

**THE RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE, LOCUS OF CONTROL
AND SENSE OF COHERENCE IN A MARKET RESEARCH ORGANISATION**

by

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submitted in accordance with the requirements for

the degree of

MASTER OF ARTS

in the subject

INDUSTRIAL AND ORGANISATIONAL PSYCHOLOGY

at the

UNIVERSITY OF SOUTH AFRICA

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February 2011

DECLARATION

I, Janine Feldman, student number 43457878, declare that

THE RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE, LOCUS OF CONTROL AND SENSE OF COHERENCE IN A MARKET RESEARCH ORGANISATION

is my own work, and that all the sources that I have used or have quoted from have been indicated and acknowledged by means of complete references.

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DATE

ACKNOWLEDGEMENTS

I would like to thank the following people:

- My supervisor, Dr Leona Ungerer, for her guidance, advice and encouragement in the completion of this study.
- The organisation providing the population.
- Andries Masenge, at Unisa's Bureau for Market Research, for his assistance and patience.
- Nicola Taylor, for always being available to answer "a quick question".
- Moya Joubert, for assisting with the language editing.
- My friend, Yolandi Van Der Berg, for being there for me throughout this process.
- My husband, Darryl, and my parents, Bobby and Winnie, for their years of support and encouragement.
- My sons, Jarred and Rhys, for their encouragement and optimistic little attitudes.

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SUMMARY

The primary objective was to determine whether there is a relationship between emotional intelligence, locus of control and sense of coherence in a market research organisation. A secondary objective was to determine whether individuals from various biographical groups differed significantly in terms of emotional intelligence, locus of control and sense of coherence. A sample of 179 participants completed the Bar-On EQ-i, Locus of Control Inventory and Sense of Coherence Scale.

There was a statistically significant relationship between emotional intelligence, locus of control and sense of coherence. No significant gender differences were found. Furthermore, the findings showed differences between occupational levels in terms of both internal locus of control and sense of coherence, but not for emotional intelligence. No significant differences were evident between education, work experience or age in terms of the three constructs.

An emotional intelligence intervention programme was recommended, as well as the use of an emotional intelligence assessment instrument. Recommendations for future research included broadening the relevance of the results.

KEY TERMS

Emotional intelligence, locus of control, sense of coherence, salutogenesis, wellness constructs

CHAPTER 1

SCIENTIFIC ORIENTATION TO THE RESEARCH

The research focussed on the relationship between emotional intelligence, locus of control and sense of coherence in a market research organisation. In this chapter, the following will be covered: background to and rationale for the study, problem statement, aims, paradigm, research design, research method, chapter layout and chapter summary.

A market research environment is often characterised by excessive client demands, strict policies and processes, brief turnaround times and unpredictable rework. Emotional intelligence, locus of control and sense of coherence are constructs which may help a person to function optimally in such an environment. The link between locus of control and management performance is well established (Adeyemi-Bello in Gropp, Geldenhuys & Visser, 2007). In addition, Gropp, Geldenhuys and Visser (2007) indicate that individuals with a high sense of coherence have a greater ability to mobilise and generate resources in their workplace than employees with a low sense of coherence. Furthermore, in terms of emotional intelligence, Slaski and Cartwright (2002) state that managers who score high on emotional intelligence suffer less subjective stress, experience better health and well-being, and demonstrate better management performance than managers who score low on emotional intelligence.

In a market research industry, the relationship between these three constructs may allude to the type of person who would function best in such an environment. Also of interest may be the relationship between these constructs and various biographical variables. If an organisation is able to identify potential leaders or talented individuals early in the recruitment or succession planning process (in terms of gender, age and other biographical variables), the organisation will be able to channel the necessary resources into their development, thereby creating efficiencies in the identification process of current and future leaders. It is also necessary to investigate biographical variables in order to establish whether there is a correlation between certain wellness constructs such as emotional intelligence, locus of control and sense of coherence and biographical variables. Such correlational information may ultimately be linked to skills such as high performance. The findings may also assist an organisation to form a holistic idea of all the skills an individual requires to perform the job well.

1.1 BACKGROUND TO AND RATIONALE FOR THE RESEARCH

The study of psychological wellness is congruent with the positive psychology movement (Gropp *et al.*, 2007). According to Schueller (2009), the study of positive mental health and human strengths has become the focus of positive psychology, a growing field in psychology. Positive psychology “offers a rare opportunity for a reorientation and reconstruction of our views of clinical psychology through a reconstruction of our views of psychological health and human adaptation and adjustment” (Snyder & Lopez, 2002, p.22). The focus is thus on wellness as opposed to pathology. In addition, an important notion in positive psychology is the view that focusing on a person’s strengths is more beneficial than addressing his or her weaknesses (Seligman in Scheuller, 2009).

According to Cilliers (in Cilliers & Kossuth, 2004), the salutogenic paradigm and its constructs developed from various personality theories emphasising personality growth, wellness and optimal psychological functioning. Around 2000, the evolution of these theories became grounded in what became known as positive psychology. Positive psychology includes many behavioural constructs, *inter alia*, sense of coherence, internal locus of control and emotional intelligence (Cilliers & Kossuth, 2004). The constructs of emotional intelligence, internal locus of control and sense of coherence thus relate to the wellness of individuals, and may be described as wellness constructs.

Attempts to define wellness often begin with references to the World Health Organisation’s (1967) definition of wellness as not merely the absence of illness but a state of complete physical, mental, and social well-being (Roscoe, 2009). Wellness overlaps with constructs such as positive mental health, flourishing, well-being and happiness, although none of these constructs alone sufficiently explain wellness as a multifaceted concept that integrates signs of well-being with the ability to function well (Schueller, 2009). According to Frankl (in De Klerk, 2005), wellness is about living a life that has significance, a will to meaning and a striving for life that has a purpose. Wellness thus includes living well and doing well, and represents the presence of positive characteristics such as positive emotions, positive social interactions and positive functioning (Schueller, 2009). According to Roos and Van Eeden (2008), wellness is characterised by continuous adaptation, general wellness, and the realisation of personal potential. Positive emotions are a crucial component of wellness, and in addition to being indicators of success, they foster better social, occupational and physical functioning (Scheuller, 2009). Wellness may be described as a state of optimal health or salutogenesis (Antonovsky in Scheuller, 2009).

Several common dimensions of wellness have been described. According to Roscoe (2009), these dimensions are social, emotional, physical, intellectual, spiritual, psychological, environmental and occupational. This research focuses on occupational or work wellness. Wellness at work is also an element of wellness, and the relationship between general wellness, meaning in life and aspects of work wellness tend to be intertwined. Work gives individuals a feeling of being tied to a larger society, of having something to do, of having a purpose in life (De Klerk, 2005). According to De Klerk (2005), an individual's organisation or work is a significant part of his or her life, and as a result a place where he or she seeks to find a sense of meaning. Work is thus not simply a job, but an opportunity of great significance that serves other functions than simply earning a living (De Klerk, 2005).

Work wellness involves an individual using his or her abilities and talents to achieve purpose, happiness and enrichment in his or her working life (Wicken, 2000). Work wellness is thus the extent to which an individual can express his or her values and gain personal satisfaction from paid and nonpaid work; an individual's attitude toward work and ability to balance several roles; and the ways in which the individual can use his skills and abilities to contribute to the community (Roscoe, 2009). According to Myers, Sweeney and Witmer (2000), work is seen as a life task that is amenable to intervention –hence the importance of understanding wellness at work in order to make interventions available for optimal functioning and well-being at individual and group level. In the current research, emotional intelligence, internal locus of control and sense of coherence are regarded as being related to the wellness of individuals, as well as to the wellness of individuals at work.

There has been an increase in employee wellness research since 1990 (Schreuder & Coetzee, 2010). However, more research is probably needed on the relationship between the constructs – as in the current research – particularly in light of the contribution these constructs can make to the realisation of people's potential. In addition, this South African research study on the relationship between these three constructs may be beneficial for the market research industry as a whole. The findings of the research may lead to a better understanding of employees in terms of the three constructs, and possibly result in coaching or other programmes aimed at wellness, which could benefit both the employees and the organisation involved in this study.

In South Africa, work demands have increased because of many factors, including the economic situation in the country (Van Zyl, 2002). The economic situation coupled with work demands leads

to fears among employees, such as possible retrenchment, loss of income, the possibility that business or individual objectives will not be achieved, and unhealthy competition among employees (Van Zyl, 2002). The global economic downturn has further demanded that employees utilise their time more efficiently.

The above is also true of the market research industry. A significant shortage of research skills exists, placing strain on the industry and employees alike. To illustrate this, Roos and Van Eeden (2008) highlighted the various challenges that a typical South African marketing research environment poses to employers. The environment is characterised by long working hours, high work volumes, fast turnaround times and deadlines. Employees often work in teams, allocated according to the nature of their work. Each team is responsible for a specialised part of the market research process. This structure necessitates each team performing their tasks correctly for the process to flow satisfactorily. The nature of the organisation requires its leaders, their subordinates, as well as the call centre agents constantly to interact with one another, as well as with various demanding clients. In addition, the environment is fast paced and pressurised because of the process interdependence between the work teams (Bard & Moore, 2000). Furthermore, according to Roos and Van Eeden (2008), the marketing research environment is not generally associated with lucrative employment benefit packages.

All of the above factors add to the difficulty that employers in the South African marketing research industry have in recruiting suitable employees and then developing and retaining them as intellectual capital (Roos & Van Eeden, 2008). The environment is therefore fairly harsh, and besides developing skills and expertise, it may be valuable to investigate wellness elements which could promote the optimal performance of employees. The trend that employees need to work smarter also applies to the market research industry.

This study therefore examines the relationship between emotional intelligence, internal locus of control and sense of coherence, in order to establish what potentially makes an employee perform well in the face of challenges such as those currently faced in both the labour and marketing research environments. A market research environment may be particularly suitable environment for assessing the relationship between these constructs amongst employees, in light of the demands they face daily and how they cope with them.

Gropp *et al.* (2007) investigated the relationship and the differences between various psychological wellness constructs, and found statistically significant correlations between self-actualisation, locus

of control, sense of coherence and emotional intelligence. This research will follow a similar approach to that of Gropp *et al.* (2007), although only the relationship between emotional intelligence, locus of control and sense of coherence has been selected for this research. Gropp *et al.* (2007) found that the dimensions of locus of control, sense of coherence and emotional intelligence clustered together in a factor that was labelled psychological wellness. Time Competence and Inner-directed Self-actualisation (as measured by the Personal Orientation Inventory) clustered together as a second factor. Based on the underlying relationship among the three constructs that was evident in Gropp *et al.*'s (2007) study, locus of control, emotional intelligence and sense of coherence were selected for this study. These three wellness constructs will now be briefly discussed. Emotional intelligence, locus of control, and sense of coherence have been identified as three wellness constructs that help an individual to perform well in the face of adversity, which may explain why these constructs have been studied extensively in the literature.

1.1.1 Emotional intelligence

Mayer and Salovey (in Mayer, Salovey & Caruso, 2004, p.197) define emotional intelligence as “the capacity to reason about emotions, and of emotions to enhance thinking. It includes the abilities to perceive emotions accurately, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth”.

In 1995, Daniel Goleman generated much interest in the role that emotional intelligence plays in individuals' lives (Van der Merwe, Coetzee & De Beer, 2005). Goleman (in Kobe, Reiter-Palmon & Rickers, 2001, p.155) seemed to popularise the concept of emotional intelligence and defined it as “the ability to be aware of and to handle one's emotions in varying situations”. The term emotional intelligence has become popular in the last 12 years, but the construct was actually studied for most of the 20th century (Bar-On, 2005), as will be evident in Chapter 2.

According to Bar-On (2010), emotional intelligence has a significant impact on performance, happiness, well-being, and the search for a more meaningful life, all of which are key areas in positive psychology. Emotional intelligence has been found to be associated with a lower likelihood to experience negative emotions and a higher likelihood to experience positive emotions, thereby contributing to a richer sense of subjective well-being. As a result, it has been hypothesised that

emotional intelligence predicts one's subjective well-being and positive mental health (Zeidner & Olnick-Shemesh, 2010). A healthy sense of well-being is likely to assist an individual to function optimally in a working environment.

In essence, emotional intelligence comprises various emotional reasoning abilities, namely perceiving, understanding and regulating emotions (Lam & Kirby, 2002). The fields of emotions and intelligence are combined in that emotions are regarded as sources of information which help one to make sense of one's environment (Salovey & Grewal, 2005). According to Bar-On (2003), to be emotionally intelligent means to understand and express oneself effectively, understand and relate well to other people and successfully cope with pressures. Emotional intelligence is integral to most relationships in the workplace. According to Bunker (in Cherniss & Goleman, 2001), leaders especially need to be aware of and manage their own feelings, as well as be aware of others' emotional reactions. In this way leaders are able to effectively assist employees in terms of managing change, which may point to the need for investigating this construct in situations such as those currently faced in labour and market research environments.

Compared to people who do not have a high level of emotional intelligence, an emotionally intelligent individual is able to better perceive emotions, use them in thought, understand their meanings, and manage emotions. They are likely to solve emotional problems quite well. The person is likely to be open and agreeable. The individual is less likely to engage in negative behaviours. In addition, such a person may describe their motivational goals, aims and missions quite well (Mayer *et al.*, 2004).

It may be beneficial to investigate this construct in a market research environment in order to gain a better understanding of employees in terms of emotional intelligence, and thereby possibly improve the emotional intelligence of employees where necessary. This may be of value in that it may lead to changes in relationships in the organisation and ultimately assist employees to function more optimally in the fast-paced and pressurised environment.

1.1.2 Locus of control

Internal-external locus of control refers to an “individual’s beliefs that he or she has control over events” (Phares, Ritchie & Phares, Rotter, Terborg, in Glazer, Stetz & Izso, 2004, p.646). Whereas internals (people characterised as having an internal locus of control) believe they are responsible for and in control of what happens to them, externals (people who are characterised as having an external locus of control) believe generally that other forces or people determine events in their lives.

Internal locus of control has been found to be related to organisational performance (Adeyemi-Bello, 2001). Phares (in Selart, 2005) reported that a person with an internal locus of control wants to have control over his or her environment, and tends to learn and perform better than an individual with an external locus of control. Internals also seem to display high self-confidence and rely on themselves. According to Carrim, Basson and Coetzee (2006), an internal locus of control is associated with job satisfaction and an external locus of control with job dissatisfaction.

An individual with an internal locus of control is likely to perform better in tasks requiring skill (Selart, 2005). Phares in Selart, 2005) is of the opinion that internals therefore have higher self-confidence and rely on themselves. In comparison, an external with adapt to a group and believes that success is the result of consulting with others (Selart, 2005). He noted that internals exert greater efforts to control their environment, exhibit better learning, seek new information more actively, and use information more effectively (Spector, 1982).

Table 1.1: The difference in characteristics between internal and external locus of control (Els, 1999, p.98)

Internal locus of control	External locus of control
Emotional stability	Emotionally sensitive
Mature, calm	Immature, uncertain
Assertive	Inferior
Independent	Dependent on approval
Unconventional	Conventional
Adventurous	Over-cautious
Socially outspoken	Shy, reserved

Firm	Accommodating, easily influenced
Responsible	Irresponsible
Intelligent, good insight	Insufficient knowledge of self
Self-assured	Uncertain
Analytical	Less precise
Free-thinking	Tunnel vision, limited insight
Relaxed	Stressed

An internal locus of control appears to be a significant component of emotional well being and the ability to handle stress in general (Spector, Cooper, Sanchez, O'Driscoll, Sparks *et al.*, 2002), pointing to the relevance of investigating it among employees in a market research organisation. Because internal control is the focus in this study, locus of control will be operationalised as internal locus of control.

1.1.3 Sense of coherence

Sense of coherence research appeared to flourish following the development of the Orientation to Life Questionnaire as published in 1987 in Antonovsky's book titled, *Unraveling the Mystery of Health* (Ortlepp & Friedman, 2001). Antonovsky viewed health from a different perspective to the pathogenic model. Instead of considering why people fall ill, he focused on what keeps them healthy (Poppius, Tenkanen, Hakama, Kalimo & Pitkanen, 2003). He called this a salutogenic instead of pathological approach, and developed the concept, sense of coherence (Poppius *et al.*, 2003).

According to Antonovsky (in Smith, Breslin & Beaton, 2003, p.475) sense of coherence is defined as "a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement".

Sense of coherence is not a coping style but a disposition or way of appraising the world, which allows a person to choose appropriate strategies to deal with the pressures facing him or her (Strümpfer & Mlonzi, 2001). Sense of coherence may further be regarded as a key element in the structure of a person's personality, which facilitates the coping process (Griffiths, 2009). An individual with a strong sense of coherence in the workplace is likely to cope more effectively with various stressors than an individual with a weaker sense of coherence, which may point to the relevance of investigating sense of coherence among employees from a market research organisation because of the various stressors they face daily.

1.2 PROBLEM STATEMENT

As indicated above, the chosen constructs for this research namely emotional intelligence, locus of control and sense of coherence are related to the salutogenic model. The salutogenic model attempts to explain the origins of health (Strümpfer & Mlonzi, 2001). Furthermore, the salutogenic paradigm focuses on a person's ability to be healthy, resilient and cope well under pressure as well as cope in everyday living (Herbst, Coetzee & Visser, 2007).

Often, in practice, insufficient attention is given to the concept of wellbeing in an organisation. Much research seems to have been done on the causes underlying employee dissatisfaction, poor performance, inability to cope under pressure and aspects of illness at work, but not enough research on the causes of employee wellness. This is a regrettable oversight because emotionally healthy employees contribute to a profitable organisation. The psychological growth and wellness of employees, for instance, are known to facilitate their coping with change and transformation (Cilliers & Kossuth, 2004). It should therefore be beneficial to have an indication of how the three wellness constructs are related among employees in a market research environment. The findings may not only highlight the level of wellness among employees, but may also draw attention to the need for wellness programmes in order to ensure that assistance is given to those individuals who may benefit from such programmes. Such programmes tend to result in reduced absenteeism, improved industrial relations, increased performance and productivity and reduced health care costs (Sieberhagen, Pienaar & Els, 2011).

As pointed out earlier, the relationship between emotional intelligence, locus of control and sense of coherence and various biographical variables (employees' age, educational level, occupational level, gender and work experience) will be investigated in this study. The effectiveness and

productivity of an organisation as a whole, and specifically its employees, may be enhanced if it can be established whether there is a correlation between certain wellness constructs such as emotional intelligence, locus of control and sense of coherence (termed soft skills or people skills), and biographical variables, which usually are grouped with hard skills. Hard skills are usually the technical or administrative procedures relating to an organisation's business. Such correlational information may ultimately be linked to further hard skills such as high performance. This may result in a means to link job criteria with the hard and soft skills required for excellence.

The practical value of the results of this study lies in the way these findings may influence the way an organisation selects, manages and specifically develops its employees. For example, the organisation may place more emphasis on selecting individuals who display high emotional competencies. A sales position, for instance, may require an individual to possess an internal locus of control, and an emotionally competent individual may then be given preference for this type of position. These requirements, added to the technical requirements of particular positions, may ensure that an organisation is able to appoint individuals in suitable roles. The results may assist in creating a suitable culture by recruiting appropriate individuals, and enhancing the emotional capabilities of the existing workforce through development initiatives. Gaining insight into the wellness of employees may further assist managers in understanding how well employees are coping with change, transformation and organisational life.

To address the above issues, this research will be designed to answer the following literature and empirical questions:

- How are emotional intelligence, internal locus of control and sense of coherence related?
- How are emotional intelligence, internal locus of control and sense of coherence related to particular biographical variables (age, educational level, occupational level, gender and work experience)?
- How might recommendations resulting from this research influence the way an organisation manages its employees and their wellness?

1.3 AIMS

The general aim of this research was to investigate the relationship between emotional intelligence, locus of control (as operationalised by internal locus of control) and sense of coherence of employees in a market research organisation in South Africa. More specifically, it aimed to determine the relationship between emotional intelligence, internal locus of control and sense of coherence and particular biographical variables (age, educational level, occupational level, gender and work experience). The specific aims were thus to determine significant differences between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence in terms of age, gender groups, educational level, occupational level and work experience.

