is that of supportive management (Brown & Leigh, 1996). Supportive management has to do with the expectations of how an employee should go about conducting their work. In other words, does a manager strictly control the way in which employees' work is being done, or does the manager give the employees freedom to use their imagination and creativity to conduct their work. Supportive managers also allow their employees to fail without retaliating and blaming the employee when failure occurs.

Psychological meaningfulness consists of contribution, recognition and challenge (Brown & Leigh, 1996). In terms of contribution, when employees perceive that the work they conduct is meaningful and contributes to the overall objective of an organisation, they tend to be more engaged in the task at hand (Khan, 1990). With respect to recognition, when employees feel that they are being thanked and that their work is appreciated by their superior it creates an environment of psychological meaningfulness. The last component of psychological meaningfulness is challenge, which speaks to the

extent to which an employee's work is challenging as it has been shown that challenging work increases personal growth in individuals (Khan, 1990).

## **2.6. KNOWLEDGE GAP**

The relationship between training and development and employee engagement has not been studied at an in-depth level. Various authors have done research within the employee engagement space (Khan, 1990) (Shuck et al., 2011) (Saks, 2006). Their research has been based in understanding the antecedents and outcomes of employee engagement and have provided insight to employee engagement as a meta construct. The antecedents to employee engagement as postulated by Shuck et al. (2011), are job fit, affective commitment and psychological climate. These constructs are built up of various components that are susceptible to influence and may be influenced by organisations in order to assist in building an engaged workforce.

On the other hand, training and development research has primarily been based in return on investment of these programmes. Research has looked at return on investment in regard to efficiency (Barrett & O'Connell, 2001), financial output (Glaveli & Karassavidou, 2011), and employee motivation (Castellanos & Martín, 2011). There have been other studies that have reviewed the perceived and actual benefits and effectiveness of training and development (Aguinis & Kraiger, 2009) (Asfaw et al., 2015).

However, these two meta constructs, training and development and employee engagement have not been studied to ascertain their relationship. As this study has looked specifically at developmental studies such as formal programmes (accredited and non-accredited), degrees and short courses as well as training that is very specific to a role or process. It was key to ascertain the relationship between the various subconstructs to understand how the meta constructs interact. Employee engagement is linked to intention to turnover and if training and development has a positive effect on employee engagement, we can infer that intention to turnover will drop (Shuck et al., 2011). On the other hand, if training and development has a negative impact on employee engagement, we can infer that intention to turnover will increase.

Hence, the knowledge gap exists in the measurement of the association between these two meta constructs to ascertain an answer to the questions posed above. This research will help organisations in decision making regarding management development.



## **2.7. SUMMARY OF CHAPTER**

This chapter provided a summary of the literature reviewed as a basis for this research project. This chapter firstly reviewed training and development as a meta construct, secondly the distinction between training and developmental learning was provided underpinned by previous research. Thereafter an assessment of employee engagement as a meta construct was carried out, which led to an investigation into physical, emotional and cognitive engagement as sub constructs. A review was done of each of the antecedents of employee engagement as postulated by Shuck et al. (2011). It was clear from the literature on both meta constructs that very little is known in regard to the association of employee engagement and training and development. Hence, this chapter provides an in-depth analysis of both meta constructs individually and demonstrates the need for further research to understand this relationship.

### **3. CHAPTER 3: RESEARCH HYPOTHESES**

The aim of this research is to understand the effect of Training & Development on the antecedents to Employee Engagement in knowledge workers employed in management roles in Gauteng. Training was viewed as a separate construct to developmental learning and measured against job fit, affective commitment and psychological climate to provide an answer to the overarching question.

The overarching question of the study is as follows:

Does Training and Development effect the antecedents of Employee Engagement in knowledge workers employed in management roles in Gauteng, South Africa?

The following hypotheses are tested to understand and provide an answer to the research question:

#### **3.1. HYPOTHESIS ONE**

H1<sub>0</sub>: There is no significant relationship between training and job fit.

H1<sub>1</sub>: There is a significant relationship between training and job fit.

#### **3.2. HYPOTHESIS TWO**

H2<sub>0</sub>: There is no significant relationship between training and affective commitment.

H2<sub>1</sub>: There is a significant relationship between training and affective commitment.

#### **3.3. HYPOTHESIS THREE**

H3<sub>0</sub>: There is no significant relationship between training and psychological climate.

H3<sub>1</sub>: There is a significant relationship between training and psychological climate.

#### **3.4. HYPOTHESIS FOUR**

H4<sub>0</sub>: There is no significant relationship between developmental learning and job fit.

H4<sub>1</sub>: There is a significant relationship between developmental learning and job fit.

### **3.5. HYPOTHESIS FIVE**

H5<sub>0</sub>: There is no significant relationship between developmental learning and affective commitment.

H5<sub>1</sub>: There is a significant relationship between developmental learning and affective commitment.

### **3.6. HYPOTHESIS SIX**

H6<sub>0</sub>: There is no significant relationship between developmental learning and psychological climate.

H6<sub>1</sub>: There is a significant relationship between developmental learning and psychological climate.

## 4. CHAPTER 4: RESEARCH METHODOLOGY

### 4.1. PHILOSOPHY

The philosophy driving this research is positivism, this philosophy is in line with the researcher's beliefs regarding the gathering and analysis of information or knowledge. Saunders and Lewis (2012) define positivism as "a research philosophy similar to those used in the physical and natural sciences. Highly structured methods are employed to facilitate replication, resulting in law-like generalisations". This philosophy is very much in line with the style and methodology outlined in this chapter, which is quantitative in nature.

Positivist research allowed the researcher distance in the data collection phase, this ensured that the researchers emotions and implicit biases did not influence the data received. Positivist research is defined by the clear distinction that there is a link between science and personal experience. It is also important in positivist research to seek objectivity and ensure rationality and logic is inherent throughout the research process (Carson, Gilmore, Perry, & Gronhaug, 2001). Thus, this quantitative research was developed with a positivistic outlook to the research process. Therefore, the research methodology followed the positivistic approach as outlined by figure 5.

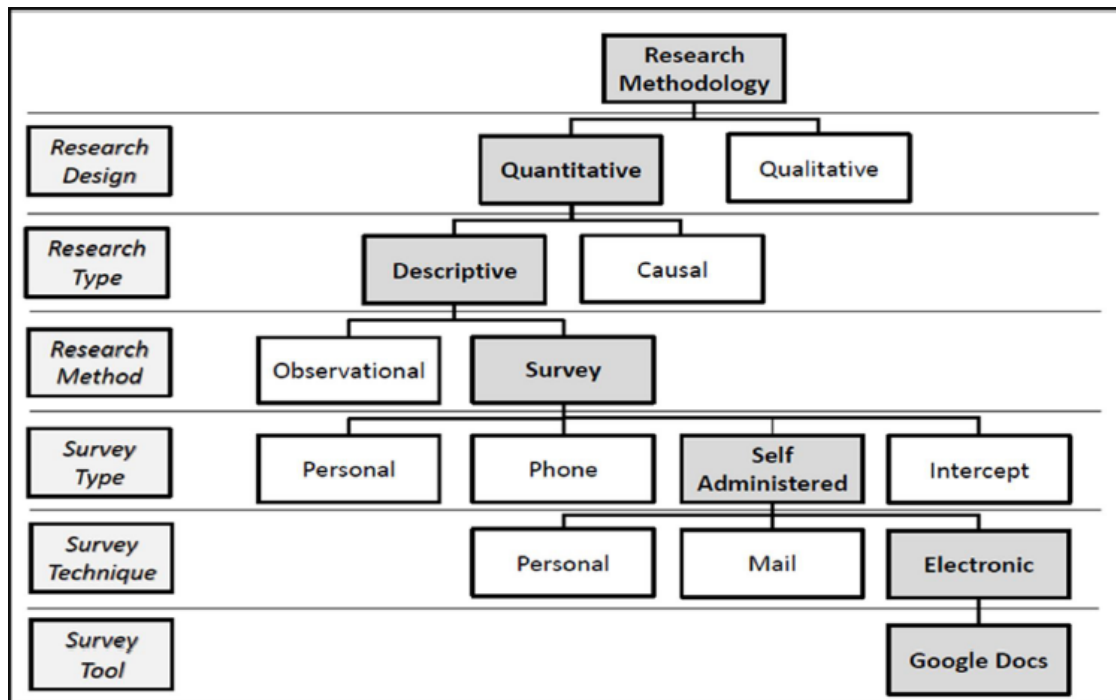


Figure 5. Researchers summary of the research methodology followed for this study.

## **4.2. APPROACH**

This research is deductive in nature as it involved the testing of an existing theoretical proposition against a specific and measurable construct. The hypotheses have been developed from the existing theory and based on the conceptual model outlined in Figure 2. A key characteristic of deductive research is, to explain causal relationships, which is the overall purpose of this research (Saunders & Lewis, 2012). The research strategy is in line with the deductive approach and is quantitative in nature.

Theories are considered to be speculative answers to perceived problems, which may be tested either inductively or deductively. Deductive reasoning by its very nature provides a falsifiable alternative to the postulated theory, which can be tested. (Walliman, 2011). Thus, it clearly sits in the positivistic paradigm, and is the underlying method driving the research methodology of this research project.

## **4.3. METHODOLOGICAL CHOICES**

The mono-method has been used via an electronic survey. This was due to time constraints in completing this study, and succinctness of the data. This is also in line with the philosophical underpinning of this research, ensuring an easily measurable outcome based on a quantitative analysis. The constructs being measured are clearly defined in the literature and thus the mono-method suits this deductive, quantitative research.

This research was grounded on a single research paradigm, which is quantitative in nature. The data collected via this research project is in numerical form and the information was analysed using quantitative data analysis techniques. This is the definition of a mono-method study (Azorin & Cameron, 2010).

## **4.4. PURPOSE OF RESEARCH DESIGN**

This research was explanatory in nature, the aim of this research was to explain the relationship between specific measurable constructs. Saunders and Lewis (2012), define explanatory study as research that focuses on explaining the relationship between variables. This definition outlines the clear distinction from exploratory research which is where something new is explored (Kowalczyk, 2018). Explanatory research studies a situation or problem, to explain the relationship between different variables. This study

therefore took on an explanatory perspective as the research aimed to understand the relationship between the meta constructs Training and Development and Employee Engagement.

Explanatory research was conducted in order to delve deeper into a problem that was studied previously but not in-depth. This research was built of the research done by (Shuck et al., 2011), but linked to the training and development paradigm to provide an in-depth study of these specific meta constructs.

#### **4.5. STRATEGY**

The overall strategic aim of this research was to ensure deadlines were met within a specified timeframe, hence to ensure the process remained on track, all surveys were disseminated electronically. Electronic surveys also allowed for quick data gathering and analysis, this assisted the researcher in ensuring the strict timelines outlined in the research project plan (appendix 2) were adhered to. Timelines were developed to ensure the research remained on track, as the timeframe for submission was already set.

#### **4.6. TIME HORIZON**

By the nature of the type of research being undertaken, the time horizon will be cross-sectional as information would be gathered from respondents at a specific time. The time in which the respondent completes the survey is finite. This gives an indication of current thinking and is vastly different than longitudinal studies which reviews data over an extended time period and will need to control for change in thinking. Hence the question regarding training and/or developmental learning will only be relevant if it has occurred within the last five years in correlation to their current level of engagement as measured by the antecedents to employee engagement.

A cross-sectional study is generally quicker, easier and cheaper to perform than longitudinal studies. Sedgwick (2014), believes that,

It is possible to record exposure to many risk factors and to assess more than one outcome in a cross-sectional study. However, because data on each participant are recorded only once it would be difficult to infer the temporal association between a risk factor and an outcome. Therefore, only an association, and not causation, can

be inferred from a cross-sectional study.

Cross-sectional research allowed for the collection of data from a large population that share some characteristics but are different on certain key factors of interest such as age, location or tenure. This allows for richness of data and for the researcher to ascertain whether there are any cohort differences as a control factor.

#### **4.7. TECHNIQUES AND PROCEDURES**

Self-administered structured interviews managed via google forms were utilised, this ensured that the process took place within specified timelines and was convenient for the researcher and respondents. Google forms is a good platform for the development of surveys that are user-friendly and easy to use for respondents and the researcher. Google forms is also a strong platform in ensuring the anonymity of respondents versus other online survey/data collection sites.

The results have been stored on the researcher's laptop and hard drive. A consent statement was added to the first page of the survey to allow respondents to understand the purpose of the study and to make an informed choice whether to partake or not. Some biographical data was required for control purposes, no personal information was elicited.

#### **4.8. POPULATION**

As the world has progressed to a knowledge economy whereby knowledge is viewed as key to organisational success. The mobility of knowledge workers in the global economy provides knowledge workers with options, hence their power regarding the labour market has increased. As a key component of this research employee engagement will lead to a decreased intention to turnover as theorised by Schuck et al (2011). For convenience and to consolidate the data, the population was knowledge workers that are employed in management roles in Gauteng.

This population was specifically chosen as firstly, the researcher is based in Gauteng. Secondly for the level of developmental learning that would take place at a management level versus lower level employees and thirdly as the developmental learning component and the prior research on employee engagement was focussed on knowledge workers.

Blue collar workers may have different drivers in regard to their engagement in the workplace versus a knowledge worker as postulated by Schuck et al (2011).

#### **4.9. UNIT OF ANALYSIS**

Knowledge workers employed in management roles in Gauteng, South Africa as stated above will be the unit of analysis based on the constructs being measured per an individual knowledge worker. Davenport (2005) defines knowledge workers, as employees that “think for a living”, knowledge workers are defined as separate to workers employed for to complete a physical task.

#### **4.10. SAMPLING METHOD AND SIZE**

Green (1991), stated that when a correlation analysis with 6 variables is done, a sample size of 30 – 300 would be sufficient dependant on the research. This research will be conducted via an electronic survey through google forms. The researcher has chosen to use snowball sampling with qualifying questions to firstly determine whether the respondent is employed in Gauteng, secondly whether the respondent is a knowledge worker and thirdly whether the respondent is in a management role. The aim for this research project was to ensure more than 300 receive the survey and per Green (1991), 67% would be considered sufficient to ensure statistical power. The researcher had chosen to aim for 200+ completed surveys as a compromise to time pressures while ensuring a level of statistical power.

Non-probability, snowball sampling ensured that the number required for statistical power was achieved. The aim was to ensure a spread of data was received by using various avenues to send out the survey, the survey was sent out on various social media outlets available to the researcher. The survey was sent out on email to respondents that the researcher knew fit the unit of analysis. A note was added to the survey with a request for participants to forward the link, thus the snowball effect was created, and the requisite number of responses were received.



#### **4.11. ETHICAL CONSIDERATIONS**

It was imperative that the purpose of this study was made clear upfront to any prospective respondents. There was a clear indication of the time that the survey would take, this was tested by the researcher and three other dummy respondents prior to distribution of the survey to the public. Specific mention was made on the opening summary that the survey was voluntary and that the respondent could withdraw at any time without penalty. Details of both the researcher and supervisor were added to ensure that any respondent that had questions could contact the researcher or supervisor directly, it was imperative that informed consent was gained prior to the start of the survey.

Only aggregated data was collected and analysed and no personal information such as names, surnames, salaries and organisation names were requested. It was key that no personal information be requested to ensure the information received regarding employee engagement was accurate. The researcher also reviewed the mediums for distribution of the survey. Kosinski, Matz, Gosling, Popov and Stillwell (2015) stated that an increased interest is being shown in regard to social media as a medium to drive the snowball effect and increase respondents. However, there is a need to ensure that the research process in regard to the request for information from respondents remains professional as this is a public platform (Kosinski et al., 2015).

#### **4.12. MEASUREMENT INSTRUMENT**

##### **4.12.1. DESIGN**

As stated above this research utilised an electronic survey with the following sections:

Section A: Purpose of research and informed consent, this provided a brief to respondents regarding the research and an opt-out selection. Section B: Included the control questions to ensure that the respondent is qualifying as a unit of analysis as outlined above. The first three questions were specific to ensuring the respondent fit the unit of analysis and included confirmation of area of employment, knowledge worker or not and whether the respondent was in management or not. The second three questions in this section were demographic in nature, and included age, gender, tenure in role or organisation. These variables have been identified in the literature as variables that may influence the outcome of employee engagement (Aguinis & Kraiger, 2009).

Section C: Thereafter the questionnaire delved into an indication of whether training or developmental learning had taken place and within a specified time period as mentioned in point 5.6 above. Both training and developmental learning were further broken down for richness of information. Hence, questions will be posed to determine firstly whether the respondent has undertaken training or developmental learning per the abovementioned definitions. Secondly, the period of the programme or training to control for duration will be investigated. Thirdly, a measure of the format of the training or developmental learning to control for the various formats of delivery will also be determined.

In order to measure the antecedents of employee engagement, the researcher has decided to use existing measurement scales that have been validated in previous research, this would ensure validity and reliability. The measurement instrument utilises a six-point Likert scale (strongly disagree to strongly agree). The Likert scale has become one of the most widely used measurement tools to make judgements in regard to a measurement of attitude (Maeda, 2015). All three antecedents, psychological climate, job fit, and affective commitment are measured using the Likert scale ranging from one (strongly disagree) to six (strongly agree). On each antecedent scale, the result for each question was aggregated to originate a total score for that specific scale.

Cronbach alpha was used as a basis of confirmation regarding the reliability of each construct, a Cronbach alpha score of 0.80 is considered to be an excellent indicator of reliability (Zikmund, Babin, Carr, & Griffin, 2010). The final questionnaire as used in the study is attached as appendix 3 and may be referred to while reading this section.

#### **4.12.2. RELIABILITY AND VALIDITY**

Prior to running the inferential statistics on SPSS, it was imperative that the validity and internal reliability of the scales being used allowed for the aggregation of the data to ensure the inferential statistics are accurate. (Zikmund et al., 2010). The internal consistency reliability practically refers to the fact that all questions asked in a scale converge to the same result. No pre-testing was done on the questionnaire as the scales used have been used and tested in previous research and proved to be both reliable and valid. (Shuck et al., 2011). Reliability and validity were confirmed through the Cronbach Alpha and bivariate correlation analysis respectively.

