

**AN EXPLORATORY FACTOR ANALYSIS ON THE MEASUREMENT OF  
PSYCHOLOGICAL WELLNESS**

by

**LIEZL GROPP**

submitted in part fulfilment of the requirements  
for the degree of

**MASTER OF COMMERCE**

in the subject

**INDUSTRIAL AND ORGANISATIONAL PSYCHOLOGY**

at the

**UNIVERSITY OF SOUTH AFRICA**

**SUPERVISOR: DR D.J. GELDENHUYS**

**JUNE 2006**

## **ACKNOWLEDGEMENTS**

I would like to thank the following people who played a major role in the completions of this thesis:

- My supervisor Dirk Geldenhuys for his guidance, encouragement and dedication during this exhaustive process.
- Professor J Schepers of Johannesburg University (RAU) for sharing his knowledge and research on Locus of Control.
- Riette Eisselen and the Statistical Department at the Johannesburg University (RAU) in conducting the statistical assimilation.
- Ruth Scheepers for her effort to edit this thesis.
- My friends and family members (especially Pierre) for their support and encouragement during this part of my journey through life.

**STATEMENT**Student number: **304-882-3**

I declare that *An exploratory factor analysis on the measurement of psychological wellness* is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

---

SIGNATURE  
(Miss L Gropp)

---

DATE

## TABLE OF CONTENTS

<b>ACKNOWLEDGEMENTS</b>	<b>II</b>
<b>STATEMENT</b>	<b>III</b>
<b>TABLE OF CONTENTS</b>	<b>IV</b>
<b>LIST OF TABLES</b>	<b>IX</b>
<b>LIST OF FIGURES</b>	<b>XI</b>
<b>SUMMARY</b>	<b>XII</b>
<b>CHAPTER 1: SCIENTIFIC ORIENTATION OF THE RESEARCH</b>	<b>1</b>
<b>1.1 BACKGROUND AND MOTIVATION FOR THE RESEARCH</b>	<b>1</b>
<b>1.2 PROBLEM STATEMENT</b>	<b>7</b>
1.2.1 Questions relating to the literature review	8
1.2.2 Questions relating to the empirical study	8
<b>1.3 AIMS OF THE RESEARCH</b>	<b>8</b>
1.3.1 General aim	8
1.3.2 Specific aims	8
<b>1.4 THE RESEARCH MODEL</b>	<b>9</b>
<b>1.5 PARADIGMATIC PERSPECTIVE OF THE RESEARCH</b>	<b>11</b>
1.5.1 Paradigm for the literature review	11
1.5.1.1 Humanistic paradigm	11
1.5.1.2 Salutogenic paradigm	12
1.5.2 Paradigms used for the empirical study	13
1.5.3 Metatheoretical statements	14
1.5.3.1 Industrial Psychology	14
1.5.3.2 Organisational Psychology	14
1.5.3.3 Psychometrics	15
<b>1.6 RESEARCH DESIGN</b>	<b>15</b>
1.6.1 Validity	16
1.6.2 Reliability	18
<b>1.7 RESEARCH METHOD</b>	<b>18</b>
<b>1.8 CHAPTER DIVISION</b>	<b>19</b>

<b>1.9 SUMMARY</b>	<b>19</b>
<b>CHAPTER 2: PSYCHOLOGICAL WELLNESS</b>	<b>20</b>
<b>2.1 DEFINITION OF PSYCHOLOGICAL WELLNESS</b>	<b>20</b>
<b>2.2 WELLNESS MODELS</b>	<b>23</b>
2.2.1 Jahoda's model	23
2.2.2 Seeman's model	24
2.2.2.1 Conceptual base	25
2.2.2.2 The empirical base (subsystems)	26
2.2.3 Witmer and Sweeney's model	29
2.2.3.1 Life Tasks:	29
2.2.3.2 Life forces	33
2.2.3.3 Global events	33
2.2.4 Adams, Benzer and Steinhardt's Model	34
2.2.4.1 Physical wellness	34
2.2.4.2 Spiritual wellness	34
2.2.4.3 Psychological wellness	34
2.2.4.4 Social wellness	34
2.2.4.5 Emotional wellness	35
2.2.4.6 Intellectual wellness	35
2.2.5 Compton's Model	36
<b>2.3 DIMENSIONS OF PSYCHOLOGICAL WELLNESS</b>	<b>37</b>
<b>2.4 SUMMARY</b>	<b>38</b>
<b>CHAPTER 3: CONSTRUCTS ASSOCIATED WITH PSYCHOLOGICAL WELLNESS</b>	<b>39</b>
<b>3.1 SELF-ACTUALISATION</b>	<b>39</b>
3.1.1 Definition	39
3.1.2 Characteristics	40
3.1.2.1 Intrapersonal characteristics	40
3.1.2.2 Interpersonal characteristics	42
<b>3.2 LOCUS OF CONTROL</b>	<b>43</b>
3.2.1 Definition	43
3.2.2 Characteristics	45
3.2.2.1 Intrapersonal characteristics	45
3.2.2.2 Interpersonal characteristics	46
<b>3.3 SENSE OF COHERENCE</b>	<b>47</b>
3.3.1 Definition	47
3.3.2 Characteristics	49
3.3.2.1 Intrapersonal characteristics	50
3.3.2.2 Interpersonal characteristics	51

<b>3.4 EMOTIONAL INTELLIGENCE</b>	<b>51</b>
<b>3.4.1 Definition</b>	<b>52</b>
<b>3.4.2 Characteristics</b>	<b>52</b>
3.4.2.1 <i>Intrapersonal characteristics</i>	53
3.4.2.2 <i>Interpersonal characteristics</i>	55
<b>3.5 THEORETICAL INTEGRATION</b>	<b>55</b>
<b>3.5.1 Integration of characteristics</b>	<b>56</b>
3.5.1.1 <i>Identified Intrapersonal characteristics</i>	56
3.5.1.2 <i>Identified interpersonal characteristics</i>	62
<b>3.6 SUMMARY</b>	<b>63</b>
<b>CHAPTER 4: EMPIRICAL STUDY</b>	<b>64</b>
<b>4.1 THE POPULATION AND SAMPLE</b>	<b>64</b>
<b>4.2 MEASURING INSTRUMENTS</b>	<b>64</b>
<b>4.2.1 Personal Orientation Inventory (POI)</b>	<b>64</b>
4.2.1.1 <i>Justification of inclusion</i>	65
4.2.1.2 <i>Aim and rationale</i>	65
4.2.1.3 <i>Administration</i>	65
4.2.1.4 <i>Interpretation</i>	66
4.2.1.5 <i>Validity</i>	68
4.2.1.6 <i>Reliability</i>	70
<b>4.2.2 Locus of Control Inventory (LOC)</b>	<b>72</b>
4.2.2.1 <i>Justification for inclusion</i>	72
4.2.2.2 <i>Aim and rationale</i>	72
4.2.2.3 <i>Administration</i>	73
4.2.2.4 <i>Interpretation</i>	73
4.2.2.5 <i>Validity</i>	74
4.2.2.6 <i>Reliability</i>	76
<b>4.2.3 Sense of Coherence Scale (SOC Scale)</b>	<b>76</b>
4.2.3.1 <i>Justification for inclusion</i>	76
4.2.3.2 <i>Aim and rationale</i>	77
4.2.3.3 <i>Administration</i>	77
4.2.3.4 <i>Interpretation</i>	77
4.2.3.5 <i>Validity</i>	79
4.2.3.6 <i>Reliability</i>	81
<b>4.2.4 Bar-On Emotional Quotient Inventory (EQ-i)</b>	<b>82</b>
4.2.4.1 <i>Justification for inclusion</i>	82
4.2.4.2 <i>Aim and rationale</i>	83
4.2.4.3 <i>Administration</i>	83
4.2.4.4 <i>Interpretation</i>	84
4.2.4.5 <i>Validity</i>	85
4.2.4.6 <i>Reliability</i>	87
<b>4.3 DATA COLLECTION (Step 3)</b>	<b>88</b>

<b>4.4 DATA ANALYSIS (Step 4)</b>	<b>88</b>
4.4.1 Descriptive statistics	88
4.4.2 Determining Principal Components for the POI	90
4.4.3 Exploratory factor analysis	91
<b>4.5 Summary</b>	<b>92</b>
<b>CHAPTER 5: RESEARCH RESULTS</b>	<b>93</b>
<b>5.1 BIOGRAPHICAL DATA</b>	<b>93</b>
5.1.1 Distribution of sample according to business units	93
5.1.2 Distribution of sample according to employment period	94
5.1.3 Distribution of sample according to responsibility	94
5.1.4 Distribution of sample according to gender	95
5.1.5 Distribution of sample according to racial groups	95
5.1.6 Distribution of sample according to age groups	96
<b>5.2 DESCRIPTIVE STATISTICS</b>	<b>97</b>
<b>5.2.1 Descriptive statistics of sample</b>	<b>97</b>
5.2.1.1 <i>The Personal Orientation Inventory (POI)</i>	97
5.2.1.2 <i>The Locus of Control Inventory (LOC)</i>	100
5.2.1.3 <i>The Sense of Coherence Scale (SOC)</i>	100
5.2.1.4 <i>The EQ-i</i>	101
<b>5.2.2 Descriptive statistics of sub-groups</b>	<b>102</b>
5.2.2.1 <i>Managerial Responsibilities</i>	102
5.2.2.2 <i>Gender</i>	106
5.2.2.3 <i>Race Groups</i>	106
<b>5.3 EXPLORATORY FACTOR ANALYSIS</b>	<b>109</b>
<b>5.3.1 Total Variances Explained</b>	<b>109</b>
<b>5.3.2 Rotated Factor Scores and Factor Correlation Results</b>	<b>112</b>
5.3.2.1 <i>Factor 1: Psychological Adjustment</i>	114
5.3.2.2 <i>Factor 2: Self-actualisation</i>	116
5.3.2.3 <i>Factor 3: Stress Management</i>	117
<b>5.4 SUMMARY</b>	<b>118</b>
<b>CHAPTER 6: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS</b>	<b>119</b>
<b>6.1 CONCLUSIONS</b>	<b>119</b>
6.1.1 <b>Conclusions – literature review</b>	<b>119</b>
6.1.2 <b>Conclusions – empirical review</b>	<b>121</b>
6.1.2.1 <i>Conclusions for the descriptive group statistics</i>	121
6.1.2.2 <i>Conclusions from explorative factor analysis</i>	124
<b>6.2 HYPOTHESIS OF THE RESEARCH</b>	<b>125</b>
<b>6.3 LIMITATIONS OF THE RESEARCH</b>	<b>125</b>

<b>6.3.1 Limitations – literature review</b>	<b>126</b>
<b>6.3.2 Limitations – empirical review</b>	<b>126</b>
<b>6.4 RECOMMENDATIONS</b>	<b>127</b>
<b>6.4.1 Recommendations for future research</b>	<b>127</b>
<b>6.4.2 Recommendations for practical implications</b>	<b>128</b>
<b>6.5 SUMMARY</b>	<b>128</b>
<b>REFERENCES</b>	<b>129</b>