1.4 THE PARADIGM PERSPECTIVE

This research falls into the humanistic paradigm, and more specifically the area of salutogenesis. The humanistic paradigm “emphasises the unique quality of humans, especially their freedom and their potential for personal growth” (Weiten, 1992, p.440). A person’s subjective view of the world is particularly important. This will be reflected in the person’s disposition.

According to Rabin, Matalon, Maoz and Shiber (2005, p.94), salutogenesis “is a view of health that examines how to preserve health – salutogenesis - rather than looking at how illness is caused – pathogenesis”. Within this paradigm, life stressors are perceived as challenges, and this paradigm’s core concept, namely sense of coherence, postulates that health involves coping actively and positively (Rabin *et al.*, 2005), indicating its relevance to the current study.

1.5 RESEARCH DESIGN

The research design refers to the outline, plan or strategy specifying the procedure to be used in seeking an answer to the research questions (Christensen, 1994). A non experimental cross-sectional design employing questionnaire data was used in the study, and a quantitative research approach was followed. The data were analysed by means of quantitative statistical methods.

The three constructs that were measured were emotional intelligence, internal locus of control and sense of coherence. Descriptive statistics were generated, depicting each participant's age, educational level, occupational level, gender and work experience. In terms of the validity and reliability of the research project, standardised assessment questionnaires, suitable for the South African environment, were used.

Participants completed the questionnaires in a controlled environment. Correlation and inferential statistics were generated. The variables were correlated and regression analysis was performed.

The unit of analysis was the individual, and to ensure that the research was ethical, all participants were informed of the purpose of the research, and their participation was voluntary. Adherence to statistical procedures further ensured the reliability and validity of the results.

1.6 RESEARCH METHOD

1.6.1 The sample

The participants in this study were employees from the head office and regional offices of a market research company in South Africa. Despite the limitations of a convenience sample, the target population for the project was employees within the market research industry. A stratified random sample of 213 employees was selected from a population of 507 individuals in the company to participate in the study. Since the business language of the organisation was English, the researcher concluded that all the employees would be proficient in English, and be able to complete the English versions of the measuring instruments.

1.6.2 Measuring instruments

Three measuring instruments representing the three constructs were administered to the respondents, namely the Bar-On Emotional Quotient Inventory (Bar-On EQ-i), Locus of Control Inventory (LCI) and Sense of Coherence Scale (SOCS).

In addition to the three measuring instruments, each participant completed a biographical questionnaire. Furthermore, a consent form was completed. Each participant was requested to acknowledge his or her voluntary participation.

1.6.2.1 Bar-On EQ-i

The Bar-On EQ-i measures an individuals' ability to deal with daily demands and pressures and will be used to measure emotional intelligence (Anonymous, 2007). The questionnaire assesses a person's general degree of emotional intelligence, potential for emotional health, and present psychological well-being.

South African EQ-i norms appear stable and the ethnicity effects found are not strong enough to warrant the inclusion of separate South African ethnicity norms (Anonymous, 2007). The psychometric properties will be provided in detail in Chapter 5.

This self-report inventory contains 133 items and measures 15 dimensions of emotional intelligence. These dimensions are further combined to yield scores on five sub-scales, namely the intrapersonal, interpersonal, adaptability, stress management and general mood scales (Gropp *et al.*, 2007). Overall emotional intelligence scores may also be calculated, and the Bar-On EQ-i includes three validity subscales (Schutte & Malouff in Gropp *et al.*, 2007). The inventory takes 30 to 45 minutes to complete.

1.6.2.2 Locus of control inventory

The locus of control inventory (LCI) was used to measure locus of control. The revised 88-item LCI was developed to measure locus of control based on internal control, external control and autonomy (Schepers in Gropp *et al.*, 2007). Individuals with low scores on external control and high scores on internal control and autonomy are regarded as well adapted individuals who are able to cope with life's demands. Individuals with high scores on external control seem to blame the environment for their life crises (Gropp *et al.*, 2007).

An advantage of using the LCI is that it is a locally developed tool, and is available in English, Afrikaans and isiZulu (Anonymous, 2007). Highly acceptable reliabilities have further been

obtained for the LCI (Schepers, Gropp & Geldenhuys, 2006). In terms of validity, it was found that internal control and autonomy are strongly related to psychological wellness, and external control negatively to stress management (Schepers *et al.*, 2006). The Cronbach alpha coefficients of the 1999 version were 0.88 (autonomy), 0.87 (external control) and 0.82 (internal control) (Gropp *et al.*, 2007). The LCI takes about 30 minutes to complete.

1.6.2.3 Sense of coherence scale

In the current study Antonovsky's SOCS (1987) was administered to measure the construct of sense of coherence. This scale measures a person's world view over time, and is designed to measure strengths within individuals that allow them to survive in the face of extreme stresses. The SOCS consists of 29 five-facet items with a seven-point semantic differential with two anchoring phrases (Gropp *et al.*, 2007), and it is manually scorable.

According to Antonovsky (in Gropp *et al.*, 2007), the SOCS was developed mainly to measure sense of coherence as a global orientation, although the scale yields scores on each of three dimensions, namely comprehensibility, manageability and meaningfulness. Each item includes four facets that describe the stimulus, including a fifth sense of coherence facet that expresses one of the three components of sense of coherence. There are 11 items for the comprehensibility dimension, ten items for manageability, and eight items for meaningfulness. Thirteen negatively phrased items are included, but the scale is reverse scored so that a higher score reflects a stronger sense of coherence (Antonovsky in Gropp *et al.*, 2007).

Antonovsky (1993) reported alpha coefficients ranging between 0.82 and 0.95 for the SOCS. Test-retest reliabilities vary between 0.52 and 0.97 (Gropp *et al.*, 2007). The scale takes approximately 15 minutes to complete.

1.6.3 Data collection procedures

Employees forming part of the randomly selected sample were requested to attend an hour-and-a-half assessment session in groups of no more than 20 participants. Numerous assessment sessions were therefore scheduled. During the assessment session, each respondent completed the Bar-On EQ-i, LCI and SOCS as explained above, as well as a consent form and biographical

questionnaire. The questionnaires were scored and a data set provided by the test distributor supplying the Bar-On EQ-i and LCI instruments.

1.6.4 Data processing and analysis

The data were then analysed by means of quantitative statistical methods. The first step in the process of analysis was to compute descriptive statistics for the study variables. Thereafter it was established whether the hypothesised relationships existed between emotional intelligence, internal locus of control and sense of coherence.

Correlation tests were performed to test this relationship and regression analysis was conducted to test if the independent variable, internal locus of control, predicted the dependent variables emotional intelligence and sense of coherence. Inferential analysis was also conducted to establish whether there was a significant difference between participants in terms of their biographical characteristics (age, educational level, occupational level, gender and work experience) and their scores on emotional intelligence, internal locus of control and sense of coherence. In addition, Analysis of Variance (ANOVA) was performed.

1.6.5 Hypotheses

The following six hypotheses were formulated to test the relationships between the various variables.

Hypothesis 1

There is a significant correlation between internal locus of control, emotional intelligence and sense of coherence.

Independent variable: internal locus of control

Dependent variables: emotional intelligence and sense of coherence

Hypothesis 2

There is a significant difference between the mean scores for the constructs emotional intelligence, internal locus of control and sense of coherence among various age level groups.

Independent variable: age

Dependent variables: emotional intelligence, internal locus of control and sense of coherence

Hypothesis 3

There is a significant difference between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence among the educational level groups.

Independent variable: educational level

Dependent variables: emotional intelligence, internal locus of control and sense of coherence

Hypothesis 4

There is a significant difference between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence among various occupational level groups.

Independent variable: occupational levels

Dependent variables: emotional intelligence, internal locus of control and sense of coherence

Hypothesis 5

There is a significant difference between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence between gender groups.

Independent variable: gender

Dependent variables: emotional intelligence, internal locus of control and sense of coherence

Hypothesis 6

There is a significant difference between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence in terms of number of years of work experience.

Independent variable: years of work experience

Dependent variables: emotional intelligence, internal locus of control and sense of coherence

1.6.6 Results and conclusions

The results of the relationship between the three constructs will be reported in Chapter 6. On the basis of the findings, the researcher will indicate whether there was a significant difference between the participants in terms of their biographical variables and their scores on emotional intelligence, locus of control and sense of coherence.

1.6.7 Limitations

The fact that only self-report measures of psychological health were used in this research may lead to particular limitations. People characteristically may exaggerate when responding to self-report measures or they may be too embarrassed to reveal certain details. Respondents may further forget certain details, or tend to provide responses that fall into a neutral zone. A further restriction in this research may be the cost involved in administering the questionnaires.

1.6.8 Ethics

In terms of ethics, all participants were required to complete a consent form to acknowledge that their participation in the assessment session was voluntary and that the process had fully been explained to them. Furthermore, the researcher decided beforehand that group feedback for the company as a whole would be given and not individual feedback on account of the constraints of time and cost involved in providing individual feedback. The researcher informed the participants that if any of them requested individual feedback, it would be provided.

1.6.9 Recommendations

The formulated problems were solved, and recommendations, based the results, were formulated for the organisation. Anything that transpired from the results would then be put forward to the organisation.

1.7 CHAPTER LAYOUT

The layout of the dissertation is as follows:

Chapter 2	Emotional Intelligence
Chapter 3	Locus of control
Chapter 4	Sense of coherence
Chapter 5	Research methodology
Chapter 6	Research results
Chapter 7	Conclusions, integration of the literature review and empirical study, limitations and recommendations

CHAPTER 2

EMOTIONAL INTELLIGENCE

This chapter provides a literature review on emotional intelligence. Attention will be given to the history of emotional intelligence, as well as the conceptualisation of this construct. Furthermore, the measurement of emotional intelligence will be explored, and the significance of emotional intelligence for occupational success and individual well-being will be discussed. The chapter will conclude with a brief investigation of how emotional intelligence can be enhanced.

2.1 THE HISTORY OF EMOTIONAL INTELLIGENCE

Positive psychology is defined as “the scientific study of positive characteristics and strengths that enable individuals to thrive” (Bar-On, 2010, p.56). The study of emotional intelligence has become an integral part of positive psychology on the basis of the way the two fields are described (Bar-On, 2010). According to Bar-On (2010) the field of positive psychology and the construct of emotional intelligence share obvious similarities. The similarities in positive human characteristics that are studied in both fields are self-regard, understanding how others feel, social skills, group identity, impulse control, good decision making, optimism, hope and general happiness (Bar-On, 2010).

As indicated in Chapter 1, the construct emotional intelligence has gained popularity in recent years, but was actually investigated for much of the 20th century (Bar-On, 2005). Darwin (in Greene, 1977) furthermore seemed to be contemplating modern emotional intelligence more than 150 years ago according to his evolution of the species and natural selection for social evolution. His theories probably constituted the beginnings of modern emotional intelligence.

Thorndike (in Law, Wong, Huang & Li, 2008, p.52) introduced the concept of “social intelligence” in 1920, and defined it as “the ability to understand and manage men and women, boys and girls – to act wisely in human relations”. Thorndike probably also “germinated the seed” of the emotional intelligence concept. His definition of social intelligence has a cognitive and behavioural component in that the ability to understand and manage people is an intellectual capacity. Also,

this intellectual capacity is different from the abstract-verbal and concrete-mechanical aspects of intelligence (Derksen, Kramer & Katzko, 2002).

David Wechsler (1943), one of the originators of IQ (intelligence quotient) testing, also recognised the significance of emotional factors (the non-intellective aspects of general intelligence) in any complete measurement of intelligence (Van der Merwe *et al.*, 2005). In 1977, Rosenthal (in Singh, 2006) reported that the ability to identify people's emotions contributes to one's social and professional success. Following this, Gardner (1983) included "personal intelligence" in his work on the theory of multiple intelligences (Law *et al.*, 2008). Modern emotional intelligence can therefore be traced back to Darwin's theory and has evolved over the years into a construct drawing the same, if not more, attention than traditional intelligence (IQ).

2.2 CONCEPTUALISATION

Emotional intelligence is a young concept, and consequently still is at an early stage in development and hypothesis testing (Cherniss, Extein, Goleman & Weissberg, 2006). This may explain why there appears to be no common agreement on how to define emotional intelligence (Matthews, Roberts & Zeidner, 2004). The "interaction between emotion and cognition that leads to adaptive functioning" seems to capture the essence of emotional intelligence (Salovey & Grewal in Schutte, Malouff, Thorsteinsson, Bhullar & Rooke, 2007, p.922).

Emotional intelligence comprises various emotional reasoning abilities, namely perceiving, understanding and regulating emotions (Lam & Kirby, 2002). The fields of emotions and intelligence converge in that emotions are regarded as sources of information which assist one to make sense of one's environment (Salovey & Grewal, 2005). Mayer *et al.* (2004) thus view emotional intelligence as an ability for processing information, applied to emotions, and subject to principles governing the intellect. Emotional intelligence, in this sense, is therefore the ability to reason about emotions. Mayer and Salovey (in Kobe *et al.*, 2001) are of the opinion that emotional intelligence "bridges the gap" between emotional and cognitive systems, and emotional intelligence and traditional intelligence (IQ) should thus be regarded as two separate intelligences.

According to Mayer *et al.* (2000), the concept of emotional intelligence as an ability gradually evolved in a series of articles in the early 1990s. More recently, three lines of research on emotional intelligence have become evident. One line of research was established in 1990 by

Salovey and Mayer, another by Goleman in 1995 and a third by Bar-On in 1997 (McEnrue & Groves, 2006). The three lines of research will be explored in the sections to follow.

Mayer and Salovey (in Mayer, Salovey & Caruso, 2004, p.197) define emotional intelligence as “the capacity to reason about emotions, and of emotions to enhance thinking. It includes the abilities to perceive emotions accurately, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth”.

According to Mayer *et al.* (2000a), the construct of emotional intelligence should meet certain criteria in order to be truly judged a type of intelligence. The three criteria are conceptual, correlational and developmental. In order to meet the conceptual criterion, emotional intelligence should describe actual abilities instead of preferred courses of behaviour. Whereas perceiving emotion may be a facial expression, regulating emotions may refer to knowing how to calm down after feeling angry (Mayer *et al.*, 2000a). In order to meet the correlational criterion, emotional intelligence should define a set of abilities that are moderately intercorrelated with one another (Mayer *et al.*, 2000a). In order to meet the developmental criterion, emotional intelligence needs to develop with age and experience. Mayer *et al.* (2000a) did in fact determine empirically that the construct of emotional intelligence meets all three criteria.

Mayer and Salovey (1997) proposed a four-branch model of the abilities involved in emotional intelligence, as represented in Figure 2.1 below. These four broad classes of abilities are arranged from lower to higher skills as indicated in Figure 2.1 (Mayer *et al.*, 2000a).

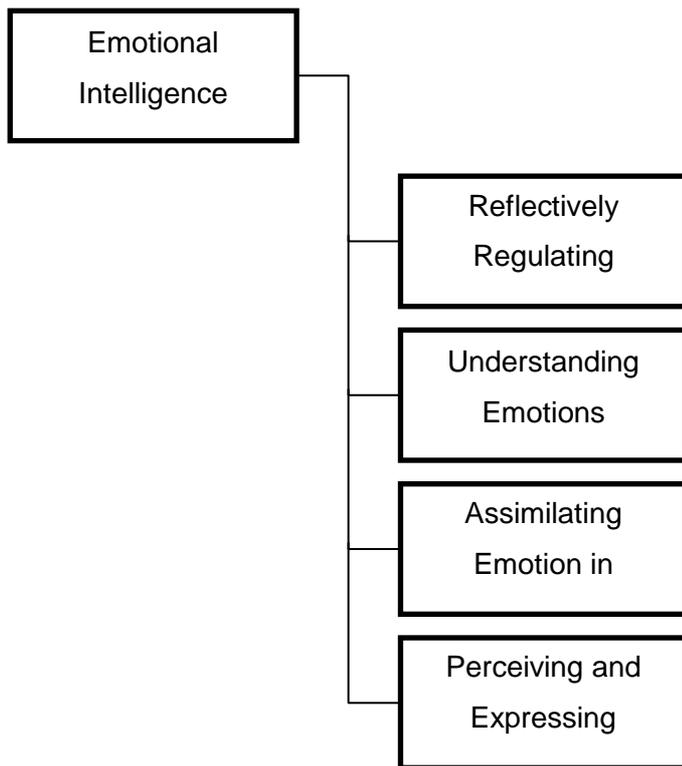


Figure 2.1: A four-branch model of the skills involved in emotional intelligence (Mayer & Salovey in Mayer *et al.*, 2000a, p.269).

According to Mayer *et al.* (2000), the lower skills involve the perception and appraisal of emotion. The second level involves assimilating basic emotional experiences into mental life, while the third level involves understanding and reasoning about emotions (Mayer *et al.*, 2000). The fourth, and highest level, involves the management and regulation of emotions, such as knowing how to calm down after experiencing feelings of anger (Mayer *et al.*, 2000).

Dr Reuven Bar-On (in Van der Merwe *et al.*, 2005) also investigated and defined emotional intelligence, from a competency-based perspective, and has made a significant contribution to positive psychology. The Bar-On model, as well as other models of emotional intelligence, has thus extended Darwinian thinking by highlighting the importance of the ability to *thrive* in addition to merely survive (Bar-On & Goleman in Bar-On, 2010).

Bar-On (2003) believes that to be emotionally intelligent means to understand and express oneself effectively, understand and relate well to other people, and successfully cope with pressures. Bar-On (in Matthews *et al.*, 2004, p.180) further is of the opinion that emotional intelligence is “a

complex interaction of qualities of emotions, mood, personality, and social orientation applied in both interpersonal and intrapersonal situations”. He differentiated between emotional intelligence and general intelligence by asserting that the focus of emotional intelligence is on emotional, social and personal competencies, whereas general intelligence focuses on the cognitive dimensions of intelligence (Kobe *et al.*, 2001). Research seems to indicate a clear distinction between emotional intelligence and general intelligence.

Table 2.1 sets out the major constructs in the Bar-On model (Barnard & Herbst, 2005).

Table 2.1: The major constructs in the Bar-On (1997) model (Barnard & Herbst, 2005, p.59)

Construct	Definition	Subcomponents
Intrapersonal	The intrapersonal area concerns a person’s ability to know and manage himself . Success in this area indicates that a person is able to express his feelings adequately, live and work independently, and has the necessary confidence to express his ideas and beliefs comfortably.	Self-regard Emotional self awareness Assertiveness Independence Self-actualisation
Interpersonal	This area refers to what is known as “people skills”. People who function well in this area tend to be responsible and dependable; they understand, interact with and relate well to others in a variety of situations.	Empathy Social responsibility Interpersonal relationships
Adaptability	The adaptability area of emotional intelligence reveals how successfully the respondent is able to cope with environmental demands and to deal with problematic situations as they may arise.	Reality testing Flexibility Problem solving
Stress management	This area of emotional intelligence involves a person’s ability to withstand stress without giving in, falling apart or losing control. Success in this area indicates a person who is usually calm, hardly ever impulsive and someone who copes well under pressure. These skills are vital in the workplace, especially when one is continuously faced with deadlines and a variety of demands.	Stress tolerance Impulse control

General mood	General mood refers to a person's outlook on life, the ability to enjoy himself and others and an overall feeling of contentment and satisfaction.	Optimism Happiness
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Another line of research is proposed by Goleman. According to Matthews *et al.* (2004) Goleman defined emotional intelligence by exclusion (with reference to traditional intelligence). Goleman (in Matthews *et al.*, 2004) views emotional intelligence as all the positive qualities that are not related to a person's IQ. He summarised emotional intelligence as having *character*. According to Goleman's EI framework (in Barry & Du Plessis, 1997), the four clusters of emotional intelligence are self-awareness, self-management, social awareness and relationship management.