#### **4.12.2.1. TRAINING AND DEVELOPMENTAL LEARNING**

Training and Developmental Learning were measured as separate sub-constructs, the researcher needed to understand whether training or developmental learning or both had taken place. Questions were asked regarding duration, specificity to job, relevance to job and format. These questions were added to provide the researcher with a further brief to how these sub-constructs were understood and accepted by the respondents and to ensure that the training or developmental learning took place within the specified period. As the analysis is based on the yes/no question, there was no need to measure internal consistency reliability of these questions.

#### **4.12.2.2. PSYCHOLOGICAL CLIMATE**

Psychological climate was measured using the existing 14-item psychological climate scale developed by Brown and Leigh (1996). Via their research on the subject four dimensions were hypothesised to relate to employee engagement, these four dimensions are supportive management, contribution, recognition and challenge. Brown and Leigh (1996) reported the internal consistency reliability as  $\alpha = .77$  for the 14-item psychological climate scale.

#### **4.12.2.3. JOB FIT**

Job fit was measured using the 5-item person-organisation fit scale developed by Resick et al.(2007). Resick et al. (2007) reported the internal consistency reliability of the scale as  $\alpha = .94$ . This result confirms the reliability of the person-organisation fit scale for measurement of job fit. Shuck et al. (2011) hypothesised a clear link between this scale (job fit) and employee engagement.

#### **4.12.2.4. AFFECTIVE COMMITMENT**

Affective commitment was measured via the six-item affective commitment scale that was developed by Rhoades et al.(2001). This scale was adapted by Rhoades et al. (2001) from prior research done by Allen & Meyer (1990) in their research into the antecedents of affective commitment. Rhoades et al. (2001) reported an internal consistency reliability of the scale as  $\alpha = .88$ .

#### **4.13. DATA GATHERING PROCESS**

The survey was self-administered electronically, respondents were responsible for reading and answering the questions that were sent electronically (Zikmund et al., 2010). This method was cost and time effective especially for the relatively large sample that was required for this study, the researcher guaranteed anonymity which allowed for honest feedback from all respondents. There are limitations to this method, firstly, the lower response rates and secondly possible connectivity and technical issues (Zikmund et al, 2010). The survey was sent out to as many people as possible, to people the researcher knows and asked that the survey be passed on, allowing for snowballing to grow the pool. This was monitored, and the survey was only close once a suitable number (200+) of fully completed surveys were available for analysis.

#### **4.14. ANALYSIS APPROACH**

As this study is a quantitative study based on a median calculated from the measurement tool using the Likert scale as a key, SPSS was used to code the data. Median is used instead of a mean as the data being extracted is ordinal in nature (Boone & Boone, 2012). Sullivan and Artino (2013) state that the distance between each point in the Likert scale isn't measurable and hence it cannot be assumed that the difference between responses are equidistant. Therefore, a mean of 2.5 is meaningless, and median provides a better indication of central tendency (Sullivan & Artino Jr, 2013). Measurements of association between the different constructs were done via SPSS to provide information that are valuable to the study. Analysis was done on the demographic information to control for age, gender and tenure. There are descriptive statistics that are drawn from the demographic information as well as the qualifying questions and the questions linked to the training and developmental learning sub constructs.

#### **4.15. LIMITATIONS**

There are limitations to this research, firstly it is important that the definition and distinction between training and developmental learning is clear to the respondents to ensure relevant feedback. As stated above internet surveys may be susceptible to technical issues, to alleviate this issue, only google forms will be used as this is a reputable platform with a wide reach. Google forms is also user friendly and does not

require any specific knowledge to complete that a knowledge worker wouldn't have. The unit of analysis and population is very broad, and the intended sample size chosen due to time constraints may not be large enough to provide rich data.

The population only focuses on certain groups and narrows the pool to a specific geographic location. Hence, the recommendations of this study may not be applicable to the population of knowledge workers in South Africa, firstly as this study specifically looks at knowledge workers at management level and secondly as the study is targeted towards Gauteng, as the workplace culture may be different to other provinces.

Snowball sampling may be viewed as a further limitation, as there is no control on who has access to the questionnaire, hence there is no control of the normal distribution of race, age, tenure and gender. This may affect the results dependant on the distribution of these factors.

The study only measures training and development against employee engagement, a revision of all factors affecting employee engagement will be required to ascertain a ranking of importance of the different factors that affect employee engagement.

#### **4.16. SUMMARY OF CHAPTER**

This chapter outlined the methodology of the research process undertaken. It is imperative in any research process that the research methodology be sound to ensure accuracy of reporting. An indication of each phase of the research process has been outlined in this chapter to provide the reader with sight to the underpinning methodology used and reasons for the specific tests that have been utilised.

## **5. CHAPTER 5: RESULTS**

This chapter outlines the results of this study and is presented in the following overarching sections; descriptive statistics, reliability of the measurement instruments, validity of the measurement instruments based on the results of the study and the inferential statistics that will be used to test the hypotheses.

### **5.1. DESCRIPTIVE STATISTICS**

The survey was sent out through various platforms including Gmail, LinkedIn, WhatsApp and Microsoft Outlook. The survey was sent primarily to colleagues, classmates and acquaintances with a request to snowball to anyone that met the unit of analysis criteria and wished to complete the survey willingly. Hence various reminders were sent to all probable respondents to help ensure the rate of response increased.

At the close of data collection, a total of 256 completed surveys were received. However, 29 (11.3%) were not employed at an organisation in Gauteng, 8 (3.1%) were not knowledge workers and 44 (17.2%) were not in a supervisory role. After a full review and removal of responses that did not meet the unit of analysis criteria, 198 (77.3%) usable responses were remaining for analysis. Given that Green (1991), stated that when a correlation analysis with 6 variables is done, a sample size of 30 – 300 would be sufficient dependant on the research. This sample would provide usable data that can be inferred to the full population.

#### **5.1.1. AGE**

Table 1 outlines the frequency distribution of the respondents age as categorised by the researcher based on literature (Gursoy et al., 2013) (James et al., 2011) (Saks, 2006). Respondents that fell in the first category, ages 20 – 29 numbered 38 (19.2%). Respondents between the ages 30 – 39 numbered 90 (45.5%), between 40 – 49 numbered 43 (21.7%), between 50 – 59 numbered 21 (10.6%), between 60 – 69 numbered 5 (2.5%) and 70 and older numbered 1 (0.5%).

Age:					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20 - 29	38	19.2	19.2	19.2
	30 - 39	90	45.5	45.5	64.6
	40 - 49	43	21.7	21.7	86.4
	50 - 59	21	10.6	10.6	97.0
	60 - 69	5	2.5	2.5	99.5
	70+	1	.5	.5	100.0
	Total	198	100.0	100.0	

Table 1. Frequency table, age of respondents.

### 5.1.2. GENDER

Table 2 indicates the frequency distribution of the number of male and female respondents that fell within the unit of analysis criteria. The majority of respondents were female by a small margin accounting for 105 responses and 53.0% of the total, hence males accounted for 93 responses and 47.0%.

Gender:					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	105	53.0	53.0	53.0
	Male	93	47.0	47.0	100.0
	Total	198	100.0	100.0	

Table 2: Frequency table, gender of respondents.

### 5.1.3. TENURE

Table 3 depicts the frequency distribution of the respondent's tenure at their organisations. 58% of respondents had a tenure of between 0-10 years. Respondents with a tenure of between 0-5 years numbered 51 (25.8%), between 6-10 years numbered 64 (32.3%), between 11 – 15 years numbered 34 (17.2%), between 16 – 20 years

numbered 22 (11.1%), between 21 – 25 years numbered 8 (4.0%) and 26 years and over numbered 19 (9.6%)

<b>Tenure (in years)</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 - 5	51	25.8	25.8	25.8
	6 - 10	64	32.3	32.3	58.1
	11 - 15	34	17.2	17.2	75.3
	16 - 20	22	11.1	11.1	86.4
	21 - 25	8	4.0	4.0	90.4
	26+	19	9.6	9.6	100.0
	Total	198	100.0	100.0	

Table 3: Frequency table, tenure at organisation in years per respondent.

#### 5.1.4. TRAINING

Table 4 depicts the frequency distribution of the responses to whether the respondents had done training. Most respondents have been on a training programme, a total of 158 (79.8%) respondents confirmed attendance on a training programme. 40 (20.2%) respondents confirmed that they have not been on a training programme.

<b>Have you been on training (programme to assist you in doing your current job better, e.g. excel training, any systems training, any training that is specific to your current role)?</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	40	20.2	20.2	20.2
	Yes	158	79.8	79.8	100.0
	Total	198	100.0	100.0	

Table 4: Frequency table, respondents that have done a training programme.



#### 5.1.4.1. DURATION OF TRAINING

Table 5 provides a view to the duration of the training programmes as confirmed by the respondents. A total of 158 respondents completed a training programme, the majority of whom, 87 (55.1%) had partook in a programme that ran over days. 23 (14.6%) partook in a programme that ran over weeks, 30 (19.0%) partook in a programme that ran over months and 18 (11.4%) partook in a programme that ran over years.

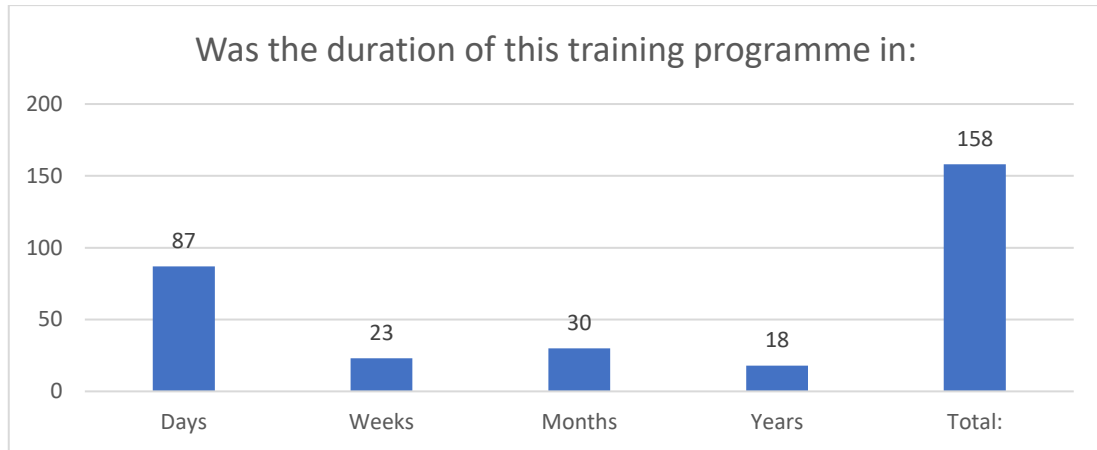


Table 5: Bar graph outlining duration of training programmes per respondent.

#### 5.1.4.2. SPECIFICITY OF TRAINING PROGRAMME

Table 6 represents how specific the respondents believed the training to be in relation to their current job. Only 1 (0.6%) respondent felt the training they undertook was not specific, 31 (19.6%) felt the training contained a little specificity, 79 (50.0%) felt the training was specific and 47 (29.7%) felt the training was very specific.

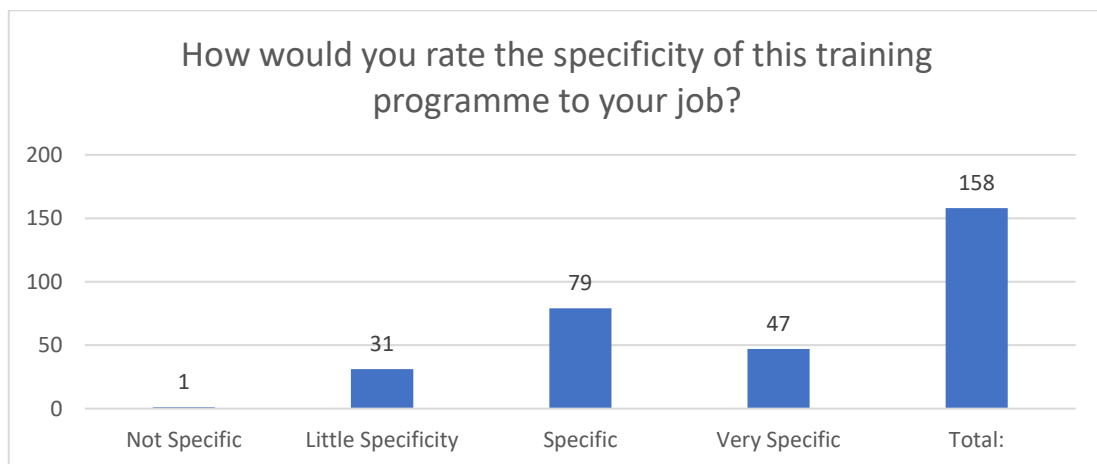


Table 6: Bar graph outlining the respondents view regarding specificity of their training.

### 5.1.4.3. RELEVANCE OF TRAINING PROGRAMME

Table 7 outlines how relevant the respondents believed their training to be. Only 1 (0.6%) respondent felt that the training they had attended was not relevant to their job, 13 (8.2%) felt their training had little relevance to their job, 88 (55.7%) felt that the training they undertook was relevant to their job and 56 (35.4%) felt their training was very relevant to their job.

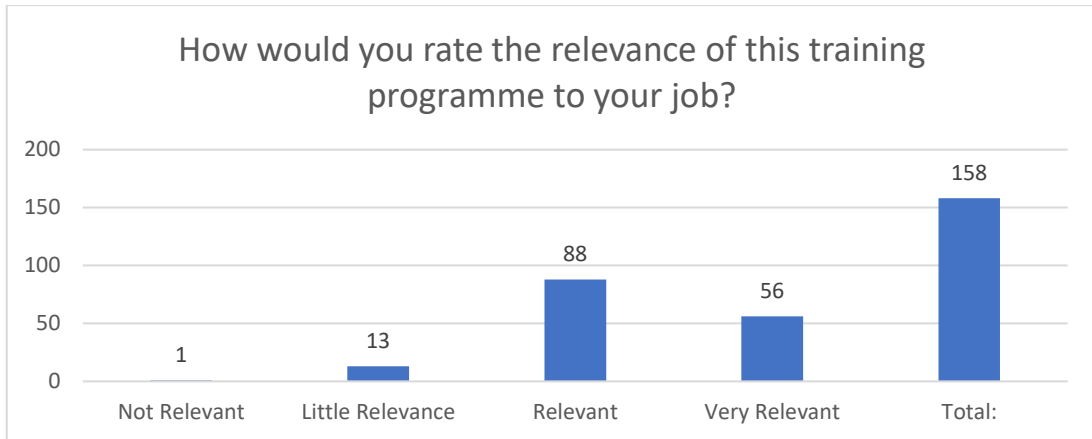


Table 7: Bar graph outlining the respondents view regarding the relevance of their training in relation to their job.

### 5.1.4.4. FORMAT OF TRAINING

Table 8 depicts the spread in regard to the delivery of the training per respondent. 101 (63.9%) partook in training that was delivered in a classroom only, 49 (31.0%) partook in training that was delivered both in a classroom and online and 8 (5.1%) partook in training that was delivered online only.

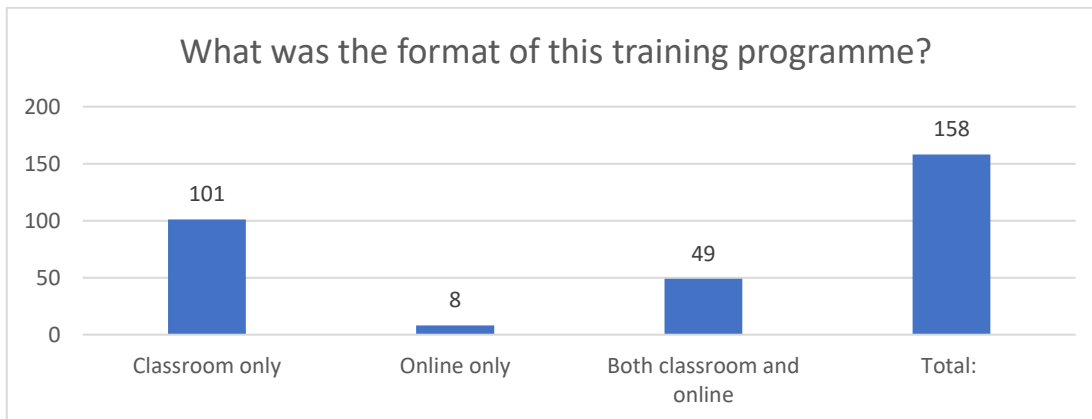


Table 8: Bar graph depicting the delivery mode of the training undertaken.

### 5.1.5. DEVELOPMENTAL LEARNING

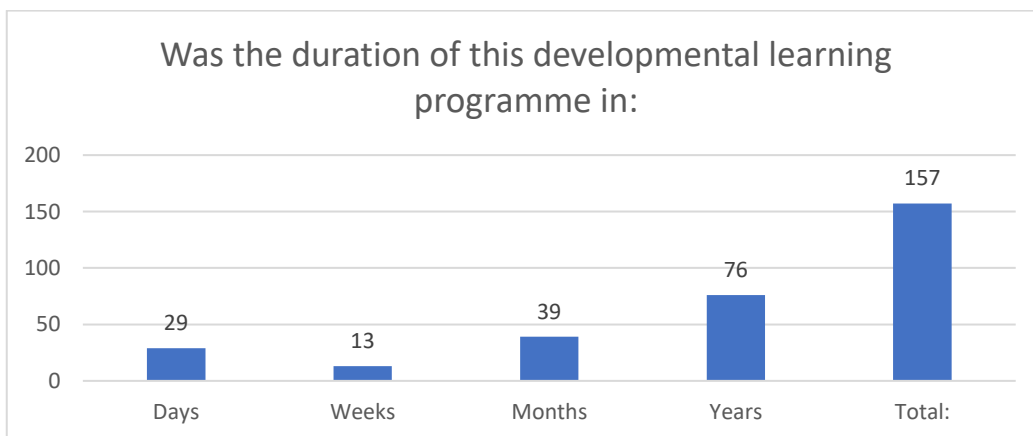
Table 9 depicts the frequency distribution of the responses to whether the respondents had done developmental learning. Most respondents have been on a developmental learning programme, a total of 157 (79.3%) respondents confirmed attendance on a developmental learning programme. 41 (20.7%) respondents confirmed that they have not been on a developmental learning programme.