## LIST OF TABLES

<b>Table 2.1</b>	<b>Concept categories and criteria for positive mental wellness</b>	<b>24</b>
<b>Table 3.1</b>	<b>Comparison of characteristics identified for the four constructs</b>	<b>57</b>
<b>Table 4.1</b>	<b>POI scale means, standard deviation and comparison of differences between samples nominated as “Self-Actualising”, “Normal” and “Non Self-Actualising”</b>	<b>68</b>
<b>Table 4.2</b>	<b>Means, standard deviation and tests of significance of differences between Beginning Therapy and Advanced Therapy Groups on POI Scales</b>	<b>69</b>
<b>Table 4.3</b>	<b>Test-retest reliability coefficient for the POI</b>	<b>70</b>
<b>Table 4.4</b>	<b>Reliability coefficients of the POI</b>	<b>71</b>
<b>Table 4.5</b>	<b>The difference between characteristics of internal and external control</b>	<b>74</b>
<b>Table 4.6</b>	<b>Dynamic interrelatedness of the SOC components</b>	<b>79</b>
<b>Table 4.7</b>	<b>Interpretive guidelines for BarOn EQ-i scale scores</b>	<b>84</b>
<b>Table 5.1</b>	<b>Distribution of sample according to business unit</b>	<b>93</b>
<b>Table 5.2</b>	<b>Distribution of sample according to months of employment</b>	<b>94</b>
<b>Table 5.3</b>	<b>Distribution of sample according to responsibility</b>	<b>95</b>
<b>Table 5.4</b>	<b>Distribution of sample according to gender</b>	<b>95</b>
<b>Table 5.5</b>	<b>Distribution of sample according to racial groups</b>	<b>96</b>

<b>Table 5.6</b>	<b>Distribution of sample according to age groups</b>	<b>96</b>
<b>Table 5.7</b>	<b>Descriptive statistics: POI</b>	<b>97</b>
<b>Table 5.8</b>	<b>POI pattern matrix<sup>a</sup></b>	<b>99</b>
<b>Table 5.9</b>	<b>Descriptive statistics: LOC</b>	<b>100</b>
<b>Table 5.10</b>	<b>Descriptive statistics: SOC</b>	<b>101</b>
<b>Table 5.11</b>	<b>Descriptive statistics: EQ-i</b>	<b>101</b>
<b>Table 5.12</b>	<b>Managerial responsibilities statistics</b>	<b>104</b>
<b>Table 5.13</b>	<b>Gender statistics</b>	<b>107</b>
<b>Table 5.14</b>	<b>Race groups statistics</b>	<b>108</b>
<b>Table 5.15</b>	<b>Factor correlation matrix</b>	<b>111</b>
<b>Table 5.16</b>	<b>Total variance explained</b>	<b>112</b>
<b>Table 5.17</b>	<b>Pattern matrix (a)</b>	<b>113</b>
<b>Table 5.18</b>	<b>Factor correlation matrix</b>	<b>114</b>

**LIST OF FIGURES**

<b>Figure 1.1</b>	<b>Integrated Model of Social Sciences Research</b>	<b>10</b>
<b>Figure 2.1</b>	<b>The Human-System Wellness Structure</b>	<b>25</b>
<b>Figure 2.2</b>	<b>Wheel of Wellness and Prevention</b>	<b>30</b>
<b>Figure 2.3</b>	<b>The Wellness Model</b>	<b>35</b>

## SUMMARY

**Subject:** An exploratory factor analysis of measurements for psychological wellness constructs.

**Key words:** psychological wellness, self-actualisation, locus of control, sense of coherence, emotional intelligence, exploratory factor analysis, internal locus of control, characteristics, definitions, psychological wellness models.

This research investigated the psychometric characteristics of self-actualisation, locus of control, sense of coherence and emotional intelligence as constructs of psychological wellness. Details of the intercorrelatedness of the various constructs will assist in understanding the nature of psychological wellness and its measurement.

In the literature review a definition for psychological wellness was determined by studying various definitions and models of psychological wellness. During this investigation it was determined that the four constructs mentioned above were related to psychological wellness.

An explorative factor analysis was conducted to address the empirical research questions. Three factors (psychological adjustment, self-actualisation and stress management) were extracted from the analysis. The descriptive statistics were analysed in terms of management responsibility, gender and race.

The findings of the explorative factor analysis supported the theoretical definition of psychological wellness. It was found that self-actualisation played a key role in psychological wellness. Meaningfulness, although indicating a low loading on all three factors, must be present to provide meaning to day to day functioning.

In the analysis of the descriptive statistics most differences were found in the management responsibility category. No significance was found in the analysis of the gender category and although differences were indicated in the race demographics further research will be needed to explore the findings. At the end of the study recommendations were made for future research.

## **CHAPTER 1: SCIENTIFIC ORIENTATION OF THE RESEARCH**

This dissertation is an exploratory factor analysis of measurement of four psychological wellness constructs: self-actualisation, the locus of control, sense of coherence and emotional intelligence.

This chapter contains the background and the motivation for the research, the problem statement, the aims of the study, the research model, the paradigmatic perspective and the research design and method. The chapter will conclude with a brief outline of the study.

### **1.1 BACKGROUND AND MOTIVATION FOR THE RESEARCH**

The world of work is changing rapidly. Employment trends affect the quality and quantity of work in general, and the changing nature of competition creates contradictions in the work experience (Snyder & Lopez, 2002). These changes are reshaping all kinds of organisations and are altering the way they operate (Prichett & Pound, n.d.) These authors found that the following has been happening in the United States of America:

- over three million lay-offs occurred in the last five years;
- more than 45% of American companies have reduced their workforces every year since 1990 and 85% of all American organisations now outsource services once performed in-house;
- mergers and acquisitions have been rising steadily over the past five years and are currently at an all-time high;
- business failures topped 400 000 in the first half of the 1990s and are on track to double those of the last decade.

When one investigates the current business environment in South Africa, it appears that continual transformation and rapid learning are required to stay ahead of the competition. Du Plessis and Potgieter (2000) state that people's

effectiveness drops by 50% during mergers. Employees feel disorientated and self-doubting and act in a resentful and self-protective manner. According to the authors, coping tactics drain people's energy away from work causing efficiency to drop. They conclude that the focus on emotion or sentiment is often neglected when it comes to the management of the human resources of an organisation (Du Plessis & Potgieter, 2000).

Snyder and Lopez (2002) agree with the above and conclude that although these modern changes provide the illusion of organisational efficiency to the outside world, they often place greater demands on remaining employees and still fail to increase productivity. The challenge that employers and employees face today "not only reflects their relations with the external environment but also guide and influence the inner life of an organisation" (Snyder & Lopez, 2002, p 717).

Johnsen (1995) mentions that despite the presence of stressors and illness inherent in modern industrialised life, there is evidence that human beings are able to overcome the negative effects of these forces and to display remarkable resilience and health. In order to address the abovementioned challenges in organisations today, various constructs can be identified and applied in organisations.

As a starting point one can exploit the shift towards psychological wellness (positive psychology). According to Jahoda (1958), there is a possible link between psychological wellness and the ability of a normal person to show some capacity for anxiety tolerance.

Schultz (1977) confirms this by stating that the emphasis has been moving away from an orientation of pathology and deficit to one of prevention and psychological health. Snyder and Lopez (2002, p 14) state that pathology-orientated and medically orientated clinical psychology has outlived its usefulness. They confirm that psychology is moving its focus to an

understanding of human behaviour in the broader sense in order to build a more positive clinical psychology.

Walsh and Shapiro (1983, p 4) state that one of the primary reasons for the existence of Western psychiatry and psychology would seem to be to contribute to our understanding of psychological wellness and to enhance our ability to realise it. Positive psychology thus “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).

Self-actualisation is one of the constructs related to psychological wellness used by organisations to encourage employees’ growth within the environment. Jahoda (1958) notes that other authors saw the essence of mental health in an ongoing process called self-actualisation, self-realisation, growth or becoming. Van Eeden (1996) indicates that self-aspects play an important part in individual behaviour and confirms the correlation between self-actualisation and psychological wellness.

McCormick and Ilgen (1989) describe self-actualisation as a need to realise one’s own potential and for continuous self-development. A fully functioning individual is characterised by the similarities between the sense of self and organismic qualities, openness to experience and the love of self and others (Stonefield, 1999). A positive mental health state seems to emphasise one or more of the following aspects – all related to the concept of self-actualisation (Jahoda, 1958):

- self-concept;
- motivational processes;
- the investment in living.

Schulz (1994) mentions that the concept of self-actualisation is an important aspect in the theory of humanistic psychology. Humanistic psychologists are



interested in an individual's own contributions to growth and realising his or her potential, in other words, to becoming self-actualised. Benjamin and Looby (1998) state that self-actualised individuals have the ability to cope with change because of their flexibility and resilience. They have a sense of responsibility, acceptance, duty, obligation and commitment which allows these individuals to use their potential talent to the utmost. This ability gives them the ultimate strength (Benjamin & Looby, 1998).

The second concept is locus of control. This construct indicates an ability to cope with difficult situations without undue pain to oneself or others. It is a common criterion used for distinguishing psychological wellness (Bradburn, 1969). Bernardi (2001) is of the opinion that in the work setting as well as in the social environment, people may attribute the cause of events either to themselves (internality) or to the external environment (externality) and to powerful people in positions of authority. Locus of control is a personality variable that has been defined as a generalised expectancy that one's own actions (internality) or other forces (externality) control, reward and reinforce outcomes in life (Spector, 1988).

Research indicates that people with an external locus of control are less likely to take responsibility for the consequences of their behaviour and are more likely to rely on external influences; internals, on the other hand, are more likely to rely on their own internal standards of right or wrong to guide their behaviour (Robbins, Odendaal & Roodt 2003). Witmer and Sweeny (1992) identify that an individual with a sense of inner control is more likely to collect information about disease and health maintenance to enable him or her to improve health habits and to implement preventive care.

Findings suggest a positive relationship between internal locus of control and a preference for responsibility, autonomy, role ambiguity and the ability to process complex tasks with job satisfaction (Garson & Stanwyck, 1997). Adams, Bezner, Drabbs, Zambarano and Steinhardt (2000, p 170) state that

an individual who is psychologically well has an enduring sense of personal control.

The third concept, namely sense of coherence, is based on the work of Antonovsky, who noted that although our language had a word to describe the processes by which disease unfolds, no parallel word was identified to describe the processes that favour healthy outcomes (Cowen, 1994). Antonovsky (1987) introduced salutogenesis in an attempt to highlight the health-promoting processes and to direct attention to new, proactive challenges for medical sociology. This is confirmed by Walker (2002), who stated that a sense of coherence is an important determinant in an individual's psychological wellness.

Antonovsky (1992, 1993) as well as Johnsen (1995, p 11) identifies a sense of coherence as the global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that:

- the stimuli deriving from one's internal and external environments in the course of living are structured, predictable and explicable;
- the resources are available to one to meet the demands posed by these stimuli;
- these demands are challenges, worthy of investment and engagement.

Sense of coherence is a dispositional orientation and a dynamic aspect of psychological wellness and includes perceptual, cognitive, affective, motivational and behavioural aspects (Van Eeden, 1996). This orientation enables the individual to have a pervasive, enduring though dynamic feeling that the stimuli derived from one's internal and external resources in the course of living are structured, predictable and explicable; the resources are available to one to meet the demands posed by these stimuli; and finally that these demands are challenges worthy of investment and engagement (Van Eeden, 1996).

Emotional intelligence is the most recent and final construct covered in this study. Walker (2002, p 3) states that “mental health can be seen as knowing or cognition while emotional health relates more to feeling”. Goleman (1998) believes that emotional intelligence is the guide to fine-tuning on-the-job performance of every kind, managing our unruly feelings, keeping ourselves motivated, tuning in with accuracy to the feelings of those around us, and developing good work-related social skills, including those essential for leadership and teamwork.