Emotional intelligence (operationalised as an emotional quotient, EQ), is a measure of an individual's emotional skills (Kunnanatt, 2004). Once the various lines of research have been considered, it may be broadly stated that ability models and mixed models of emotional intelligence exist. Ability models suggest that emotions and intelligence can function together, and the models focus on emotions themselves and their interactions with people's thoughts. Mayer and Salovey's (in Sternberg, 2000) work may be described as an ability model. Mixed models treat mental abilities and a variety of other characteristics such as motivation and social activity as a single entity (Mayer *et al.*, in Sternberg, 2000). Bar-On and Goleman's research are both considered to be mixed models. After thoroughly consulting the literature available on emotional intelligence, the researcher is of the opinion that a mixed model of emotional intelligence will be most suitable for this study. Specifically, Bar-On's (1997) model forms the basis of this study. A significant reason for this choice is that Bar-On's (1997) model lends itself to view emotional intelligence as dynamic in the sense that emotional intelligence may be developed through coaching, mentoring and other intervention programmes.

Lastly, Salovey and Grewal (2005) point out a core idea in Mayer and Salovey's model, namely that the skills (perceiving and expressing emotions, using and assimilating emotion in thought, understanding and analysing emotions, and managing emotions / reflective regulation of emotion) cannot exist outside of the social context in which they operate. An individual must thus be aware of what is considered appropriate behaviour by the people with whom he or she interacts in order to use the skills appropriately. Kunnanatt (2004, p.489) asserts that emotional intelligence is "the

ability of a person to use emotions as a guiding tool for interpersonal effectiveness in his or her social environment”, as depicted in Figure 2.2.

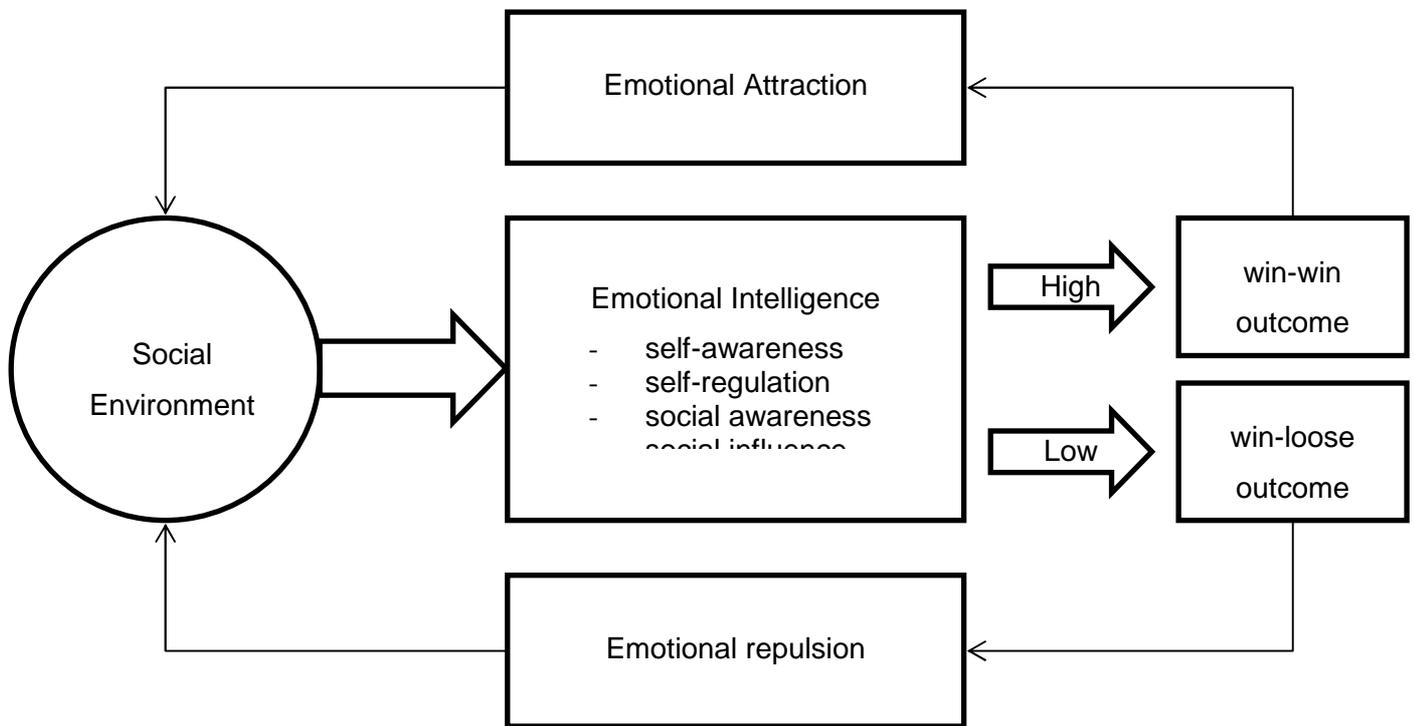


Figure 2.2: Emotional intelligence and social interaction (Kunnamatt, 2004, p.490)

The higher a person’s emotional intelligence, the greater the success he or she will have in a social environment. In this regard, emotionally intelligent people produce win-win relationships for others as well as for themselves. These people therefore seem to develop a network of social relationships and emotional support structures (Kunnamatt, 2004). Those with low emotional intelligence seem to distance themselves from others, often without even knowing they are doing so (Kunnamatt, 2004).

In the section to follow, the relationship between emotional intelligence and biographical variables will be discussed.

2.3 THE RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND BIOGRAPHICAL VARIABLES

Results on the relationship between gender and emotional intelligence appear to be mixed. Previous research on gender differences in emotional intelligence seems to indicate that men and women do not seem to differ in overall emotional intelligence scores, but appear to differ in some of the specific emotional intelligence competencies (Bohrer, 2007). Fatt and Howe (2003) found that men show higher average levels in terms of total emotional intelligence score. Other researchers, however, found the opposite. Goleman (in Bohrer, 2007) reported that women tend to score better on empathy, while men tend to score better on self-management. In a study on the relationship between emotional competence and leadership, Cavallo and Brienza (in Bohrer, 2007) found women scoring significantly higher on empathy, interpersonal relations and social responsibility. Men scored higher on self-actualisation and adaptability, compared with women. Although many studies indicated gender and age differences in terms of emotional intelligence, they may vary in different cultural environments and different age groups (Gaitniece-Putane, 2006).

In their investigation of emotional intelligence in the workplace, Nikolaou and Tsaousis (2002) reported the existence of a relationship between age and emotional intelligence (Bohrer, 2007). They claim that data show, on average, that individuals' emotional intelligence tends to increase as they age. Bohrer (2007) found no statistically significant positive relationship between emotional intelligence and age. It could be said that the sample age was skewed to the higher end (older people), possibly accounting for the lack of a relationship between emotional intelligence and age. The results of different studies involving emotional intelligence and age vary considerably (Bohrer, 2007).

Once again, there appears to be a dearth of published research on the relationship between people's emotional intelligence and their educational level (Bohrer, 2007). Nikolaou and Tsaousis (2002) found that certain emotional intelligence variables correlated significantly with years of education. Bohrer (2007), however, reported no significant positive relationship between emotional intelligence and educational level.

In terms of occupational level, Goleman (in Bohrer, 2007) believes that emotional intelligence plays an increasingly significant role at companies' highest levels. Bohrer (2007), however, explored the relationship between emotional intelligence and occupational level (indicated by rank in the

intelligence community), and did not find a statistically significant relationship between emotional intelligence and occupational level (as determined in this particular manner).

2.4 THE MEASUREMENT OF EMOTIONAL INTELLIGENCE

Badenhorst and Smith (2007) doubt the measurability of the concept of emotional intelligence. They argue that emotional intelligence overlaps with some aspects of established personality theories and traits. They further point out that measures of the construct tend to be weak or problematic. In addition, critics contest the degree to which emotional intelligence is malleable, in contrast to the relative fixity of IQ.

In terms of meeting standard psychometric criteria, Matthews *et al.* (2004) are of the opinion that the accurate measurement of emotional intelligence may prove to be a challenge for test developers. These potential challenges may apply to questionnaire-based approaches as well as performance-based approaches. To this end, they argue that self-reports of emotional intelligence may not be distinct from other concepts such as personality constructs, which are also assessed using self-report measures. In addition, they argue that an issue in the performance-based approach is that it requires veridical (true or real) scoring of test items, just as is required in cognitive intelligence testing. In terms of the veridical scoring of test items, the correlations between emotional intelligence questionnaire measures and other intelligence factors are too low. Furthermore, emotional intelligence questionnaire measures tend to correlate too strongly with personality factors (Matthews *et al.*, 2004). Matthews *et al.* (2004) are of the opinion that it is too early to conclude that ability tests for emotional intelligence meets traditional criteria for an intelligence test, although the Mayer-Salovey-Caruso group have made significant progress in developing a psychometrically acceptable test for emotional intelligence.

Goldenberg, Matheson and Mantler (2006) suggest that using performance instead of self-report measures to assess emotional intelligence does have some advantages. Performance measures directly assess an individual's performance level on a task, and are likely to reflect actual rather than perceived levels of emotionally intelligent functioning (Goldenberg *et al.*, 2006).

In defence of emotional intelligence measures, Bar-On (in Barnard & Herbst, 2005) cites research conducted over 12 years with more than 6300 respondents as evidence of the reliability and validity of the Bar-On EQ-i. According to Van Rooy and Viswesvaran (in Schutte *et al.*, 2007),

emotional intelligence overlaps with cognitive intelligence and aspects of personality, but also has substantial separate variance. In light of its high degree of reliability and validity, the Bar-On EQ-i assessment tool will be used in this study, and Bar On's (1997) approach will form the basis of the research.

To summarise, Badenhorst and Smith (2007) contend that despite an extensive body of literature on emotional intelligence, there still appears to be a knowledge gap. There does not seem to be a single accepted definition of emotional intelligence, and the construct is not clearly conceptualised. Also, there appear to be some inconsistencies when applying various definitions of emotional intelligence in the development of a holistic emotional intelligence body of knowledge. Furthermore, there appears to be no documented holistic, integrated framework of how emotional intelligence fits into the total person. Although Waterhouse (in Cherniss *et al.*, 2006) expresses some concern about the fact that there are many constructs of emotional intelligence, he contends that at this early stage of the theory's development, the generation of many versions of emotional intelligence theory is not a weakness but a sign of vitality. He believes this trend indeed is promising for the field of positive psychology.

2.5 THE SIGNIFICANCE OF EMOTIONAL INTELLIGENCE FOR OCCUPATIONAL SUCCESS AND INDIVIDUAL WELL-BEING

Matthews *et al.* (2004) are of the opinion that emotional intelligence is not necessarily critical to real world success, as some other researchers believe. According to them, "applied studies provide little basis for supposing that either emotional intelligence is strongly predictive of outcomes in real-world settings or that interventions to increase emotional intelligence will be cost-effective" (2004, p.193). More research has been done on the validity of personality and ability measures, and hence more progress has been made in these fields. They do acknowledge that it is expected that in the longer term, tests for emotional skills and knowledge will gain greater utility, and this implies some positivity about the measurement of emotional intelligence (Matthews *et al.*, 2004).

On a more positive note, Herbst, Maree and Sibanda (2006) point out that the interest in emotional intelligence in practice can mainly be ascribed to two reasons. Firstly, the potential value of emotional intelligence to predict success as a leader and secondly, to help explain the difference

between outstanding and average levels of leadership performance. There is a very strong, significant, linear positive relationship between emotional intelligence and transformational leadership, and transformational leaders are probably more emotionally intelligent than transactional leaders (Hayward, Amos & Baxter, 2008).

Goleman (1995) adapted the research of Salovey and Mayer (1990) to explore how emotional intelligence relates to working life. Particularly with regard to leadership, he states that emotional intelligence is the most significant contributor to effective leadership, although he notes that IQ and technical skills are important as well (Kobe *et al.*, 2001). Within the organisational context as a whole, he postulates that emotions, properly managed, can drive loyalty, trust and commitment, as well as productivity gains and accomplishments for teams (Barry & du Plessis, 2007).

Goleman (in Cherniss, 2006) believes that everyone at the top echelons of a profession has already been sifted based on their intellect, either by utilising intelligence tests or by natural selection. Because of this, he proposes that leaders' emotional intelligence abilities, rather than their IQ, will better discriminate among those who will be most capable in top positions. Goleman (in Cherniss, 2006) therefore suggests that emotional intelligence matters in selecting, promoting and developing leaders.

Slaski and Cartwright (2002) found that managers who scored higher in emotional intelligence suffered less subjective stress and experienced better health and well-being, and that this relationship affected management performance. Individuals who regulate their emotional states have been found to be healthier because they are able to appraise their emotional states, express their feelings and regulate their moods (Nikolaou & Tsaousis, 2002). According to Jadhav and Mulla (2010), however, few studies relate emotional intelligence to job performance. They suggest that a balanced approach would be to examine the nature of each job in the organisation, and on the basis of this, then decide on the importance to be attached to emotional intelligence coaching or emotional intelligence as a job requirement. It would therefore appear sensible to judge each individual or situation on merit before considering emotional intelligence training or coaching, or making emotional intelligence a job prerequisite.

At a more general level, Nelis, Quoidbach, Mikolajczak and Hansenne (2009) point out that both ability and trait emotional intelligence have been found to be associated with job performance and occupational success. Emotional intelligence has also been found to be related to team performance at group level (Nelis *et al.*, 2009). Whitton (2005) is of the opinion that emotional

intelligence presents enormous opportunities for harnessing people's emotions in an effective manner. Technical and operational expertise will always be important in most jobs. However, emotional intelligence is what separates mere competence from consistent excellence.

In terms of wellness, Le Roux and De Klerk (2001) cite several benefits of being emotionally intelligent, including the ability to formulate goals and be assertive. In addition, healthier relationships arise from improved communication and the ability to show empathy. Furthermore, emotionally intelligent individuals display emotional awareness, balance their thoughts and feelings and realise that they are responsible for their own feelings. This may explain Goleman's (in Barry & du Plessis, 2007) statement that the emotional intelligence of individuals gives organisations the three driving forces of competitive advantage, namely building trusting relationships, increasing energy and effectiveness, and creating the future.

2.6 ENHANCEMENT OF EMOTIONAL INTELLIGENCE

In light of its possible contribution to human wellness and occupational success, it may be necessary to investigate how emotional intelligence develops, and how it can be enhanced.

2.6.1 Early development of emotional intelligence

According to Goleman (2003) it has been found that children may respond better to social crises if they acquired mastery in life skills such as self-awareness and emotional self-regulation, empathy and social skills. This may explain why in educational theory, the emotional quotient concept focuses on the whole child, and while facilitating academic achievement, the focus is not solely on academic factors (Riatti, 2008).

Mayer, Salovey and Caruso (2004) are of the opinion that emotional intelligence should increase with age. Nelis *et al.* (2009) found that emotional intelligence can be improved among young adults. They are of the opinion that with a proper methodology relying on the most recent scientific knowledge about emotion, some facets of emotional intelligence can be enhanced, for instance emotion identification and emotion management.

Mayer and Salovey (in Rietti, 2008) propose the concept of emotional knowledge (EK), which refers to the body of information to which emotional intelligence applies. In their opinion, EK can be taught, by teaching techniques for managing emotions in oneself and others.

2.6.2 Emotional intelligence training programmes

Chrusciel and Turner (in Jonker, 2009), propose that emotional intelligence, unlike IQ, is learnable and therefore trainable. As was evident earlier, an individual and the organisation in which he or she works, will reap the benefits of a high emotional quotient. Although the benefits are clear, emotional intelligence competencies are learnt fairly slowly, and rehearsal and repetition are required for individuals to build a repertoire of responses that can be used and practised in real and spontaneous situations (Turner, in Jonker, 2009).

Many emotional intelligence enhancement programmes have been developed in an attempt to help people develop their emotional intelligence competencies. In many of these programmes, the individual's rational-emotional processes are initially analysed. Thereafter, a typical series of stages are likely to follow, including emotional mapping; emotional pattern diagnosis; emotional authentication; emotional navigation; empathy building and influence building (Kunnanatt, 2004). According to Kunnanatt (2004), an effective emotional intelligence training programme fosters better attitudes, clearer perceptions and productive affiliations in life. He adds that the contribution of emotional intelligence training to human resource development can be beneficial in that powerful and sustained changes in employee behaviour have resulted from this type of training. Table 2.2 outlines a typical emotional intelligence training session.

Table 2.2: Outline of emotional intelligence training session (Nelis *et al.*, 2009, pp.40-41).

Session 1: Understanding emotions
Role play illustrating the importance of emotions and emotional intelligence.
Introductions / Welcome / Explanation of the sessions and the use of the personal diary.
Explanation of key concepts (emotions, emotional intelligence).
Summary and homework
Session 2: Identifying emotions
Review of previous session and homework.
Identifying one's emotions using three doors (i.e., physiological activation, cognitions and action tendencies in Scherer's five components of emotion): theory and practice.
Identifying others' emotions through facial expression decoding: drill with the METT programme.
Identifying others' emotions (continue): asking the right question and empathic.
Communication.
Summary and homework.
Session 3: Expressing and using emotions
Review of previous session and homework.
How to express emotions: facts – emotions – need – positive solutions.
Role play.
Using the power of positive emotions: how to improve one's positive feelings (e.g., gratefulness).
Using emotions to solve problems: the emotional roadmap.
Summary and homework.
Session 4: Managing emotions
Review of previous sessions and homework.
Coping strategies and their effectiveness: theory and group discussion.
Positive reappraisal: role play and drill.
Mind-body connections and relaxation exercises.
Summary / Questions / Evaluation.

Jonker (2009) advises that emotional intelligence training works best in small groups and over a longer period of time where behavioural changes may be seen. It is insufficient to merely utilise training on the basis of mixed models and therefore only soft skills. It is therefore advisable that ability-based models also be incorporated into training programmes. Lastly, in light of the fact that emotional intelligence has been found to be associated with performance and excellence, it may

be argued that emotional intelligence enhancement needs particular attention within organisations, especially the relevance of particular models for training success.

2.7 CHAPTER SUMMARY

In this chapter a literature review on emotional intelligence was provided. Attention was given to the history of emotional intelligence, as well as the conceptualisation of the construct. Furthermore, the measurement of emotional intelligence was explored, and the significance of emotional intelligence for occupational success was discussed. The chapter concluded with the enhancement of emotional intelligence. In Chapter 3, locus of control will be discussed under similar headings.

CHAPTER 3

LOCUS OF CONTROL

This chapter offers a brief historical overview of locus of control. Attention is given to the construct's conceptualisation, and the stability of locus of control over the life span. In addition, the role of locus of control in various life domains is discussed.

3.1 BRIEF HISTORICAL OVERVIEW OF LOCUS OF CONTROL

The concept of locus of control derived from Rotter's social learning theory (Roddenberry & Renk, 2010). Rotter argued that locus of control stemmed from one's generalised expectancy about the world. A person whose efforts are consistently rewarded develops an internal locus of control, whereas people who do not succeed despite their efforts acquire an external locus of control (Twenge, Zhang & Im, 2004). Internals therefore see a causal relationship between their behaviour and rewards, whereas externals tend not to make this connection (Rotter, 1990).

Rotter's theory of locus of control evolved from Carl Jung's earlier work on psychological types (Forte, 2005). The Jungian typological characteristics are extroversion and introversion, thinking and feeling, sensation and intuition, judging and perceiving (Nesterenko, Vasilyev, Medvedev & Robenkova, 2003). Rotter's theory of internal-external locus of control particularly evolved from Jung's two opposing tendencies in personality: introversion and extroversion (Forte, 2005).

Locus of control is further based on the attribution theory of Heider (Gropp *et al.*, 2007). Attribution theory provides a basis on which individuals judge the stable versus fluctuating qualities of other people (such as motives, intentions or characteristics). Attribution theory is concerned with causal inferences and based on this conceptualisation of locus of control, the question posed is "To what can X-outcome (e.g. success or wellbeing) be attributed?" (Taylor, Schepers & Crous, 2006, p.63). Individuals therefore try to determine the origin of their own as well as others' behaviour (Gropp *et al.*, 2007).

Locus of control has gained extensive research attention within several sub-disciplines of psychology, including clinical, developmental and social psychology (Wang, Bowling & Eschleman,

2010). Locus of control has also been examined in education, economics and medicine (Fournier & Jeanrie, 2003).