Have you been on any developmental learning programmes (formal programmes that are not specific to your job, e.g. management programmes, formal coaching, degrees or diplomas, formal custom programmes)?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	41	20.7	20.7	20.7
	Yes	157	79.3	79.3	100.0
	Total	198	100.0	100.0	

Table 9. Frequency table, respondents that have done a developmental learning programme.

#### 5.1.5.1. DURATION OF DEVELOPMENTAL LEARNING PROGRAMME

Table 10 provides a view to the duration of the developmental learning programmes as confirmed by the respondents. A total of 157 respondents completed a developmental learning programme, the majority of whom, 76 (48.4%) had partook in a programme that ran over years. 29 (18.5%) partook in a programme that ran over days, 13 (8.3%) partook in a programme that ran over weeks and 39 (24.8%) partook in a programme that ran over months.



Table

10: Bar graph outlining duration of developmental learning programmes.

### 5.1.5.2. SPECIFICITY OF DEVELOPMENTAL LEARNING PROGRAMME

Table 11 represents how specific the respondents believed the developmental learning to be in relation to their current job. 10 (6.4%) respondents felt the developmental learning they undertook was not specific, 53 (33.8%) felt the developmental learning contained a little specificity, 66 (42.0%) felt the developmental learning was specific and 28 (17.8%) felt the developmental learning was very specific.

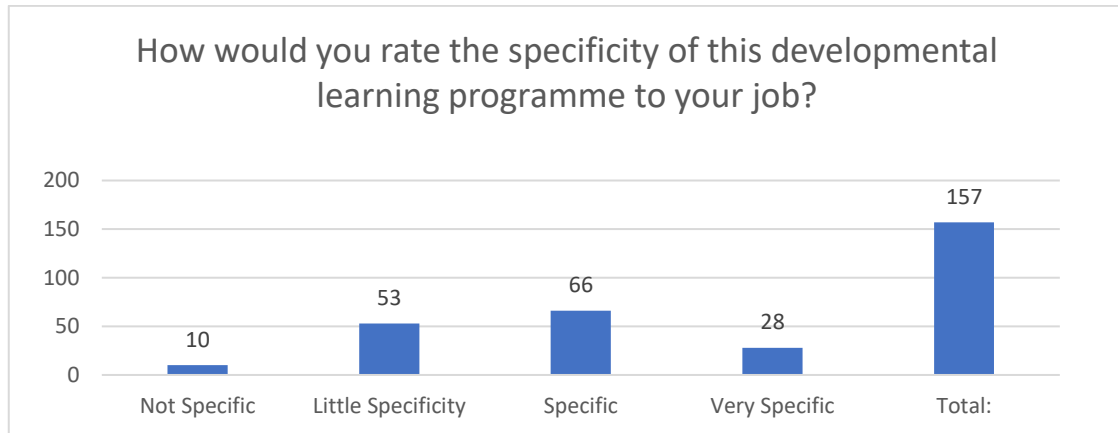


Table 11: Bar graph outlining the respondents view regarding specificity of their developmental learning programmes.

### 5.1.5.3. RELEVANCE OF DEVELOPMENTAL LEARNING PROGRAMME

Table 12 outlines how relevant the respondents believed their developmental learning to be. Only 4 (2.5%) respondents felt that the developmental learning they had attended was not relevant to their job, 25 (15.9%) felt their developmental learning had little relevance to their job, 83 (52.9%) felt that the developmental learning they undertook was relevant to their job and 45 (28.7%) felt their developmental learning was very relevant to their job.

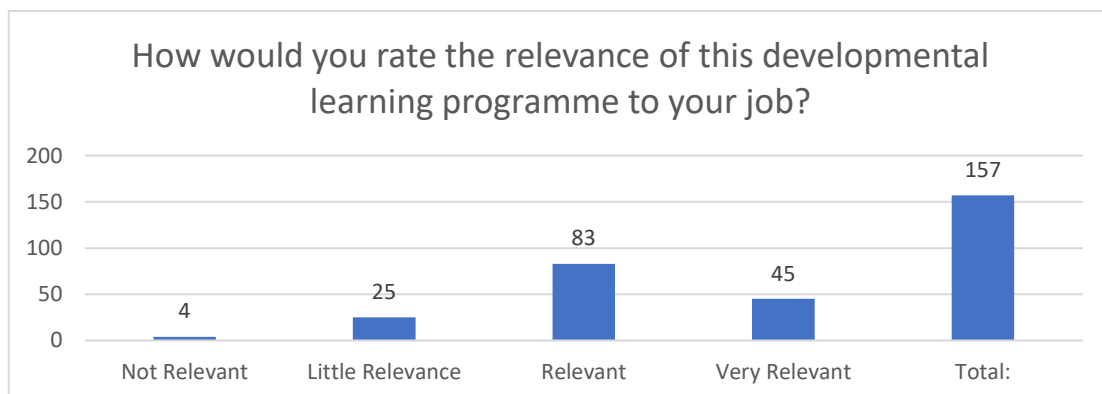


Table 12: Bar graph outlining the respondents view regarding the relevance of their developmental learning programme in relation to their job.

#### 5.1.5.4. FORMAT OF DEVELOPMENTAL LEARNING PROGRAMME

Table 13 depicts the spread in regard to the delivery of the developmental learning per respondent. 76 (48.4%) partook in developmental learning that was delivered in a classroom only, 75 (47.8%) partook in developmental learning that was delivered both in a classroom and online and 6 (3.8%) partook in developmental learning that was delivered online only.

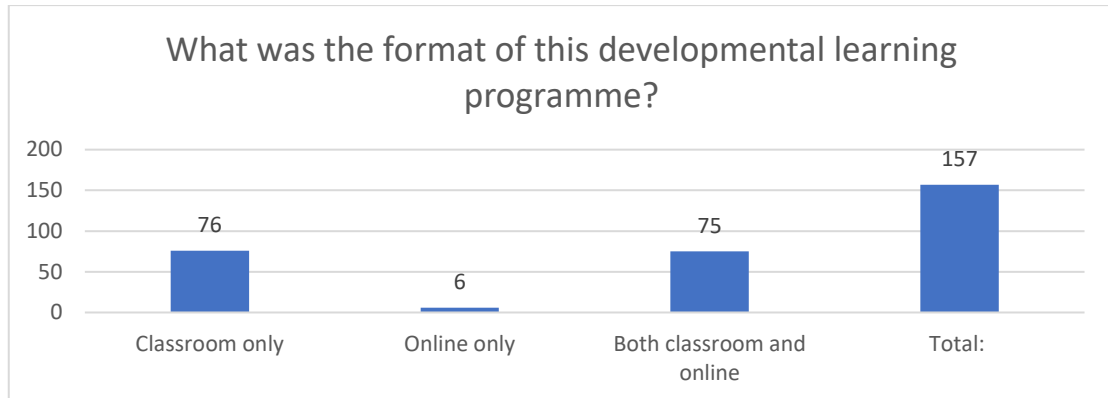


Table 13: Bar graph depicting the delivery mode of the developmental learning undertaken.

#### 5.2. RELIABILITY

The Cronbach alpha score for each of the sub constructs that were measured using the Likert scale is outlined in Table 14. The lowest being that of the Job Fit scale which measured .930, with Affective Commitment and Psychological Climate measuring .934 and .945 respectively. This shows that the scales utilised to ascertain Psychological Climate, Job Fit and Affective commitment were all internally consistent and proves the reliability of the scales used (Zikmund et al., 2010). If any item is removed from the scale for both Psychological Climate or Job Fit, the scale is still always above .90. However, removing question two and three within the Affective Commitment scale drops the Cronbach alpha to .899 and .898 respectively, this is still strong especially as this scale has only five items (Zikmund et al., 2010).

Scale Description	Cronbach's Alpha	No of Items
Psychological Climate	.945	14
Job Fit	.930	5
Affective Commitment	.934	6

Table 14: Cronbach's alpha for each scale utilised.

The Cronbach alpha outputs for all three scales outlined in Table 14 above including the inter-item correlation matrix and item-total statistics can be found in appendix 5.

### 5.3. VALIDITY

To ascertain validity, a bivariate correlation between individual questions and the total within each scale was measured in order to confirm the validity of each question in the scale as part of the whole. Table 15 depicts the results of the bivariate correlation on the job fit scale. A review of the total against each question, we noted that the p-value was less than .5, which indicates that each question in the scale was valid as a measurement of the construct (Field, 2013). The bivariate correlation for psychological climate and affective commitment can be found in Appendix 5, all the questions in both scales were also less than .5 and hence found to be valid.

		<b>Correlations</b>				
		Q1	Q2	Q3	Q4	Q5
Q1	Pearson Correlation	1				
	N	198				
Q2	Pearson Correlation	.812	1			
	Sig. (2-tailed)	.000				
	N	198	198			
Q3	Pearson Correlation	.795	.919	1		
	Sig. (2-tailed)	.000	.000			
	N	198	198	198		
Q4	Pearson Correlation	.593	.635	.649	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	198	198	198	198	
Q5	Pearson Correlation	.655	.735	.754	.690	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	198	198	198	198	198
Total	Pearson Correlation	.855	.906	.916	.699	.799
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	198	198	198	198	198

Table 15: Bivariate Correlations between job fit scale questions and the total for the scale.

#### 5.4. FACTOR ANALYSIS

Confirmatory factor analysis was completed on each of psychological climate, job fit and affective commitment. Table 16 refers to the factor analysis for job fit, the factor analysis for psychological climate and affective commitment can be found in Appendix 5. Post interpretation of Table 16, it was clear that all the variables had a minimum of at least one correlation above .3 (Field, 2013). Hence, based on this output, none of the variables were removed.

**Job Fit Correlation Matrix**

		Q1	Q2	Q3	Q4	Q5
Correlation	Q1	1.000	.812	.795	.593	.655
	Q2	.812	1.000	.919	.635	.735
	Q3	.795	.919	1.000	.649	.754
	Q4	.593	.635	.649	1.000	.690
	Q5	.655	.735	.754	.690	1.000

Table 16: Job fit correlation matrix

The first component of Table 17, the Kaiser-Meyer-Olkin (KMO) provides an indication of the suitability of the data for the factor analysis. The KMO measure is .863, hence it falls between .8 and .9, and is therefore meritorious and the factor analysis is suitable (Kaiser, 1974). The Bartlett's Test of Sphericity reported significance ( $p < .5$ ), which confirms that the principal component analysis (PCA) was suitable (Zikmund et al., 2010).

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.863
Bartlett's Test of Sphericity	Approx. Chi-Square	895.259
	df	10
	Sig.	.000

Table 17: Job fit KMO and Bartlett's test

Table 18 outlines the eigenvalue, based on the eigenvalue one rule, only one component was extracted that represents 78.1% of the variance as can be noted from Table 18. This result confirmed that the job fit scale only measured one construct as intended (Zikmund et al., 2010). All other constructs factor analyses were approached in the same manner, and all other scales were confirmed to measure one construct.

<b>Total Variance Explained</b>						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.907	78.136	78.136	3.907	78.136	78.136
2	.497	9.950	88.086			
3	.299	5.980	94.066			
4	.217	4.347	98.413			
5	.079	1.587	100.000			

Extraction Method: Principal Component Analysis.

Table 18: Job fit total variance explained

## 5.5. CONTROL VARIABLES (MANCOVA/BOX'S TEST OF EQUALITY)

A MANOVA test was conducted to ascertain whether the control variables outlined in literature, age, gender and tenure had any effect on the antecedents of employee engagement, job fit, affective commitment and psychological climate. Firstly, Box's M test as depicted in Table 19 was analysed, to understand whether the covariance matrices are equal for the groups being measured. Per Table 19, Box's M is not statistically significant ( $p > .05$ ) (Field, 2013).

For further strength to the assumption confirmed by Box's M test above, Levene's test for equality of variances was reviewed as well. Table 20 provides a clear indication that based on the mean of each construct, none were statistically significant as ( $p < 0.5$ ) for all constructs. This confirms that the equal variance assumption is satisfied and that MANOVA can be analysed to understand the effect of the control variables on the antecedents of employee engagement (Field, 2013).



<b>Box's Test of Equality of Covariance Matrices</b>	
Box's M	125.470
F	1.219
df1	84
df2	4207.100
Sig.	.087

Table 19: Box's test of equality of covariance matrices

<b>Levene's Test of Equality of Error Variances</b>					
		Levene Statistic	df1	df2	Sig.
Affective Commitment	Based on Mean	.739	25	161	.811
	Based on Median	.459	25	161	.988
	Based on Median and with adjusted df	.459	25	119.361	.987
	Based on trimmed mean	.719	25	161	.832
Job Fit	Based on Mean	1.105	25	161	.343
	Based on Median	.470	25	161	.985
	Based on Median and with adjusted df	.470	25	130.391	.985
	Based on trimmed mean	1.026	25	161	.436
Psychological Climate	Based on Mean	1.459	25	161	.085
	Based on Median	.791	25	161	.750
	Based on Median and with adjusted df	.791	25	130.210	.748
	Based on trimmed mean	1.309	25	161	.162

Table 20: Levene's test of equality of error variances.

As the assumption regarding the equality of covariance's was confirmed, Wilks Lambda was analysed to ascertain whether the control variables did influence the antecedents of employee engagement (Field, 2013). Table 21 depicts the multivariate tests; Wilks Lambda was not significant for all three control variables, gender: Wilk's  $\lambda = .997$ ,  $F(3.159) = .139$ ,  $p = .936$ , partial  $\eta^2 = .003$ , age: Wilk's  $\lambda = .968$ ,  $F(15.439) = .351$ ,  $p = .989$ , partial  $\eta^2 = .011$  and tenure: Wilk's  $\lambda = .966$ ,  $F(15.439) = .374$ ,  $p = .985$ , partial  $\eta^2 = .012$ .

Multivariate Tests							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
GenderSPSS	Pillai's Trace	.003	.139 <sup>b</sup>	3.000	159.000	.936	.003
	Wilks' Lambda	.997	.139 <sup>b</sup>	3.000	159.000	.936	.003
	Hotelling's Trace	.003	.139 <sup>b</sup>	3.000	159.000	.936	.003
	Roy's Largest Root	.003	.139 <sup>b</sup>	3.000	159.000	.936	.003
AgeSPSS	Pillai's Trace	.033	.355	15.000	483.000	.989	.011
	Wilks' Lambda	.968	.351	15.000	439.330	.989	.011
	Hotelling's Trace	.033	.348	15.000	473.000	.990	.011
	Roy's Largest Root	.017	.550 <sup>c</sup>	5.000	161.000	.738	.017
TenureSPSS	Pillai's Trace	.035	.378	15.000	483.000	.984	.012
	Wilks' Lambda	.966	.374	15.000	439.330	.985	.012
	Hotelling's Trace	.035	.370	15.000	473.000	.986	.012
	Roy's Largest Root	.016	.509 <sup>c</sup>	5.000	161.000	.769	.016

Table 21: Multivariate tests

Table 22 depicts the separate ANOVA that was conducted for each dependant variable, with each ANOVA evaluated at an alpha level of .025 due the Bonferroni correction (Field, 2013). There was no significant difference between any of the control variables and any of the antecedents to employee engagement as ( $p > .25$ ) for all tests.

#### Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
GenderSPSS	Affective Commitment	.009	1	.009	.007	.935	.000
	Job Fit	.012	1	.012	.010	.920	.000
	Psychological Climate	.284	1	.284	.248	.619	.002
AgeSPSS	Affective Commitment	3.588	5	.718	.537	.748	.016
	Job Fit	2.047	5	.409	.336	.891	.010
	Psychological Climate	2.079	5	.416	.362	.874	.011
TenureSPSS	Affective Commitment	2.678	5	.536	.401	.848	.012
	Job Fit	2.099	5	.420	.344	.885	.011
	Psychological Climate	1.782	5	.356	.311	.906	.010

Table 22: ANOVA tests for each control variable.

## 5.6. HYPOTHESIS TESTING

Pearson chi square was used to test association between training as well as developmental learning and the antecedents of employee engagement which is psychological climate, job fit and affective commitment. The strength of the association was measured using Cramer's V as more than two variables were measured using the contingency table, applicable where significant association was found. Trusty, Thompson and Petrocelli (2004) posed the ranges outlined in Figure 6 in ascertaining the level of strength of association.

Under .1	Very weak
.10 - .19	Weak
.20 - .29	Moderate
.30 and over	Strong

Figure 6. Table for interpreting measures of association: strength of relationships

As the hypotheses are tested using Pearson Chi Square analysis for independence, the data must meet two assumptions. The first assumption is that variables should be measured at an ordinal or nominal level, the variables should be categorical in nature. It is clear that the constructs, training, developmental learning, psychological climate, job fit, and affective commitment are categorical in nature. Training and developmental learning are both nominal in this study and the other constructs outlined above are ordinal using the Likert scale. (Saunders & Lewis, 2012)

The second assumption that must be met to run the Pearson Chi Square test for independence is that the data should consist of two or more categorical, independent groups. This assumption has been met for all constructs, training and developmental learning are measure via a yes/no question ascertaining what type of intervention a respondent has done. The other constructs are measured using the five-point Likert scale. (Saunders & Lewis, 2012)

### 5.6.1. HYPOTHESIS ONE

The null hypothesis of hypothesis one states that there is no significant relationship between training and job fit. Table 23 depicts the contingency table for training and the

job fit construct that was measured using the Likert scale, 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree and 5 being strongly agree. With reference to Table 20, Pearson Chi Square is .089 ( $p > .05$ ) with 4 degrees of freedom (df). Only 1 cell had an expected count less than 5, which fell under the 30% threshold for expectancy, which confirms that the assumptions have been met (Zikmund et al., 2010). Strength of association was not reviewed as  $p > .05$  (Field, 2013). The null hypothesis was accepted,  $X^2(4) = 8.072$ ,  $p > .05$ .

Crosstab								
			Job Fit					Total
			1	2	3	4	5	
Training	0	Count	1	5	5	18	11	40
		% within Training	2.5%	12.5%	12.5%	45.0%	27.5%	100.0%
	1	Count	9	22	31	79	17	158
		% within Training	5.7%	13.9%	19.6%	50.0%	10.8%	100.0%
Total		Count	10	27	36	97	28	198
		% within Training	5.1%	13.6%	18.2%	49.0%	14.1%	100.0%

Table 23: Contingency table: training and job fit

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	8.072 <sup>a</sup>	4	.089
Likelihood Ratio	7.287	4	.121
Linear-by-Linear Association	3.779	1	.052
N of Valid Cases	198		

a. 1 cells (10.0%) have expected count less than 5. The minimum expected count is 2.02.