People are beginning to realise that success demands more than intellectual excellence or technical prowess, and that people need another sort of skill to survive and thrive in the increasingly turbulent job market. Internal qualities such as resilience, initiative, optimism and adaptability are taking on a new valuation (Goleman, 1998).

Cooper and Sawaf (1998) mention that up to the present, some of the most compelling proof of the power of emotional adaptability and resilience – in particular, flexible optimism – in producing business success comes from University of Pennsylvania psychologist Martin Seligman’s studies of insurance salesmen. He found that salesmen, who are by nature (or training) optimists and who are emotionally resilient, sold 37 percent more insurance in the first two years on the job compared to pessimists (Cooper & Sawaf 1998).

In a national survey in the USA, Goleman (1998, p 12) identified that employers were looking for the following skills in entry-level employees:

- ability to learn on the job (specific technical skills are now less important);
- listening and oral communication;
- adaptability and creative responses to setbacks and obstacles;
- personal management, confidence, motivation to work toward goals, a sense of wanting to develop one’s career and taking pride in accomplishments;

- group and interpersonal effectiveness, cooperativeness and teamwork, skills at negotiating disagreements;
- effectiveness in the organisation, wanting to make a contribution and leadership potential.

From the above, it would seem that there is a possibility that the chosen constructs, namely self-actualisation, locus of control, sense of coherence and emotional intelligence, share a common theme that humans are conscious entities who have the freedom to make choices from the alternatives available to them (Jordaan & Jordaan, 1992). Furthermore, it seems that all four constructs are somehow related to the psychological wellness of the individual.

This research will thus attempt to investigate the psychometric characteristics of self-actualisation, locus of control, sense of coherence and emotional intelligence as constructs of psychological wellness. Details about the intercorrelation of the different constructs will assist in understanding the nature of psychological wellness and its measurement.

## **1.2 PROBLEM STATEMENT**

Mouton and Marais (1996, p 192) state that the core concepts of the problem need to be clearly defined for empirical research. A problem statement must thus be identified for this specific study.

Adams, Troy, Bezner, Drabbs, Zambarano and Steinhardt (2000) state that wellness is commonly conceptualised as having many dimensions. However, there has been very little effort given to evaluating how psychological dimensions are related to overall wellness. Hence, there is no general agreement about the ways of measuring mental health (Jahoda, 1958). This is confirmed by Compton (2001, p 486) who states that one “will find a confusing array of theoretical perspectives, conclusions and methodologies that all claim some authority in the literature.”

Research questions arising from the problem statement are the following:

### **1.2.1 Questions relating to the literature review**

1. How can psychological wellness be conceptualised?
2. How can self-actualisation, locus of control, sense of coherence and emotional intelligence be conceptualised and what are the characteristics related to the different constructs?
3. What are the characteristics of a psychologically well individual?

### **1.2.2 Questions relating to the empirical study**

1. What is the factor structure of psychological wellness?
2. What conclusions and recommendations can be formulated from the results?

## **1.3 AIMS OF THE RESEARCH**

The aims of this research can be formulated as follows:

### **1.3.1 General aim**

The general aim of this research is to determine the factor structure of psychological wellness based on four constructs, namely: self-actualisation, locus of control, sense of coherence and emotional intelligence.

### **1.3.2 Specific aims**

The specific aims of the literature review are as follows:

1. to conceptualise psychological wellness;
2. to conceptualise self-actualisation, locus of control, sense of coherence as well as emotional intelligence and determine the characteristics related to the different constructs;
3. to determine theoretically the characteristics of a psychologically well individual.

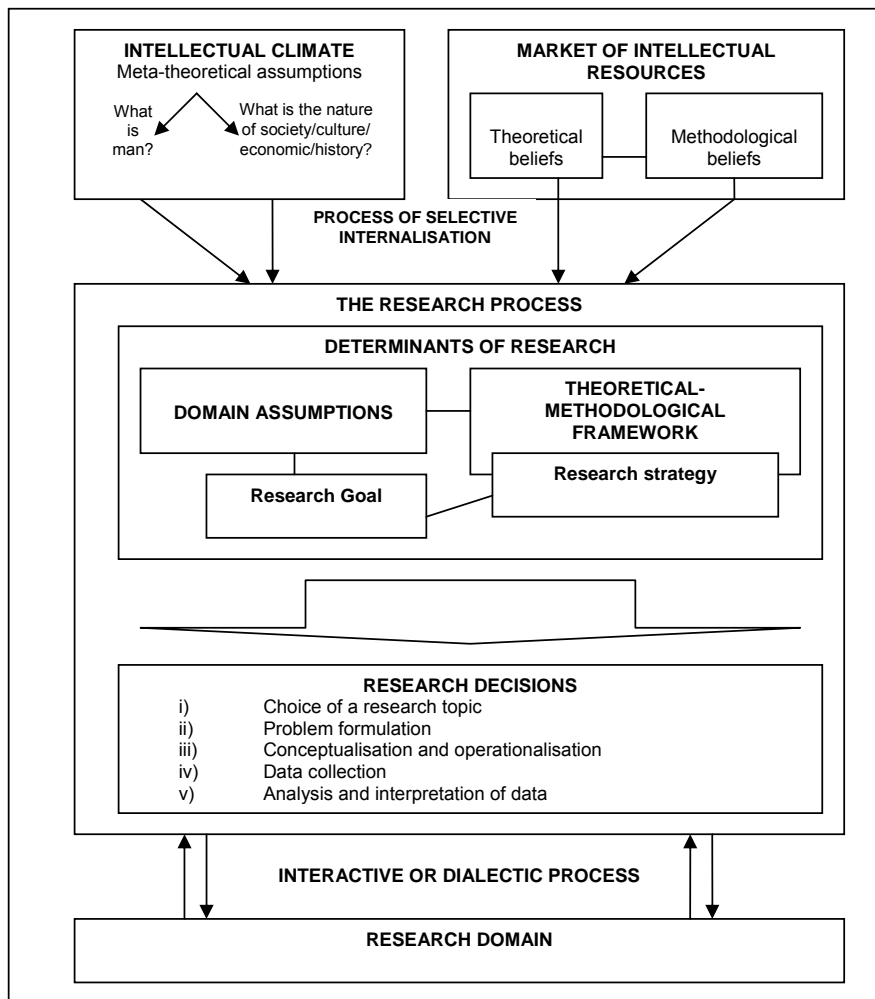
The specific aims of the empirical study include:

1. to determine the factor structure of psychological wellness;
2. to formulate conclusions and recommendations for future measurements of psychological wellness constructs within Industrial Psychology.

#### **1.4 THE RESEARCH MODEL**

Mouton and Marais (1996) suggest that researchers within the social sciences follow an integrated model of social science research. With this model (Figure 1.1) the writers establish the three subsystems that interact with each other and the research domain. These are (Mouton & Marais, 1996):

- The intellectual climate of a specific discipline. This refers to the diversity of meta-theoretical values and beliefs held by researchers of different disciplines.
- The market of intellectual resources within each discipline. This subsystem refers to the theoretical beliefs (the what's and why's) about human behaviour and the methodological beliefs (the beliefs related to social science and scientific research).



**Figure 1.1 Integrated model of Social Sciences Research (Mouton & Marais, 1996, p 22)**

- The research process. This refers to the selective internalisation process where the researcher subscribes to the research project in a selective manner to produce scientifically valid research. This will include the assumptions the researcher will make (domain assumptions) as well as the theories, models, methods and techniques (theoretical-methodological framework) that will influence the research goals and the research strategy. On completion of the first part of the

process the second part refers to the decision-making steps of the process.

The above-mentioned model will be used as a framework for this research. The rest of the chapter will clarify the subsystems within this research project.

## **1.5 PARADIGMATIC PERSPECTIVE OF THE RESEARCH**

There are three paradigms applicable to this research. Firstly, the literature review is presented according to the humanistic as well as the salutogenetic paradigms. The empirical study will then finally be presented according to the functionalistic paradigm (Schulz, 1994).

### **1.5.1 Paradigm for the literature review**

According to Visser (1994), similarities between the humanistic and the salutogenic paradigms are the need for self-actualisation, the ability to make decisions enabling the individual to withstand excessive stress and the ability of the individual to be in control of challenges present in day-to-day functioning. The researcher has decided to use the humanistic as well as the salutogenic paradigms for the purpose of this research.

#### *1.5.1.1 Humanistic paradigm*

The humanistic paradigm sees a person always in the process of growing, striving to realise his potential and to be truly himself (Meyer, Moore & Viljoen, 1995). Humanistic psychologists developed a view of human nature with a central characteristic – human beings are conscious entities with the freedom to make choices from the alternatives available to them (Jordaan & Jordaan, 1992).



Meyer, Moore and Viljoen (1995) state that the characteristics of Humanism could be grouped in the following statements:

- An individual is an integrated whole. Each individual should be studied as an integrated, unique, organised whole or gestalt.
- An individual is a dignified human being. According to this principle, a human is a unique being with qualities that distinguish him from lifeless objects such as stones, trees and also from primitive animalistic beings. Acknowledgement of a higher spiritual dimension is vital in order to study these qualities.
- Man has a positive nature. Human nature is good, or at least neutral.
- The conscious processes of the individual: humanists recognise the role of conscious decision-making processes.
- A person is an active being: humanism acknowledges the person's active participation in determining his own behaviour, actualising his or her potential and his or her creative ability.
- Emphasis on psychic health: the humanist asserts that the psychologically healthy person should be the criterion for examining human functioning.

It can be concluded that "the humanistic approach is concerned with personality, formed by individuals' personal view of themselves in their world and how this influences their thoughts, feelings and behaviour" (Keegan, 2002, p 6).

#### *1.5.1.2 Salutogenic paradigm*

There is a radical difference between the salutogenesis paradigm and the pathogenic paradigm – "to explain the mystery of health is a radically different challenge than to explain disease" (Antonovsky, 1992, p 33).

The salutogenic paradigm emphasises the origins of wellness or health (Strümpfer, 1990). The word salutogenesis originated from the Latin word *salus* (health) and Greek word *genesis* (origin) (Strümpfer, 1990).

Antonovsky (1992, p 33) defines the salutogenic paradigm as “the approach that seeks to explain health rather than disease – the salutogenic approach – focuses on coping rather than risk factors, survivors rather than the defeated, the invulnerable rather than the damaged”.

The following characteristics of the salutogenesis paradigm were identified (Van Eeden, 1996, p 14-18):

- The salutogenesis paradigm investigates the deviant cases.
- The salutogenesis paradigm approaches stress differently than the pathogenic approach.
- The salutogenesis paradigm is a quest for strengths.
- Salutogenesis requires a continuum approach.

### **1.5.2 Paradigms used for the empirical study**

The empirical study is presented within a functionalistic paradigm (Stonefield 1999). According to Stonefield (1999), a functionalistic paradigm assumes that society is concrete, systematic and provides an ordered and regulated way of life. It focuses on the role of the individual within society. The norms and culture of society influence an individual's behaviour.

Schulz (1994) mentions that the basic orientation of the functionalistic paradigm therefore concerns an understanding of society in a way that generates useful empirical knowledge. This therefore means that psychometric theory and procedures could be applied to assess personality attributes, reliability and validity.

### 1.5.3 Metatheoretical statements

According to Mouton and Marais (1996), the assumptions underlying the theories, models and paradigms that form the context of a specific study are represented by metatheoretical assumptions. Metatheoretical values or beliefs have acquired a specific theoretical relevance and content within social sciences research and must be considered all the time (Mouton & Marais, 1996).