The contribution of locus of control to the understanding of human behaviour further presents obvious links to positive psychology (Fournier & Jeanrie, 2003). Some of these areas include:

- the optimisation of people's strengths and their capacity to adapt to different situations.
- the identification of areas in which individuals can exercise control over their own development and psychological well-being, at the same time recognising that some situations or events are out of their control.
- the recognition of the importance of subjectivity in the perception of external and internal forces that determine what happens to an individual.
- assisting people to discover and gain access to their strengths, and to choose health-promoting actions.

In the following section, locus of control as a wellness construct will be conceptualised.

3.2 CONCEPTUALISATION

Rotter (in Gropp *et al.*, 2007) defines internal locus of control as an individual's perception that an event is dependent upon his or her own behaviour. An external locus of control is exhibited when an individual perceives that events occur as the result of luck, chance, fate or the control of powerful others.

Much debate has surrounded Rotter's definition of locus of control (Fournier & Jeanrie, 2003). Some of the issues that were raised include the following:

- whether or not locus of control should be considered a stable personality dimension – most experts appear to believe that it is not
- whether locus of control is a specific psychological characteristic which manifests in a uniform manner across situation and time
- the assumption that an internal locus of control is more desirable than an external locus of control

- whether locus of control is generalisable or situation specific
- a lack of clarity about the dimensionality of locus of control the fact that dominant social norms may impact on people's experiences of locus of control

According to Spector (in Hattrup, O'Connell & Labrador, 2005), Locus of control refers to an expectancy that outcomes are controlled by one's own actions (internal) or by external factors (external). Individuals with an internal locus of control believe that the outcomes of their actions are a result of their own personal effort and ability, whereas people with an external locus of control believe that their own actions do not influence future outcomes and that the outcomes of their actions are dependent on factors not in their control (Landy & Conte, 2004; Martin, Thomas, Charles, Epitropaki & McNamara, 2005).

According to Rotter (in Selart, 2005), locus of control implies that a person perceives the effects of rewards differently depending on whether the person explains the reward as dependent on his or her own behaviour or independent of it. Lefcourt, Levenson and Rotter (in Keller & Blomann, 2008) postulate that locus of control concerns the beliefs people hold about the relationship between actions and experienced outcomes. Internal locus of control concerns the belief that outcomes are dependent upon the effort put in to them. External locus of control reflects a belief that success is a function of chance, luck or knowing the right people.

According to Rotter (in Aube, Rousseau & Morin, 2007 p.483) "locus of control is an important determinant of the way individuals interpret the situations they encounter". He elaborates in that "internal versus external control refers to the degree to which persons expect that a reinforcement or an outcome of their behaviour is contingent on their own behaviour or personal characteristics versus the degree to which persons expect that the reinforcement or outcome is a function of chance, luck, or fate, is under the control of powerful others, or is simply unpredictable".

According to a recent conceptualisation of locus of control, this construct is composed of three independent dimensions, namely internal, powerful others and chance, with the latter two derived from what was previously the external dimension (Roddenberry & Renk, 2010). Locus of control is therefore the extent to which a person attributes the events in his or her life to actions or forces beyond his or her control (Adeyemi-Bello, 2001). As pointed out earlier, in this study, locus of control was operationalised as internal locus of control.

3.3 STABILITY OF LOCUS OF CONTROL OVER THE LIFESPAN

To explore changes over time in locus of control, Twenge *et al.* (2004) did a literature review of samples consisting of people of the same age collected during different time periods. They investigated whether people's beliefs about control change over time.

Twenge *et al.* (2004) considered two interesting models to explain changes in people's locus of control in their review. Firstly, the independence model suggests increases in internality (Twenge *et al.*, 2004). This model indicates that people's locus of control has become more internal over the past 40 years, possibly because of a considerable increase in individualism in societies. In addition, people seem to currently have more control over their environments than they did previously, which could lead to them becoming more internal in their locus of control over time (Twenge *et al.*, 2004).

By contrast, the alienation model suggests increases in externality over time (Twenge *et al.*, 2004). This model focuses on two historical trends: the tendency to blame one's misfortunes on outside forces, and increases in negative social indicators (Twenge *et al.*, 2004). Twenge *et al.*'s (2004) study appears to indicate that people seem to be becoming more external in terms of locus of control. Their research, however, was based on young Americans and its findings may therefore not necessarily be generalisable to other populations. Nevertheless, young Americans appear to increasingly feel that outside forces control their lives, which appears to be consistent with the alienation model (Twenge *et al.*, 2004).

Rotter (in Twenge *et al.*, 2004) stated in 1971 that university students feel powerless to change their circumstances or control their paths in life. They (2004) found that this tendency seems to be external in terms of locus of control, and has increased among the youth. However, the implications of externality in terms of locus of control are generally negative because most researchers believe that an internal locus of control is more desirable (Twenge *et al.*, 2004).

Overall, an internal locus of control is associated with adaptability, efficiency and the ability to set goals, whereas an external locus of control alludes to a society that tends to blame others. The current study therefore focuses particularly on internal locus of control.

3.4 THE ROLE OF LOCUS OF CONTROL IN VARIOUS LIFE DOMAINS

Locus of control has been conceptualised as a hierarchical construct, with general locus of control existing at the highest level (Wang *et al.*, 2010). General locus of control, unlike narrower conceptualisations of the construct, does not make reference to a specific context or situation. A number of context-specific sub-dimensions of locus of control have, however, been identified, such as health locus of control, marital locus of control, work locus of control and parental locus of control (Wang *et al.*, 2010).

Adams (2000) found that individuals who are psychologically well have an enduring sense of personal control (Gropp *et al.*, 2007). Locus of control has been found to be related to organisational performance and various individual variables (Adeyemi-Bello, 2001). Locus of control plays an integral part in our outlook on life and our perceived control over situations, as will be evident below.

3.4.1 The relationship between locus of control and biographical characteristics

According to Muhonen and Torkelson (2004), research on the relationship between gender and locus of control has produced inconsistent findings. Some studies seem to indicate that women are more externally oriented than men (Rubenstein, 2004), while no gender differences in terms of locus of control were reported in other studies (Holder & Vaux 1998; Lengua & Stormshak, 2000). Majzub, Bataineh, Ishak and Rahman (2009) suggest that, owing to the impact of social desirability, males may score higher in terms of internal locus of control than females. Females' responses on locus of control scales appear to be influenced by their beliefs about appropriate gender roles. Females tend to believe that an internal perspective is inconsistent with female gender roles, and thus not socially desirable. Stipek and Weisz (in Majzub *et al.*, 2009) found that females who scored high on beliefs about social desirability scored higher in terms of an external locus of control than females with low beliefs in social desirability. It would therefore appear that females' locus of control scores may not always accurately reflect their actual beliefs.

According to Fournier and Jeanrie (2003), locus of control furthermore is dependent on a person's culture. Individuals' way of expressing control is closely intertwined with their cultural norms, and respondents' cultural and socio-economic characteristics should therefore be kept in mind when interpreting their locus of control scores. It appears that countries/cultures such as Japan, China

and Hispanics are high in external locus of control, and that these countries consist of people who are less socio-economically privileged. American and Western cultures tend to be low in external locus of control (Fournier & Jeanrie, 2003). Breed, Cilliers and Visser (2006) contend that little appears to be known about the unique manifestation and operationalisation of salutogenic functioning among different cultural groups in South Africa, and that salutogenic functioning manifests differently in the various cultural and language groups in this country.

In terms of changes in locus of control with age, research findings have been inconclusive. It was found in some studies that that internality increases up to middle age. Changes in locus of control in later life seem to relate to increased externality (<http://www.wattpad.com/724132-locus-of-control?p=5>).

3.4.2 Locus of control and health behaviours

Roddenberry and Renk (2010) are of the opinion that an individual's sense of control over his or her psychological environment is associated with his or her well-being. These authors believe that people who are psychologically healthy have a greater sense of control than do those suffering from psychological distress. Carden, Bryant and Moss (in Hadsell, 2010) found that people with an internal locus of control showed lower academic procrastination and test anxiety, and reported higher academic achievement than externals. Kirkcaldy, Shephard and Furnham (2002) found that people with a high internal locus of control tend to have higher aspirations, are more persistent, respond more to challenge, and see themselves as a source of their success.

The locus of control concept has been adapted to understanding specific health related behaviours, as research suggests that an individual's locus of control predicts certain health behaviours (Roddenberry & Renk, 2010). In particular, internal health-related locus of control is associated positively with psychological adjustment, health behaviours, and better health (Roddenberry & Renk, 2010). Horner (in Roddenberry & Renk, 2010) found that external locus of control is associated with higher levels of actual as well as perceived stress. Roddenberry and Renk (2010) found that participants who endorse higher levels of stress also endorse higher levels of external locus of control and higher levels of illness. In terms of managing stress, locus of control is expected to influence how one copes with stressful situations. Internals tend to be proactive, and are more likely than externals to engage in problem-focused coping behaviours

(Wang *et al.*, 2010). Internal locus of control and the display of wellness behaviours are the focus in this study.

3.4.3 Locus of control in the workplace

It has been noted that internal control beliefs are an important part of emotion, adjustment and ability to handle stress in general, and in the workplace (Spector *et al.*, 2002). In 1962 Phares found that an individual with an internal locus of control will want to have control over his or her environment. Such a person is likely to perform better in tasks requiring skill (Selart, 2005). Phares (in Selart, 2005) is of the opinion that internals therefore have higher self-confidence and rely on themselves. In contrast, an external will adapt to a group and believe that success is the result of consulting with others (Selart, 2005). Phares (in Spector, 1982) also noted that internals exert greater efforts to control their environment, exhibit better learning, seek new information more actively, and use information more effectively than externals.

According to Taylor *et al.* (2006), it is evident that there are numerous intrinsic benefits linked to having an internal locus of control, whilst an external locus of control tends to be associated with performance-inhibiting factors. The relationship between locus of control and job performance has also been investigated in previous research. Hough (in Hatstrup *et al.*, 2005), as well as Judge and Bono (in Hatstrup *et al.*, 2005) reported significant correlations between locus of control and overall job performance, and Hatstrup *et al.* (2005) found significant relationships between locus of control and job performance, after controlling for cognitive ability and conscientiousness.

It is also evident that internals seem to be more involved in their jobs and display more satisfaction than externals (Singh, 2006). An internal locus of control tends to be associated with job satisfaction and an external locus of control with job dissatisfaction (Carrim, Basson & Coetzee, 2006). Rahim and Psenicka (1996) found that persons with an external locus of control are unable to deal with the pressure, uncertainty and challenges associated with a demanding working environment.

Internals are better suited to leadership positions and jobs requiring initiative, independent action, complex thinking and motivation (Singh, 2006). In addition, internals tend to be more satisfied with their jobs, and seem to cope in stressful situations. Furthermore, internals tend to be more interested in research and development, and seem to plan further into the future (Singh, 2006).

Internal locus of control has also been linked to management performance. Klein and Wasserstein found that individuals with an internal locus of control are likely to have faith in their ability to achieve self-appointed objectives and to transform their environment. These individuals take responsibility for their job success, and they display an involvement in planning and implementing work projects (Gropp *et al.*, 2007).

It appears that individuals who perform better in most employment situations possess a moderately strong internal rather than external locus of control (Singh, 2006). These internals therefore seem to be more successful in their careers and earn more money than externals. In general then, it can be said that internals give their all in interpersonal and organisational situations by efficiently managing the psychological and non-psychological hurdles that they may face to perform to their best potential (Singh, 2006). Internals thus tend to display more control in certain areas such as work flow, working relationships, goal-setting and work scheduling (Carrim *et al.*, 2006). Lastly, individuals with an internal locus of control would experience greater work motivation and job involvement as they perceive themselves as having greater control over their work environment than externally oriented individuals (Nunns & Argirys, 1992).

3.5 CHAPTER SUMMARY

In this chapter a brief historical overview of locus of control was given. Attention was given to the construct's conceptualisation, and the stability of locus of control over the life span. In addition, the role of locus of control in various life domains was addressed. In Chapter 4, sense of coherence will be discussed.

CHAPTER 4

SENSE OF COHERENCE

This chapter offers a brief historical view of sense of coherence. Attention is given to the conceptualisation and development of sense of coherence. In addition, the impact of sense of coherence on various areas of life is discussed, and finally, research on locus of control and sense of coherence is explored.

4.1 A BRIEF HISTORICAL OVERVIEW OF SENSE OF COHERENCE

As indicated in Chapter 1, the origin of sense of coherence lies in the salutogenic approach. Rabin *et al.* (2005, p. 94) state the following: "Salutogenesis is a view of health that examines how to preserve health (salutogenesis) rather than looking at how illness is caused (pathogenesis)." The term salutogenic comes from Latin word, *salus*, which means health and *genesis*, which means origins (Nel, Crafford & Roodt, 2004). The salutogenic approach accepts the inevitability of stressors in everyday life and in the workplace, as well as the fact that individuals are able to cope with the ensuing stress in some way or another (Oosthuizen & Van Lill, 2008).

The origin of the salutogenetic approach can be traced to an investigative study conducted in the 1960s by Antonovsky, Maoz, Dowty and Wijssenbeek (Rabin *et al.*, 2005). It was found in this study that survivors of the Holocaust adjusted worse to later life changes than those individuals who had not been subjected to the Holocaust. Antonovsky then further examined 30% of individuals in the sample who had adjusted well, but who had also been in the Holocaust. He started to focus on how people learn to cope with and adapt to difficult circumstances. Antonovsky seemed to be of the opinion that individuals who remain fairly healthy in the face of adversity have a certain way of looking at the world (Rabin *et al.*, 2005). Antonovsky's idea was to focus people's resources and capacity to create health instead of the classic focus on risks, ill health and disease (Lindstrom & Eriksson, 2005).

The key elements in the salutogenic development are the orientation towards problem solving, and the capacity to use the resources available (Lindstrom & Eriksson, 2005). According to Antonovsky, health is viewed on a continuum between ill health (dis-ease) and health (ease)

(Lindstrom & Eriksson, 2005). Antonovsky formulated this perception of life theory into his sense of coherence concept. Sense of coherence is thus the core concept of the salutogenic paradigm. He states that salutogenesis has inter-disciplinary application possibilities, and may be applied at an individual, group or societal level (Lindstrom & Eriksson, 2005).

Pathogenesis, which focuses on obstacles and deficits, may be seen as the opposite of salutogenesis (Lindstrom & Eriksson, 2005). Sense of coherence is therefore not a particular coping style, but in fact a disposition which allows individuals to choose appropriate strategies to deal with the stressors confronting them (Strümpfer & Mlonzi, 2001).

4.2 CONCEPTUALISATION

Sense of coherence has been identified as one of the salutogenic variables that may act as a coping mechanism in stressful situations (Oosthuizen & Van Lill, 2008). Antonovsky (in Lindstrom & Eriksson, 2005), originally defined sense of coherence as follows:

... a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement.

Sense of coherence is essentially a tendency towards an individual seeing life as being "under control" (Amirkhan & Greaves, 2003). Sense of coherence consists of three elements, namely comprehensibility, manageability, and meaningfulness (Lindstrom & Eriksson, 2005):

- Comprehensibility (the cognitive component of sense of coherence) refers to the extent to which an individual perceives stimuli that confront him or her as making cognitive sense as information that is ordered, consistent, structured and clear.
- Manageability (the behavioural component of sense of coherence) is the extent to which an individual perceives that adequate resources are at his or her disposal to help him or her to meet the demands posed by the stimuli.
- Meaningfulness (the motivational component of sense of coherence) refers to the extent to which a person feels that life makes sense emotionally. He or she feels that it is worth

investing energy in problems, and that demands are worthy of commitment and engagement. Furthermore, these demands are regarded as challenges instead of burdens.

All in all, sense of coherence as a life orientation refers to consistency, congruence and harmony (Mayer & Boness, 2009).

4.3 THE DEVELOPMENT OF SENSE OF COHERENCE

While an individual's sense of coherence is still developing, he or she is repeatedly exposed to tension states requiring him or her to actively respond to stressors by mobilising appropriate resources (Richardson & Ratner, 2009). Sense of coherence is thought to be a product of idiosyncratic events in an individual's life, but may also be a product of having grown up in a particular social structure, culture and historical period (Antonovsky, in Strümpfer & De Bruin, 2009). It is thought that people develop their sense of coherence through their whole life span, but mainly during about the first thirty years of their lives, when they learn how to cope with life in general (Lindstrom & Eriksson, 2005).

Antonovsky (1998) hypothesised that the strength of a person's sense of coherence more or less stabilise by age 30, because the person had enough life experiences by that time to form his or her sense of coherence. However, this assumption is criticised in several studies, which suggest that sense of coherence tends to increase with age through the person's entire lifespan (Forsberg, Bjorkman, Sandman & Sandlund, 2010). As an individual progresses through life, he or she is exposed to certain challenges and stressors. This exposure will either result in the individual being able to handle the situation or he or she will feel overcome by the challenge (Antonovsky, in Nel *et al.*, 2004). Successfully dealing with a challenge leads to the formation of generalised resistance resources (GRRs), which may be described as making sense out of the many stressors with which one is faced (Antonovsky, in Nel *et al.*, 2004). GRRs are therefore experienced or learned ways of managing stress, or a belief system developed on the basis of stimulus-response. Hence they are therefore more than a coping mechanism (Nel *et al.*, 2004). By being able to apply the GRRs during a challenging time of life, an individual seems to develop a strong sense of coherence over time (Strümpfer, in Nel *et al.*, 2004). Conversely, a person with a strong sense of coherence will have the ability to bring into play the GRRs available to him or her (Mlonzi & Strümpfer, 1998).

In terms of enhancing people's sense of coherence, initiatives designed to strengthen a person's sense of coherence are attractive from a health promotion point of view (Antonovsky, 1996).

Richardson and Ratner (2005) conclude that sense of coherence seems to buffer the impact of recent stressful life events on self reported health. Frankenhoff (1998), however, points out that there is no evidence to show that sense of coherence scores can be strengthened by a health promotion intervention specifically designed to do so.

A further point to consider in the development of sense of coherence is gender differences. It appears, however, that current studies on the existence of gender differences reflect contradictory results and a distinct lack of consensus (Roothman, Kirsten & Wissing, 2003). Roothman *et al.* (2003) found no gender differences in terms of sense of coherence, suggesting that the general psychological well-being of men and women is comparable. An awareness of gender differences is important in that it may promote optimal psychological well-being in both men and women, and may help identify and redress historical imbalances between resources and opportunities for men and women.

4.4 THE IMPACT OF SENSE OF COHERENCE ON VARIOUS AREAS OF LIFE

According to Griffiths (2009), sense of coherence can be regarded as a crucial element in the structure of an individual's personality that facilitates the coping process. Viviers (in Oosthuizen & Van Lill, 2008) further points out that many illnesses (physiological and psychological) can be controlled or even prevented, by making individuals aware of how to function optimally whenever they are required to cope with stress at work and home. Both employees and the organisation alike can benefit from developing a salutogenic approach, and thereby also focussing on sense of coherence, as will be evident in the following discussion. Reference will also be made to research findings of the sense of coherence in these areas of life.

4.4.1 The role of sense of coherence in emotional well-being

Antonovsky (in Amirkhan & Greaves, 2003) offered three possible ways to explain how sense of coherence might buffer stress and protect emotional wellbeing. The proposed mechanisms are perceptual, cognitive and behavioural in nature. A perceptual mechanism may be likened to the concept of a "primary appraisal" (Lazarus & Folkman in Amirkhan & Greaves, 2003). During this process, first impressions of a stressful event are formed. A person with a strong sense of coherence may judge a particular stimulus to be neutral, when another person with a weaker

sense of coherence may experience tension caused by the same stimulus (Mayer & Boness, 2009).