Table 24: Chi-Square test: training and job fit

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	.202	.089
	Cramer's V	.202	.089
	Contingency Coefficient	.198	.089
N of Valid Cases		198	

Table 25: Measures of strength of association: job fit.

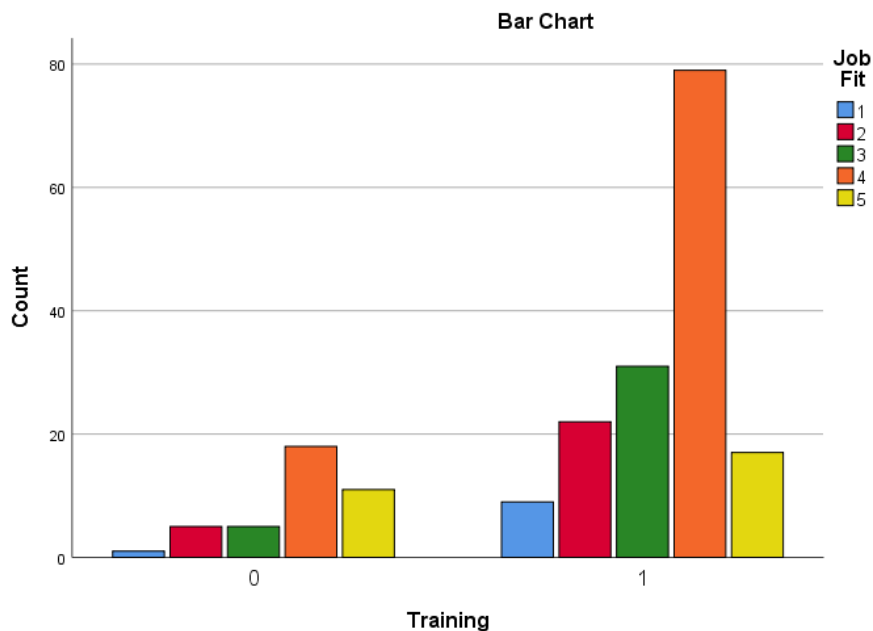


Table 26: Bar chart outlining the relationship between training and job fit.

Table 26 above provides a graphic representation of the spread in regard to how respondents looked at their job fit alongside whether they had done training or not. As we can see the highest percentages sit between 3 and 4 for those that have done training and between 4 and 5 for those that have not done training.

### 5.6.2. HYPOTHESIS TWO

The null hypothesis of hypothesis two states that there is no significant relationship between training and affective commitment. Table 27 depicts the contingency table for training and the affective commitment construct that was measured using the Likert scale, 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree and 5

being strongly agree. With reference to Table 24, Pearson Chi Square is .342 ( $p > .05$ ) with 4 degrees of freedom (df). 2 cells had an expected count less than 5, which fell under the 30% threshold for expectancy, which confirms that the assumptions have been met (Zikmund et al., 2010). Strength of association was not reviewed as  $p > .05$  (Field, 2013). The null hypothesis was accepted,  $X^2 (4) = 4.503$ ,  $p > .05$ .

Crosstab								
			Affective Commitment					Total
			1	2	3	4	5	
Training	0	Count	1	5	9	13	12	40
		% within Training	2.5%	12.5%	22.5%	32.5%	30.0%	100.0%
	1	Count	13	17	28	69	31	158
		% within Training	8.2%	10.8%	17.7%	43.7%	19.6%	100.0%
Total		Count	14	22	37	82	43	198
		% within Training	7.1%	11.1%	18.7%	41.4%	21.7%	100.0%

Table 27: Contingency table: training and affective commitment.

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.503 <sup>a</sup>	4	.342
Likelihood Ratio	4.797	4	.309
Linear-by-Linear Association	.895	1	.344
N of Valid Cases	198		

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 2.83.

Table 28: Chi-Square test: training and affective commitment.

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	.151	.342
	Cramer's V	.151	.342
	Contingency Coefficient	.149	.342
N of Valid Cases		198	

Table 29: Measures of strength of association: affective commitment

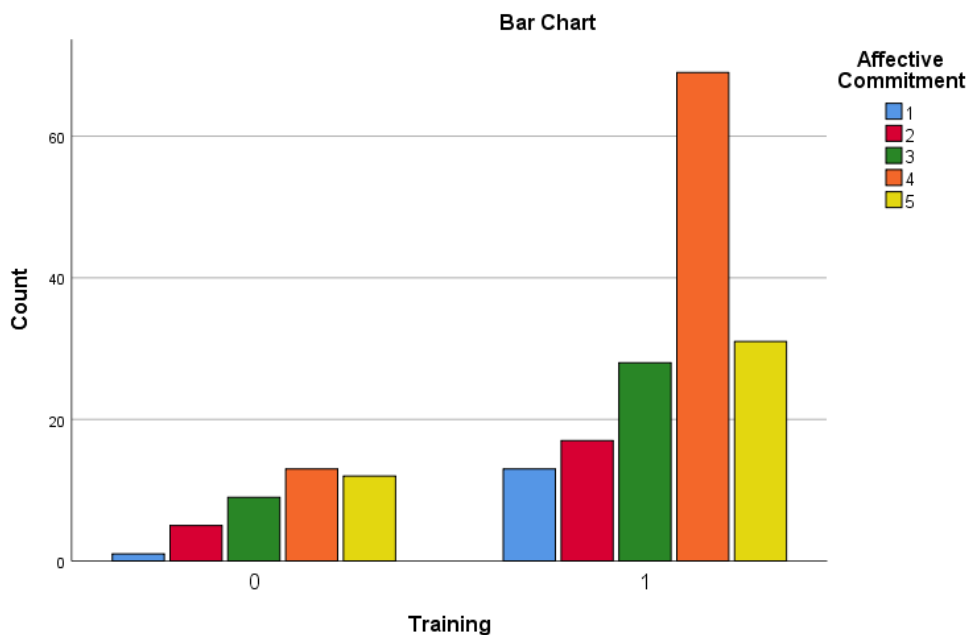


Table 30: Bar chart outlining the relationship between training and affective commitment.

Table 30 above provides a graphic representation of the contingency table outlined in Table 27 in regard to how respondents answered in regard to their affective commitment alongside whether they had done training or not. As we can see the highest percentages sit between 4 and 5 for those that have done training and those that have not done training.

### 5.6.3. HYPOTHESIS THREE

The null hypothesis of hypothesis three states that there is no significant relationship between training and psychological climate. Table 31 depicts the contingency table for training and the psychological climate construct that was measured using the Likert scale, 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree and 5 being strongly agree. With reference to Table 28, Pearson Chi Square is .270 ( $p > .05$ ) with 4 degrees of freedom (df). 3 cells had an expected count less than 5, which was

met the 30% threshold for expectancy, which confirms that the assumptions have been met (Zikmund et al., 2010). Strength of association was not reviewed as  $p > .05$  (Field, 2013). The null hypothesis was accepted,  $X^2(4) = 5.176$ ,  $p > .05$ .

Crosstab								
			Psychological Climate					Total
			1	2	3	4	5	
Training	0	Count	0	4	3	15	18	40
		% within Training	0.0%	10.0%	7.5%	37.5%	45.0%	100.0%
	1	Count	8	15	11	77	47	158
		% within Training	5.1%	9.5%	7.0%	48.7%	29.7%	100.0%
Total		Count	8	19	14	92	65	198
		% within Training	4.0%	9.6%	7.1%	46.5%	32.8%	100.0%

Table 31: Contingency table: training and psychological climate.

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5.176 <sup>a</sup>	4	.270
Likelihood Ratio	6.634	4	.157
Linear-by-Linear Association	2.319	1	.128
N of Valid Cases	198		

a. 3 cells (30.0%) have expected count less than 5. The minimum expected count is 1.62.

Table 32: Chi-Square test: training and psychological climate.



Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	.162	.270
	Cramer's V	.162	.270
	Contingency Coefficient	.160	.270
N of Valid Cases		198	

Table 33: Measures of strength of association: psychological climate.

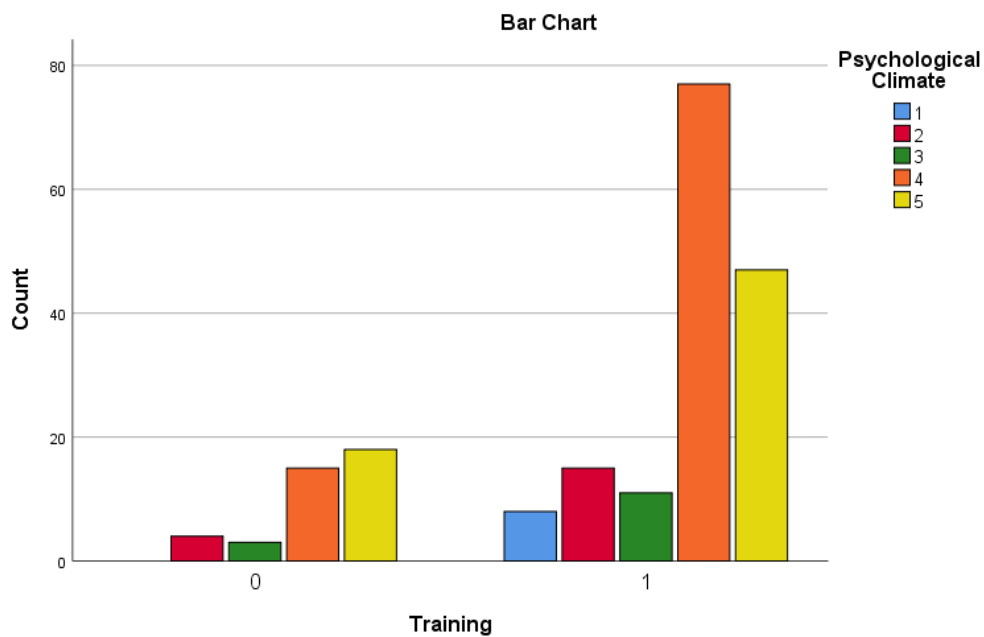


Table 34: Bar chart outlining the relationship between training and psychological climate.

Table 34 above provides a graphic representation of the contingency table outlined in Table 31 in regard to how respondents answered in regard to their affective commitment alongside whether they had done training or not. As we can see the highest percentages sit between 4 and 5 for those that have done training and 5 and 4 for those that have not done training.

#### 5.6.4. HYPOTHESIS FOUR

The null hypothesis of hypothesis four states that there is no significant relationship between developmental learning and job fit. Table 31 depicts the contingency table for developmental learning and the job fit construct that was measured using the Likert scale, 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree and 5 being strongly agree. With reference to Table 35, Pearson Chi Square is .002 ( $p \leq .05$ )

with 4 degrees of freedom (df). 1 cell had an expected count less than 5, which was met the 30% threshold for expectancy, which confirms that the assumptions have been met (Zikmund et al., 2010). The strength of the association is measured using Cramer's V as there are more than two variables, hence the strength of association is  $\phi_c = 0.294$  which is moderate (Trusty et al., 2004). The null hypothesis was rejected,  $X^2(4) = 17.150$ ,  $p \leq .05$ .

Crosstab								
			Job Fit					Total
			1	2	3	4	5	
Developmental Learning	0	Count	6	10	7	15	3	41
		% within Developmental Learning	14.6%	24.4%	17.1%	36.6%	7.3%	100.0%
	1	Count	4	17	29	82	25	157
		% within Developmental Learning	2.5%	10.8%	18.5%	52.2%	15.9%	100.0%
Total		Count	10	27	36	97	28	198
		% within Developmental Learning	5.1%	13.6%	18.2%	49.0%	14.1%	100.0%

Table 35: Contingency table: developmental learning and job fit.

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17.150 <sup>a</sup>	4	.002
Likelihood Ratio	14.839	4	.005
Linear-by-Linear Association	14.556	1	.000
N of Valid Cases	198		

a. 1 cells (10.0%) have expected count less than 5. The minimum expected count is 2.07.

Table 36: Chi-Square test: developmental learning and job fit.

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	.294	.002
	Cramer's V	.294	.002
	Contingency Coefficient	.282	.002
N of Valid Cases		198	

Table 37: Measures of strength of association: developmental learning and job fit.

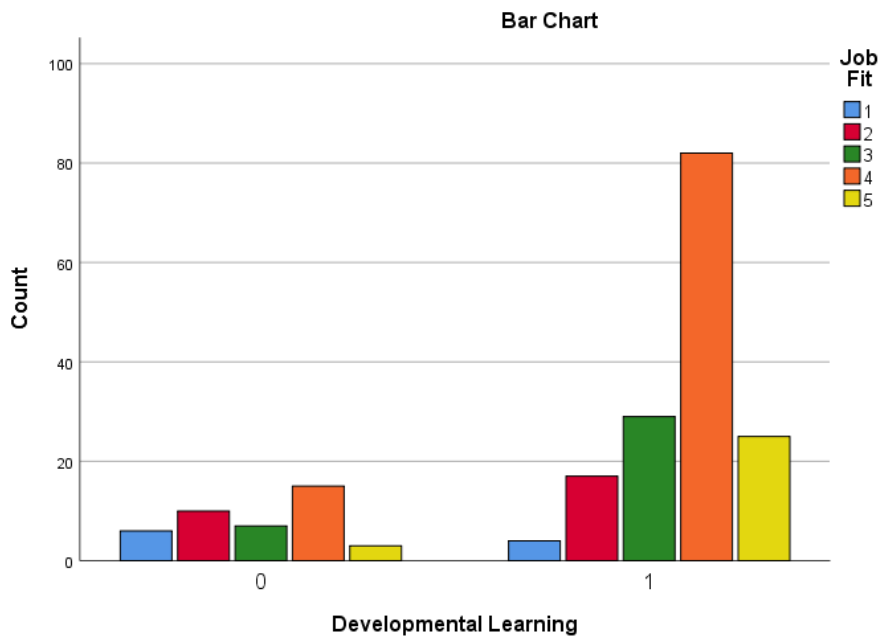


Table 38: Bar chart outlining the relationship between developmental learning and job fit.

Table 38 above provides a graphic representation of the contingency table outlined in Table 35 in regard to how respondents answered in regard to their affective commitment alongside whether they had done training or not. As we can see the highest percentages sit between 4 and 3 for those that have done training and 4 and 2 for those that have not done training.

### 5.6.5. HYPOTHESIS FIVE

The null hypothesis of hypothesis five states that there is no significant relationship between developmental learning and affective commitment. Table 39 depicts the contingency table for developmental learning and the affective commitment construct that was measured using the Likert scale, 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree and 5 being strongly agree. With reference to Table 36, Pearson Chi Square is .000 ( $p \leq .05$ ) with 4 degrees of freedom (df). 2 cells had an

expected count less than 5, which was met the 30% threshold for expectancy, which confirms that the assumptions have been met (Zikmund et al., 2010). The strength of the association is measured using Cramer's V as there are more than two variables, hence the strength of association is  $\phi_c = 0.346$  which is strong (Trusty et al., 2004). The null hypothesis was rejected,  $X^2(4) = 23.475$ ,  $p \leq .05$ .

Crosstab								
			Affective Commitment					Total
			1	2	3	4	5	
Developmental Learning	0	Count	7	10	9	13	2	41
		% within Developmental Learning	17.1%	24.4%	22.0%	31.7%	4.9%	100.0%
	1	Count	7	12	28	69	41	157
		% within Developmental Learning	4.5%	7.6%	17.8%	43.9%	26.1%	100.0%
Total	Count	14	22	37	82	43	198	
	% within Developmental Learning	7.1%	11.1%	18.7%	41.4%	21.7%	100.0%	

Table 39: Contingency table: developmental learning and affective commitment.

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	23.745 <sup>a</sup>	4	.000
Likelihood Ratio	23.316	4	.000
Linear-by-Linear Association	22.882	1	.000
N of Valid Cases	198		

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 2.90.

Table 40: Chi-Square test: developmental learning and affective commitment.

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	.346	.000
	Cramer's V	.346	.000
	Contingency Coefficient	.327	.000
N of Valid Cases		198	

Table 41: Measures of strength of association: developmental learning and affective commitment.

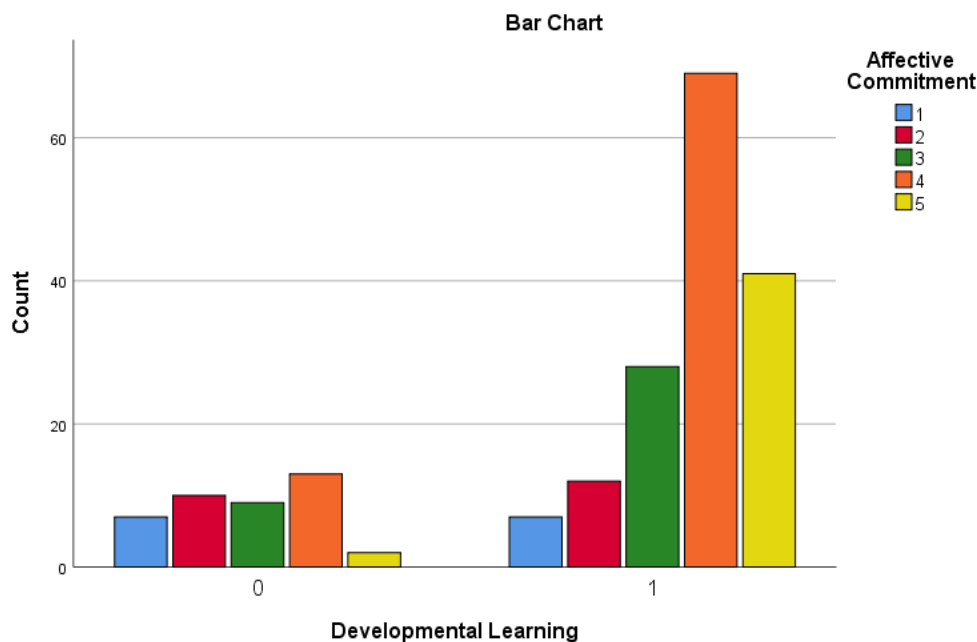


Table 42: Bar chart outlining the relationship between developmental learning and affective commitment.

Table 42 above provides a graphic representation of the contingency table outlined in Table 39 in regard to how respondents answered in regard to their affective commitment alongside whether they had done a developmental programme or not. As we can see the highest percentages sit between 4 and 5 for those that have done developmental learning programme and 4 and 2 for those that have not done a developmental learning programme.