One discipline (Industrial Psychology) and two sub-disciplines (Organisational Psychology and Psychometrics) are important to this study. A brief description of each of these will follow:

#### *1.5.3.1 Industrial Psychology*

Industrial Psychology can be described as the “scientific study of human behaviour in the production, distribution and consumption of the goods and services of society” (Schulz, 1994, p 8). Cooper and Locke (2000) agree with this definition and state that it is the use of generic psychological theory and research that is utilised in industry, commerce and the public sector. Robbins et al. (2003, p 8) state that Industrial psychology’s contributions are related to “learning, perception, personality, emotions, training, leadership effectiveness, needs and motivational forces, job satisfaction, decision-making processes, performance appraisals, attitude measurement, employee selection techniques, work design and job stress”.

#### *1.5.3.2 Organisational Psychology*

Organisational psychology can be defined as the interaction of individuals in a complex system. If the process is understood it will allow one to have a positive contribution, outlook and feeling within an organisational role (Stonefield 1999). Snyder and Lopez (2002) support this definition by concluding that the organisation is an arena where employees can develop

resources, find meaning and pursue social, environmental and psychological wellness. Organisational psychology is “a field of study that investigates the impact that individuals, groups and structure have on behaviour within organisations for the purpose of applying such knowledge towards improving an organisation’s effectiveness” (Robbins, et al., 2003, p 7).

#### *1.5.3.3 Psychometrics*

Psychometrics can be defined as the study of all psychological measurements – the drawing up and the standardising of psychological tests – and is a subfield of psychology that is aimed at the development and application of mathematical and statistical procedures in psychology (Schulz, 1996). Haynes and O’Brien (2000, p 200) agree with the above by stating that “psychometrics is concerned with the evaluation of data from assessment instruments and judgements based on those data; the science of psychological measurement.”

The psychometric approach traditionally states that a psychological test measures an individual’s characteristics and the scores he or she obtains can be used to predict how this candidate will function in practically any situation (Meyer, Moore & Viljoen, 1995).

The following inventories will be used:

Self-actualisation – Personal Orientation Inventory (POI)

Locus of Control – Locus of Control Inventory (LOC)

Sense of coherence – Sense of Coherence Scale (SOC)

Emotional intelligence – BarOn EQ-i

## **1.6 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 (Christenen, 1994). The researcher, a student in industrial psychology, will

research individuals (unit of analysis) working at an insurance company in South Africa. Due to the fact that the unit of analysis is the individual, all references referring to him or her will refer to the opposite gender as well unless otherwise specified.

Mouton and Marais (1996, p 42-45) distinguish between three types of research goals, namely:

- Exploratory research – indicating that the goal of the research is the exploration of a relatively unknown area.
- Descriptive research – on the one hand, an in-depth description of a specific individual, situation, group, organisation, tribe, subculture, interaction or social objects, and on the other hand, one might emphasise the frequency with which a specific characteristic or variable occurs in a sample.
- Explanatory research – indicating causality between variables or events.

In terms of the literature review and empirical study of this specific research study, the goals can be categorised as exploratory in nature. Hypotheses tend to be developed as a result of such research rather than the research being guided by the hypotheses (Mouton & Marais, 1996).

The research is a quantitative study owing to the precisely identified terms of the variables (Mouton & Marais, 1996). To ensure that the findings of any type of measurement are accurate and constant, two factors need to be considered: validity and reliability.

### **1.6.1 Validity**

Christensen (1994) defines validity as the extent to which you are measuring what you want to measure. This is confirmed by Haynes and O'Brien

(2000, p314), who state that validity is “an integrated evaluative judgment of the degree to which empirical evidence and theoretical rationales support the adequacy and appropriateness of inferences and actions based on the data acquired from an assessment instrument.”

The aim of a research design is thus to plan and structure a given research study in such a manner that the eventual validity of the research findings is maximised (Mouton & Marais, 1996).

The validity of a method is the accuracy with which meaningful and relevant measurements can be made with it, in the sense that it actually measures the traits it was intended to measure (Smit, 1991). According to Mouton and Marais (1994), researchers need to be clear on the strategy they want to follow because it will have an influence on the validity of the research.

It is thus important to be aware of two general criteria of research design, namely internal and external validity. Internal validity includes aspects that affect the control of the design while external validity refers to the representativeness or generalisation of the findings.

The researcher intends to ensure the internal validity of the study by using representative literature of psychological wellness and the four constructs (namely: self-actualisation, locus of control, sense of coherence and emotional intelligence) as part of the theoretical study. For the empirical part of the study, the measures taken to ensure internal validity are the randomly selected sample and the assurance that the four inventories used in this research are completed on the same date and at the same time.

The size of the random sample in correlation to the actual sample size ensures the external validity of the empirical study. The validity of the inventories used (discussed in chapter 4) will also play a key role in the external validity of the empirical part of the research as well as of the statistical methods used in the explorative and the confirmatory factor analysis.

### **1.6.2 Reliability**

According to Christensen (1991), reliability can be defined as the extent to which the same results are obtained when responses are measured at different times. Haynes and O'Brien (2000) state that reliability can be seen as the soundness of the data produced by an assessment under constant conditions.

The reliability of the inventories used (discussed in chapter 4) and the statistical methods used to perform the explorative and exploratory factor analysis confirm the reliability of the empirical study.

## **1.7 RESEARCH METHOD**

This study is divided into two phases. Phase one represents the literature review and phase two the empirical study. These can be explained as follows:

### **Phase 1 - Literature review**

- Step 1: The conceptualisation of psychological wellness.
- Step 2: The conceptualisation of locus of control, self-actualisation, emotional intelligence and sense of coherence and the identification of characteristics related to the constructs.
- Step 3: The identification of characteristics of psychological wellness.

### **Phase 2 - Empirical study**

- Step 1: Selection and description of the population and sample.
- Step 2: The identification and motivation for using the measuring instruments for each of the constructs, namely self-actualisation, locus of control, sense of coherence and emotional intelligence.
- Step 3: Data collection.

- Step 4: Data analysis.
- Step 5: Report and interpretation of results in tabular form.
- Step 6: Formulation of the hypothesis and conclusions according to set aims.
- Step 7: Limitations of the research.
- Step 8: Recommendations regarding the research.

## **1.8 CHAPTER DIVISION**

The research is divided into six chapters focusing as follows:

- Chapter 1: Scientific orientation of the research.
- Chapter 2: Psychological wellness.
- Chapter 3: Four constructs of psychological wellness.
- Chapter 4: Empirical study.
- Chapter 5: Research results.
- Chapter 6: Conclusions, limitations and recommendations.

## **1.9 SUMMARY**

This chapter presented the background and the motivation for the research, the problem statement, the aims of the research, the research model, the paradigmatic perspective and the research design and method. The chapter concludes with an outline of the study and the chapter division.



## **CHAPTER 2: PSYCHOLOGICAL WELLNESS**

The aim of this chapter is to conceptualise psychological wellness. Firstly, the concept of psychological wellness will be defined, followed by discussions of various wellness models. Based on the various models, the researcher will then identify the different dimensions of the concept.

### **2.1 DEFINITION OF PSYCHOLOGICAL WELLNESS**

According to Bradburn (1969), a person's degree of psychological wellness can be seen as a result of the individual's position on two independent dimensions, namely a positive affect and a negative affect. This statement is supported by Cowen (1994), who indicates that wellness anchors one end of a hypothetical continuum and sickness (pathology) the other end.

Cowen's research (1994) also reveals that overt and covert expressions of values are built into any definition of wellness. The author does express his concern and stipulates that one should keep in mind that values differ across cultures as well as among subgroups. The author therefore concludes that a uniformly acceptable definition of psychological wellness is an illusion (Cowen 1994).

Van Eeden (1996) confirms this statement in her research and mentioned that there is little consensus between the different models and theories of psychological wellness. She states that further research needs to be undertaken to understand the relationship between the theoretical conceptualisations and the empirical denotations of constructs related to psychological wellness. Compton (2001, p 486) concludes that "any investigator who is curious about the parameters of psychological wellness will find a confusing array of theoretical perspectives, conclusions and methodologies that all claim some authority in the literature". Keeping the

abovementioned concerns in mind, the various definitions of psychological wellness are investigated for the purpose of this study.

Kozma, Stones and McNeil (1991) mention that psychological wellness falls within a broad field of study that examines quality of life issues. Psychological wellness groups a set of constructs, such as happiness, life satisfaction and morale, that share many common characteristics (Kozma, et al., 1991).

Adams, Benzer and Steinhardt (1997) define psychological wellness as the general perception experienced by an individual that there will be a positive outcome to an event or circumstances. This definition refers to a psychic resource identified as dispositional optimism.

Compton's research (2001, p 497) confirms that psychological wellness can be conceptualised by "a tripartite model that contains factors for subjective wellness, personal growth and a style of religiosity that is characterized by other centeredness". Snyder and Lopez (2002), however, seem to go back to the belief that positive functioning comprises the six dimensions of psychological wellness (self-acceptance, positive relationships with others, personal growth, purpose in life, environmental mastery and autonomy).

Benjamin and Looby (1998) conceptualise wellness as constituting six major dimensions, namely, physical, emotional, mental, social, occupational and spiritual dimensions. Optimum wellness is attained only when there is spiritual and personal balance in each of the six interconnected dimensions of wellbeing.

Cowen (1994) suggests that we should first consider the nature of the terms wellness and wellness enhancement, how they differ from existing concepts and what one can gain from using them. It is then concluded that psychological wellness cannot define itself automatically or easily. Van Eeden's (1996) research confirms this. She compared various models of psychological

wellness and concluded that the models focused on the holistic functioning of an individual, evolving from interactions of factors and systems.

Other researchers, identified by Cowen (1994), made positive contributions to the elements in psychological wellness. These elements included behavioural markers (having effective interpersonal relationships, mastering age- and ability-appropriate tasks) and psychological markers (having a sense of belonging and purpose, control over one's fate and satisfaction with one's existence and oneself) (Cowen, 1994).

"Psychological wellness can therefore be seen in more-or-less terms that are acceptable to change with changing circumstances" (Cowen 1994, p 152). This statement is supported by Van Eeden (1996, p 88), who concludes: "Psychological wellness is a relatively continual state of mind that is identified by continuous adaptability, general wellness and the realisation of personal potential in all dimensions of subsystems in the human system."

Cowen (1994) concluded that wellness and the goal of wellness enhancement need to pertain to all people and not just to a select few of the population. Psychological wellness is proposed as a potentially fruitful orienting concept that directs attention to a family of genotypically unified phenomena of interest (Cowen, 1994). Thus psychological wellness is "not seen as an absolute but rather as an anchor point at the positive end of an adjustment continuum, as an ideal that we should strive concertedly to approach" (Cowen, 1994, p 171).

For the purpose of this study and based on the above definitions, psychological wellness is defined as a multidimensional construct with optimal functioning when these dimensions are in balance. This optimal functioning is a continuous process. To obtain a better understanding of the dimensions, various wellness models will be investigated.

## **2.2 WELLNESS MODELS**

Over the last two decades psychologists have moved away from a pathology to more health-orientated models (Snyder & Lopez, 2002). The importance of wellness models is acknowledged in previous research (Compton, 2001; Van Eeden, 1996; Walker, 2002) and five models will be discussed to conceptualise psychological wellness.

### **2.2.1 Jahoda's model**

Both Van Eeden (1996) and Compton (2001) state that Marie Jahoda is one of the first writers who provide empirical proof that positive psychological wellness has other characteristics than originally accepted. During the late fifties and early sixties, Jahoda (1958) studied the existing literature and empirical findings of her time. She identified the characteristics of what she calls "positive mental wellness".