Cognitive mechanisms are similar to a “secondary appraisal” process (Lazarus & Folkman in Amirkhan & Greaves, 2003). This involves cognitive activity beyond recognition and classification (Amirkhan & Greaves, 2003). Hence in light of this, people with a strong sense of coherence could use different attributions to explain the problems in their lives. The individual may thus judge a stimulus to be a stressor, while at the same time determine whether the stressor is threatening, favourable or irrelevant (Mayer & Boness, 2009). Behavioural mechanisms relate to determining action. People with a strong sense of coherence seem to be focussed upon problems in their lives, and actively rectifying those (Amirkhan & Greaves, 2003).

To someone with a weak sense of coherence, the world may seem incomprehensible, hostile and even absurd (Strümpfer & De Bruin, 2009). Such a person will further suffer from information overload, and they may find their world difficult to interpret. Furthermore, such a person would feel the victim of circumstances beyond his or her control and therefore be burdened by having to accept the negative outcomes of these circumstances (Strümpfer, in Nel *et al.*, 2004).

Kalimo, Pahkin and Mutanen (2002) suggest that a strong sense of coherence, strong self-esteem and belief in one’s competence can be seen as crucial prerequisites for emotional well-being. In addition, they found that sense of coherence, in particular, seems to be a general stress resistance resource, although somewhat unstable over time, and an effective predictor of well-being in the long run. In terms of stability, there appears to be no firm evidence that sense of coherence is stable over time and it therefore seem to be temporarily reliable (Larsson, & Setterland, 1990; Smith, & Meyers, 1997 in Kalimo *et al.*, 2002).

4.4.2 The role of sense of coherence in health psychology

The link between sense of coherence and specific indicators of health has been established. It has, for instance, been established that SOC scores relate to health status – low scores indicate potential health needs, and high sense of coherence scores protect persons against life events (Morrison & Clift, 2006). Some individuals manage well when faced with stressful situations, whilst others suffer from undesirable effects because of this (Ortlepp & Friedman, 2001). This relationship

has led to a focus on resiliency models, and Semmer (in Ortlepp & Friedman, 2001) summarises the three core characteristics of resilient people as follows:

- They seem to interpret the world as harmless to their health, and do not expect intentional harm from others.
- They tend to view failures in perspective and do not necessarily view setbacks indicative of their own incompetence, or a hostile world.
- They seem to view life as something that may be influenced and acted upon. Stressful events thus seem to be regarded as a challenge.

In the context of mental health rehabilitation, Griffiths (2009) contends that the enhancement of individuals' sense of coherence can be beneficial in terms of their rehabilitation and recovery. He goes on to say that rehabilitation services should ensure that they have rehabilitation goals that strengthen individuals' sense of coherence. Having a strong sense of coherence may protect a person against depression, and sense of coherence may therefore be useful in identifying people who may be helped by psychological interventions. A strong sense of coherence also improves life satisfaction, and is linked to reduced fatigue, loneliness, and anxiety (<http://psychcentral.com/lib/2006/your-sense-of-coherence/>).

4.4.3 The role of sense of coherence in the workplace

In an organisational environment, a person with a strong sense of coherence tends to be able to make cognitive sense of the workplace, and will perceive its stimuli as ordered, clear, consistent, structured and predictable information. In addition, this person will perceive work as challenging, and should be able to make motivational sense of work demands as challenges that are worthy of engaging with and investing energy in (Strümpfer & De Bruin, 2009). Strümpfer and De Bruin (2009) further found strong support for the hypothesis that sense of coherence is positively related to job satisfaction. According to Antonovsky (1987), the strength of an individual's sense of coherence will be a contributory factor when a task is complex. A person with a strong sense of coherence is likely to be motivated and will see the task as a challenge. Assuming that the individual is interested in the task, it is likely that there will be some contribution of the sense of coherence to its outcome.

Strümpfer and de Bruin (2009) state that a working person with a strong sense of coherence will make cognitive sense of the workplace and will perceive its stimuli as clear, ordered, structured, consistent and predictable information. Such an individual is likely to perceive work as challenging, by utilising his or her personal resources and those under the control of, say, managers, co-workers and subordinates. In addition, such an individual is likely to make motivational sense of work demands as challenges that are worthy of engaging with and investing personal energy in.

In summary, sense of coherence is regarded as one the major constructs that contribute towards research in the area of resiliency and health. Richardson and Ratner (2009) conclude that recent research in a variety of clinical and work related settings supports Antonovsky's theory that sense of coherence moderates the health impacts of stressful life events. However, they state that there is a need for longitudinal, population-based studies examining the buffering/moderating capacity of sense of coherence.

4.5 SENSE OF COHERENCE AND LOCUS OF CONTROL AT WORK

Employees' sense of coherence and locus of control, as salutogenic variables, play a significant role in the workplace. In terms of stress at work, Oosthuizen and Van Lill (2008) suggest that a strong sense of coherence tends to result in a feeling of confidence in coping with life stress. According to Oosthuizen and Van Lill (2008) individuals with a strong sense of coherence feel that they are able to manage their stress whilst those with a weaker sense of coherence seem not to manage well. In terms of locus of control, perceived control contributes to a feeling of optimism, particularly in times of stress, which may result in effective coping and matching demands and resources (Fontaine, Manstead & Wagner, 1993). Oosthuizen and Van Lill (2008) postulate that a direct relationship exists between external locus of control and stress in that people who feel that control over situations is largely located outside themselves are experiencing high levels of stress.

Locus of control and sense of coherence appear to have a significant impact on an organisation's climate as a whole. Feldt, Kinnunen and Mauno (in Cilliers & Kossuth, 2002) found a strong relationship between sense of coherence and organisational climate. According to the findings, employees who perceived organisational climate as positive and job security as high, reported higher scores on sense of coherence. Organisational climate is thus influenced by employees' salutogenic functioning. A high sense of coherence and locus of control facilitate a more positive

and realistic perception and effect on climate (Oosthuizen & Van Lill, 2008) – a further illustration why it may be necessary to investigate the relationship between these constructs in an environment characterised by high stress levels.

4.6 CHAPTER SUMMARY

In this chapter sense of coherence was conceptualised. A brief history of sense of coherence was provided, and the development of sense of coherence was discussed. The impact of sense of coherence on various areas of life was investigated and some research findings in this regard were presented. Lastly the practical significance of sense of coherence and locus of control for success in a working environment was explored. In Chapter 5, the research methodology will be discussed.

CHAPTER 5

RESEARCH METHODOLOGY

5.1 INTRODUCTION

The focus in this chapter will be on the empirical aspects of the research study, with the specific aim of describing the statistical strategies that will be utilised to investigate the relationship between emotional intelligence, locus of control and sense of coherence. After a brief introduction, the objectives of the study will be reiterated. An overview of the study's population and sample and the sampling techniques will be discussed. The general procedure for execution, data gathering and data capturing will be described. This will be followed by a discussion of the measuring instruments and the processes of data collection and analysis. Descriptive and inferential statistics will be briefly explained and the statistical level of significance alluded to. In conclusion, the hypotheses will be formulated.

5.2 OBJECTIVES

The main objective of this study was to determine whether there is a statistically significant relationship between emotional intelligence, locus of control (as operationalised by internal locus of control), and sense of coherence. Further objectives of the study were as follows:

- To determine whether there is a relationship between the mean scores for the constructs of emotional intelligence, locus of control and sense of coherence between various age level groups
- To determine whether there is a relationship between the mean scores for the constructs of emotional intelligence, locus of control and sense of coherence between educational level groups
- To determine whether there is a relationship between the mean scores for the constructs of emotional intelligence, locus of control and sense of coherence between various occupational level groups

- To determine whether there is a relationship between the mean scores for the constructs emotional intelligence, locus of control and sense of coherence between individuals who are male or female
- To determine whether there is a relationship between the mean scores for the constructs of emotional intelligence, locus of control and sense of coherence between groups with various levels of work experience

5.3 POPULATION AND SAMPLE

A population is a collection of all units of analysis defined by the research question (Brewerton & Millward, 2001). This research project was conducted at the head office a South African marketing research organisation and two of its regional offices. The population comprised all the employees of the organisation, which totalled 507 individuals.

5.3.1 Sampling design

Sampling is the process of taking a portion of a population or universe to represent that population or universe (Kerlinger & Lee, 2000). Hence the main criteria of sample selection are as follows (Brewerton & Millward, 2001, p.114):

- ensuring that a sample provides a faithful representation of the total population from which it is selected
- knowing as precisely as possible the probability that a sample is reliable in this way

Sampling design thus includes the target population and the sampling methods to be used.

5.3.2 Sampling techniques

The sampling technique used in this study was probability sampling. Probability sampling uses some form of random sampling in one or more of the stages (Kerlinger & Lee, 2000). A probability or random sample describes a sample selected in such a way that all members in the population have a known chance of being selected (Brewerton & Millward, 2001).

The type of probability sampling used in this study was stratified random sampling. In stratified sampling, the population is first divided into strata. Random samples are then drawn from each stratum (Kerlinger & Lee, 2000). The population for this study was divided into the following strata:

- professionally qualified, experienced specialists and mid-management
- skilled technical and academically qualified workers, junior management and supervisors
- semi-skilled and discretionary decision-making workers

Using the statistical package SPSS, random samples were drawn from each stratum. This resulted in a final sample of 179 employees to participate in the study. A replacement sample was also drawn in the event of someone in the sample being unable to attend one of the assessment sessions.

5.4 MEASURING INSTRUMENTS

Three measuring instruments were used in this study representing the three constructs, namely emotional intelligence, locus of control and sense of coherence. As indicated earlier, the measuring instruments used were the Bar-On Emotional Quotient Inventory (Bar-On EQ-i), Locus of Control Inventory (LCI) and Sense of Coherence Scale (SOCS), representing the constructs respectively. Detailed descriptions of the three instruments are provided below.

5.4.1 Bar-On EQ-i

5.4.1.1 Structure of the questionnaire

The Bar-On EQ-i measures a person's ability to deal with daily demands and pressures and is used to measure emotional intelligence (Anonymous, 2007). The inventory assesses a person's general degree of emotional intelligence, potential for emotional health, and present psychological well-being. This self-report inventory contains 133 brief items and employs a five-point response set (ranging from "Not true of me" to "True of me"). The level of reading required is a good command of the English language.

The assessment renders four validity scale scores, a total emotional quotient score, five composite scale scores, and 15 EQ subscale scores. The five composite scales as well as the 15 subscales used to measure them are indicated in Table 5.1.

Table 5.1: Bar-On EQi composite scales and subscales

Composite scales	Subscales
Intrapersonal components	Self-regard
	Emotional self-awareness
	Assertiveness
	Independence
	Self-actualisation
Interpersonal components	Empathy
	Social responsibility
	Interpersonal relationship
Adaptability components	Reality testing
	Flexibility
	Problem solving
Stress management	Stress tolerance
	Impulse control
General mood scales	Optimism
	Happiness

Overall, the EQ-i attempts to satisfy the need for an empirically developed, multifactorial, and theoretically eclectic test of emotional intelligence (Bar-On).

5.4.1.2 Administration

The Bar-On EQ-i may be administered individually or in groups. It takes approximately 30 to 40 minutes to complete, but the participants are allowed as much time as they need to complete the questionnaire.

In this study, scannable EQ-i response sheets and EQ-i item booklets were used. The item booklet and mail-in response sheets administration option was therefore chosen. Various reporting options are available, but a data set provided by the Bar-On EQ-i distributor was deemed to be the most suitable for this study.

5.4.1.3 Interpretation

The EQ-i raw scores are of limited value on their own. The EQ-i, raw scores are converted into standard scores based on a mean of 100 and a standard deviation of 15 (similar to IQ scores). Converting EQ-i raw scores to standard scores facilitates comparison of a respondent's scores to the scores of the normative group and theoretically the rest of the population (Bar-On EQ-i technical manual, 2004, p.39).

Eight steps are recommended for interpreting the EQ-i results (Bar-On EQ-i technical manual, 2004, p.41):

- Assess the validity of the EQ-i results
- Interpret the total EQ scale score
- Interpret the EQ composite scale scores
- Interpret the EQ subscale scores
- Examine the response style and critical items
- If possible, compare EQ-i results to findings from additional sources of information
- Summarise the findings and make recommendations for improving emotional skills whenever applicable
- Retest the respondent to evaluate progress whenever applicable.

The interpretive guidelines of the scores are highlighted in Table 5.2.

Standard score	Interpretive guideline
130 +	Markedly high – atypically well developed emotional capacity
120 – 129	Very high – extremely well developed emotional capacity
110 – 119	High – well developed emotional capacity
90 – 109	Average – adequate emotional capacity
80 – 89	Low – under-developed emotional capacity, requiring improvement
70 – 79	Very low – extremely under-developed emotional capacity, requiring improvement
Under 70	Markedly low – atypically impaired emotional capacity, requiring improvement

Table 5.2: Interpretive guidelines for Bar-On EQ-i scale scores (Bar-On, 1997, p.40)

High EQ-i scores (above 100) indicate “emotionally intelligent” people, while lower scores indicate a need to improve “emotional skills” in specific areas. This scoring structure is similar to the IQ scoring structure (Bar-On EQ-i technical manual, 2004). Scores will almost always range between 55 and 145 (about 3 standard deviations from the mean).

5.4.1.4 Psychometric properties

Reliability refers to the degree of data consistency across a defined dimension (Brewerton & Millward, 2001). Two basic types of reliability studies were conducted out during the development of the Bar-On EQ-i, namely internal consistency and retest reliability. The internal consistency of the EQ-i was examined by using the Cronbach alpha. The EQ-i scales demonstrated acceptable to very high levels of internal consistency within the South African sample (Anonymous, 2007).

Two South African groups were used to establish test-retest reliabilities, with a retest period of one and four months respectively. The mean reliability coefficient after one month was 0.85 and after four months it was 0.74 (Bar-On in Gropp *et al.*, 2007). By examining the results of the internal consistency and retest reliability studies, it can be concluded that the EQ-i has demonstrated adequate reliability for South African conditions (Bar-On EQ-i technical manual, 2004). South African EQ-i norms appear stable and the ethnicity effects that were found are not strong enough to warrant the inclusion of separate South African ethnicity norms (Anonymous, 2007).

Validity refers to an evaluation of how successful the EQ-i is in assessing what it is designed to assess (emotional intelligence and its factorial components). Nine types of validity studies have been conducted: content, face, factor, construct, convergent, divergent, criterion-group, discriminant, and predictive validity. These validity studies were conducted to see if the items capture the essence of each scale; to examine the degree to which the questionnaire's original structure is confirmed; to verify the extent to which the subscales measure what they are supposed to measure; and to assess the extent to which they can identify and differentiate among people who are more emotionally intelligent from those who are less emotionally intelligent, and if they can predict emotionally intelligent behaviour in the future. Research findings demonstrate that the EQ-i is clearly valid (Bar-On EQ-i technical manual, 2004).

5.4.1.5 Justification for inclusion in the study

The Bar-On EQ-i is the first empirically constructed test of emotional intelligence commercially available in South Africa (Bar-On EQ-i technical manual, 2004). The EQ-i combines a holistic and eclectic assortment of existing observations, theories, methodological strategies, research findings and a multifactorial comprehensive nature. In addition, the EQ-i is fairly brief in comparison with many other self-report inventories, and has an expanded qualitative response format that tends to elicit more cooperation from respondents. Additional advantages of using this inventory include (Anonymous, 2007) the following:

- an international and multicultural focus
- a multidimensional scope
- a large normative database
- suitability for corporate settings

Considering the above-mentioned advantages and its relevance to South African conditions, the Bar-On EQ-i was chosen to measure emotional intelligence in this study.

5.4.2 The locus of control inventory

The LCI was developed to measure locus of control of an individual based on the following three factors, namely, internal control, external control and autonomy. The revised 88-item LOC inventory (published in 1999) was developed to measure locus of control based on the same three factors (Schepers in Gropp *et al.*, 2007).

5.4.2.1 Administration

The inventory takes approximately 20 to 30 minutes to complete. In this study, the test distributor scored the LCI, captured the data, and provided a data set to the researcher. Should a participant have requested feedback on his or her results, a profile report could have been generated; tabling stanines with descriptions on the LCI constructs (Anonymous, 2007).

5.4.2.2 Interpretation

Individuals with low scores on external control and high scores on internal control and autonomy are regarded as well adapted individuals, who are able to cope with life's demands. As was evident in Table 1.1, a number of positive characteristics are ascribed to people who are characterised by an internal locus of control. Such individuals have been shown to be cheerful, positive, optimistic in their approach, and hopeful (Taylor *et al.*, 2006)

Individuals with high scores on external control seem to blame the environment for life crises (Gropp *et al.*, 2007). These individuals believe that reinforcements are not within the limits of personal control (Pettersen in Taylor *et al.*, 2006).

5.4.2.3 Psychometric properties

Highly acceptable reliability coefficients have been obtained for the LCI in South Africa (Schepers *et al.*, 2006). The Cronbach alpha coefficients of the 1999 version were 0.88 (autonomy), 0.87 (external control) and 0.82 (internal control) (Gropp *et al.*, 2007).

Schepers (in Schepers *et al.*, 2006) found evidence for construct and criterion validity in the LCI. Validity findings further indicate that internal control and autonomy are strongly related to psychological wellness and external control negatively to stress management.

5.4.2.4 Justification for inclusion in the study

In the researcher's opinion, the LCI is ideally suited for use in a South African context. It is a South African designed and developed instrument, and its validity and reliability for the broad South African population have already been established (Bothma & Schepers, 1997). The inventory is available in English, Afrikaans and isiZulu versions (Anonymous, 2007), some of the main languages spoken in South Africa.

5.4.3 SENSE OF COHERENCE SCALE

According to Antonovsky (in Gropp *et al.*, 2007), the SOCS was developed mainly to measure sense of coherence as a global orientation, although the scale yields scores on each of the three dimensions it measures, namely comprehensibility, manageability and meaningfulness. The hand scorable, self-report scale with its three subscales, is designed to measure strengths within individuals that allow them to survive in the face of extreme stressors.

The SOCS consists of 29 five-facet items with a seven-point semantic differential, with two anchoring phrases (Gropp *et al.*, 2007). Every item includes four facets that describe the stimulus, including a fifth SOC facet that expresses one of the three components of sense of coherence. Eleven items are used to measure the comprehensibility dimension, ten items measure manageability, and meaningfulness is measured by eight items. Thirteen negatively phrased items are included, but these items are reverse scored, resulting in high scores on these items indicating a strong sense of coherence (Antonovsky in Gropp *et al.*, 2007).

The SOCS takes approximately 15 to 20 minutes to complete. It was developed for either self-completion or to be used in an interview process (Gropp, 2006).

5.4.3.1 Interpretation

According to Antonovsky (in Gropp, 2006), an individual with a strong sense of coherence will score highly on the three components (comprehensibility, manageability and meaningfulness). An individual with a poor sense of coherence will score low on the three components.

A high score on **comprehensibility** indicates that the person expects that the stimuli he or she encounters in future will be predictable. The individual will thus be able to make sense of the stimuli. The converse is true of a low score on comprehensibility (Antonovsky in Gropp, 2006).

A high score on **manageability** indicates that the person will not feel victimised by events or feel that life treats him or her unfairly (Antonovsky in Gropp, 2006). These individuals know that they will be able to cope with day-to-day life. A person with a low score is likely to feel like a victim.

An individual with a strong sense of **meaningfulness** would probably speak of important areas in his or her life that are crucial to making sense of things. The meaning of the important areas will make cognitive and emotional sense to the person. Life thus makes sense emotionally (Antonovsky in Gropp, 2006). Respondents who scores poorly on meaningfulness tend to feel that life does not make sense to them.

An individual may obtain a high score on one or two of the components but a low score on the third component (Gropp, 2006). Table 5.3 explains the variations in the prediction of the sense of coherence of respondents that may result from situations like these.