### 5.6.6. HYPOTHESIS SIX

The null hypothesis of hypothesis six states that there is no significant relationship between developmental learning and affective commitment. Table 43 depicts the contingency table for developmental learning and the affective commitment construct that was measured using the Likert scale, 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree and 5 being strongly agree. With reference to Table 40, Pearson Chi Square is .000 ( $p \leq .05$ ) with 4 degrees of freedom (df). 3 cells had an

expected count less than 5, which met the 30% threshold for expectancy, which confirms that the assumptions have been met (Zikmund et al., 2010). The strength of the association is measured using Cramer's V as there are more than two variables, hence the strength of association is  $\phi_c = 0.582$  which is strong (Trusty et al., 2004). The null hypothesis was rejected,  $X^2(4) = 23.475, p \leq .05$ .

Crosstab								
			Psychological Climate					Total
			1	2	3	4	5	
Developmental Learning	0	Count	8	13	3	12	5	41
		% within Developmental Learning	19.5%	31.7%	7.3%	29.3%	12.2%	100.0%
	1	Count	0	6	11	80	60	157
		% within Developmental Learning	0.0%	3.8%	7.0%	51.0%	38.2%	100.0%
Total	Count	8	19	14	92	65	198	
	% within Developmental Learning	4.0%	9.6%	7.1%	46.5%	32.8%	100.0%	

Table 43: Contingency table: developmental learning and psychological climate.

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	66.980 <sup>a</sup>	4	.000
Likelihood Ratio	57.231	4	.000
Linear-by-Linear Association	55.956	1	.000
N of Valid Cases	198		

a. 3 cells (30.0%) have expected count less than 5. The minimum expected count is 1.66.

Table 44: Chi-Square test: developmental learning and psychological climate.

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	.582	.000
	Cramer's V	.582	.000
	Contingency Coefficient	.503	.000
N of Valid Cases		198	

Table 45: Measures of strength of association: developmental learning and psychological climate.

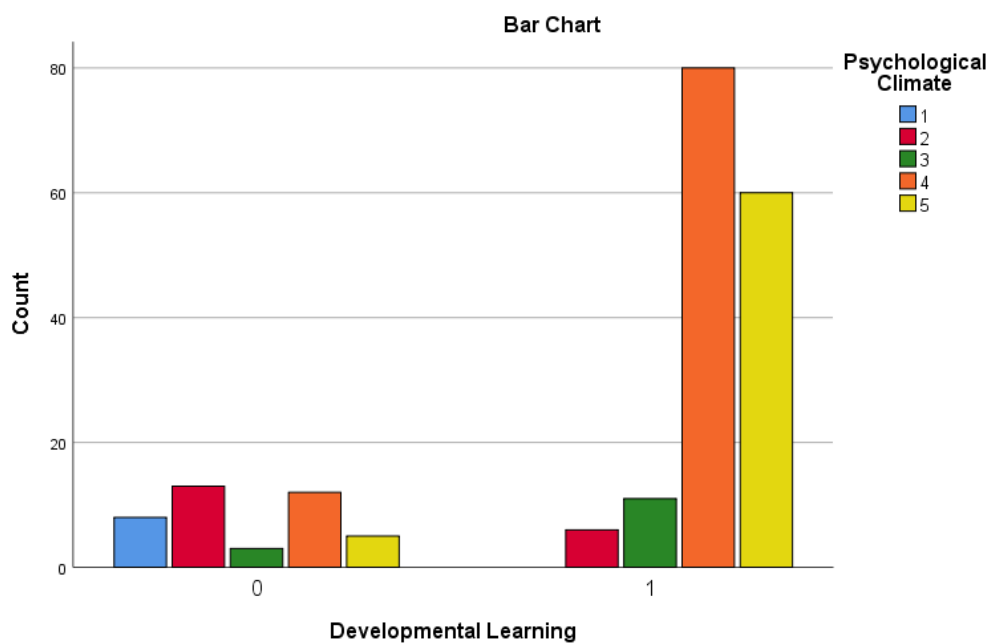


Table 46: Bar chart outlining the relationship between developmental learning and psychological climate.

Table 46 above provides a graphic representation of the contingency table outlined in Table 43 in regard to how respondents answered in regard to their affective commitment alongside whether they had done a developmental programme or not. As we can see the highest percentages sit between 4 and 5 for those that have done developmental learning programme and 4 and 2 for those that have not done a developmental learning programme.

## **5.7. CHAPTER SUMMARY**

The null hypothesis for hypotheses one to three were accepted, hence it was evident that training did not have an association with job fit, affective commitment or psychological climate as the antecedents of employee engagement.

The null hypothesis for hypotheses four to six were rejected, hence it was evident that developmental learning did have an association with job fit, affective commitment and psychological climate for knowledge workers employed in managerial roles in Gauteng. The association found between developmental learning and the antecedents to employee engagement were also proved to be strong in nature and confirmed significance via Cramer's V.



## **6. CHAPTER 6: ANALYSIS OF RESULTS**

This chapter considers the results attained through statistical analysis outlined in chapter five and relates the results to back to the literature reviewed in chapter two. Each of the six hypotheses that were formulated in chapter three have been interpreted based on the results obtained. This chapter consists of three overarching sections; descriptive statistics, research hypotheses discussion and summary.

### **6.1. DESCRIPTIVE STATISTICS**

#### **6.1.1. AGE**

With reference to Table 2, the majority of respondents were between the ages of 30 – 39 and 40 – 49. These two age categories accounted for (128) 67.2% of the total respondent pool. Only one respondent was over 70 and five between 60 – 65, this may speak to the fact that many industries have a hard and fast rule in regard to 65 being the retirement age. However, there was a generally good spread across the six age groupings. It was also interesting that 19.2% of the respondents were between 20 – 29, Bell and Steyn (2017) reported that 10% of South African managers were under 35 years old in the face of growing youth unemployment in South Africa. This may indicate a shift in the age that employees move into managerial roles, research has shown that younger employees need growth faster than older employees and are able to master their jobs at a faster rate (Deaconu et al., 2016).

10.6% of the respondents fell in the 50 – 59 age range, this is a smaller group compared to the rest and this may be due to the fact that the majority of the researcher's immediate acquaintances that received the survey fell in the 30 – 39 and 40 – 49 age groups. However, this may also be due to the fact that this survey was distributed electronically via email and primarily social media. Fincham (2008) believes this may be either because employees from an older generation are apprehensive about sharing information in an impersonal manner or that they are not using these platforms. The MANOVA portrayed in Table 21 showed no significant differences across the different age groups as measure against each of the antecedents to employee engagement.

### **6.1.2. GENDER**

The responses in regard to gender were split into very similar size portions, with 53% of respondents being female and 47% of respondents being male. This ensures the study will have statistical power as we are able to receive a clear indication of the perspectives of both sexes. Although some research has shown differences in regard to the engagement levels between males and females (Saks, 2006) (Sonnetag, 2003). The MANOVA in Table 21 and the ANOVA's in Table 22 show no differences when gender is measured against each of the antecedents of employee engagement, affective commitment, job fit and psychological climate. This may be due to the fact that the age group of the majority of responses were between 20 – 49. The shifting workplace gender paradigm sees more empowered women that are highly engaged (James et al., 2011).

### **6.1.3. TENURE**

With reference to Table 3, it was interesting to note that the highest percentage 32.3% and 64 respondents were the group between 6 – 10 years. Studies have noted that millennials, the majority of respondents to this survey, tend to move jobs within a period of five years (Gursoy et al., 2013). 24.7% of the respondents accounted for tenure of between 16 – 26+ years, this may be an indication of the age groups that have responded to the survey as outlined in Table 1. The MANOVA displayed in Table 21 did not find any differences that were statistically significant when tenure was compared to the antecedents of employee engagement.

### **6.1.4. TRAINING**

20.2% of the respondents confirmed that they had not done any training programmes, this may be specific to respondents that have long tenure and may be in the same or similar role that has not required training. However, this is concerning given the rate of change of contemporary business. Lim et al. (2018) believe that older employees actually require more training than their younger counterparts due to the rate of change of the contemporary business environment. The perception of older employees in the current business context is that they do not keep up with technology, lack creativity and are not innovative (Lim et al., 2018).

Aguinis and Kraiger (2009) define training as the systematic approach to affecting individuals' knowledge, skills, and attitudes in order to improve individual, team, and organisational effectiveness. This is key as training is specific to a role or process and is aimed primarily at increasing efficiency within a specific section of the business. Therefore, it was important to review the data collected in regard to duration, specificity, relevance and format as outlined in the sections to follow.

#### **6.1.4.1. DURATION OF TRAINING PROGRAMME**

This chapter was key to understanding the timelines of the training programmes that were undertaken by the respondents. It was also important to note the difference in duration in regard to training and developmental learning. The majority of respondents, 55.1% did training that was completed in days. 14.6% did training that was completed in weeks, 19.0% did training that was completed in months and 11.4% did training that was completed in years. This statistic also provided clarity regarding the understanding of training as a subconstruct in contradistinction to developmental learning by the respondents. As the majority 69.7% completed training programmes in days and weeks, it was clear that the distinction between training and developmental learning was understood as the majority of responses for developmental learning was in the longer durations. Aguinis and Kraiger (2009) noted that most training programmes run over shorter periods, however there are training programmes that run over longer periods and are specified to industries.

#### **6.1.4.2. SPECIFICITY OF TRAINING PROGRAMME**

This question was added to understand how the respondents viewed the training they completed. This question was key in confirming the contradistinction between training and developmental learning as two separate sub constructs. 79.7 % of respondents felt that the training they had completed was either specific or very specific with only 1 respondent having felt that the training was not specific. This clearly indicates that there was a clear distinction in the minds of respondents between developmental learning and training. Tannenbaum and Yukl (1992) noted that generally employers often fail to present training material at the appropriate level of difficulty and job specificity. Ensuring the job specificity in the design of a training programme is crucial in ensuring the required knowledge is disseminated.

#### **6.1.4.3. RELEVANCE OF TRAINING PROGRAMME**

This question dealt with understanding how relevant the training programme was in relation to the respondent's job. It was also important to review this against the previous question in regard to specificity. 91.1% of respondents felt that the training they completed was either relevant or very relevant to their jobs, only 1 respondent felt that their training was not relevant to their job. We can infer from this data in conjunction with the data obtained from the question regarding specificity, that organisations in Gauteng have been able to provide training at a managerial level to knowledge workers that is job specific and relevant. Bell et al. (2017) discussed the need for relevance of training and developmental learning programmes as being critical in ensuring the knowledge gained is actually utilised. They felt that the majority of training initiatives were not relevant and where not assimilated in the operation of the employee's job (Bell et al., 2017). Therefore, the positive responses in regard to the relevance of the training completed contradicts the study done by Bell et al. (2017) and may be specific to a South African, management context.

#### **6.1.4.4. FORMAT OF TRAINING PROGRAMME**

101 (63.9%) respondents confirmed that they had done their training through a classroom only format. Only 8 (5.1%) respondents did their training through an online only format. There is a shift in most major organisations towards online training, hence all new employees would need to do certain online courses that are specific to their job (Castellanos & Martín, 2011). Therefore, it is thought-provoking that, so few training programmes were online only. However, given the positives in regard to specificity and relevance, perhaps the classroom provides a more robust setting for training new employees, or old employees on new processes. Bell et al. (2017) discussed the benefits of online only training, however stated that more research is required to understand the level of engagement and learning that takes place in an online learning platform versus learning and levels of engagement in a classroom only setting. They felt that the design of either programme is also important in ensuring higher levels of engagement and learning.

### **6.1.5. DEVELOPMENTAL LEARNING**

The ratio of employees that have done developmental learning compared to employees that have not, is very similar to the ratio in regard to employees that have done developmental learning. 79.3% of respondents have done some form of developmental learning as opposed to 20.7% that have not. This is a good indication that the majority of managers are doing some form of developmental learning that is key to the development of skills that create strong leaders as opposed to specialists in a specific field. It is imperative that a holistic view is taken to both training and developmental learning as a combination of these will assist in driving efficiency within any business (Pollock et al., 2015). New managers will need to do some training to learn some specific skills, however thereafter it would be key that they complete developmental learning to assist in developing their leadership skills. Becker and Bish (2017) believe that formal learning is an important employee value proposition that helps in developing employees for leadership roles. This statistic in regard to the number of respondents that have done formal developmental learning programmes bodes well for the management paradigm in a South African context.

#### **6.1.5.1. DURATION OF DEVELOPMENTAL LEARNING PROGRAMME**

48.4% (76) of respondents completed their developmental learning programme in years and 24.8% (39) of respondents completed in months. This speaks to a total of 73.2% of respondents in this range, this is a clear contradistinction to the statistics outlined for training whereby the majority completed in days and weeks. This is a clear indication that the respondents understood the distinction between training and developmental learning. Developmental learning speaks to the formal programmes that were completed by the respondents, the high number of respondents having done developmental learning may be due to the fact that all respondents were in a managerial role. As outlined by Becker and Bish (2017), developmental learning is a critical facet to building leaders. The statistics in regard to duration of both training and developmental learning fit the definition of both constructs as theorised by Aguinis and Kaiger (2009).

#### **6.1.5.2. SPECIFICITY OF DEVELOPMENTAL LEARNING PROGRAMME**

The majority of the respondents, 42.0% felt the developmental learning programme they completed was specific, and 33.8% felt that the developmental learning programme they completed was a little specific. This is slight deviation from the statistics reviewed for training as the majority was specific and very specific. This may be due to the fact that only respondents in managerial roles were analysed, hence developmental learning may be specific in some ways to their role as a leader. This may be the reason for a higher level of specificity on developmental learning than was expected based on review of literature (Aguinis & Kraiger, 2009). In contrast to training, developmental learning at its core aims at broadening the knowledge of the employee whereas training is aimed at deepening the knowledge of an employee. Therefore, generally developmental learning isn't specific to a job unless the employee gains leadership skills from the developmental learning programme that can be utilised in an operational manner in their day to day position.

#### **6.1.5.3. RELEVANCE OF DEVELOPMENTAL LEARNING PROGRAMME**

35.4% of respondents felt that the developmental learning programme they completed was very relevant to their job and 55.7% felt that the developmental training they completed was relevant to their role. This was a key statistic in regard to the need of developmental learning programmes for management roles, as personal development is part of the design of developmental learning programmes. Nevis et al. (2000) noted that the fact the developmental learning programmes are focussed towards building leaders within the organisation, it is a key to the overall strategy of the business and decisions in this regard should sit at an executive level. This statistic confirms the relevance of a developmental learning programme to a manager. In a world that is fast changing, and competitive edges are wiped away overnight, the key to ensuring longevity is human learning and innovation (Gursoy et al., 2013). Hence, the relevance of formal developmental learning programmes to management roles is crucial to ensuring sustainability. Castellanos and Martin (2011) believed that return on investment calculations for developmental learning should be based in the long-term development of employees within the organisation as financial outputs are short term and have too many other factors effecting it.

#### **6.1.5.4. FORMAT OF DEVELOPMENTAL LEARNING PROGRAMME**

The majority of respondents (48.4%) completed developmental learning programmes that were classroom only based, followed close behind by the respondents that completed programmes that were both online and classroom based at 47.8%. This was far more than the training statistic, whereby 31% partook in both classroom and online learning. The concept of learning in the traditional sense has shifted from the archaic notion of a one-way teacher learner relationship, to a multi-faceted approach that includes group learning and application. Hence, the need for movement towards holistic digital learning is important but the classroom dynamic adds to the way in which people learn as it is easier to get different perspectives and to bounce ideas of the people in the room (Davenport, 2005). This is in contrast to training, whereby the required outcome is specific and hence lends itself to digital learning easier (Aguinis & Kraiger, 2009).

## **6.2. RESEARCH HYPOTHESES DISCUSSION**

Prior to delving into the analysis of each hypothesis, it was imperative that a review of the research purpose in line with the objectives of the research was done to ensure the analysis was focussed. This research study was based on the conceptual model developed by Shuck et al. (2011) outlined in Figure 3, whereby they postulated that the antecedents to employee engagement were job fit, affective commitment and psychological climate and the outcomes of employee engagement were discretionary effort and intention to turnover. The aim of this research was to provide a practical perspective to business on what aspects of training and development they require, and to provide a clear distinction between training and developmental learning. The overall purpose of this research project was to understand the relationship between training and development and the antecedents of employee engagement. Hence the objectives of the research were to understand the relationship of training as a subconstruct with affective commitment, job fit and psychological climate and to understand the relationship between developmental learning as a subconstruct and affective commitment, job fit and psychological climate separately. This section explores each of the hypotheses in relation to the literature review.

### 6.2.1. HYPOTHESIS ONE

H1<sub>0</sub>: There is no significant relationship between training and job fit.

~~H1<sub>1</sub>: There is a significant relationship between training and job fit.~~

The null hypothesis outlined above was accepted on the basis of the Pearson Chi Square value of .89 depicted by  $X^2 (4) = 8.072, p > .05$ . Figure 7 depicts this relationship graphically.

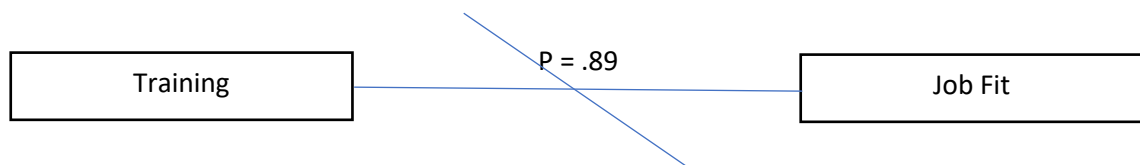


Figure 7. Relationship between training and job fit.

The statistical analysis clearly shows that there is no association between training and job fit. The descriptive statistics for training provided a view to the strong relevance and specificity of the training undertaken and provided a view to the way in which the respondents interacted with the training. However, this did not relate into job fit as a construct, generally the responses in regard to job fit were similar for those that had done training and those that had not done training. From Table 23, it can be noted that the majority of both groups primarily responded agree to most of the questions within the job fit scale, with a different spread across the other measures on the Likert scale.