According to Jahoda (1958), the absence of mental disease as a criterion has proved to be an insufficient indication in view of the difficulty of defining disease. The author identifies six concept categories that give an indication of "positive mental wellness". These concept categories and criteria are presented in Table 2.1 and can be regarded as the original thinking about psychological wellness and are, according to the author, the minimum requirements for obtaining wellness. These concept categories will be used as the foundation in determining the dimensions of psychological wellness.

**Table 2.1 Concept categories and criteria for positive mental wellness  
(Jahoda, 1958, p 23)**

	Concept Category	Description of the category
1.	Attitude of an individual toward his own self.	Accessibility of the self to consciousness Correctness of the self-concept Feelings about the self-concept Sense of identity
2.	The individual's style and degree of growth, development or self-actualisation.	Motivational processes Investment in living
3.	Integration	Balance of psychic forces A unifying outlook on life Resistance to stress
4.	Autonomy	Regulation of behaviour from within Independent behaviour
5.	Perception of reality	Perception free from need-distortion Empathy or social sensitivity
6.	Environmental mastery	The ability to love Adequacy in love, work and play Adequacy in interpersonal relations Meeting of situational requirements Adaptation and adjustment Problem-solving.

### 2.2.2 Seeman's model

Seeman (1989) proposes a model of psychological wellness based on a framework inclusive of all human systems' behavioural subsystems. He warrants a higher asymptotic health conceptualisation and measurement than previously produced by Western biomedical theory.

According to Van Eeden (1996), Seeman's model focuses on the upper end of the health continuum to strengthen the conceptualisation of effective human functioning. This model is based on a systems view as well as a developmental focus (Seeman, 1989).



The horizontal dimension of the model emphasises the point that wellness needs to be mapped in longitudinal developmental terms so as to include the concept of health as an ongoing process (Seeman, 1989).

According to Van Eeden (1996), this means that the structural aspects of the model may stay consistent during the development phases, although some of the substantial indicators may be related to the development phases.

#### *2.2.2.2 The empirical base (subsystems)*

Seeman (1989) uses his model by portraying studies that highlight each of the behavioural subsystems in ways that feature positive functioning. Each of the subsystems can be identified and differentiated for analysis and description.

##### *a) The biochemical subsystem*

According to Seeman (1989), this subsystem features human-system performance that clearly involves biochemical processes. The model discusses the role that the immune system plays in strategic wellness maintenance with reference to research done in the functioning of T-lymphocytes and natural killer (NK) cells as well as research on the impact of naturally occurring stressors on the immunocompetence. Seeman (1989, p 1103) suggested that “there is a tenable foothold for the argument that variables in the biochemical subsystem are embedded in the larger matrix of organismic behaviour characterising positive wellness”.

##### *b) The physiological subsystem*

Seeman and Behrends (Seeman, 1989) state that, according to this model, there are qualitative differences in the effectiveness of the information flow and feedback between well-functioning persons, and those who are not so well-endowed. This statement is supported by Van Eeden (1996). Another statement concerning the physiological subsystem is that increased physical activity is associated with manifold physiological benefits. This statement has specific reference to the intersystem contingencies that relate physiological behaviour to behaviour in other human subsystem components.

*c) The perceptual subsystem*

By studying the perceptual subsystem, one discovers the interconnections between behavioural subsystems and the notable linkage of perception and cognition (Seeman, 1989).

Harber (1969, p 1) states that “sensation, perception, memory and thought must be considered as a continuum of cognitive activity”. Seeman (1989) agrees with this statement and refers to the work of Gibson (1983). According to her research, “one may accept that studies in perception are specifying a sensory entry point that engages more complex central processes” (Seeman, 1989, p 1104).

Seeman (1989, p 1105) concludes with the work of Foxman (1974) that indicates that a highly functional person has a relatively differentiated personality organisation, a characteristic found to be applicable to a person who tends towards a field-independent personal organisation, enabling this individual to maximize the available information.

*d) The cognitive subsystem*

This domain is described by Seeman (1989, p 1105) as “so powerful in its impact on health that it would be difficult to overstate its centrality”. A concept known as mind-brain relationships is used to explore the possibilities that those further higher-level intellectual resources can be brought to yield toward the maintenance and enhancement of health.

Other associations between cognition and wellness derive from information-processing models, cognitive-behavioural theory and phenomenological theory. From these models and theories, two themes emerge. One relates to an affirmative self-definition and the other to a sense of personal mastery and control over significant components of one’s life (Seeman, 1989).

*e) The interpersonal-ecological subsystem*

The interpersonal-ecological subsystem consists of:



**Person-person relationships:** Seeman (1989) states that, from a developmental perspective, it is best to start with positive styles of person-environment interchange. A dominant theme in the developmental literature is that of individuation. Vailant (1978), in an extensive longitudinal study, identified a correlation between interpersonal relations and physical examinations. The indexes used in the study were marital harmony, interpersonal warmth and openness, continued contact with family of origin and relationship with own children.

**Person-environment matrix:** This views the positive functioning (wellness) from the perspective of person-environment transactions. Seeman (1989) identified three themes in his article, namely:

- (i) the early formulation of the person-environment connection as envisioned by Kurt Lewin (1938);
- (ii) the criteria for positive mental health identified by Jahoda (1958);
- (iii) the study of persons in their environments as developed by Wapner (1981; 1987).

A high level of environmental contact is a pervasive characteristic of a high-functioning person (Seeman, 1989). The author concludes that, as in other domains of life, marker points of personal competence contribute to enriched person-environment transactions (Seeman, 1989).

The importance of this model is that it confirms Jahoda's point of wellness that one does not need to stand on the threshold of disease to understand or measure levels of wellness (Seeman, 1989). For the purpose of this research, Seeman's model clearly confirms that one cannot focus on a single subsystem and that it is in the integration of this functioning that wellness prevails. The order of the subsystems indicates that wellness will start with the individual's perception of inner processes and then move to the perception of the external processes (person-to-person and person-to-environment). This is also a

continuous, developmental process that will occur throughout the life of the individual.

The function of this model is to provide structure and guidance for our thinking about the domains and their interaction. It is important to understand that a human-system formulation of wellness has further implications.

### **2.2.3 Witmer and Sweeney's model**

Witmer and Sweeney (1992) present their model for the purpose of theory building, research, clinical application, education, advocacy and consciousness building. The model (see Figure 2.2) is an attempt to explain the interconnectedness of the characteristics of a well person, the life tasks and the life forces.

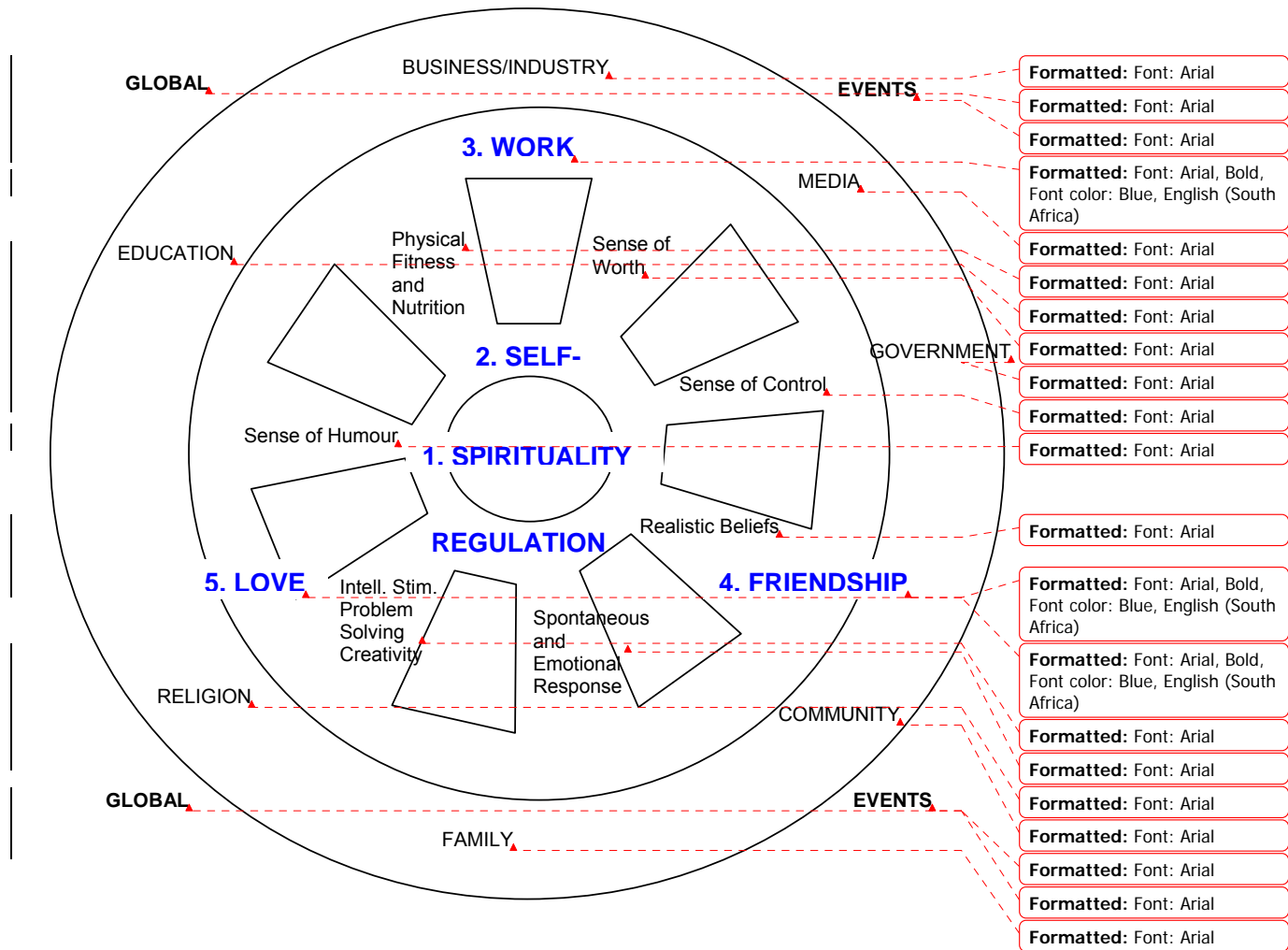
In this model the authors emphasise and explain the interactions between these components as a requirement for wellness (Witmer & Sweeney, 1992).

#### *2.2.3.1 Life Tasks:*

Life tasks can be defined as tasks that an individual focuses on during his or her life span. According to Witmer and Sweeney (1992), there are five basic life tasks. Each life task will be discussed individually.

##### *a) Life Task 1: Spirituality*

Every civilisation, culture or nation has indicated and engages in some form of religious belief that outlines values reflecting what is considered sacred and essential for maintenance of life (Witmer & Sweeney, 1992). This "spirituality" is what one could call the search for an inner or higher awareness that is in harmony with the cosmos. The authors define spirituality as "certain life-enhancing beliefs about human dignity, human rights and reverence for life" (Witmer & Sweeney, 1992, p 141). Spirituality consists of the following characteristics:



**Figure 2.2 Wheel of wellness and prevention (Witmer & Sweeney, 1992, p 142)**

*i) Oneness and the inner life*

Eastern and Western religions tend to acknowledge the oneness of the person and the desire to attain an inner peace and sense of wholeness, free from inner friction and fragmentation.

*ii) Purposiveness, optimism and values*

These aspects refer to meaning in life, hope in anticipation of future events as well as values for guiding a person in human relationships and decision-making.