Table 5.3: Dynamic interrelatedness of the sense of coherence components (Antonovsky in Gropp, 2006, p.79)

Component				
Type	Comprehensibility	Manageability	Meaningfulness	Prediction
1	High	High	High	Stable
2	Low	High	High	Rare
3	High	Low	High	Pressure to move up
4	Low	Low	High	Pressure to move up
5	High	High	Low	Pressure to move up
6	High	Low	Low	Pressure to move up
7	Low	High	Low	Rare
8	Low	Low	Low	Stable

Respondents characterised by type 1 and 8 patterns are fairly stable, and the world will appear coherent (high score) or incoherent (low score) to them. People characterised as types 2 and 7 tend to be rarely found, as high manageability is dependent on high comprehensibility (Antonovsky in Gropp, 2006). Types 3 and 6 have a tendency towards instability. The high level of comprehensibility combined with a low level of manageability is likely to force the manageability to change. The direction for the change will be directed by the sense of meaningfulness (Antonovsky in Gropp, 2006). The profile will be forced down in type 5, as the person scores highly on comprehensibility, highly on manageability, but obtain a low score on meaningfulness. A type 4 person is likely to show a thoughtful spirit, trying to search for understanding and resources (Antonovsky in Gropp, 2006).

5.4.3.2 Psychometric properties

Antonovsky (1993) reported alpha coefficients ranging between 0.82 and 0.95, indicating that the SOCS does measure what it purports to measure. Test-retest reliabilities vary between 0.52 and 0.97 (Gropp *et al.*, 2007).

5.4.3.3 Justification for inclusion in the study

According to Antonovsky (in Gropp, 2006) the SOCS has been used in a variety of studies worldwide (including South Africa) and has been accepted as a culture-free questionnaire. The researcher therefore felt that Antonovsky's SOCS would be an appropriate measurement tool to use as part of the assessment battery in this study.

5.5 DATA COLLECTION

Prior to data collection, the Chief Executive Officer and Human Resource Director were consulted and they provided the company's consent to proceed with the data collection. Data were collected over a period of two months during which all participants completed all three measuring instruments in paper-and-pencil format. Each participant further completed a biographical form (see Appendix 1) designed for the purpose of this study, as well as a consent form (see Appendix 2) to acknowledge their willingness to participate in the study.

Participants were requested to attend a one-and-a-half to two hour assessment session in groups of approximately 20 individuals. Numerous assessment sessions were thus held over the two month period. At the start of each session, candidates were informed in detail about the purpose of the study, that their participation was voluntary, and they were presented with of an outline of the process that would be followed. The participants provided their written consent for participating in the study, and allowing the researcher to use their results for this study. The researcher assured participants about confidentiality, and pointed out that their results would not be used for purposes other than this study. They were further invited to raise any questions before participating in the assessments.

As pointed out earlier, the Bar-On EQ-i, LCI and SOCS were used as measuring instruments. The three paper-based questionnaires were handed to each participant and the group was supervised while completing them. The questionnaires were completed by a total of 179 individuals. The questionnaires (all marked with a unique number to identify the questionnaires of each participant) were scored, captured and compiled into a spreadsheet for statistical analysis and interpretation.

The EQ-i and LCI were scored by the test distributor using the software designed for this purpose. The test distributor also scored responses on the SOCS, captured the scores and sent this

information in the form of a data set to the researcher. The researcher then coded the data set and made it available for processing and analysis.

Ethics was considered in the data collection process in that all individuals participated voluntarily, and gave their informed consent. In addition, individual feedback was offered to each participant.

5.6 DATA ANALYSIS

In this section, the statistical methods used to analyse the data and the process followed in analysing and interpreting the data will be discussed. In this study, data analysis consisted of the process of determining whether:

- a relationship exists between emotional intelligence, locus of control and sense of coherence.
- biographical groups (as determined by education, occupational level, work experience, age and gender) differed significantly in terms of the three constructs.

This was a correlational study in that the research focused on the relationship between variables.

The process was as follows:

- Correlation tests were conducted to investigate the direction and strength of the variables measured by the Bar-On EQ-i, LCI and SOCS. The Pearson product-moment correlation coefficient was applied for this purpose.
- Inferential statistics were performed to enable the researcher to make inferences about the data. Regressions were performed in order to determine which portion of the variance was explained by the independent variable (internal locus of control) regarding the dependent variables (emotional intelligence and sense of coherence).
- Inferential statistical analyses were performed to determine whether groups based on the biographical characteristics of education, occupational level, work experience, age and gender differed significantly in terms of the constructs measured. T-test and ANOVAs were applied for this purpose.

5.6.1 Descriptive statistics

Descriptive statistics is based on the sample, and refers to the collection of methods for classifying and summarising numerical data. The descriptive statistics used to analyse data in this study were frequencies, means and standard deviations. Descriptive statistics for education, position, work experience, age and gender were generated. Frequency tables were used to indicate the distribution of biographical variable data and thus enabled the researcher to describe the sample population in terms of these variables.

5.6.2 Correlational statistics

Pearson's product moment correlation coefficient (r) was used to calculate the direction and strength between the three variables. The Pearson-product correlation coefficient was used to test the hypotheses relating to the positive or negative relationships that exist between the scores on the EQ-i, LCI and SOCS. The correlation coefficient is a point on the scale between -1.00 and $+1.00$ and the closer the coefficient is to either of these points, the stronger the relationship will be between two variables (Howell, 1995). A correlation of $+1.00$ is indicative of a perfect positive relationship, a correlation of 0.00 indicates no relationship, and a correlation of -1.00 indicates a perfect negative relationship between variables.

5.6.3 Inferential statistics

Inferential statistics is the branch of statistics that deals with inferring characteristics of populations from characteristics of samples (Howell, 1995). When the focus of analysis is on estimation or hypothesis testing, the sample is used to make inferences about the population. This process is known as statistical inference, and the techniques employed are referred to as inferential statistics (Diamantopoulos & Schlegelmilch, 2000). The following types of inferential statistics were used in this study:

5.6.3.1 Regression

Regression refers to the prediction of one variable from knowledge of one or more other variables. Linear regression refers to regression in which the relationship is linear (Howell, 1995). In this sense, linear regression uses a straight line to describe the relationship between the variables (Iman, 1994). Regression analysis was performed on internal locus of control and emotional intelligence, as well as on internal locus of control and sense of coherence in order to predict the relationship between internal locus of control (independent variable) and the other two variables.

5.6.3.2 T-test analysis

The t-test is a statistical test which assesses whether the means of two groups are *statistically* different from each other (http://www.socialresearchmethods.net/kb/stat_t.php). In this study, t-tests were used to determine whether there were statistically significant differences between participants based on their gender, in order to determine whether they significantly differ in terms of the variables of emotional intelligence, internal locus of control and sense of coherence.

5.6.3.3 Analysis of variance (ANOVA)

According to Howell (1995) ANOVA is a statistical technique for testing for differences in the means of several groups. In this study, one-way ANOVA was used – an analysis of variance was conducted where the groups were defined on only one independent variable, internal locus of control. ANOVA was performed on education, position, work experience and age (the biographical variables) in order to determine differences in means for each of the three constructs (emotional intelligence, locus of control and sense of coherence), in terms of the different levels of the four biographical variables mentioned.

5.6.3.4 Statistical level of significance

Level of significance (or level of rejection) refers to the probability with which the researcher is willing to reject the null hypothesis when it is in fact correct (Howell, 1995). Thus, whenever the probability (p-value) obtained under the null hypothesis is less than or equal to the predetermined significance level, the null hypothesis is rejected. For the purpose of this study, the 0.05 level of

significance/rejection was employed. This means that there is a 95% chance that the sample results would reflect the real relationship in the population (Neuman, 1997).

As pointed out earlier, Pearson's product-moment correlation coefficient (r) was used to calculate the direction and strength between the three constructs. The levels of significance of $p \leq 0.05$ and $r \geq 0.01$ were thus chosen as the cut-off points for rejecting the null hypothesis.

5.7 FORMULATION OF THE RESEARCH HYPOTHESES

According to Brewerton and Millward (2001, p.195), a hypothesis is "a tentative proposition made as a basis for further exploration, often based on limited evidence. A *null* hypothesis (i.e. the assumption that the hypothesis is unfounded) may only be rejected in light of sufficient evidence that the hypothesis is supported."

In the literature chapters the central hypothesis was formulated, namely to determine whether a relationship exists between emotional intelligence, locus of control (as operationalised by internal locus of control) and sense of coherence:

Hypothesis 1

There is a significant relationship between emotional intelligence, internal locus of control and sense of coherence. (There is a significant positive correlation between internal locus of control, emotional intelligence and sense of coherence).

Independent variable: internal locus of control

Dependent variables: emotional intelligence and sense of coherence

The following additional hypotheses were formulated in order to achieve the empirical objectives of the study:

Hypothesis 2

There is a significant difference between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence between various age level groups.

Independent variable: age

Dependent variables: emotional intelligence, internal locus of control and sense of coherence

Hypothesis 3

There is a significant difference between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence between various educational level groups.

Independent variable: educational level

Dependent variables: emotional intelligence, internal locus of control and sense of coherence

Hypothesis 4

There is a significant difference between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence between various occupational level groups.

Independent variable: occupational levels

Dependent variables: emotional intelligence, internal locus of control and sense of coherence

Hypothesis 5

There is a significant difference between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence between gender groups.

Independent variable: gender

Dependent variables: emotional intelligence, internal locus of control and sense of coherence

Hypothesis 6

There is a significant difference between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence in terms of number of years of work experience.

Independent variable: years of work experience

Dependent variables: emotional intelligence, internal locus of control and sense of coherence

5.8 CHAPTER SUMMARY

In this chapter, the research methodology was explained and the statistical methods used to analyse the data obtained from the questionnaires clarified. The objectives of the study were formulated, the sampling design and the characteristics of the sample discussed and the method for data collection and analyses explained. The measuring instruments were then discussed and the descriptive and inferential statistics used in the study presented. The statistical level of significance was explained and the hypotheses formulated. The results of the study will be reported in Chapter 6.

CHAPTER 6

RESEARCH RESULTS

6.1 INTRODUCTION

In this chapter, the research results will be reported and interpreted. The results are aligned to the methodology presented in Chapter 5.

6.2 OBJECTIVES

The main objective of this study was to determine whether there is a statistically significant relationship between emotional intelligence, locus of control (as operationalised by internal locus of control), and sense of coherence.

The additional objectives of the study were as follows:

- To determine whether there is a relationship between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence between various age level groups
- To determine whether there is a relationship between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence between various educational level groups
- To determine whether there is a relationship between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence between various occupational level groups.
- To determine whether there is a relationship between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence between gender groups
- To determine whether there is a relationship between the mean scores for the constructs of emotional intelligence, internal locus of control and sense of coherence between groups with various levels of work experience

6.3 DESCRIPTIVE RESULTS

According to Diamantopoulos and Schlegelmilch (2000, p.73) the purpose of descriptive analysis is as follows:

- Provide preliminary insights into the nature of the responses obtained, as reflected in the distribution of values for each variable of interest.
- Help detect errors in the coding process.
- Provide a means for presenting the data in a digestible manner, through the use of tables and graphs.
- Provide summary measures of “typical” or “average” responses as well as the extent of variation in responses for a given variable.
- Provide an early opportunity for checking whether the distributional assumptions of subsequent statistical tests are likely to be satisfied

In the following sections, the sample will be described in terms of the biographical profile. Furthermore, the means and standard deviations will be interpreted.

6.3.1 Description of the sample in terms of the biographical profile

As indicated in Chapter 5, a stratified random sample of 213 employees from a market research company was selected for this study. The three measuring instruments (the Bar-On EQ-i, LOC and SOCS), the biographical questionnaire and consent form were completed by 179 participants. The response rate was thus 84%.

Biographical data was gathered in this study on the participants’ gender, age, occupational level, educational level and work experience. The sample will now be described in terms of each of these variables.

6.3.1.1 Gender distribution of the sample

Table 6.1 depicts the gender distribution of the sample.

Table 6.1: Gender distribution of the sample

Gender	N	Percentage of sample
Female	121	67.60
Male	58	32.40
	n = 179	100

Of the total sample, 121 were female and 58 were male. Figure 6.1 is a graphic representation of the gender distribution of the sample.

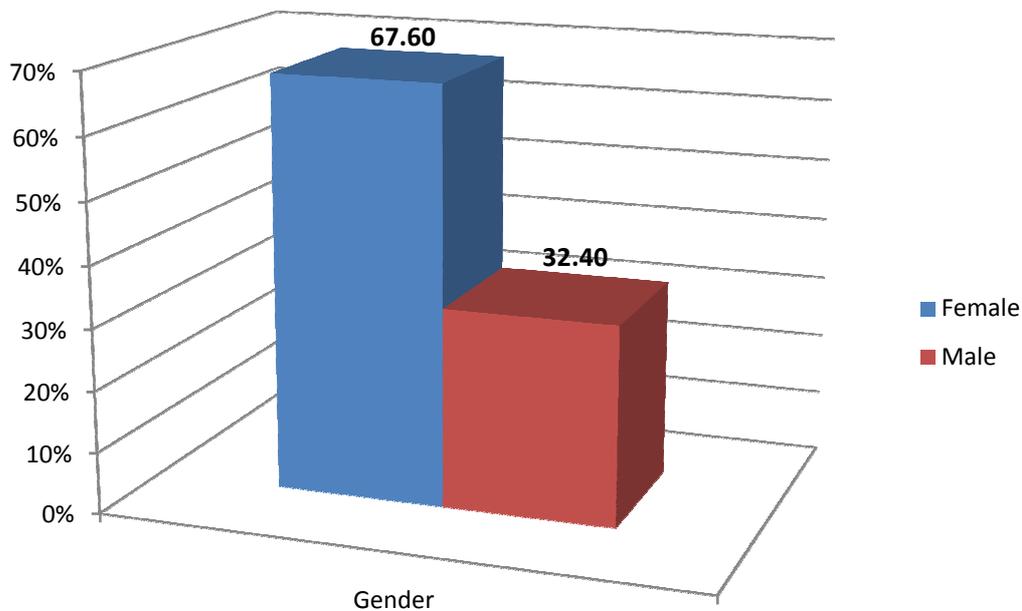


Figure 6.1: Gender distribution of the sample

6.3.1.2 Age

Participants were required to indicate their exact age or date of birth. Twenty participants in the sample, however, did not indicate their age. Table 6.2 indicates the age distribution of the sample.

Table 6.2: Age distribution of the sample

Age group	Frequency	Percentage in sample	Valid percentage
Valid ≤ 24 yrs	42	23.5	26.42
25 – 27 yrs	36	20.1	22.64
28 – 30 yrs	23	12.8	14.47
31 – 34 yrs	27	15.1	16.98
35 + yrs	31	17.3	19.50
Total	159	88.8	100.00
Missing system	20	11.2	0
Total	n = 179	100.0	100

The organisation tends to employ young individuals, and more than half the sample was 30 years old or younger. Figure 6.2 depicts the age distribution of the sample graphically.

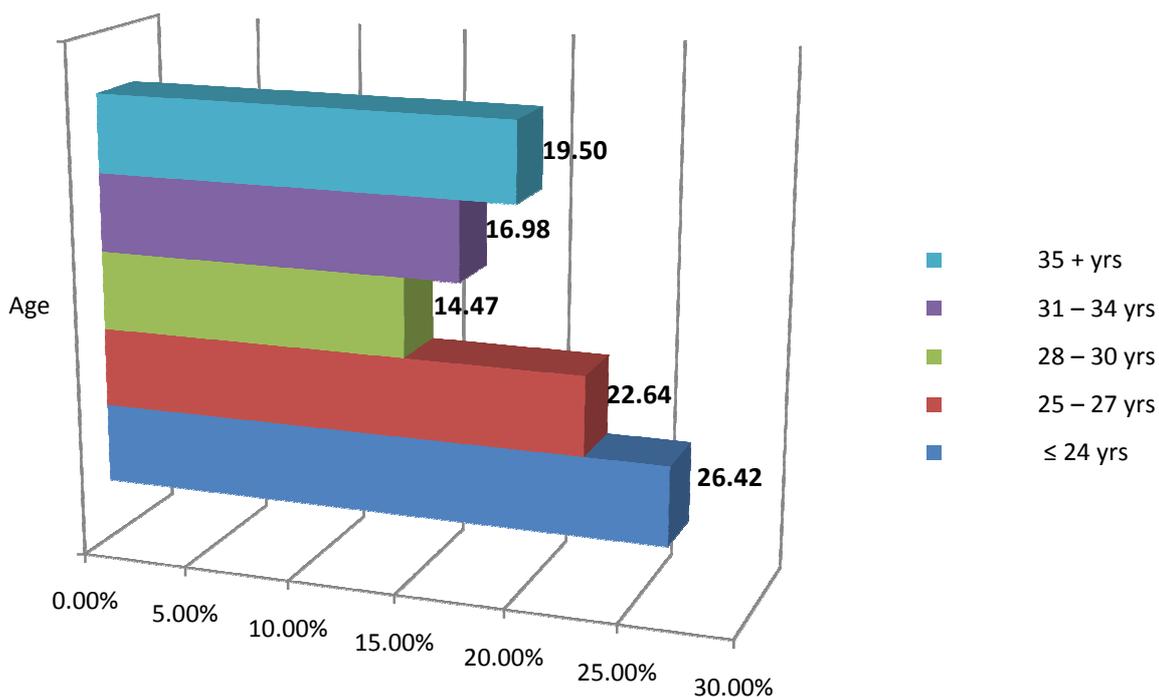


Figure 6.2: Age distribution of the sample

6.3.1.3 Occupational level

Table 6.3 indicates the occupational level distribution of the sample.

Table 6.3: Occupational level distribution of the sample

Occupational level	Frequency	Percentage
Professionally qualified, experienced specialists and mid-management	16	8.94
Skilled technical and academically qualified workers, junior management and supervisors	31	17.32
Semi-skilled and Decision-making workers	132	73.74
Total	n = 179	100

Table 6.3 indicates that the majority of the sample fell within the category “semiskilled and discretionary decision-making workers”. This may be ascribed to the large number of call centre staff employed by the organisation. Figure 6.3 is a graphical depiction of the occupational level distribution in the sample.

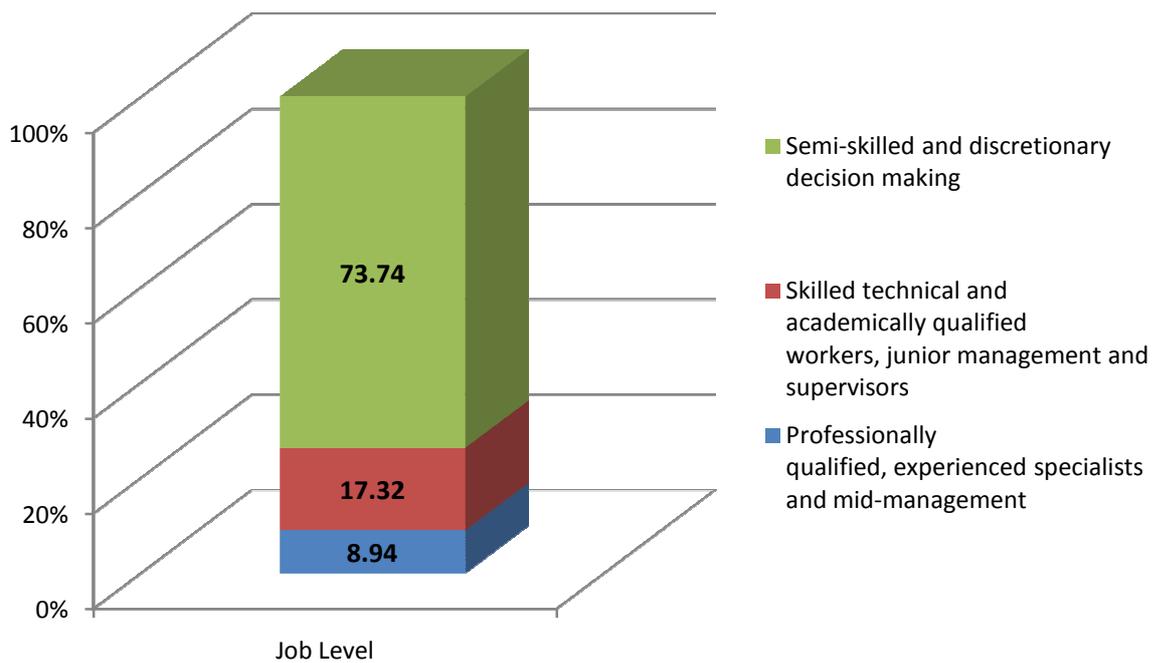


Figure 6.3: Occupational level distribution of the sample

6.3.1.4 Educational level

Table 6.4 depicts the employees' highest educational level achieved.