The results for the job fit scale portrayed in Table 26 indicated that the respondents were generally positive in regard to their workplace. They portrayed a congruence between their personal needs and the needs of the organisation (Shuck et al., 2011). We can infer that most of these employees are engaged at work, as job-fit is an antecedent to employee engagement (Shuck et al., 2011). Saks (2006) postulated that higher levels of job fit leads to employees bringing more of themselves to the workplace and hence increasing their cognitive and emotional engagement.

As all of the respondents were employed in managerial roles, training may not be viewed as an employee value proposition compared to developmental learning. The needs of managers are different to the needs of subordinates in regard to their personal and



professional requirements (Ford, 2014). This may have had an effect on the results of the association between training and job fit. This is a key learning for organisations regarding where they should focus their training and development spend for managers and prospective managers (Aguinis & Kraiger, 2009).

## 6.2.2. HYPOTHESIS TWO

H2<sub>0</sub>: There is no significant relationship between training and affective commitment.

~~H2<sub>1</sub>: There is a significant relationship between training and affective commitment.~~

The null hypothesis outlined above was accepted on the basis of the Pearson Chi Square value of .342 depicted by  $X^2(4) = 4.503, p > .05$ . Figure 8 depicts this relationship graphically.

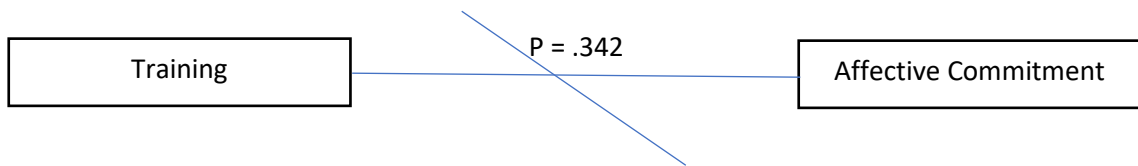


Figure 8. Relationship between training and affective commitment.

The result in regard to the relationship between training and affective commitment proved to be non-existent, the statistical analysis was very similar to the outputs for the training and the job fit scale. It is clear that the training was positive as outlined by Tables 6 and 7 that depicted the level of specificity and relevance of the training programmes to the job that the respondents do. Table 27 outlines the spread of answers across both those that answered yes to doing training and those that answered no to doing training. It is clear that the spreads are somewhat similar.

Affective commitment relates directly to emotional engagement as this construct speaks to the way in which an employee perceives their employer. Hence, if an employee believes that their employer cares about their well-being, they tend to have increased levels of affective commitment (Rhoades et al., 2001). Employees with high levels of affective commitment tend to be more engaged in the workplace (Shuck et al., 2011). In this case, it is clear that training does not provide the desired effect to managerial employees. Table 30 outlining the spread in regard to the affective commitment scale

answers provides a graphical indication that most respondents answered positively on the affective commitment scale.

It is evident that training does not relate to affective commitment specifically and as stated previously, this may be due to the fact that the unit of analysis ensures only respondents in managerial roles were analysed (Rhoades et al., 2001). This may affect the result of this output. Training is specific to a role or process and is not developmental in nature, hence it does not take personal needs into account (Aguinis & Kraiger, 2009). Training is aimed at efficiency for the business and this may be viewed as a positive for the business, but managers may not be engaged in the training as it offers them no developmental knowledge. If this is related back to affective commitment, the employer runs training for the organisations gain and employees may enjoy the training but not feel the emotional engagement required to effect affective commitment (Khan, 1990).

### 6.2.3. HYPOTHESIS THREE

H3<sub>0</sub>: There is no significant relationship between training and psychological climate.

~~H3<sub>1</sub>: There is a significant relationship between training and psychological climate.~~

The null hypothesis outlined above was accepted on the basis of the Pearson Chi Square value of .270 depicted by  $X^2(4) = 5.176, p > .05$ . Figure 9 depicts this relationship graphically.

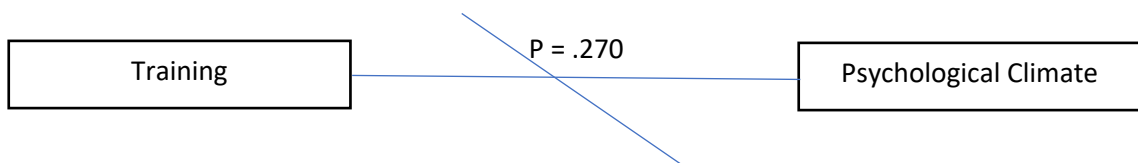


Figure 9. Relationship between training and psychological climate.

Training showed no association with psychological climate as outlined in Table 32, measured by the Pearson Chi Square output. The bar chart depicts the response rates per measure on the Likert scale and is separated between those that answer yes to having done training and those that have answered no to having done training. The majority of responses sit in agree and strongly agree for both groups, however those that answered no have more strongly agree answers by percentage than any other option.

This confirms that most of the respondents work in positive psychological climates, and by inference are engaged. Training provides a climate for sharing of knowledge within any organisation, and in the case of the respondents most of the learning was classroom only based. However, as discussed previously, perhaps the level of training isn't where it should be for managers, and they are not engaged in the training. Hence, they do not associate training with the level of empowerment, capabilities and culture of the workplace as these factors link to psychological climate (Shuck et al., 2011).

Table 34 provides a graphical representation of the spread in regard to the view of psychological climate by the respondents. In general, it was clear across all three antecedents reviewed, that the majority of the respondents were engaged at their workplace as can be inferred by the high scores on each antecedent (Shuck et al., 2011). Khan (1990) noted that psychological climate is driven by both cognitive engagement and emotional engagement. Psychological climate is made up of four sub-elements; supportive management, challenge, contribution and recognition (Brown & Leigh, 1996).

It seems that the key to the difference between the association of training and the antecedents of employee engagement as opposed to the association of developmental learning and the antecedents of employee engagement is the fact that only managerial employees were surveyed and analysed (Tharenou et al., 2007). It can be inferred that most of these employees enjoy the psychological climate as it is linked to benefits and recognition, people that have been promoted into leadership positions generally are recognised for the value they bring to the organisation and hence they perceive their environment to be positive and score higher on the psychological climate scale (Macey & Snyder, 2008). On the other hand, the managers seem to not view training as an employee value proposition and do not associate one with the other. Specifically, as it is clear that most of the respondents saw benefit in the training and had high psychological climate scores.

#### 6.2.4. HYPOTHESIS FOUR

~~H4<sub>0</sub>: There is no significant relationship between developmental learning and job fit.~~

H4<sub>1</sub>: There is a significant relationship between developmental learning and job fit.

The null hypothesis outlined above was rejected on the basis of the Pearson Chi Square value of .002 depicted by  $X^2(4) = 17.150, p \leq .05$ . The strength of association was measured using Cramer's V at  $\phi_c = .294$ , which confirmed moderate strength as outlined in Figure 6. Figure 10 depicts this relationship graphically.

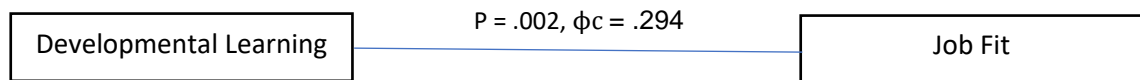


Figure 10. Relationship between developmental learning and job fit.

In contrast to the results in regard to the association between training and job fit, a moderate significant association exists between developmental learning and job fit. Developmental learning refers to the formal programmes that were completed by respondents that were not specific to their jobs and contained personal development components to the learning (Aguinis & Kraiger, 2009). Developmental learning is key to the development of leadership and potential leaders within any organisation (Tharenou et al., 2007).

Job fit in this context is very relatable, as developmental learning is a very crucial factor to be a good leader. Nevis et al.(2000) discussed the shift that most organisations are making towards becoming learning systems, this is key as it will assist in building leaders. Becker & Bish (2017) believed that good leaders must continually develop themselves and this is done via various forms of developmental learning. Macey and Snyder (2008) believed that “capacity is developed from feeling competent and autonomous, understanding one’s job role, and having a high degree of fit between an employee and their specific job responsibilities.”. This speaks to a high level of engagement due to job fit, and specifically an increase in the person-organisation fit through learning.

Job fit relates to cognitive engagement, as it speaks to the employee's perception of their workplace and the meaningfulness of the role they play within this workplace (Resick et al., 2007). Developmental learning adds to the meaningfulness that the employees feel in regard to their role, as it adds to the relevance of their job as outlined in Table 12.

### 6.2.5. HYPOTHESIS FIVE

~~H5<sub>0</sub>: There is no significant relationship between developmental learning and affective commitment.~~

H5<sub>1</sub>: There is a significant relationship between developmental learning and affective commitment.

The null hypothesis outlined above was rejected on the basis of the Pearson Chi Square value of .000 depicted by  $X^2(4) = 23.475, p \leq .05$ . The strength of association was measured using Cramer's V at  $\phi_c = .346$ , which confirmed strong association as outlined in Figure 6. Figure 11 depicts this relationship graphically.

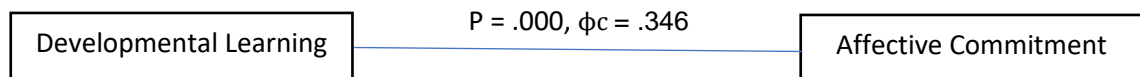


Figure 11. Relationship between developmental learning and affective commitment.

A significant strong association was found for developmental learning and affective commitment. Developmental learning in this context assists in developing affective commitment specifically as affective commitment is linked to emotional engagement, developmental learning builds the emotional intelligence of employees through personal development. Per the graphical representation in Table 42, it is clear that those that have done developmental learning have higher scores on the affective commitment scale compared to the respondents that have not done any developmental learning programmes.

Affective commitment refers to the bond that an employee has with their workplace, that determines their dedication, loyalty and satisfaction (Rhoades et al., 2001). Saks (2006)

theorised that rewards, recognition, procedural justice and supervisor support are the antecedents to affective commitment. This speaks directly to the way in which developmental learning is viewed in contrast to the way in which training is viewed. Employees that have high affective commitment scores are generally willing to take on tasks that fall outside their role if they see organisational benefit (Khan, 1990). Employees that are affectively committed tend to feel a greater sense of belonging and are willing to go the extra mile (Allen & Meyer, 1990).

Providing a developmental learning programme and allowing specific employees to partake, offers recognition and specifically recognition that they are viewed as possible future leaders within the organisation. This will help drive affective commitment within these managers or future managers. Developmental learning programmes not only send a signal to employees, but also assists in ensuring the employees develop themselves to be better leaders. The return on investment of a developmental learning programme may therefore be an engaged employee that is affectively committed.

#### 6.2.6. HYPOTHESIS SIX

~~H6<sub>0</sub>: There is no significant relationship between developmental learning and psychological climate.~~

H6<sub>1</sub>: There is a significant relationship between developmental learning and psychological climate.

The null hypothesis outlined above was rejected on the basis of the Pearson Chi Square value of .000 depicted by  $X^2(4) = 23.475, p \leq .05$ . The strength of association was measured using Cramer's V at  $\phi_c = .582$ , which confirmed strong association as outlined in Figure 6. Figure 12 depicts this relationship graphically.

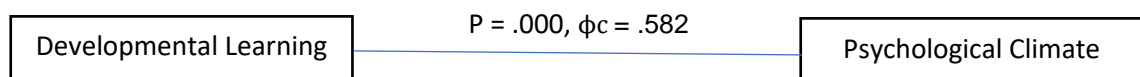


Figure 12. Relationship between developmental learning and psychological climate.

A significant strong association was found between developmental learning and psychological climate. Developmental learning as a construct links into psychological climate very closely as both are enhanced by learning and the sharing of knowledge (Eraut, 2000). Table 46 depicts a big disparity in regard to the positive responses on the psychological climate scale of those that have done a developmental learning programme in contrast to those that have not done a developmental learning programme. This disparity is also clear through the very strong Cramer's V output.

Psychological climate is made up of four sub-elements; supportive management, challenge, contribution and recognition (Brown & Leigh, 1996). All of these sub-elements can be positively affected by developmental learning; firstly through the development of strong leaders that are supportive, secondly through challenging preconceived notions and building organisational knowledge, thirdly by ensuring that learning that takes place can be assimilated into the workplace and lastly in the form of recognition for employees that show potential for growth (Aguinis & Kraiger, 2009) (Asfaw et al., 2015) (Bell et al., 2017). Positive psychological climate will drive sustainability and productivity.

The association between developmental learning and psychological climate provides us insight into the way that managers perceive the developmental learning programmes they have been on and how this may link back to their mindset at work. Developmental learning inherently changes mindsets by providing knowledge to an employee (Aguinis & Kraiger, 2009). The benefits of developmental learning programmes are implicit in nature and are difficult to relate to a bottom line, however this association provides an insight to the potential benefit for any organisation.

### 6.3. CHAPTER SUMMARY

This chapter provided insight into the data analysis outlined in chapter five, this chapter was divided into descriptive statistics, measures of reliability and validity, analysis of control variables and hypothesis testing. The analysis of the descriptive statistics, firstly focussed on the control variables, age, gender and tenure. In general, the spread across all three control variables were good. It was interesting to note the percentage of managers in the 20 – 29 age group compared to global statistics. Tenure provided a perception of the mobility of knowledge workers in a South African context. The descriptive statistics thereafter focused on training, it was evident that the respondents understood the distinction between training and developmental learning as their answers regarding specificity was in line with literature. It was also interesting to note the small percentage of training that took place online, given the current movement toward digital learning. The developmental learning statistics presented a smaller specificity score and higher levels of relevance. It was clear that both the training and developmental learning undertaken by the respondents were received well.

The next section reviewed the reliability of the scales used, the Cronbach Alpha test was used to analyse each item in a scale and its correlation to the other items in the same scale. Cronbach Alpha proved to be strong for all items on all scales measured and confirmed reliability. Validity was measured through a bivariate correlation analysis, this proved to confirm validity. A factor analysis was run to ensure that the variables within each measurement scale measured the same construct, this analysis was positive. An analysis of the control variables was undertaken using a MANOVA test, the test for each control variable proved that there were no significant differences across all control variables.

There were six hypotheses being measured, Pearson Chi Square test was used to analyse association between each pair of constructs. Cramer's V was utilised to measure strength of association, where an association was found. Firstly, training was measured against each of the antecedents of employee engagement. No association was found between training and any of the three antecedents of employee engagement. The statistics for training were generally positive and the respondents provided generally positive results in regard to each of the antecedents of employee engagement. It was



therefore, it was interesting to note that no association existed between training and job fit, training and affective commitment and training and psychological climate. This may have been due to the fact that all respondents held a managerial role and did not view training as an employee value proposition.

Hypothesis three, four and five measure the association of developmental learning and the antecedents of employee engagement. An association was found for all three hypotheses. There was a moderate association found for developmental learning and job fit and strong associations found for both developmental learning and affective commitment as well as psychological climate. This was a key finding, specifically in contrast to the finding on training. This speaks to need for developmental learning in management development, as well as part of the training and development spend across the board. Developmental learning should be driven by the executives of an organisation as it is closely linked to sustainability of the organisation through the development of staff. Developmental learning seems to resonate with managers as we saw high levels of relevance to their roles and strong association with employee engagement as inferred from the high scores on each of job fit, affective commitment and psychological climate.

## **7. CHAPTER 7: CONCLUSION**

The overall purpose of this research was to understand the relationship between training and development as a meta construct and employee engagement as a meta construct. This overarching purpose was broken down further to creating an understanding in regard to the relationship between the subconstructs training and developmental learning against the antecedents of employee engagement; job fit, affective commitment and psychological climate with a focus on knowledge workers that are managers in Gauteng, South Africa. This chapter firstly draws the principal findings of the research study together and highlights the key outcomes for theory and management. Secondly, this chapter will review the limitations of this research and provide suggestions in regard to possible future research in this field.

### **7.1. PRINCIPAL FINDINGS**

This research study was based on the conceptual model developed by Shuck et al. (2011) outlined in Figure 3, whereby they postulated that the antecedents to employee engagement were job fit, affective commitment and psychological climate and the outcomes of employee engagement were discretionary effort and intention to turnover. The concept of training and developmental learning as separate subconstructs was based on research by Aguinis and Kraiger (2009).

It was clearly evident from the statistics that the two subconstructs; training and developmental learning were distinctive and fit the definitions outlined in literature for both. This was a key finding in confirming the understanding of the respondents, further validating the data collected (Aguinis & Kraiger, 2009). It was also noted that developmental learning was rated as highly relevant and training was rated as highly specific, which speaks to the way in which both programmes were perceived by the respondents.

Importantly, training was found to have no association with any of the antecedents to employee engagement in contrast to developmental learning whereby moderate to strong association was found for all three antecedents to employee engagement. It was interesting to note, specifically as the unit of analysis for this study was knowledge workers in managerial roles based in Gauteng.

### **7.1.1. TRAINING**

Pearson Chi Square test was used to analyse association between each pair of constructs. Training was measured against each of the antecedents of employee engagement. No association was found between training and any of the three antecedents of employee engagement. The output for training and job fit was  $p = .089$ ,  $P > 0.05$ . The output for training and affective commitment was  $p = .342$ ,  $P > 0.05$  and the output for training and psychological climate was  $p = .270$ ,  $P > 0.05$ . Although, no association was found between training and the antecedents to employee engagement, it was clear that the respondents felt the training they completed was specific and relevant to their job (Aguinis & Kraiger, 2009). It is also imperative to understand that as training is specific to a job or process, the outputs are measurable against the efficiency of said job or process post training. Hence, training is driven wholly by the needs of the organisation and not the individual which may provide insight to the fact that no association was found (Asfaw et al., 2015).

### **7.1.2. DEVELOPMENTAL LEARNING**

An association was found for all three hypotheses related to developmental learning and the antecedents to employee engagement. There was a moderate association found for developmental learning and job fit and strong associations found for both developmental learning and affective commitment as well as psychological climate. The output for developmental learning and job fit was  $P = .002$ ,  $P \leq 0.05$  with  $\phi_c = 0.294$ . The output for developmental learning and affective commitment was  $P = .000$ ,  $P \leq 0.05$  with  $\phi_c = 0.346$ . The output for developmental learning and psychological climate was  $P = .000$ ,  $P \leq 0.05$  with  $\phi_c = 0.582$ . This was an important finding in the field of developmental learning as it provides a link between formal learning programmes and employee engagement, specifically in regard to management development and management education. This finding contrasted with the finding for training and confirms the need for developmental learning to form part of the strategy of an organisation (Tharenou et al., 2007).