*b) Life Task 2: Self-regulation*

According to Van Eeden (1996), self-regulation is the process that coordinates long-term patterns of goal-orientated behaviour of an individual in accordance with social norms. This life task includes some characteristics of a healthy person. The characteristics are as follows:

*i) Sense of worth*

Self-worth is the major single factor that affects personal growth and behaviour (Witmer & Sweeney, 1992).

*ii) Sense of control*

Beliefs with regard to a sense of control have to do with feelings about comprehension and confidence (Witmer & Sweeney, 1992) and people who perceive life as manageable have less anxiety and fewer physical symptoms.

*iii) Realistic beliefs*

Individuals with a perception of reality, in other words what is rational and logical as well as what is distorted, are in a position to perceive the truth, come to conclusions and to be logical and cognitively efficient (Witmer & Sweeney, 1992).

*iv) Spontaneity and emotional responsiveness*

Witmer and Sweeney (1992) state that healthy individuals have a childlike simplicity and authenticity in their response to events and confirm that their relationships are essentially free of defensiveness and deceptiveness. Healthy people also tend to be sensitive to the dilemmas of others.

*v) Intellectual stimulation, problem solving and creativity*

A healthy person has the need to know, the need to learn, the need to organise, is curious and has a sense of wonder. Van Eeden (1996) concludes that this enables the person to master his or her environment and to resolve problems.

*vi) Sense of humour*

Humour, and especially laughter, support physiological, psychological and social change. It was found that well-adjusted people would use humour more than maladjusted people (Witmer & Sweeney, 1992).

*vii) Physical fitness and health habits*

According to Witmer and Sweeney (1992), there is a significant relationship between health habits, health and life expectancy.

*c) Life task 3: Work*

Work consists of:

*i) Work as a life-span task*

Witmer and Sweeney (1992) believe that work is a fundamental life task that provides economic, psychological and social advantages to the wellbeing of the individual. Those who cannot engage in work activities struggle for survival both economically and psychologically.

*ii) Psychological, social and economic benefits*

According to Witmer and Sweeney (1992) and Van Eeden (1996), work fosters self-worth, self-efficacy, identity, a feeling of mastery and commitment. Social benefits include encountering people, a feeling of being valued or needed by others, social status and potential friendships while the economic benefits include the resources to purchase goods and services, evidence of success and assets to purchase leisure or free time.

*d) Life task 4: Friendship*

Friendship consists of:

*i) Social interest and connectedness*

This life task is used to describe all those social relationships that involve connections with others, either individually or in community, but with no marital, sexual or family commitment (Witmer & Sweeney, 1992). Van Eeden (1996) concludes that cooperation between people indicates the capacity for interdependent participation.

*ii) Social support, interpersonal relations and health*

Social support consists of three functions: (1) emotional support – attachment, reassurance, being able to rely upon and confide in a person; (2) tangible support – involving direct aid such as loans, gifts and services; and (3)

informational support – providing information or advice and feedback (Witmer & Sweeney, 1992).

*e) Life task 5: Love*

According to Witmer and Sweeney (1992), the life task of love suggests that a person can be intimate, trusting, self-disclosing, cooperative, has the ability to commit in the long term and is comfortable with the intimacy of sexual relationships. Witmer and Sweeney (1992) support the above with research that found that the top three contributors to overall satisfaction with life for women and men are spouse, children and friends.

*2.2.3.2 Life forces*

Life forces refer to the internal and external forces affecting life tasks. The way that societal institutions function in achieving their purposes will affect the advancement and achievement of the five life tasks (Witmer & Sweeney, 1992). The life forces that will influence an individual's life tasks are: family, religion, education, community, media, government and business or industry.

*2.2.3.3 Global events*

Global events go beyond life forces and include wars, hunger, disease, poverty, overpopulation, environmental pollution, etc. These events have an influence on an individual's living and quality of life (Witmer & Sweeney, 1992).

Witmer and Sweeney's model confirms the interconnectedness of the life tasks and life forces. The model affirms the multi-dimensions of wellness with its starting point as the spiritual side (the internal process). This researcher is of the opinion that the second life task, self-regulation, can be used as a basis for defining psychological wellness. This basis cannot, however, be separated from the other life tasks.

### **2.2.4 Adams, Benzer and Steinhardt's Model**

The Wellness Model identifies six wellness dimensions that are represented in the form of a cone. The top of the model (see Figure 2.4) represents wellness because it is expanded to the fullest possible extent while the bottom represents illness (Adams, Benzer & Steinhardt, 1997). According to the authors, the individual will have the ability to function between these two scales with innumerable combinations of wellness in the several dimensions and the various states of balance between them. Each of the dimensions will be discussed individually below.

#### *2.2.4.1 Physical wellness*

Physical wellness is defined as a positive awareness and presumption of physical state (Adams et al., 1997).

#### *2.2.4.2 Spiritual wellness*

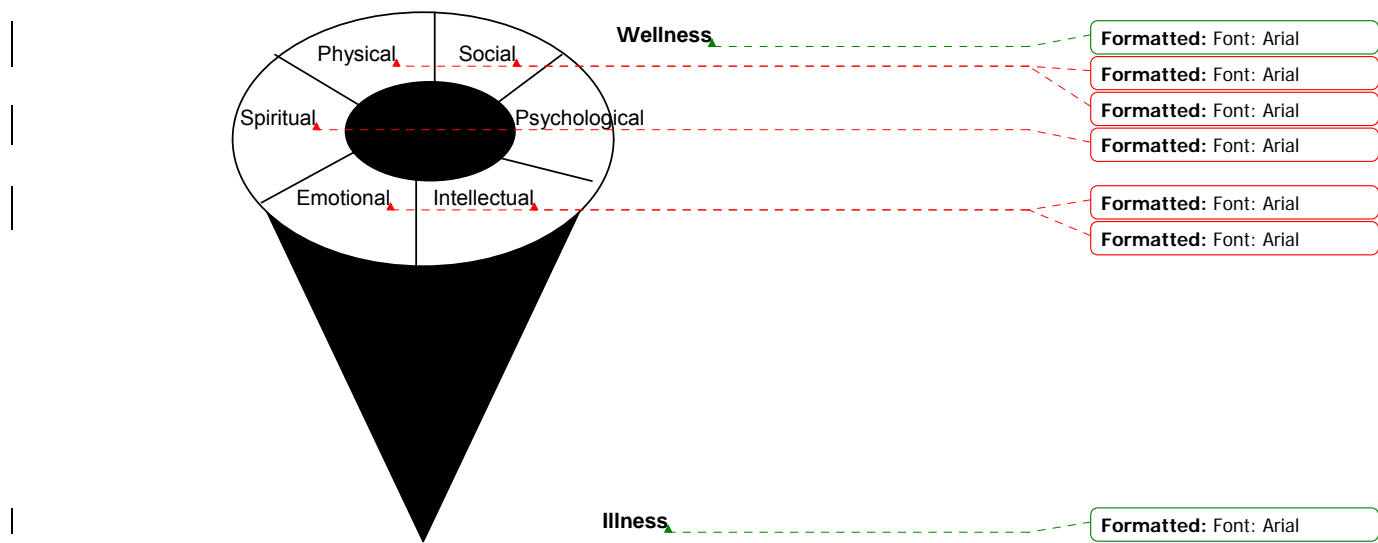
This is the ability to believe in a unifying force as an integrative power between the mind and body or as a positive perception of meaning and purpose in life (Adams et al, 1997).

#### *2.2.4.3 Psychological wellness*

Psychological wellness is the ability to have a general perception that one will experience positive outcomes to the events and circumstances of life (Adams et al., 1997).

#### *2.2.4.4 Social wellness*

Social wellness is seen as the assumption of having support available from family and friends in difficult times, as well as the perception of being a valued support giver (Adams et al., 1997).



**Figure 2.3 The Wellness Model (Adams, Bezner & Steinhardt, 1997, p 210)**

#### 2.2.4.5 Emotional wellness

Emotional wellness is the ability to possess a secure self-identity as well as a positive sense of self-regard. These are both facets of a positive self-esteem (Adams et al., 1997).

#### 2.2.4.6 Intellectual wellness

This can be seen as “being internally energised by an optimal amount of intellectually stimulating activity” (Adams et al., 1997, p 211).

This is one of the first models to indicate psychological wellness as a specific dimension within wellness as a whole (Adams et al., 1997). This model confirms the multi-dimension of wellness and it reinforces the opinion that wellness is not a fixed state but a developing process that continues on a daily basis. Further studies (Adams, Bezner, Drabbs, Sambarano & Steinhart, 2000) using this model confirm that there is a definite link between psychological wellness and overall wellness.



These authors also provide additional support for “the importance of optimism and a sense of coherence as components of psychological wellness” (Adams et al., 2000, p 176). Their study concludes that one should not underestimate the complexity of the quantifying process in psychological and spiritual wellness – stating that the attempt to quantify these constructs is an important starting point in understanding them.

### **2.2.5 Compton’s Model**

Compton (2001) claims that psychological well-being is best assumed by a tripartite model that includes: subjective well-being, personal growth and an other-centred religiosity. He mentions that as people strive to gain greater psychological wellness they may (Compton, 2001, p491):

- focus on immediate social realities and the use of mutually supportive interpersonal relationships to enhance self-esteem;
- pursue an existential search for the actualisation of their authentic or real self;
- pursue self-renunciation and other-centred compassion within a religious context.

In this study Compton (2001) identifies a correlation between the conflicts that people experience in their search for happiness and the good life. He concludes that this tension may also be related to the empirical and conceptual relatedness in the need for a relatively stable sense of identity. The three independent factors seem to be dependant on one another for a complete model of psychological wellness with a stable sense of identity (Compton, 2001).

### 2.3 DIMENSIONS OF PSYCHOLOGICAL WELLNESS

The authors of the various models make use of system theory to explain their models. This allows them to explore the multi-dimensional aspect of psychological wellness as well as the interaction between different dimensions. The interaction between the dimensions is a requirement for wellness as a whole and will have an impact on psychological wellness. An individual's behaviour is a manifestation of the interaction between these dimensions and wellness will be attained in circumstances where an individual masters the coping mechanisms. The following dimensions seem to be consistent in all the models:

- aspects of the self (intrapersonal, affective or cognitive behaviour, spirituality, personal growth);
- other domains of life (interpersonal, social and contextual, in love and work).

These dimensions are supported in the work of Van Eeden (1996), who mentioned that the multi-dimensions of psychological wellness can be divided into the different facets of an individual's life, namely: facets of the self, facets of cognition, facets of emotions, facets of behaviour, facets of social interaction and facets of value alignments.

It is, however, important to note that wellness is perceived as a relatively lasting state of mind that is characterised by continuous adaptation, general wellness and the realisation of personal potential in the dimensions (Van Eeden, 1996). This statement links to the definition of psychological wellness as stated earlier in Chapter 2 section 2.1.

Taking the different models into consideration, it can be stated that psychological wellness is multi-dimensional with optimal functioning occurring when these dimensions are in balance. These dimensions refer to aspects of the self (intrapersonal, affective and cognitive behaviour, spirituality, personal

growth) as well as other domains of life (interpersonal, social and contextual, in love and work) in which the self manifests itself. Psychological wellness functions thus in a complex system that will change with time and place, as well as with the integration of the different dimensions.

It seems that the behaviour of the psychologically well individual, as indicated in the various dimensions of the models, relates to the well known psychological constructs of self-actualisation, locus of control, sense of coherence and emotional intelligence. This assumption is confirmed by previous research (Bar-On, 1997; Jahoda, 1958; Moomal, 1999; Van Eeden, 1996; Walker, 2002) that has indicated that these four constructs are related to psychological wellness. In the following chapter these constructs will be discussed to determine characteristics that may be related to psychological wellness.