Table 6.4: Employees' educational level

Educational level	Frequency	Percentage of sample	Valid percentage
Grade 10 – 12	97	54.2	55.43
Certificate and diploma	44	24.6	25.14
Bachelors' degree	19	10.6	10.86
Postgraduate	15	8.4	8.57
Total	175	97.8	100
Missing System	4	2.2	0
Total	n = 179	100	100

The highest qualification of about half the sample (55.43%) was grade 10 to 12. Once again, this could be a reflection of the large number of call centre staff in the organisation. A grade 12 qualification (or grade 10 combined with previous work experience) is the minimum requirement for employment as a call centre agent. Four participants did not indicate their educational level.

Figure 6.4 is a graphical representation of the employees' educational level.

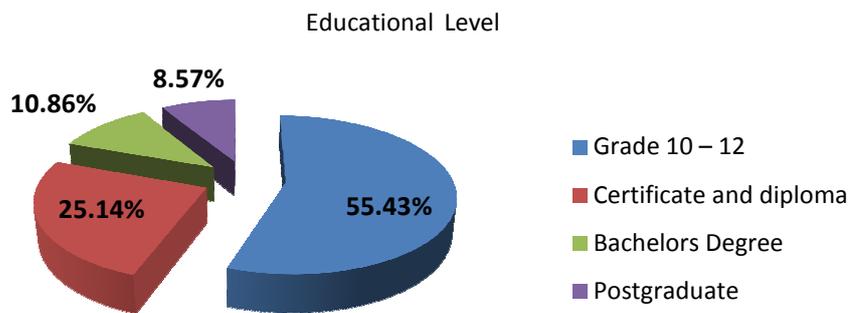


Figure 6.4: Employees' educational level

6.3.1.5 Work experience

Table 6.5 indicates the work experience distribution in the sample.

Table 6.5: Work experience in the sample

Work experience	Frequency	Percentage of sample	Valid percentage
0 – 5 years	33	18.4	18.54
6 – 10 years	64	35.8	36.96
11 – 15 years	26	14.5	14.61
16 – 20 years	25	14.0	14.04
21 years +	30	16.8	16.80
Total	178	99.5	100
Missing System	1	0.5	0
Total	n = 179	100	100

A substantial portion of employees (36.96%) had a total of six to ten years' work experience. One participant did not indicate his or her years of work experience. Figure 6.5 indicates the work experience distribution in the sample graphically.

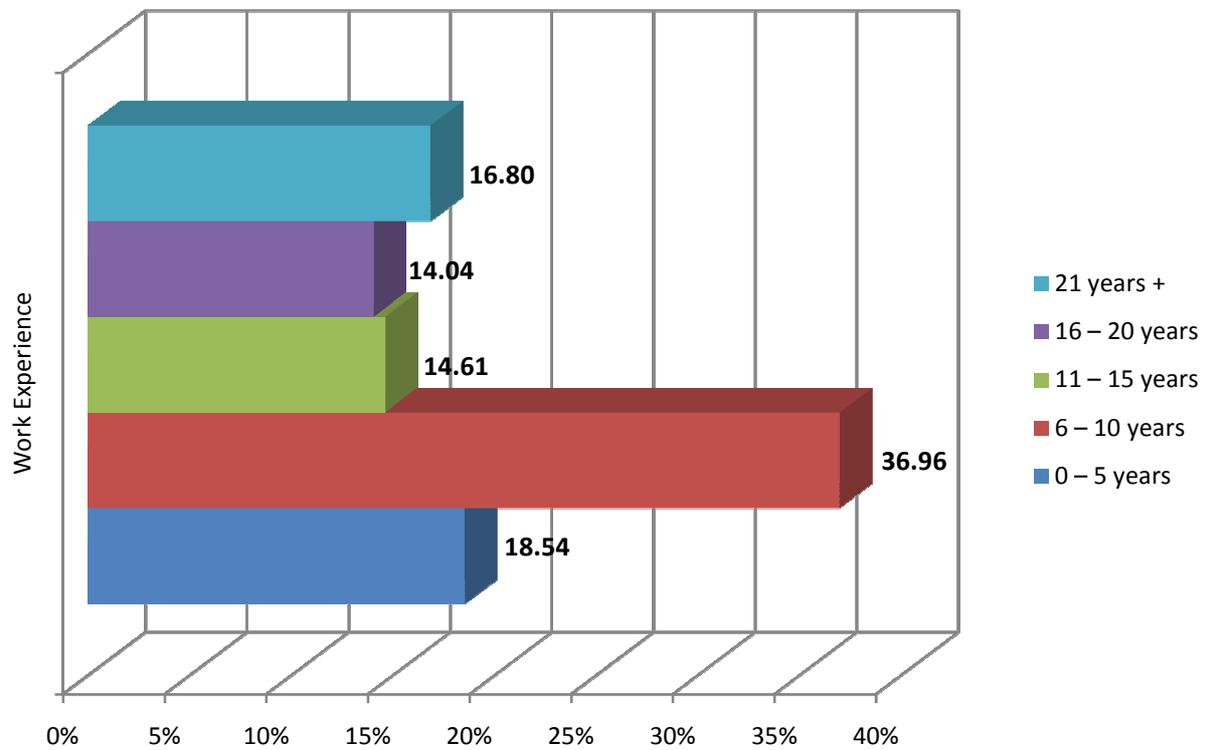


Figure 6.5: Work experience in the sample

6.3.2 Interpretation of means and standard deviations

Table 6.6 provides the means and standard deviations for emotional intelligence, internal locus of control and sense of coherence.

Table 6.6: Means and standard deviations for emotional intelligence, internal locus of control and sense of coherence.

		Internal locus of control	Emotional intelligence	Sense of coherence
n	Valid	179	179	179
	Missing	0	0	0
Mean		182.45	88.28	133.95
Std. Deviation		15.46	14.99	20.59
Minimum		127.00	52	77.00
Maximum		217.00	132	193.00

The mean score for internal locus of control was 182.45, with a standard deviation of 15.46. The mean score for sense of coherence was 133.95, with a standard deviation of 20.59. A mean score of 88.28 was calculated for emotional intelligence, with a standard deviation of 14.99. It is evident that the standard score of 88.28 obtained for emotional intelligence was relatively low for the organisation as a whole, although it did fall within the effective functioning group, based on the guidelines for interpretation provided in the Bar-On EQ-i technical manual (1997).

The mean score for sense of coherence was 133.95, with a standard deviation of 20.59. In terms of interpreting this score, the researcher turned to previous research undertaken:

- In their study Mlonzi and Strümpfer (1998) reported a mean score of 131.91 for sense of coherence, with a standard deviation of 15.42.
- Herbst, Coetzee and Visser (2007) reported a mean of 134.26 and a standard deviation of 23.35 for 120 respondents in their study.
- Wissing and Van Eeden (in Herbst *et al.*, 2007) obtained a mean score of 136.52 with a standard deviation of 21.68.

- Coetzee and Rothman (in Herbst *et al.*, 2007) obtained a mean score of 143.11 with a standard deviation of 21.42.
- Jackson and Rothmann (in Oosthuizen & Van Lill, 2008) reported a mean sense of coherence score of 131.20 with a standard deviation of 20.62 for 100 participants from a South African health services institution.
- In their study, Oosthuizen and Van Lill (2008) obtained a mean score of 134.88, with a standard deviation of 21.76.

The mean score reported in this study is therefore similar to those obtained in other studies.

The mean score for internal locus of control was 182.45, with a standard deviation of 15.46. Schepers and Hasset (2006) reported a mean score of 184.12 with a standard deviation of 14.39 (n = 3033).

6.4 CORRELATIONAL RESULTS

In this study three variables, namely emotional intelligence, locus of control and sense of coherence were analysed, and the Pearson product-moment correlation coefficient was used to calculate the correlations between the variables.

Table 6.7 indicates the Pearson product-moment correlations obtained for internal locus of control, emotional intelligence and sense of coherence.

Table 6.7: Pearson product-moment correlations between internal locus of control, emotional intelligence and sense of coherence

		Internal locus of control	Emotional intelligence	Sense of coherence
Internal LOC	Pearson correlation	1	.328**	.183*
	Sig. (2-tailed)		.000	.014
	N	179	179	179
EI	Pearson correlation	.328**	1	.560**
	Sig. (2-tailed)	.000		.000
	N	179	179	179
SOC	Pearson correlation	.183*	.560**	1
	Sig. (2-tailed)	.014	.000	
	N	179	179	179

** . significant at $\alpha = 0.01$ (2-tailed)

* . significant at $\alpha = 0.05$ (2-tailed)

The cut-off point for practical significance of correlation between variables is set according to guidelines by Cohen (1988, p.83), meaning correlation is practically significant if $r = 0.10$ (small effect), $r = 0.30$ (medium effect) and $r = 0.50$ (large effect).

A highly significant positive relationship (at a 0.01 level of significance) was evident between the sense of coherence and emotional intelligence variables, suggesting that the higher a participant scored on sense of coherence, the higher he or she scored on emotional intelligence. This implies that individuals who are emotionally intelligent are also able to cope more effectively with various stressors.

A significant positive relationship (at a 0.05 level of significance) was evident between the internal locus of control and sense of coherence variables, suggesting a significant correlation between these two variables. This implies that individuals who cope well with various stressors also believe they have control over their environment.

A highly significant positive relationship (at a 0.01 level of significance) was found between the internal locus of control and emotional intelligence variables, suggesting a strong correlation between these two variables. This implies that emotionally intelligent individuals tend to believe they have control over their environment.

6.5 INFERENCE RESULTS

Firstly, regression analysis was performed in order to investigate the relationship between the independent variable (internal locus of control) regarding the dependent variables (emotional intelligence and sense of coherence). This investigation forms hypothesis 1. Thereafter, the t-test and ANOVA were performed to examine whether the biographical groups (age, educational level, occupational level, gender and work experience) differed significantly on their mean scores with regard to the variables of concern to this study, namely emotional intelligence, internal locus of control and sense of coherence.

6.5.1 Regression analysis

Regression analysis was performed on internal locus of control and emotional intelligence, as well as on internal locus of control and sense of coherence (Hypothesis 1). The value of adjusted R^2 was used to interpret the results. The significance value was set at a 95% confidence interval ($p \leq 0.05$). The F test was used to test whether there was a significant regression between the independent and dependent variable.

6.5.1.1 Regression analysis on internal locus of control and emotional intelligence

Table 6.8 provides the summary of results from the regression analysis performed on internal locus of control and emotional intelligence.

Table 6.8: Regression analysis on internal locus of control and emotional intelligence

Model	Variable	Unstandardised		Standardised		t	p	F	R ²	R	p
		Coefficient B	Std error	Coefficient Beta (β)	Coefficient						
1	(Constant)	30.19	12.61			2.40	0.02	21.40	0.10	0.33 ^a	.00 ^a
	Internal LOC	0.32	0.07	0.33		4.63	0.00				

It is evident from Table 6.8 that this model is significant, and explains 10% of the variance in the dependent variable. Hence, internal locus of control significantly predicts or explains emotional intelligence.

The characteristics of a person with an internal locus of control include future time orientation, academic goal setting, self-regulation, better academic performance, achievement-oriented day-dreaming, higher levels of academic self-esteem, and an openness to change (Taylor *et al.*, 2006). These positive behaviours of an internal locus of control thus seem to be associated with emotional intelligence – the interaction between emotion and cognition that leads to adaptive functioning.

6.5.1.2 Regression analysis on internal locus of control and sense of coherence

Table 6.9 provides a summary of the results of the regression analysis performed on internal locus of control and sense of coherence.

Table 6.9: Regression analysis on internal locus of control and sense of coherence

Model	Variable	Unstandardised		Standardised	t	p	F	R ²	R	p
		Coefficient B	Std error	coefficient Beta (β)						
1	(Constant)	89.55	18.02		4.97	0.00	6.11	0.03	0.18 ^a	0.01 ^a
	Internal LOC	0.24	0.10	0.18	2.47	0.01				

This model is significant, and explains 2% of the variance in the dependent variable. Hence internal locus of control positively predicts or explains sense of coherence.

As explained earlier, an internal locus of control concerns the belief that outcomes are dependent upon the effort put in to them. This self-directed aspect of internal locus of control thus seems to be associated with sense of coherence, the tendency towards an individual seeing life as “under control”.

6.5.2 Differences in the mean scores for the gender groups

In this study, the t-test was used to determine statistically significant differences between participants on the basis of gender, that is, whether participants differed in terms of gender in respect of the variables of emotional intelligence, locus of control and sense of coherence. Table 6.9 provides a summary of the results of the t-test for equality of means.

Table 6.10: Independent samples test

		Internal locus of control	Emotional intelligence	Sense of coherence	
		Equal variances assumed	Equal variances assumed	Equal variances assumed	
Levene's test for equality of variances	F	.01	.06	.18	
	Sig.	.92	.82	.67	
t-test for equality of means	T	-1.15	-.75	-1.47	
	Df	177	177	177	
	Sig. (2-tailed)	.25	.45	.14	
	Mean difference	-2.83	-1.80	-4.82	
	Std. error difference	2.47	2.40	3.28	
	95% confidence interval of the difference				
		Lower	-7.70	-6.53	-11.29
		Upper	2.03	2.93	1.65

The t-test for equality of means in Table 6.10 indicates that there were no significant differences between the participants on the basis of their gender. There were no significant gender differences (at a 0.05 level of significance in respect of all the variables, namely emotional intelligence, internal locus of control and sense of coherence).

6.5.3 Differences in mean scores for further biographical groups

Table 6.11 presents the ANOVA results for education, occupational level, work experience and age.

Table 6.11: Analysis of variance

		Sum of Squares	df	Mean square	F	Sig.
Internal LOC	Between groups	1160.15	2	580.07	2.47	.09
	Within groups	41370.10	176	235.06		
	Total	42530.25	178			
SOC	Between groups	2909.31	2	1454.65	3.53	.03
	Within groups	72549.24	176	412.21		
	Total	75458.55	178			
EI	Between groups	877.11	2	438.56	1.97	.14
	Within groups	39113.36	176	222.24		
	Total	39990.47	178			

Differences were found among participants' internal locus of control and sense of coherence in terms of occupational levels but not for emotional intelligence and occupational levels. No significant differences were found between the participants' emotional intelligence, locus of control and sense of coherence, in terms of their educational level, work experience or age. A significant difference was found at the 0.05 level between the various occupational groups in terms of their sense of coherence. A significant difference at the 0.10 level was also evident between occupational groups in terms of internal locus of control.

A multiple comparisons post hoc test was done to determine whether the means differ between groups at a 0.05 significance level. Table 6.12 depicts the means report in terms of occupational levels, and Table 6.13 presents the multiple comparisons test.

Table 6.12: Means report for occupational levels

Position	Sense of coherence	Internal locus of control
Professionally qualified, experienced specialists and mid-management	143.13	174.44
Skilled technical and academically qualified workers, junior management and supervisors	139.16	184.16
Semi-skilled and discretionary decision-making workers	131.61	183.02
Total	133.95	182.45

Table 6.13: Multiple comparisons report

Dependent variable	(I) Position	(J) Position	Std. error	Sig.
Internal locus of control	Professionally qualified, experienced specialists and mid-management	Skilled technical and academically qualified workers, junior management and supervisors	4.72	.04
		Semi-skilled and discretionary decision-making workers	4.06	.04
	Skilled technical and academically qualified workers, junior management and supervisors	Professionally qualified, experienced specialists and mid-management	4.72	.04
		Semi-skilled and discretionary decision-making workers	3.06	.71
	Semi-skilled and discretionary decision making	Professionally qualified, experienced specialists and mid-management	4.06	.04

		Skilled technical and academically qualified workers, junior management and supervisors	3.06	.71
Sense of coherence	Professionally qualified, experienced specialists and mid-management	Skilled technical and academically qualified workers, junior management and supervisors	6.25	.53
		Semi-skilled and discretionary decision-making workers	5.37	.03
	Skilled technical and academically qualified workers, junior management and supervisors	Professionally qualified, experienced specialists and mid-management	6.25	.53
		Semi-skilled and discretionary decision-making workers	4.05	.06
	Semi-skilled and discretionary decision making	Professionally qualified, experienced specialists and mid-management	5.37	.03
		Skilled technical and academically qualified workers, junior management and supervisors	4.05	.06

For ease of explanation, the occupational level categories will be numbered as follows:

Group 1: professionally qualified, experienced specialists and mid-management.

Group 2: skilled technical and academically qualified workers, junior management and supervisors

Group 3: semi-skilled and discretionary decision-making workers

It is evident from Table 6.12 that in terms of locus of control, there is a significant difference at the 0.05 significance level in means between groups 1 and 2 ($p=0.04$), as well as groups 1 and 3 ($p=0.04$), but not a significant difference between groups 2 and 3 ($p=0.71$).

It is further evident that in terms of sense of coherence, there is a difference in means between groups 1 and 3 at the 0.05 level of significance ($p=0.03$). There was a difference in means between groups 2 and 3 ($p=0.06$) at the 0.01 level of significance.

It would thus appear that there is a significant difference between professional, managerial and specialised employees, and lower levels workers in terms of their locus of control as well as their sense of coherence.

6.6 HYPOTHESES

In the literature chapters the central hypothesis was formulated, namely to determine whether a relationship exists between emotional intelligence, internal locus of control and sense of coherence:

Hypothesis 1

There is a significant positive correlation between internal locus of control, emotional intelligence and sense of coherence

Independent variable: internal locus of control

Dependent variables: emotional intelligence and sense of coherence

The results of the study indicate a significant relationship between internal locus of control and emotional intelligence, as well as between locus of control and sense of coherence. Hypothesis 1 is therefore accepted.

In addition, the following hypotheses were formulated in order to achieve the empirical objectives of the study:

Hypothesis 2

There is a significant difference between the mean scores for the constructs emotional intelligence, locus of control and sense of coherence among various age level groups.

Independent variable: age

Dependent variables: emotional intelligence, locus of control and sense of coherence

No significant differences were found between the mean scores for the constructs emotional intelligence, locus of control and sense of coherence among various age groups. Hypothesis 2 is therefore rejected.

Hypothesis 3

There is a significant difference between the mean scores for the constructs emotional intelligence, locus of control and sense of coherence among the educational level groups.

Independent variable: educational level

Dependent variables: emotional intelligence, locus of control and sense of coherence

No significant differences were found between the mean scores for the constructs emotional intelligence, locus of control and sense of coherence among educational level groups. Hypothesis 3 is therefore rejected.

Hypothesis 4

There is a significant difference between the mean scores for the constructs emotional intelligence, locus of control and sense of coherence among various occupational level groups.

Independent variable: occupational levels

Dependent variables: emotional intelligence, locus of control and sense of coherence

Differences were found for occupational level groups in terms of both internal locus of control and sense of coherence, but not for emotional intelligence and occupational level groups. The same occupational level categories as indicated above were used, namely:

Group 1: Professionally qualified, experienced specialists and mid-management.

Group 2: Skilled technical and academically qualified workers, junior management and supervisors

Group 3: Semi-skilled and discretionary decision-making workers

In terms of locus of control, there was a difference in means between groups 1 and 2, as well as groups 1 and 3, but no difference between groups 2 and 3 (all at a 0.05 level of significance). In terms of sense of coherence, there was a difference at a 0.05 level of significance in means

between groups 1 and 3. There was also a difference (at a 0.01 level of significance) in means between groups 2 and 3.

Significant differences were therefore found between professionals, managers and specialist employees, and lower levels employees in terms of their locus of control as well as their sense of coherence. Hypothesis 4 is therefore partially accepted.

Hypothesis 5

There is a significant difference between the mean scores for the constructs emotional intelligence, locus of control and sense of coherence between gender groups.

Independent variable: gender

Dependent variables: emotional intelligence, locus of control and sense of coherence

No significant gender differences were found in terms of emotional intelligence, locus of control and sense of coherence. Hypothesis 5 is therefore rejected.