This was a key finding, specifically in contrast to the finding on training. This speaks to need for developmental learning in management development, as well as part of the training and development spend across the board. Developmental learning should be driven by the executives of an organisation as it is closely linked to sustainability of the

organisation through the development of staff. Developmental learning seems to resonate with managers as we saw high levels of relevance to their roles and strong association with employee engagement as inferred from the high scores on each of job fit, affective commitment and psychological climate.

## **7.2. IMPLICATIONS FOR THEORY**

This research was primarily based on the research by Shuck et al. (2011), and was linked to various other studies in employee engagement, job fit, affective commitment and psychological climate (Allen & Meyer, 1990) (Brown & Leigh, 1996) (Resick et al., 2007) (Khan, 1990). The key to this research was to understand the relationship between training and development and employee engagement. The conceptual model outlined in Figure 2 linked training and development to the antecedents of employee engagement. The crucial development in regard to the literature on employee engagement is the addition of developmental learning as a possible factor to the raised engagement of staff. This construct adds another dimension that has not be reviewed previously.

Literature was reviewed to provide an indication of the overall benefits of training and development. Research on training and development was primarily based in return on investment and secondarily based in effectiveness of training (Barrett & O'Connell, 2001) (Asfaw et al., 2015) (Aguinis & Kraiger, 2009) (Becker & Bish, 2017) (Ford, 2014) (Noe et al., 2014). The key development in regard to training and development literature is based in the fact that employee engagement is a possible outcome to effective training and developmental programmes. This study focussed on managers and found association at this level in regard to developmental learning, which also confirms the distinction between training and developmental learning. Pollock et al. (2015) postulated that these two constructs should be viewed separately and planned for at different levels within an organisation. Figure 13 outlines the amended conceptual framework.



Figure 13. Amended conceptual framework

### 7.3. IMPLICATIONS FOR MANAGEMENT

Development inherently changes mind-sets and knowledge bases, this may affect engagement in a current role and high performers may need more of a challenge. This poses a risk of an increase in intention to turnover in employees that require growth at a pace that the firm cannot match (Shuck et al., 2014). It is key that employees that are flagged for development are developed through developmental learning programmes as soon as possible (Aguinis & Kraiger, 2009). Training provides knowledge to specific tasks that may be necessary but to ensure that the employee remains engaged and to lower intention to turnover, developmental learning programmes may be the key. This may be specific to either current managers or staff that display leadership qualities.

This research can assist firms in decision making. It will assist firms in understanding the need for developmental learning for employees that have had sufficient training to do their jobs. The key outcome is the fact that both training and developmental learning are separate constructs and should be treated as such. It is crucial in planning that decisions regarding training are separate to decisions regarding developmental learning as the outcomes of both constructs are different. Hence, investment in the realm of training and not development will ensure organisational performance in the long term as training is linked to a specific job or process. On the other hand, investment in developmental learning may provide a more engaged workforce that will drive long term organisational performance.

#### **7.4. LIMITATIONS OF THE RESEARCH**

This study focussed on managers in Gauteng, the geographical reach could have been extended to provide different perspectives. 11.3% of respondents on the raw data were not based in Gauteng. This research also only focussed on managers, hence the outcomes can be related to the training and development of managers specifically and not subordinates as they may have different training and development needs. Further limitations have been outlined in section 4.15.

#### **7.5. SUGGESTIONS FOR FUTURE RESEARCH**

Further studies in the field of training and development should focus on a different level at work, perhaps a larger study would provide data that could be inferred to the working population in general as training may have an association with employee engagement at different levels within the same organisation and the same can be said of developmental learning. A study that measures effectiveness of training or developmental learning against the constructs job fit, affective commitment and employee engagement may also provide correlation and a different perspective.

#### **7.6. CONCLUDING STATEMENT**

The purpose of this research was to understand the relationship between training and development and employee engagement in knowledge workers employed in managerial roles in Gauteng, South Africa. This study met this objective as key findings were made regarding the strong association between developmental learning and the antecedents to employee engagement. Crucial conclusions can be drawn from the fact that in contrast to the findings mentioned above, training had no association with the antecedents to employee engagement.

The distinction between training and developmental learning carried throughout the research process and was clearly depicted in the data regarding relevance and specificity of the programmes to the respondent's jobs. Holistically, this research project was able to provide information that can be used operationally to help develop managers and assist in decision making regarding training and development.

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## 9. APPENDICES

### 9.1. APPENDIX 1: CONSISTENCY MATRIX

Hypotheses	Literature Review	Data Collection Tool	Analysis
1. There is a significant relationship between training and job fit.	(Shuck, Twyford, Reio, & Shuck, 2014)  (Aguinis & Kraiger, 2009) (Resick, Baltes, & Shantz, 2007)  (Shuck, Reio, & Rocco, Employee engagement: an examination of antecedent and outcome variables, 2011)  (Noe, Clarke, & Klein, 2014)  (Qureshi, 2016)	Question 1 to 8  Person-Organization Fit Scale (Resick, Baltes, & Shantz, 2007)	Simple linear regression will be used. The zero order correlational coefficients will be measured against each other to ascertain the direction and strength of the relationship between the constructs.
2. There is a significant relationship between training and affective commitment.	(Shuck, Twyford, Reio, & Shuck, 2014)  (Aguinis & Kraiger, 2009) (Rhoades, Eisenberger, & Armeli, 2001)  (Shuck, Reio, & Rocco, Employee engagement: an examination of	Question 1 to 8  Affective Commitment Scale (Rhoades, Eisenberger, & Armeli, 2001)	Simple linear regression will be used. The zero order correlational coefficients will be measured against each other to ascertain the direction and strength of

	<p>antecedent and outcome variables, 2011)</p> <p>(Noe, Clarke, &amp; Klein, 2014)</p> <p>(Qureshi, 2016)</p>		<p>the relationship between the constructs.</p>
<p>3. There is a significant relationship between training and psychological climate.</p>	<p>(Shuck, Twyford, Reio, &amp; Shuck, 2014)</p> <p>(Aguinis &amp; Kraiger, 2009) (Brown &amp; Leigh, 1996)</p> <p>(Shuck, Reio, &amp; Rocco, Employee engagement: an examination of antecedent and outcome variables, 2011)</p> <p>(Noe, Clarke, &amp; Klein, 2014)</p> <p>(Qureshi, 2016)</p>	<p>Question 1 to 8</p> <p><u>Modified Psychological Climate Measure</u> (Brown &amp; Leigh, 1996) (Shuck, Reio, &amp; Rocco, Employee engagement: an examination of antecedent and outcome variables, 2011)</p>	<p>Simple linear regression will be used. The zero order correlational coefficients will be measured against each other to ascertain the direction and strength of the relationship between the constructs.</p>
<p>4. There is a significant relationship between developmental learning and job fit.</p>	<p>(Shuck, Twyford, Reio, &amp; Shuck, 2014)</p> <p>(Aguinis &amp; Kraiger, 2009) (Resick, Baltes, &amp; Shantz, 2007)</p>	<p>Question 1 to 8</p> <p>Person-Organization Fit Scale (Resick, Baltes, &amp; Shantz, 2007)</p>	<p>Simple linear regression will be used. The zero order correlational coefficients will be measured against each other to ascertain the</p>

	<p>(Shuck, Reio, &amp; Rocco, Employee engagement: an examination of antecedent and outcome variables, 2011)</p> <p>(Noe, Clarke, &amp; Klein, 2014)</p> <p>(Qureshi, 2016)</p>		direction and strength of the relationship between the constructs.
5. There is a significant relationship between developmental learning and affective commitment.	<p>(Shuck, Twyford, Reio, &amp; Shuck, 2014)</p> <p>(Aguinis &amp; Kraiger, 2009) (Rhoades, Eisenberger, &amp; Armeli, 2001)</p> <p>(Shuck, Reio, &amp; Rocco, Employee engagement: an examination of antecedent and outcome variables, 2011)</p> <p>(Noe, Clarke, &amp; Klein, 2014)</p> <p>(Qureshi, 2016)</p>	<p>Question 1 to 8</p> <p>Affective Commitment Scale (Rhoades, Eisenberger, &amp; Armeli, 2001)</p>	Simple linear regression will be used. The zero order correlational coefficients will be measured against each other to ascertain the direction and strength of the relationship between the constructs.
6. There is a significant relationship between developmental learning	<p>(Shuck, Twyford, Reio, &amp; Shuck, 2014)</p>	<p>Question 1 to 8</p> <p>Modified Psychological Climate Measure (Brown &amp; Leigh, 1996) (Shuck, Reio, &amp;</p>	Simple linear regression will be used. The zero order correlational coefficients will be



<p>and psychological climate.</p>	<p>(Aguinis &amp; Kraiger, 2009) (Brown &amp; Leigh, 1996)</p> <p>(Shuck, Reio, &amp; Rocco, Employee engagement: an examination of antecedent and outcome variables, 2011)</p> <p>(Noe, Clarke, &amp; Klein, 2014)</p> <p>(Qureshi, 2016)</p>	<p>Rocco, Employee engagement: an examination of antecedent and outcome variables, 2011)</p>	<p>measured against each other to ascertain the direction and strength of the relationship between the constructs.</p>
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## 9.2. APPENDIX 2: RESEARCH PROJECT PLAN

MBA Integrative Business Research Report 2018 Project Plan		
Task	Date	Comments
Ethical Clearance	28-May-18	
Elective 1: Personal Leadership Development	31 May to 3 June	One individual assignment (reflection based)
Survey Release	04-Jun-18	
Chapter 1: Introduction to Research Problem	04-Jun-18	To allow for one-week turnaround for feedback from Supervisor prior to finalisation of chapter.
Elective 2: Scenario Planning and Strategic Thinking	7 to 10 June	No syndicate assignment, only individual assignment
Elective 3: Customer Centric Strategy	28 June to 1 July	No syndicate assignment, only individual assignment
Chapter 2: Literature Review	02-Jul-18	
Chapter 3: Hypotheses	02-Jul-18	
Elective 4: Expert Negotiator	17 to 20 July	No syndicate assignment, only individual assignment
Elective 5: Mergers and Acquisitions	26-29 July	
Chapter 4: Research Methodology	30-Jul-18	
Survey Close	06-Aug-18	
Data analysis	06 August 18 to 31 August 2018	
Chapter 5: Results	31-Aug-18	
Chapter 6: Discussion of results	24-Sep-18	
Chapter 7: Conclusion	29-Sep-18	Aim to finish prior to departure on Global Module
Draft 1 of Research Project	29-Sep-18	
Draft 2 of Research Project	29-Oct-18	
Final Research Project	05-Nov-18	

### 9.3. APPENDIX 3: DRAFT MEASUREMENT INSTRUMENT

1. Are you employed at a company based in Gauteng?

Yes/No

2. Are you a knowledge worker? (an employee whose job involves developing and using knowledge rather than producing goods or services. Examples: administrators, lawyers, engineers, physicians, pharmacists, architects, engineers, scientists, design thinkers, public accountants, lawyers, academics, and any other white-collar **workers** (Davenport, 2005))

Yes/No

3. Do you manage staff/ lead a team/ supervise any employees?

Yes/No

4. Have you been on training (programme to assist you in doing your current job better, e.g. excel training, any systems training, any training that is specific to your current role)?

Yes/No, if yes please specify:

- a. Duration of programme: weeks/ months/ years
- b. Format: online only/ classroom only/ online and classroom
- c. Relevance to your job: not relevant/ little relevance/ relevant/ very relevant
- d. Specificity to your job: not specific/ little specificity/ specific/ very specific

5. Have you been on any developmental learning programmes (formal programmes that are not specific to your job, e.g. management programmes, formal coaching, degrees or diplomas, formal custom programmes)?

Yes/No, if yes please specify:

- a. Duration of programme: weeks/ months/ years
- b. Format: online only/ classroom only/ online and classroom
- c. Relevance to your job: not relevant/ little relevance/ relevant/ very relevant
- d. Specificity to your job: not specific/ little specificity/ specific/ very specific

6. Age:

20-29/30-39/40-49/50-59/60-69/70 and up

7. Gender:  
Female/Male

8. Tenure at Organisation (in years):  
0-5/6-10/11-15/16-20/21-25/26 or more

Please rate the following questions using the scale below:

- 1= Strongly Disagree
- 2= Disagree
- 3= Neutral
- 4= Agree
- 5= Strongly Agree

Modified Psychological Climate Measure (Brown & Leigh, 1996) (Shuck, Reio, & Rocco, Employee engagement: an examination of antecedent and outcome variables, 2011)

Supportive management subscale

- 1. My boss is flexible about how I accomplish my job objectives.
- 2. My manager is supportive of my ideas and ways of getting things done.
- 3. My boss gives me the authority to do my job as I see fit.
- 4. I'm careful in taking responsibility because my boss is often critical of new ideas.  
[reverse scored]
- 5. I can trust my boss to back me up on decisions I make in the field.

Contribution subscale

- 6. I feel very useful in my job.
- 7. Doing my job well really makes a difference.
- 8. I feel like a key member of the organization.
- 9. The work I do is very valuable to the organization.

Recognition subscale

- 10. I rarely feel my work is taken for granted.
- 11. My supervisors generally appreciate the way I do my job.
- 12. The organization recognizes the significance of the contributions I make.

Challenge subscale

- 13. My job is very challenging.
- 14. It takes all my resources to complete my work objectives.

Person-Organization Fit Scale (Resick, Baltes, & Shantz, 2007)

1. I feel my values “match” or fit this organization and the current employees in this organization.
2. I think the values and personality of this organization reflect my own values and personality.
3. The values of this organization are similar to my own values.
4. My values match those of current employees to this organization.
5. I feel my personality matches the “personality” or image of this organization.

Affective Commitment Scale (Rhoades, Eisenberger, & Armeli, 2001)

1. I feel a strong sense of belonging to my organization.
2. I feel personally attached to my work organization.
3. I am proud to tell others I work at my organization.
4. Working at my organization has a great deal of personal meaning to me.
5. I would be happy to work at my organization until I retire.
6. I really feel that problems faced by my organization are also my problems.

## 9.4. APPENDIX 4: ETHICAL CLEARANCE

**Gordon  
Institute  
of Business  
Science**  
University  
of Pretoria

14 June 2018

Pillay Pravashen

Dear Pravashen

*Please be advised that your application for Ethical Clearance has been approved.*

*You are therefore allowed to continue collecting your data.*

*Please note that approval is granted based on the methodology and research instruments provided in the application. If there is any deviation change or addition to the research method or tools, a supplementary application for approval must be obtained*

*We wish you everything of the best for the rest of the project.*

*Kind Regards*

GIBS MBA Research Ethical Clearance Committee

## 9.5. APPENDIX 5: STATISTICAL ANALYSIS RESULTS

### 9.5.1. CRONBACH'S ALPHA OUTPUTS

#### Scale: Psychological Climate

##### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.945	.947	14

##### Inter-Item Correlation Matrix

	My boss is flexible about how I accomplish my job objectives.	My manager is supportive of my ideas and ways of getting things done.	My boss gives me the authority to do my job as I see fit.	I'm careful in taking responsibility because my boss is often critical of new ideas.	I can trust my boss to back me up on decisions I make in the field.
My boss is flexible about how I accomplish my job objectives.	1.000	.868	.827	.441	.772
My manager is supportive of my ideas and ways of getting things done.	.868	1.000	.861	.443	.815
My boss gives me the authority to do my job as I see fit.	.827	.861	1.000	.396	.816
I'm careful in taking responsibility because my boss is often critical of new ideas.	.441	.443	.396	1.000	.434
I can trust my boss to back me up on decisions I make in the field.	.772	.815	.816	.434	1.000
I feel very useful in my job.	.691	.741	.760	.325	.773
Doing my job well really makes a difference.	.654	.709	.686	.402	.732

I feel like a key member of the organization.	.567	.623	.671	.289	.634
The work I do is very valuable to the organization.	.564	.641	.632	.250	.679
I rarely feel my work is taken for granted.	.487	.519	.565	.234	.538
My supervisors generally appreciate the way I do my job.	.619	.679	.653	.368	.696
The organization recognizes the significance of the contributions I make.	.481	.488	.556	.206	.557
My job is very challenging.	.448	.468	.488	.391	.447
It takes all my resources to complete my work objectives.	.408	.417	.451	.181	.428

#### Inter-Item Correlation Matrix

	I feel very useful in my job.	Doing my job well really makes a difference.	I feel like a key member of the organization.	The work I do is very valuable to the organization.	I rarely feel my work is taken for granted.
My boss is flexible about how I accomplish my job objectives.	.691	.654	.567	.564	.487
My manager is supportive of my ideas and ways of getting things done.	.741	.709	.623	.641	.519
My boss gives me the authority to do my job as I see fit.	.760	.686	.671	.632	.565
I'm careful in taking responsibility because my boss is often critical of new ideas.	.325	.402	.289	.250	.234
I can trust my boss to back me up on decisions I make in the field.	.773	.732	.634	.679	.538
I feel very useful in my job.	1.000	.830	.761	.731	.539
Doing my job well really makes a difference.	.830	1.000	.696	.738	.515



I feel like a key member of the organization.	.761	.696	1.000	.746	.558
The work I do is very valuable to the organization.	.731	.738	.746	1.000	.507
I rarely feel my work is taken for granted.	.539	.515	.558	.507	1.000
My supervisors generally appreciate the way I do my job.	.714	.693	.685	.656	.612
The organization recognizes the significance of the contributions I make.	.564	.524	.563	.509	.649
My job is very challenging.	.515	.570	.527	.538	.324
It takes all my resources to complete my work objectives.	.441	.448	.471	.429	.348

### Inter-Item Correlation Matrix

	My supervisors generally appreciate the way I do my job.	The organization recognizes the significance of the contributions I make.	My job is very challenging.	It takes all my resources to complete my work objectives.
My boss is flexible about how I accomplish my job objectives.	.619	.481	.448	.408
My manager is supportive of my ideas and ways of getting things done.	.679	.488	.468	.417
My boss gives me the authority to do my job as I see fit.	.653	.556	.488	.451
I'm careful in taking responsibility because my boss is often critical of new ideas.	.368	.206	.391	.181
I can trust my boss to back me up on decisions I make in the field.	.696	.557	.447	.428
I feel very useful in my job.	.714	.564	.515	.441
Doing my job well really makes a difference.	.693	.524	.570	.448
I feel like a key member of the organization.	.685	.563	.527	.471