Self-actualisation, locus of control, a sense of coherence and emotional intelligence will be conceptualised and characteristics will be identified in chapter three. These features of the constructs will be then used to identify the characteristics of a psychologically well individual.

## **2.4 SUMMARY**

The aim of this chapter was to conceptualise psychological wellness. This was achieved by defining the concept of psychological wellness, followed by discussions of various wellness models to identify the different dimensions of the concept.

## **CHAPTER 3: CONSTRUCTS ASSOCIATED WITH PSYCHOLOGICAL WELLNESS**

In this chapter, the four constructs associated with psychological wellness are discussed. Self-actualisation, locus of control, a sense of coherence and emotional intelligence will be conceptualised and characteristics will be determined for each of the four related constructs. An integration of the different characteristics will be conducted at the end of chapter three to determine which are related to psychological wellness.

### **3.1 SELF-ACTUALISATION**

Self-actualisation is a popular research topic and various studies have been conducted. Jahoda (1958) states that the term self-actualisation originated from Goldstein in 1940. It was referred to as the “third force” humanistic psychology movement during the 1950s (Schulz, 1994, p 56).

#### **3.1.1 Definition**

According to Jahoda (1958), there are a number of authors who see the essence of psychological wellness as an ongoing process called self-actualisation or growth.

Stonefield (1999) believes that Goldstein, Maslow and Rogers played an important role in the conceptualisation of self-actualisation. Their theories indicated that individuals strive for perfection and attempt to realise their latent potential (Stonefield, 1999).

According to Maslow (1954), all humans are born with instinctive needs that motivate them to grow and develop and to actualise themselves to become all that they are capable of becoming. Rogers (1961) believes that self-

actualisation is growth and enhanced experience towards the goal of increased complexity of functioning in becoming everything a person is capable of being.

Schulz (1994, p 59) defines self-actualisation as “a never-ending growth process of purposeful striving, optimal development and becoming a more fully functioning and mature individual. It is described as an end-of-being state of fullest realisation of one’s potentials.” Keegan (2002, p 9) agrees with this definition, stating that self-actualisation is the essence of personal growth “embodied in episodic peak experiences, which occur when we get an insight into what it means to be human”. Snyder and Lopez (2002, p 302) mention that self-actualisation is “to be able to fulfil your potential and achieve that which you want most in life”, again focusing on the growth process and becoming more in life.

The researcher is of the opinion that Schulz’s definition is best suited to the purpose of this study.

### **3.1.2 Characteristics**

Visser (1994) and Schulz (1994) referred to research done by Shostrom and indicate that the personality traits of a self-actualised individual can be divided between intrapersonal and interpersonal characteristics. Stonefield (1999) confirms this. These researchers concluded that the interpersonal characteristics flow from the intrapersonal characteristics.

#### ***3.1.2.1 Intrapersonal characteristics***

Intrapersonal characteristics refer to physical, cognitive, affective and motivational characteristics (Stonefield, 1999; Visser, 1994).

*a) Physical characteristics*

The self-actualised individual is aware of the physical functioning of the body and accepts it as is (Schulz, 1994; Visser, 1994). Schulz (1994) states that these individuals have a tendency to exercise regularly, are energetic and are generally physically healthy.

*b) Cognitive characteristics*

The work of Schulz (1994) and Visser (1994) indicates that a self-actualised individual usually has an above-average intellect and is objective, flexible, imaginative and optimistic about people and life in general. They accept their emotions and are able to control them without disrupting other activities (Stonefield, 1999).

They apply sound judgement because they have the ability to understand themselves, their convictions, their motives (Schulz, 1994) and have the courage to evaluate situations critically and objectively (Visser, 1994). Self-actualised individuals are open to experiences and will distinguish between the means to a goal and the goal itself (Schulz, 1994; Visser, 1994).

*c) Affective characteristics*

Schulz (1994), Visser (1994) and Stonefield (1999) all agree that the self-actualised individual has the ability to perceive himself or herself, others and the environment in a realistic way to ensure that capabilities are known and tasks are achieved. The self-actualised individual thus experiences life as meaningful and accepts full responsibility for his or her feelings (Stonefield, 1999).

Such individuals tend to have a high tolerance for frustration and experience stress as something pleasant that motivates them to improved performance and bigger challenges (Schulz, 1994). These individuals live for the moment and have learnt to deal with their own emotional state in such a way that it does not lead to impulsive acts or interference with the well-being of others (Stonefield, 1999).

*d) Motivational characteristics*

A self-actualised individual does not depend on the physical and social environment for his or her main satisfaction (Stonefield, 1999). These individuals experience freedom of choice in determining their conduct and do not see themselves as victims of external forces (Schulz, 1994).

Their life does not revolve solely around themselves and they are personally involved in external matters such as friends, hobbies, ideas and their careers (Schulz, 1994). Stonefield (1999) quotes Schultz and says “the more an individual focuses on activities that are relevant and important, the more healthy the individual will be”.

*3.1.2.2 Interpersonal characteristics*

Schulz (1994), Visser (1994) and Stonefield (1999) mention in their research that interpersonal skills cannot exist if intrapersonal skills are not in place. When intrapersonal skills are established, the individual is capable of displaying intimacy towards others without losing the self (Stonefield, 1999; Visser, 1994).

The above characteristics lead to enrichment and the facilitation of growth in others through interpersonal contact. According to Allport (1961), the self-actualised individual has warm relationships with family members and close friends and knows how to maintain a sufficient distance to avoid becoming intrusive or possessive.

Self-actualised individuals have a desire to help others because of their optimistic and unconditional acceptance of and respect for them (Schulz, 1994; Stonefield, 1999). The self-actualised individual is not afraid of showing empathy and knows that he or she can learn from other individuals (Visser, 1994).

### **3.2 LOCUS OF CONTROL**

As stated in the background in chapter one, locus of control has been identified as a construct of psychological wellness. An individual who is psychologically well has an enduring sense of personal control (Adams et al., 2000). Witmer and Sweeny (1992) point out that an individual with a sense of inner control is more likely to collect information about disease and health maintenance to enable him or her to improve health habits and implement preventive care.

#### **3.2.1 Definition**

Locus of control is based on the Social-Learning Theory of Rotter and the Attribution Theory of Heider (Schepers, 1995). Theron (n.d.) states that the locus of control concept revolves around the controllability of events in a person's life. Individuals have the ability to attribute the control of events either to themselves or to factors in the external environment. Rotter (1966, p1), Bothma and Schepers (1997), Els, Linde and Rothmann (2001), as well as Le Roux, Schmidt and Schepers (1997) identified the concept of locus of control and defined it as:

“When a reinforcement that is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate as under the control of powerful other, or as unpredictable because of great complexity of the forces surrounding him. When the event is interpreted in this way by the individual, we have labelled this a belief of external control. If the person perceives that the event is contingent upon his own behaviour or his own relatively permanent characteristics, we have termed this a belief in internal control.”



According to Schepers (1995) and Sunbul (2003), Rotter's Social Learning Theory distinguishes between a person who has an internal locus of control (belief that reinforcement of their behaviour is dependent on own achievements, abilities and commitment) and one who has an external locus of control, that is believing that luck, fate and influential people are responsible for reinforcement of his or her behaviour.

The Social-Learning Theory of Rotter (1966) explains the nature of reinforcement from the social environment and the influence that this reinforcement has on the future behaviour of the individual. In conjunction with the Social-Learning Theory, the Attribution Theory of Heider (1958) provides a basis on which an individual gains information on the stable or fluctuating qualities of other people (e.g. motives, intentions and characteristics). Individuals thus try to determine the origin of their own as well as others' behaviour.

Lefcourt (1981) built on Rotter's definition of the locus of control by adding that the internal-external control construct was conceived as a generalised expectancy to perceive reinforcement either as contingent upon one's own behaviour (internal control) or as the result of forces beyond one's control and due to chance, fate or powerful others (external control).

Research by Phillips (1980), Reker (1977), Yarnell (1971) and Sammon, Reznikoff and Geisenger (1985) respectively indicate a positive correlation between the internal locus of control and psychological wellness. For the purpose of this study, the researcher will focus on the characteristics of the individual with an internal locus of control. Internal locus of control will thus be defined as the ability of an individual to perceive reinforcement in the environment as a result of his or her own behaviour.

### 3.2.2 Characteristics

For the purpose of this study, the characteristics of an individual with an internal locus of control will be divided into intrapersonal and interpersonal characteristics.

#### 3.2.2.1 *Intrapersonal characteristics*

To be in a position to compare the intrapersonal characteristics with those of the other constructs, they will be explained in terms of physical, cognitive, affective and motivational characteristics.

##### *a) Physical characteristics*

An individual with an internal locus of control perceives life as controllable and has fewer physical symptoms. It can be concluded that longer survival and better adjustment to serious diseases or injury are related to lower perceptions of the role of powerful others in controlling outcomes (Lefcourt, 1981). Witmer and Sweeney (1992) confirm this claim.

##### *b) Cognitive characteristics*

Lefcourt (1982), as well as Els, Linde and Rothmann (2001), states that individuals with an internal locus of control tend to be more cautious and calculating about their choices, involvement and personal entanglements than individuals with an external locus of control. The internal tends to ask more questions and seeks more information on situations (Lefcourt, 1982).

Research also indicates that internals tend to retain, learn, remember and attend to more information when this relates to future goals (Moore & Dwyer, 1997). Lefcourt (1982) states that internal locus of control correlates positively with academic achievement.

*c) Affective characteristics*

Bell (1980) states that these individuals are less influenced by social pressures, tend to be better adjusted, can tolerate frustrations and can cope with stress. They therefore have a more optimistic attitude to themselves, their abilities and life in general (Els et al. 2001; Van Eeden, 1996).

*d) Motivational characteristics*

Internal control individuals appear more active in their attempts to control and master the environment (Bell, 1980). This is confirmed by Moore and Dwyer (1997) as well as by Els et al. (2001), who conclude that internals need greater independence and are resistant to subtle attempts at influence.

Internal locus of control individuals believe that reinforcement is contingent upon their own behaviour, capacities or attributes (Moore & Dwyer, 1997).

*3.2.2.2 Interpersonal characteristics*

Lefcourt (1981) states that individuals with internal locus of control are more likely to participate in social actions because they believe that their behaviour can bring about desired goals.

These individuals do not feel that they are controlled by powerful others and will thus be in a position to trust other individuals' intentions (Lefcourt, 1981). This gives them the ability to maintain better interpersonal relationships with others by coping better with their emotions and stressors (Van Eeden, 1996).

Internal locus of control correlates with social sensitivity and social competencies (Coetzer & Schepers, 1997; Els et al., 2001) and this will enhance the interpersonal characteristics of an individual.

### **3.3 SENSE OF COHERENCE**

In chapter one the researcher refers to the work of Van Eeden (1996), who indicated a sense of coherence as a relevant construct of psychological wellness. Moomal (1999) confirms Van Eeden's statement by pointing out that several studies have explored the relationship between psychological well-being and meaning or purpose in life as operationalised by different instruments, such as the Life Attitude Profile, the Purpose in Life Test and the Sense of Coherence Scale.

For the purpose of this study, a sense of coherence will be defined and characteristics discussed to put the researcher in a position to determine those traits related to psychological wellness.