Hypothesis 6

There is a significant difference between the mean scores for the constructs emotional intelligence, locus of control and sense of coherence in terms of number of years of work experience.

Independent variable: years of work experience

Dependent variables: emotional intelligence, locus of control and sense of coherence

No significant differences were found between the mean scores for the constructs emotional intelligence, locus of control and sense of coherence in terms of groups with various levels of work experience. Hypothesis 6 is therefore rejected.

6.7 CHAPTER SUMMARY

The research results and findings were discussed in this chapter. The results obtained by means of descriptive statistics were presented, where after the correlational statistics were explained. This was followed by a presentation of the results determined by means of inferential statistics, and the findings in terms of the hypotheses were presented. In the final chapter, the conclusions, integration of the literature review and empirical study, limitations and recommendations will be presented.

CHAPTER 7

CONCLUSIONS, INTEGRATION OF THE LITERATURE REVIEW AND EMPIRICAL STUDY, LIMITATIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

The aim of this study was to determine whether there was a statistically significant relationship between the constructs emotional intelligence, internal locus of control and sense of coherence among employees in a market research organisation. In addition, a further objective was to determine whether there was a relationship between the above-mentioned three constructs and various biographical groups, namely age, educational level, occupational level, gender and levels of work experience. In this chapter, the results provided in Chapter 6 will be interpreted, and the findings of the study discussed in the context of the literature review and empirical study. The limitations of the study will be discussed and recommendations made for the organisation and for future research.

7.2 CONCLUSIONS

In this section, the conclusions of the literature review and empirical study will be discussed.

7.2.1 Conclusions relating to the literature review

Literature reviews were conducted on emotional intelligence, locus of control and sense of coherence. These reviews enabled the researcher to both formulate the hypotheses, and compare findings of previous research with the findings of the present study.

Chapter 2 focused on emotional intelligence. Kapp (2000) defines emotional intelligence as a part of the human spirit responsible for motivating an individual to perform and provides the energy to demonstrate positive behaviours. This definition, amongst others, highlights the link between emotional intelligence and positive psychology. Three lines of research on the construct were identified. One line of research was established by Salovey and Mayer (in McEnrue & Groves,

2006), another by Goleman (in McEnrue & Groves, 2006), and a third by Bar-On (McEnrue & Groves, 2006). Chapter 2 also concentrated on various life domains where emotional intelligence has been shown to have a significant impact.

According to Nelis *et al.* (2009), it is possible to enhance some facets of emotional intelligence, but this does not apply to all facets of this construct. It has, however been found that changes in individual behaviour have resulted from effective emotional intelligence training programmes (Kunnanatt, 2004). Lastly, emotional intelligence seems to be linked to leadership skills.

Chapter 3 addressed locus of control. Locus of control in general was defined, but the chapter focussed specifically on internal locus of control. Taylor *et al.*, (2006) explain that individuals with an internal locus of control display characteristics such as future time orientation; goal setting; superior academic performance; and superior levels of academic self esteem.

The role of locus of control in various life domains was discussed. In the workplace, individuals with an internal locus of control seem to experience greater work motivation and job involvement than individuals with an external locus of control (Spector, 1982). In addition, internals seem to perform better in tasks requiring skill, have higher self-confidence, and tend to use information more effectively (Phares, in Spector, 1982).

Hattrup *et al.* (2005) found significant relationships between locus of control and job performance. There further is evidence that internal locus of control and sense of coherence result in a feeling of confidence in coping with life stress. A high sense of coherence and internal locus of control also seem to have a positive effect on organisational climate (Oosthuizen & Van Lill, 2008).

Chapter 4 focused on sense of coherence. Sense of coherence consists of three elements, namely comprehensibility, manageability and meaningfulness, and is essentially a tendency to view life as “under control” (Amirkhan & Greaves, 2003). In the workplace, an individual with a strong sense of coherence makes cognitive sense of the workplace, and perceives information as ordered, clear and structured. Such an individual is also likely to be challenged by work, and will put his/her efforts and energy into work demands and see them as challenges (Strümpfer & De Bruin, 2009). An individual with a high sense of coherence is likely to be satisfied in his or her job.

7.2.2 Conclusions relating to the empirical study

The general aim of this research was to investigate the relationship between emotional intelligence, locus of control and sense of coherence of employees in a market research organisation in South Africa. More specifically, the study aimed to determine the relationship between emotional intelligence, locus of control and sense of coherence, and particular biographical variables (age, educational level, occupational level, gender and work experience).

This research was designed to answer the following empirical questions:

- How are emotional intelligence, locus of control and sense of coherence related?
- How are emotional intelligence, locus of control and sense of coherence related to particular biographical variables (age, educational level, occupational level, gender and work experience)?
- How might recommendations resulting from this research influence the way an organisation manages its employees?

The practical value of the results of this study lies in the way the findings could influence the way an organisation selects, manages and specifically develops its employees. Perhaps more significantly, the findings could help an organisation to develop appropriate wellness programmes in order to highlight the importance of the salutogenic constructs discussed in this research, and apply this knowledge in practice in the organisation.

7.2.2.1 Conclusions based on the descriptive statistics

In terms of the gender distribution of the sample ($n = 179$), 121 of the respondents were female and 58 male. The majority of employees in the organisation seemed to be fairly young (30 or younger) and were grouped into the occupational category "semiskilled and discretionary decision-making staff". A large proportion of the staff in the organisation were call centre agents, and therefore comprised a large portion of the aforementioned occupational category. More than half the employees had a grade 12 qualification, while only 8% had a postgraduate qualification.

Although the mean score for emotional intelligence displayed some degree of effective functioning in terms of this construct, the score was fairly low for the organisation as a whole. The following two research questions were posed:

- How will the results of the findings affect the organisation?
- How could the recommendations potentially influence the way an organisation manages its employees?

The researcher is of the opinion that the organisation could benefit from a training programme aimed at enhancing the emotional intelligence skills of its employees. In terms of both sense of coherence and locus of control, the mean obtained was similar to those obtained in other studies. The employees thus seemed to be reasonably motivated and involved in their jobs and generally viewed life as being “under control”.

7.2.2.2 Conclusions based on the correlational results

The correlational results indicated a highly significant positive relationship between sense of coherence and emotional intelligence, while a significant positive relationship was evident between sense of coherence and internal locus of control. A highly significant positive relationship was observed between internal locus of control and emotional intelligence. It can therefore be concluded that there is a significant relationship between emotional intelligence, internal locus of control and sense of coherence.

The results also indicated that an individual who displays emotionally intelligent skills, an internal locus of control and sense of coherence, is likely to perform well in a workplace and demonstrate positive behaviours. Such an individual will be time focused, set goals, perform well academically and feel self-confident. He or she is also more likely to feel that he or she can cope with stress and make cognitive sense of the workplace.

7.2.2.3 Conclusions based on the inferential results

This study revealed that an internal locus of control predicts emotional intelligence. The characteristics of a person characterised by an internal locus of control include future time

orientation, academic goal setting, self-regulation, better academic performance, achievement-oriented day-dreaming, higher levels of academic self esteem, and an openness to change (Taylor *et al.*, 2006). These positive characteristics linked to people with an internal locus of control thus seem to be associated with emotional intelligence, the interaction between emotion and cognition that leads to adaptive functioning. In addition, internal locus of control positively predicts and explains sense of coherence. An internal locus of control, and the belief that outcomes are dependent upon the effort put in to them, seems to be associated with sense of coherence, the tendency towards an individual seeing life as “under control”.

No significant gender differences in terms of emotional intelligence, locus of control and sense of coherence were found. Some differences, however, were revealed among other biographical groups. Differences were found among occupational level groups in terms of both internal locus of control and sense of coherence, but not for emotional intelligence and occupational levels. In terms of internal locus of control, there was a significant difference between professionally qualified, experienced specialists and mid-management, and skilled technical persons and academically qualified workers, junior management and supervisors. There was also a significant difference between professionally qualified, experienced specialists and mid-management and semi-skilled and discretionary decision-making workers. A significant difference between skilled technical and academically qualified workers, junior management and supervisors and semi-skilled and discretionary decision-making workers was not found.

It is further evident that in terms of sense of coherence, there was a difference between professionally qualified, experienced specialists and mid-management, and semi-skilled and discretionary decision-making workers. There was a difference between skilled technical and academically qualified workers, junior management and supervisors and semi-skilled and discretionary decision-making workers. No significant differences were found among participants from different education level, work experience level or age groups in terms of the three constructs under investigation.

Gropp *et al.* (2007) found that there is a relationship between a person's inclination to attribute the control of events to themselves, or to factors in the external environment (locus of control), the positive orientation displayed towards life crises and the ability to react to stressors in a positive way (sense of coherence), and the ability to regulate and cope with the emotions that environmental demands and pressures evoke (emotional intelligence). Similarly, in this study a relationship between internal locus of control, sense of coherence and emotional intelligence was

found. In addition, Gropp (2006) found that internal locus of control, sense of coherence, emotional intelligence and self-actualisation have a strong relationship with psychological wellness. Moreover, a psychologically well individual will have similar characteristics to an individual measuring high on internal locus of control, sense of coherence, emotional intelligence and self-actualisation (Gropp, 2006).

Previous findings have suggested various links between the three constructs. According to Sullivan (1993), Rotter's locus of control bears some resemblance to what Antonovsky describes in his SOC concept. The sense of control as defined by Rotter, however, is often mistakenly equated with Antonovsky's manageability as a component of sense of coherence (Sullivan, 1993). Antonovsky views control as comprised of two related factors, a sense that events are comprehensible, and under some kind of control, not necessarily one's own. The western ideology that man is master of his fate tends to obscure these distinctions (Sullivan, 1993). A sense of participation in shaping one's destiny without a perception of mastery may be sufficient to foster a sense of coherence. In this light, a sense of coherence may be said to exist in an individual without there necessarily being a sense of control (Sullivan 1993).

Other researchers have also demonstrated a relationship between sense of coherence and measures of control. Ruiselova (in Van Wijk, 2008) found that a higher sense of coherence was associated with an internal locus of control. Van Wijk (2008) also found evidence that high sense of coherence scores were significantly correlated with a more internal locus of control. Antonovsky (in van Wijk, 2008) argues that an internal locus of control may act as a general resistance resource, strengthening an individual's sense of coherence.

Previous research has also linked emotional intelligence with locus of control. According to Deniz, Tras and Aydogan (2009) there is a relationship between the subscales of EQ and internal locus of control. Baltas (in Deniz *et al.*, 2009) further emphasises that internal locus of control is one of the most significant characteristics of a person who has developed emotional intelligence. Hence, having an internal locus of control is one of the most important features of individuals who have high emotional intelligence (Baltas in Deniz *et al.*, 2009). Mohapatra and Gupta (2010) are of the opinion that being in charge of one's emotions leads to a belief of being in control of life and a belief in the ability to attain goals by well-directed efforts. Mohapatra and Gupta (2010) also found evidence revealing an association amongst emotional intelligence, work values and internal locus of control. According to Spector *et al.* (in Johnson & Holdsworth, 2009), work locus of control has been demonstrated to be related to general well-being. Work locus of control may buffer the effects

of a poor emotional intelligence, in that feelings of control at work may compensate for problems associated with a lower emotional intelligence (Johnson & Holdsworth, 2009).

This study contributed to the above body of knowledge, because it also determined a relationship between emotional intelligence, locus of control and sense of coherence.

7.3 HYPOTHESES OF THE RESEARCH

Based on the results of the study, the following hypotheses were formulated:

Hypothesis 1

There is a significant relationship between emotional intelligence, internal locus of control, and sense of coherence.

Hypothesis 2

There is no significant difference between the constructs of emotional intelligence, internal locus of control and sense of coherence among various age level groups.

Hypothesis 3

There is no significant difference between the constructs emotional intelligence, internal locus of control and sense of coherence among educational level groups.

Hypothesis 4

There is a significant difference between the constructs emotional intelligence, internal locus of control and sense of coherence among various occupational level groups.

This difference will briefly be discussed. In terms of internal locus of control, there was a significant difference between professionally qualified, experienced specialists and mid-management, and skilled technical persons and academically qualified workers, junior management and supervisors. There was also a significant difference between professionally qualified, experienced specialists and mid-management and semi-skilled and discretionary decision-making workers. Skilled technical and academically qualified workers, junior management and supervisors and semi-skilled and discretionary decision-making workers did not differ significantly in terms of internal locus of control. It is further evident that in terms of sense of coherence, there was a significant difference

between professionally qualified, experienced specialists and mid-management, and semi-skilled and discretionary decision-making workers. Skilled technical and academically qualified workers, junior management and supervisors and semi-skilled and discretionary decision-making workers also differed significantly in terms of sense of coherence.

Hypothesis 5

There is no significant difference between the constructs of emotional intelligence, internal locus of control and sense of coherence between males and females.

Hypothesis 6

There is no significant difference between the constructs of emotional intelligence, internal locus of control and sense of coherence in terms of number of years of work experience.

7.4 LIMITATIONS OF THE RESEARCH

The following limitations were identified:

7.4.1 Limitations of the literature review

It appears as if there is a lack of published research on the relationships between wellness constructs in a work setting. Hence the constructs emotional intelligence, locus of control and sense of coherence have been discussed largely in terms of organisational success and not sufficiently in terms of wellness in an organisational context. In addition, there appears to be a lack of apparent research on the relationships between wellness constructs and biographical variables such as age, gender and educational level. Instead of being the main focus of the research, these relationships appear to be embedded in existing construct-level wellness research in an organisational context.

7.4.2 Limitations of the empirical study

The use of self-report measures of psychological health in this study may be seen as a limitation, because many people may fall into a “neutral zone”, because they tend to provide neutral

responses. A further limiting aspect was the cost and time involved in administering the questionnaires to a sizable sample.

This study mainly focused on employees' internal locus of control, but further research in terms of external locus of control may yield valuable results.

7.5 RECOMMENDATIONS

Recommendations for the organisation will now be briefly discussed, as well as practical implications and recommendations for future research.

7.5.1 Recommendations for the organisation

According to Cherniss (in Cherniss & Goleman, 2001), emotional intelligence influences organisational effectiveness in numerous ways: employee recruitment and retention; development of talent; teamwork; employee commitment; innovation; productivity; efficiency; sales; revenues; quality of service; customer loyalty and client outcomes.

The findings obtained in this research indicate that although the organisation's emotional intelligence score as a whole is within the effective functioning range, the overall mean score of 88 is still fairly low. Employees may consequently benefit from coaching or other emotional intelligence programmes. These interventions may lead to a better understanding of employees in terms of emotional intelligence, and both employees as well as the organisation may benefit from such interventions. Kunnanatt (2004) in fact believes that powerful and sustained changes in employee behaviour may result from this type of training. Cherniss (in Cherniss & Goleman, 2001), however, notes that any effort to improve the emotional intelligence of employees will fail unless it affects naturally occurring relationships among those employees. In this light, formal training may only be of value if it leads to sustained changes in relationships in the organisation once employees return to their work environment.

A further recommendation would be for the organisation to consider incorporating an emotional intelligence assessment instrument, or other instruments assessing wellness, in its battery of assessments for recruitment purposes. Such an instrument should highlight many of the soft skills

often overlooked in the hiring process. In this way, the organisation may be able to place suitable candidates in positions requiring a high level of emotional intelligence, sense of coherence, or internal locus of control.

7.5.2 Recommendations for practical applications

Some practical suggestions are that training should not merely focus on what is known as hard skills, but also on softer skills such as emotional intelligence training. However, as indicated in Chapter 2, it would be advisable to judge each individual or situation on merit before considering emotional intelligence training or coaching, or making emotional intelligence a job prerequisite.

If coaching and mentoring programmes are considered at work, it may be advisable to focus on the psychological wellness constructs in this study in such programmes. Work is seen as a life task that is open to being influenced, as discussed in Chapter 1. It is therefore essential to understand wellness at work in order to make interventions available for optimal functioning and well-being at individual and group level. It is also worth understanding emotional intelligence, internal locus of control and sense of coherence as a function of wellness of individuals. Such wellness programmes may help to foster general wellness and work wellness in particular, and assist individuals to experience their work in a more meaningful way. Myers *et al.* (2000) suggest compiling a written behavioural wellness plan. Included in such a plan would be the objectives of change, methods to be used to effect change and the resources that would be used as the plan is implemented.

The findings of this research are valuable to organisations as a whole, and specifically to the market research industry. In addition, this study contributes to the field of industrial and organisational psychology in that it adds to the body of existing knowledge on the relationship between wellness constructs. A few recommendations for future research will be highlighted below.

7.5.3 Recommendations for future research

In light of the apparent lack of published research on wellness constructs in the work environment, further South African research in this regard appears warranted. Further investigation of the relationship between locus of control, sense of coherence and emotional intelligence (and/or other

wellness constructs) within other industries in the South African business environment is recommended. Further studies should, however, include samples that are more representative of other industries other than the market research industry, in order to broaden the relevance of the results of the relationship between the emotional intelligence, locus of control and sense of coherence. In addition, Gropp (2006) suggested investigating the understanding of sense of coherence from a South African perspective. In this light it would also be useful to investigate other wellness constructs from a South African perspective, such as emotional intelligence and locus of control.

In terms of emotional intelligence, it may be advisable to conduct a longitudinal study on the effects of an emotional intelligence coaching programme for employees within a South African business environment. The effectiveness of an emotional intelligence programme (hence increased emotional intelligence) may be linked to organisational effectiveness by considering measurable aspects such as employee retention, employee commitment, productivity and sales outcomes. Firstly investigating emotional intelligence as a trait versus an ability may also contribute to an awareness of how such programmes should be approached.

Based on the diversity of the South African workforce, further investigation of the external component of locus of control may also be valuable. Cultural differences between groups, such as the fact that some groups tend to be community focused and others more individualistic, may lead to differences in locus of control which may not be explained by existing theories.

Lastly, this research serves as an initial step in investigating the relationship between locus of control, sense of coherence and emotional intelligence. In future studies, more advanced statistical techniques such as structural equation modelling should be used to investigate the relationship between these constructs. To determine true relations between the various wellness constructs, more advanced statistical techniques such as these may enhance our knowledge by revealing finer nuances in the relationships among constructs.

7.6 CHAPTER SUMMARY

This chapter concludes the final steps of the research study. The conclusions, in terms of both theoretical and empirical objectives, were discussed. Possible limitations were mentioned, and recommendations were made for the organisation involved in the study and for future research. The general aim of the study, to determine the relationship between emotional intelligence, locus of control and sense of coherence in a market research organisation, was achieved.

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Appendix 1

Biographical questionnaire

Name

Relevant branch (Head office, Pretoria, Durban, Rivonia)

Cell number

ID number (or birth date)

Highest educational level

Current position within the organisation

Total number of years work experience (Current company and elsewhere)

Have you ever been exposed to psychometric testing before?

Is there anything that would prevent you from doing your best in answering the questionnaires today?

Gender

Race

Please note that this form is only used for statistical purposes. All information will be kept confidential. Thank you once again for your participation.

Date: _____

Signature: _____

Appendix 2

Participant Consent Form

BACKGROUND INFORMATION

Title and researcher. The title of this research is: The relationship between emotional intelligence, locus of control and sense of coherence within a market research organisation. My name is Janine Feldman and I am currently studying at UNISA.

Reason for the research. I am studying the relationship between the above-mentioned constructs within a market research environment, and I am collecting data from a random sample of about 200 employees to enable me to conduct my research.

Details of participation. The research involves completing three questionnaires, namely the Bar-On EQ-i, Locus of Control Inventory and Orientation to Life Questionnaire. You will also be requested to fill in a biographical questionnaire and consent form. The session should take about 90 minutes. Please feel free to ask questions.

CONSENT STATEMENT

1. I understand that my participation is voluntary.
2. I am aware of what my participation will involve.
3. I understand that there are no risks involved in the participation of this study.
4. All questions that I have about the research have been satisfactorily answered.

I agree to participate.

Participant's signature: _____

Participant's name (please print): _____

Please note that the organisation will be receiving feedback on the results for the group as a whole.

Date: _____