The work I do is very valuable to the organization.	.656	.509	.538	.429
I rarely feel my work is taken for granted.	.612	.649	.324	.348
My supervisors generally appreciate the way I do my job.	1.000	.667	.534	.485
The organization recognizes the significance of the contributions I make.	.667	1.000	.412	.364
My job is very challenging.	.534	.412	1.000	.611
It takes all my resources to complete my work objectives.	.485	.364	.611	1.000

### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
My boss is flexible about how I accomplish my job objectives.	49.25	124.766	.785	.787	.939
My manager is supportive of my ideas and ways of getting things done.	49.22	123.937	.833	.845	.938
My boss gives me the authority to do my job as I see fit.	49.27	122.816	.842	.823	.938
I'm careful in taking responsibility because my boss is often critical of new ideas.	49.85	130.887	.422	.334	.950
I can trust my boss to back me up on decisions I make in the field.	49.30	123.418	.838	.782	.938
I feel very useful in my job.	49.20	122.159	.844	.803	.938
Doing my job well really makes a difference.	49.08	122.324	.824	.760	.938
I feel like a key member of the organization.	49.31	123.686	.780	.699	.939
The work I do is very valuable to the organization.	49.06	127.149	.762	.689	.940

I rarely feel my work is taken for granted.	49.74	126.263	.633	.519	.943
My supervisors generally appreciate the way I do my job.	49.29	124.521	.812	.697	.939
The organization recognizes the significance of the contributions I make.	49.54	126.118	.648	.567	.943
My job is very challenging.	49.39	128.056	.621	.559	.943
It takes all my resources to complete my work objectives.	49.49	129.855	.536	.443	.946

## Scale: Job Fit

### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.930	.929	5

### Inter-Item Correlation Matrix

	I feel my values "match" or fit this organization and the current employees in this organization.	I think the values and personality of this organization reflect my own values and personality.	The values of this organization are similar to my own values.	My values match those of current employees to this organization.	I feel my personality matches the "personality" or image of this organization.
I feel my values "match" or fit this organization and the current employees in this organization.	1.000	.812	.795	.593	.655

I think the values and personality of this organization reflect my own values and personality.	.812	1.000	.919	.635	.735
The values of this organization are similar to my own values.	.795	.919	1.000	.649	.754
My values match those of current employees to this organization.	.593	.635	.649	1.000	.690
I feel my personality matches the “personality” or image of this organization.	.655	.735	.754	.690	1.000

#### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation
I feel my values “match” or fit this organization and the current employees in this organization.	13.94	14.473	.801	.681
I think the values and personality of this organization reflect my own values and personality.	14.10	13.569	.888	.865
The values of this organization are similar to my own values.	14.13	13.502	.893	.864
My values match those of current employees to this organization.	14.20	15.479	.703	.522
I feel my personality matches the “personality” or image of this organization.	14.07	14.204	.791	.644

### Item-Total Statistics

Cronbach's Alpha if Item Deleted

I feel my values "match" or fit this organization and the current employees in this organization.	.916
I think the values and personality of this organization reflect my own values and personality.	.899
The values of this organization are similar to my own values.	.898
My values match those of current employees to this organization.	.934
I feel my personality matches the "personality" or image of this organization.	.918

### Scale: AFFECTIVE COMMITMENT

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.934	.937	6

#### Inter-Item Correlation Matrix

	I feel a strong sense of belonging to my organization.	I feel personally attached to my work organization.	I am proud to tell others I work at my organization.	Working at my organization has a great deal of personal meaning to me.
I feel a strong sense of belonging to my organization.	1.000	.859	.779	.821
I feel personally attached to my work organization.	.859	1.000	.714	.798

I am proud to tell others I work at my organization.	.779	.714	1.000	.770
Working at my organization has a great deal of personal meaning to me.	.821	.798	.770	1.000
I would be happy to work at my organization until I retire.	.669	.653	.620	.670
I really feel that problems faced by my organization are also my problems.	.705	.718	.627	.668

### Inter-Item Correlation Matrix

	I would be happy to work at my organization until I retire.	I really feel that problems faced by my organization are also my problems.
I feel a strong sense of belonging to my organization.	.669	.705
I feel personally attached to my work organization.	.653	.718
I am proud to tell others I work at my organization.	.620	.627
Working at my organization has a great deal of personal meaning to me.	.670	.668
I would be happy to work at my organization until I retire.	1.000	.598
I really feel that problems faced by my organization are also my problems.	.598	1.000

### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation
I feel a strong sense of belonging to my organization.	17.51	25.764	.884	.815

I feel personally attached to my work organization.	17.51	25.794	.860	.781
I am proud to tell others I work at my organization.	17.10	27.523	.797	.666
Working at my organization has a great deal of personal meaning to me.	17.38	26.177	.855	.750
I would be happy to work at my organization until I retire.	18.06	25.479	.719	.519
I really feel that problems faced by my organization are also my problems.	17.62	26.846	.747	.568

### Item-Total Statistics

Cronbach's Alpha if Item Deleted

I feel a strong sense of belonging to my organization.	.911
I feel personally attached to my work organization.	.914
I am proud to tell others I work at my organization.	.923
Working at my organization has a great deal of personal meaning to me.	.915
I would be happy to work at my organization until I retire.	.936
I really feel that problems faced by my organization are also my problems.	.928

## 9.5.2. BIVARRIATE CORRELATION

### Affective Commitment Correlations

		Q1	Q2	Q3	Q4	Q5	Q6	Total
Q1	Pearson Correlation	1						
	N	198						
Q2	Pearson Correlation	.859	1					
	Sig. (2-tailed)	.000						
	N	198	198					
Q3	Pearson Correlation	.779	.714	1				
	Sig. (2-tailed)	.000	.000					
	N	198	198	198				
Q4	Pearson Correlation	.821	.798	.770	1			
	Sig. (2-tailed)	.000	.000	.000				
	N	198	198	198	198			
Q5	Pearson Correlation	.669	.653	.620	.670	1		
	Sig. (2-tailed)	.000	.000	.000	.000			
	N	198	198	198	198	198		
Q6	Pearson Correlation	.705	.718	.627	.668	.598	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000		
	N	198	198	198	198	198	198	
Tot	Pearson Correlation	.884	.875	.818	.910	.684	.735	1
al	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	198	198	198	198	198	198	198

### Psychological Climate Correlations

My boss is flexible about how I accomplish my job objectives .	My manager is supportive of my ideas and ways of getting things done.	My boss gives me the authority to do my job as I see fit.	I'm careful in taking responsibility because my boss is often critical of new ideas.	I can trust my boss to back me up on decisions I make in the field.	I feel very useful in my job.	Doing my job well really makes a difference .
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My boss is flexible about how I accomplish my job objectives.	Pearson Correlation	1						
	N	198						
My manager is supportive of my ideas and ways of getting things done.	Pearson Correlation	.868	1					
	Sig. (2-tailed)	.000						
	N	198	198					
My boss gives me the authority to do my job as I see fit.	Pearson Correlation	.827	.861	1				
	Sig. (2-tailed)	.000	.000					
	N	198	198	198				
I'm careful in taking responsibility because my boss is often critical of new ideas.	Pearson Correlation	.441	.443	.396	1			
	Sig. (2-tailed)	.000	.000	.000				
	N	198	198	198	198			
I can trust my boss to back me up on decisions I make in the field.	Pearson Correlation	.772	.815	.816	.434	1		
	Sig. (2-tailed)	.000	.000	.000	.000			
	N	198	198	198	198	198		
I feel very useful in my job.	Pearson Correlation	.691	.741	.760	.325	.773	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000		
	N	198	198	198	198	198	198	
Doing my job well really makes a difference.	Pearson Correlation	.654	.709	.686	.402	.732	.830	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	198	198	198	198	198	198	198
	Pearson Correlation	.567	.623	.671	.289	.634	.761	.696

I feel like a key member of the organization.	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	198	198	198	198	198	198	198
The work I do is very valuable to the organization.	Pearson Correlation	.564	.641	.632	.250	.679	.731	.738
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	198	198	198	198	198	198	198
I rarely feel my work is taken for granted.	Pearson Correlation	.487	.519	.565	.234	.538	.539	.515
	Sig. (2-tailed)	.000	.000	.000	.001	.000	.000	.000
	N	198	198	198	198	198	198	198
My supervisors generally appreciate the way I do my job.	Pearson Correlation	.619	.679	.653	.368	.696	.714	.693
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	198	198	198	198	198	198	198
The organization recognizes the significance of the contributions I make.	Pearson Correlation	.481	.488	.556	.206	.557	.564	.524
	Sig. (2-tailed)	.000	.000	.000	.004	.000	.000	.000
	N	198	198	198	198	198	198	198
My job is very challenging.	Pearson Correlation	.448	.468	.488	.391	.447	.515	.570
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	198	198	198	198	198	198	198
It takes all my resources to complete my work objectives.	Pearson Correlation	.408	.417	.451	.181	.428	.441	.448
	Sig. (2-tailed)	.000	.000	.000	.011	.000	.000	.000
	N	198	198	198	198	198	198	198
Total score	Pearson Correlation	.781	.822	.811	.435	.825	.808	.798
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	198	198	198	198	198	198	198

**Psychological Climate Correlations cont...**

		I feel like a key member of the organization.	The work I do is very valuable to the organization.	I rarely feel my work is taken for granted.	My supervisors generally appreciate the way I do my job.	The organization recognizes the significance of the contributions I make.	My job is very challenging.	It takes all my resources to complete my work objectives.
My boss is flexible about how I accomplish my job objectives.	Pearson Correlation							
	N							
My manager is supportive of my ideas and ways of getting things done.	Pearson Correlation							
	Sig. (2-tailed)							
	N							
My boss gives me the authority to do my job as I see fit.	Pearson Correlation							
	Sig. (2-tailed)							
	N							
I'm careful in taking responsibility because my boss is often critical of new ideas.	Pearson Correlation							
	Sig. (2-tailed)							
	N							
I can trust my boss to back me up on decisions I make in the field.	Pearson Correlation							
	Sig. (2-tailed)							
	N							

I feel very useful in my job.	Pearson Correlation						
	Sig. (2-tailed)						
	N						
Doing my job well really makes a difference.	Pearson Correlation						
	Sig. (2-tailed)						
	N						
I feel like a key member of the organization.	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	198					
The work I do is very valuable to the organization.	Pearson Correlation	.746	1				
	Sig. (2-tailed)	.000					
	N	198	198				
I rarely feel my work is taken for granted.	Pearson Correlation	.558	.507	1			
	Sig. (2-tailed)	.000	.000				
	N	198	198	198			
My supervisors generally appreciate the way I do my job.	Pearson Correlation	.685	.656	.612	1		
	Sig. (2-tailed)	.000	.000	.000			
	N	198	198	198	198		
The organization recognizes the significance of the contributions I make.	Pearson Correlation	.563	.509	.649	.667	1	
	Sig. (2-tailed)	.000	.000	.000	.000		
	N	198	198	198	198	198	
My job is very challenging.	Pearson Correlation	.527	.538	.324	.534	.412	1

	Sig. (2-tailed)	.000	.000	.000	.000	.000		
	N	198	198	198	198	198	198	
It takes all my resources to complete my work objectives.	Pearson Correlation	.471	.429	.348	.485	.364	.611	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	198	198	198	198	198	198	198
Total score	Pearson Correlation	.754	.768	.627	.811	.608	.626	.557
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	198	198	198	198	198	198	198

### 9.5.3. FACTOR ANALYSIS

**Affective Commitment Correlation Matrix**

		I feel a strong sense of belonging to my organization.	I feel personally attached to my work organization.	I am proud to tell others I work at my organization.	Working at my organization has a great deal of personal meaning to me.	I would be happy to work at my organization until I retire.	I really feel that problems faced by my organization are also my problems.
Correlation	Q1.	1.000	.859	.779	.821	.669	.705
	Q2	.859	1.000	.714	.798	.653	.718
	Q3	.779	.714	1.000	.770	.620	.627
	Q4	.821	.798	.770	1.000	.670	.668
	Q5	.669	.653	.620	.670	1.000	.598
	Q6	.705	.718	.627	.668	.598	1.000

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.918
Bartlett's Test of Sphericity	Approx. Chi-Square	1007.761
	df	15
	Sig.	.000

**Total Variance Explained**

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.569	76.148	76.148	4.569	76.148	76.148
2	.423	7.051	83.199			
3	.400	6.664	89.863			
4	.282	4.703	94.567			
5	.195	3.251	97.817			
6	.131	2.183	100.000			

Extraction Method: Principal Component Analysis.

### Psychological Climate Correlation Matrix

	My boss is flexible about how I accomplish my job objectives.	My manager is supportive of my ideas and ways of getting things done.	My boss gives me the authority to do my job as I see fit.	I'm careful in taking responsibility because my boss is often critical of new ideas.	I can trust my boss to back me up on decisions I make in the field.	I feel very useful in my job.	Doing my job well really makes a difference.	I feel like a key member of the organization.	The work I do is very valuable to the organization.	I rarely feel my work is taken for granted.	My supervisors generally appreciate the way I do my job.	
Correlation	1.000	.868	.827	.441	.772	.691	.654	.567	.564	.487	.619	
	My boss is flexible about how I accomplish my job objectives.	.868	1.000	.861	.443	.815	.741	.709	.623	.641	.519	.679
	My manager is supportive of my ideas and ways of getting things done.	.827	.861	1.000	.396	.816	.760	.686	.671	.632	.565	.653
	My boss gives me the authority to do my job as I see fit.	.441	.443	.396	1.000	.434	.325	.402	.289	.250	.234	.368

I can trust my boss to back me up on decisions I make in the field.	.772	.815	.816	.434	1.000	.773	.732	.634	.679	.538	.696
I feel very useful in my job.	.691	.741	.760	.325	.773	1.000	.830	.761	.731	.539	.714
Doing my job well really makes a difference.	.654	.709	.686	.402	.732	.830	1.000	.696	.738	.515	.693
I feel like a key member of the organization .	.567	.623	.671	.289	.634	.761	.696	1.000	.746	.558	.685
The work I do is very valuable to the organization .	.564	.641	.632	.250	.679	.731	.738	.746	1.000	.507	.656
I rarely feel my work is taken for granted.	.487	.519	.565	.234	.538	.539	.515	.558	.507	1.000	.612
My supervisors generally appreciate the way I do my job.	.619	.679	.653	.368	.696	.714	.693	.685	.656	.612	1.000
The organization recognizes the significance of the contributions I make.	.481	.488	.556	.206	.557	.564	.524	.563	.509	.649	.667



	My job is very challenging.	.448	.468	.488	.391	.447	.515	.570	.527	.538	.324	.534
	It takes all my resources to complete my work objectives.	.408	.417	.451	.181	.428	.441	.448	.471	.429	.348	.485
Sig. (1-tailed)	My boss is flexible about how I accomplish my job objectives.		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	My manager is supportive of my ideas and ways of getting things done.	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000
	My boss gives me the authority to do my job as I see fit.	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	I'm careful in taking responsibility because my boss is often critical of new ideas.	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000
	I can trust my boss to back me up on decisions I make in the field.	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	I feel very useful in my job.	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000

Doing my job well really makes a difference.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
I feel like a key member of the organization.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
The work I do is very valuable to the organization.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
I rarely feel my work is taken for granted.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
My supervisors generally appreciate the way I do my job.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
The organization recognizes the significance of the contributions I make.	.000	.000	.000	.002	.000	.000	.000	.000	.000	.000	.000
My job is very challenging.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
It takes all my resources to complete my work objectives.	.000	.000	.000	.005	.000	.000	.000	.000	.000	.000	.000

**Psychological Climate Correlation Matrix cont....**

		The organization recognizes the significance of the contributions I make.	My job is very challenging.	It takes all my resources to complete my work objectives.
Correlation	My boss is flexible about how I accomplish my job objectives.	.481	.448	.408
	My manager is supportive of my ideas and ways of getting things done.	.488	.468	.417
	My boss gives me the authority to do my job as I see fit.	.556	.488	.451
	I'm careful in taking responsibility because my boss is often critical of new ideas.	.206	.391	.181
	I can trust my boss to back me up on decisions I make in the field.	.557	.447	.428
	I feel very useful in my job.	.564	.515	.441
	Doing my job well really makes a difference.	.524	.570	.448
	I feel like a key member of the organization.	.563	.527	.471
	The work I do is very valuable to the organization.	.509	.538	.429
	I rarely feel my work is taken for granted.	.649	.324	.348
	My supervisors generally appreciate the way I do my job.	.667	.534	.485
	The organization recognizes the significance of the contributions I make.	1.000	.412	.364
	My job is very challenging.	.412	1.000	.611
	It takes all my resources to complete my work objectives.	.364	.611	1.000
Sig. (1-tailed)	My boss is flexible about how I accomplish my job objectives.	.000	.000	.000
	My manager is supportive of my ideas and ways of getting things done.	.000	.000	.000

My boss gives me the authority to do my job as I see fit.	.000	.000	.000
I'm careful in taking responsibility because my boss is often critical of new ideas.	.002	.000	.005
I can trust my boss to back me up on decisions I make in the field.	.000	.000	.000
I feel very useful in my job.	.000	.000	.000
Doing my job well really makes a difference.	.000	.000	.000
I feel like a key member of the organization.	.000	.000	.000
The work I do is very valuable to the organization.	.000	.000	.000
I rarely feel my work is taken for granted.	.000	.000	.000
My supervisors generally appreciate the way I do my job.	.000	.000	.000
The organization recognizes the significance of the contributions I make.		.000	.000
My job is very challenging.	.000		.000
It takes all my resources to complete my work objectives.	.000	.000	

a. Determinant = 4.374E-6

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.934	
Bartlett's Test of Sphericity	Approx. Chi-Square	2363.083
	df	91
	Sig.	.000

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total

1	8.474	60.531	60.531	8.474	60.531	60.531	7.739
2	1.055	7.536	68.068	1.055	7.536	68.068	5.255
3	.981	7.007	75.074				
4	.737	5.264	80.339				
5	.626	4.473	84.812				
6	.383	2.735	87.547				
7	.330	2.359	89.906				
8	.301	2.150	92.057				
9	.275	1.964	94.021				
10	.260	1.856	95.876				
11	.194	1.388	97.264				
12	.139	.989	98.253				
13	.136	.971	99.224				
14	.109	.776	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.