#### **3.3.1 Definition**

Visser (1994), Van Eeden (1996) and Heiman (2004) state that a sense of coherence is the central concept identified in the salutogenic paradigm described by Antonovsky. The relationship between the salutogenic paradigm and the humanistic paradigm was discussed in the first chapter of this dissertation, thus allowing the researcher to compare a sense of coherence with the other constructs in the humanist paradigm. A sense of coherence is defined by Antonovsky (1993, p 725) as:

“Sense of coherence is 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 environment 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.”

According to Heiman (2004) and Visser (1994), Antonovsky's theoretical model addresses the relationship between psychological optimisation and the term that we know as a sense of coherence. Strümpfer (1990) and Visser (1994) note that Antonovsky introduced the concept of generalised resistance resources that assist with the facilitation of effective tension management in any situation of demand. These generalised resistance resources allow the individual to make sense of all the stressors confronted on a day-to-day basis (Visser, 1994). The following are examples of generalised resistance resources (Strümpfer, 1990; Visser, 1994):

- physical and biochemical generalised resistance resources such as immunosuppressors and immunopotentiators;
- artefactual-material generalised resistance resources such as wealth, power, status and services;
- cognitive generalised resistance resources such as knowledge-intelligence (education and life skills knowledge);
- emotional generalised resistance resources;
- coping strategies as plans of action for overcoming the stressors;
- interpersonal-relational generalised resistance resources such as social support and commitment;
- macro-sociocultural generalised resistance resources.

Antonovsky and Sourani (1988) contend that a sense of coherence refers to the extent to which one sees one's world as comprehensible, manageable and meaningful. Strümpfer (1990) mentions that a sense of coherence develops through repeated experiences of making sense of countless stressors in an individual's life. Through the repeated exposure of these experiences of sense-making, a person develops a strong sense of coherence over time (Strümpfer, 1990).

Strümpfer (1990) indicates that a sense of coherence is a dispositional orientation and not a state or a trait. A sense of coherence embraces

components of perception, memory, information processing and effect into habitual patterns of appraisal.

Heiman (2004), Strümpfer (1990) and Van Eeden's research (1996) states that a sense of coherence consists of three integrated components:

- **Comprehensibility** – this refers to the extent in which the individual sees the stimuli as clear, ordered, structured and consistent information at present, as well as in the future. These perceptions make cognitive sense.
- **Manageability** – this refers to the extent of an individual's perception that the necessary resources are adequate and available.
- **Meaningfulness** – this refers to the extent to which an individual feels that life makes sense emotionally rather than cognitively.

A sense of coherence refers thus for the purposes of this study to an individual's orientation to life crises and the ability to react to stressors in a positive manner (Van Eeden, 1996). Strauser and Lustig (2003, p 130) confirm this by stating that "individuals with a higher sense of coherence tend to be better adjusted and are able to make the necessary adjustments in life to be stable and productive individuals".

### 3.3.2 Characteristics

Based on the above, a strong sense of coherence creates the perception that the world is predictable, manageable and meaningful. The characteristics of an individual with a strong sense of coherence will now be discussed by distinguishing between the intrapersonal and interpersonal characteristics.

### 3.3.2.1 *Intrapersonal characteristics*

To be in a position to compare the intrapersonal characteristics with those of the other constructs, these will be explained in terms of the following headings: physical-, cognitive-, effective- and motivational characteristics.

#### *a) Physical characteristics*

An individual with a strong sense of coherence would rather participate in activities that are beneficial to his or her health than activities that might be a danger. These individuals perceive their lives as meaningful and believe that they can only function optimally if they are healthy (Visser, 1994). Strümpfer (1990) indicates that an individual with a strong sense of coherence would be more likely to maintain his or her position on the “health ease” or “dis-ease” continuum.

#### *b) Cognitive characteristics*

A strong sense of coherence gives you the cognitive ability to make realistic judgement calls that are not controlled by emotions (Visser, 1994). Individuals with a strong sense of coherence will have the ability to find structure in any event. The structure and rules will not be strictly followed all the time, providing the opportunity to balance the current structure and rules with the current situation and potential new information (Strauser & Lustig, 2003; Visser, 1994). A strong sense of coherence also gives you the ability to show readiness to exploit the resources that may be potentially available (Strauser & Lustig, 2003; Strümpfer, 1990).

#### *c) Affective characteristics*

Individuals with a strong sense of coherence will voice the important aspects of their lives and will regard these as challenges to themselves. These individuals will then be willing to connect on a cognitive as well as an emotional level with these challenges. A strong sense of coherence will provide an individual with calmness and confidence in any situation and the ability to be in control of the situation. Life has meaning on an emotional level (Cilliers, 2001; Visser, 1994).

#### *d) Motivational characteristics*

Individuals with a strong sense of coherence perceive their entire world as comprehensive, manageable and meaningful. They have the ability to set boundaries for themselves. Anything that falls outside these boundaries does not seem to trouble them (Cilliers, 2001; Strümpfer, 1990). External stressors are not experienced as a threat to an individual's ego and anxiety levels are not raised by these stressors; instead, these stressors are seen as opportunities with potential positive results worth the energy spent on them (Visser, 1994).

#### *3.3.2.2 Interpersonal characteristics*

Cilliers (2001), Strümpfer (1990) and Visser (1994) all believe that a person with a strong sense of coherence will be able to cope successfully with the challenges and demands of the environment. Together with this comes the ability to maintain positive interpersonal relationships with others. These relationships are built on mutual and collective support and concern. An individual with a strong sense of coherence will work with others towards a common goal, creating possible situations in which they will receive support from other people (Visser, 1994).

### **3.4 EMOTIONAL INTELLIGENCE**

The phrase *emotional intelligence* was first used by Peter Salovey and John Mayer (Gibbs, 1995; Goleman, 1998; Schutte and Malouff, 1998). Emotional intelligence is a concept that has received attention over the last decade and is identified by writers as a hidden advantage for success (Cooper & Sawaf, 1998; Goleman, 1998). According to Bar-on (1997), emotional intelligence is not only an important factor in determining one's ability to succeed in life: it also influences one's general psychological well-being.



### **3.4.1 Definition**

Salovey and Mayer (1993) define emotional intelligence as the ability to regulate one's own feelings and to use feelings to guide thoughts and actions. Goleman (1998) supports this definition and adds that emotional intelligence refers to the capacity to recognise our own feelings and those of others in motivating ourselves, and for managing emotions in us and in our relationships.

Snyder and Lopez (2002, p 159) confirm this by defining emotional intelligence as the ability to "process emotion-laden information competently and to use it to guide cognitive activities, like problem-solving, and to focus energy on required behaviour".

Reuven Bar-On (1997) defines emotional intelligence as an array of non-cognitive capabilities, competencies and skills that influence one's ability to succeed in coping with environmental demands and pressures.

For the purpose of this study, emotional intelligence is defined as a person's non-cognitive capabilities, competencies and skills that enable the individual to cope with environmental demands and pressures and the emotions that these evoke.

### **3.4.2 Characteristics**

Bar-On (1997) refers to early research done by Howard Gardner as indicating that the emotional dimension of intelligence consists of two general components, referred to as intrapersonal capacities and interpersonal skills. In this study a distinction is made between intrapersonal and interpersonal characteristics.

#### 3.4.2.1 *Intrapersonal characteristics*

Intrapersonal characteristics refer to physical, cognitive, affective and motivational characteristics. In studying the research of Bar-On (1997), Goleman (1998), Gibbs (1995), Cooper and Sawaf (1997) and Snyder and Lopez (2002) identify the following characteristics as typical of a person with a high emotionally intelligence.

##### *a) Physical characteristics*

Gibbs (1995) states that emotionally intelligent individuals handle frustration better and take each refusal as a challenge and not a setback. Cooper and Sawaf (1997) indicate that an emotionally intelligent person understands the value of frequent physical activity for mental and emotional alertness to strive with confidence. Individuals who measure high on emotional intelligence have a positive attitude towards their body as well as its functioning.

These findings are confirmed by Abramovitz (2001, p 14), who states that “developing emotional intelligence can help you avoid both short-term injury risks and long-term illnesses such as heart disease, liver disease and some cancers”. According to this author, an individual with higher emotional intelligence will understand the health risks involved in substance abuse and other dangerous lifestyle choices (e.g. out-of-control emotional stress).

##### *b) Cognitive characteristics*

Studies done by Swart on students (Bar-on, 1997) suggested correlations between academically successful individuals and higher scores on emotional intelligence. Goleman (1998, p 23) confirms this and states that emotionally intelligent individuals do need to have the necessary “intellectual horsepower” to be successful in life but that emotional intelligence skills are synergistic.

These individuals can accurately identify their strengths and weaknesses; know their internal states, preferences, resources and intuitions (Bar-On, 1997; Goleman, 1998; Lubit, 2004; Snyder & Lopez, 2002). They recognise their own emotions and their effects. A strong sense of their self-worth and capabilities is

present and they have the ability to be self-directed and self-controlled in their thinking and actions, feeling free of emotional dependency (Bar-On, 1997; Snyder & Lopez 2002).

Emotionally intelligent individuals have the ability “to identify and define problems, as well as the generation and implementation of potentially effective solutions” (Bar-On, 1997, p 17).

*c) Affective characteristics*

Emotionally intelligent individuals manage their own internal states, impulses and resources to maintain their integrity, taking responsibility for their personal performance (Goleman, 1998; Lubit, 2004; Snyder & Lopez, 2002). They can admit their own mistakes and confront unethical actions in others.

Bar-On (1997) supports the above by stating that this behaviour leads to the characteristics of emotional self-awareness, assertiveness and self-actualisation. The richness of the emotional lives of these individuals gives them the opportunity to lead meaningful and full lives.

These individuals remain composed, positive and unflappable even in difficult moments and have the ability to respect and accept themselves as basically good (Bar-On, 1997; Goleman, 1998; Lubit, 2004; Snyder & Lopez 2002). They feel satisfied with their lives, enjoy themselves and others, and know how to have fun.

*d) Motivational characteristics*

Emotionally intelligent individuals exhibit emotional tendencies that guide them in reaching their goals despite obstacles or setbacks (Goleman, 1998). Bar-On (1997) identified that they can withstand adverse events and stressful situations without falling apart by actively and positively coping with stress.

They have the ability to assess the process between what is experienced and what objectively exists (reality testing), adapting their emotions, thoughts and

behaviour to changing situations and conditions, staying optimistic, waiting for and creating opportunities, ready to act on them (Bar-On, 1997; Goleman, 1998; Lubit 2004).

#### *3.4.2.2 Interpersonal characteristics*

The above intrapersonal characteristics play an integral role in allowing the emotionally intelligent individual to exhibit interpersonal characteristics. An emotionally intelligent individual has the ability to establish and maintain mutually satisfying relationships that are characterised by intimacy and by giving and receiving affection (Bar-On, 1997; Douglas, Frink & Ferris, 2004).

This emotionally intelligent individual can thus sense another's feelings, perspectives and concerns (Goleman, 1998; Lubit, 2004; Snyder & Lopez, 2002). Such individuals understand and appreciate others' feelings and deal with these feelings with empathy, negotiating and resolving conflict (Bar-On, 1997; Goleman, 1998)

They are cooperative, contributing and constructive members of social groups who cultivate opportunities through different kinds of people (Bar-On, 1997; Douglas et al., 2004; Goleman, 1998). An emotionally intelligent person can inspire and guide other individuals and groups to work towards a shared goal and has the ability to create group synergy (Boyatzis & Van Oosten, 2003; Goleman, 1997; Lubit, 2004) owing to the understanding of a group's emotional currents as well as power relations.

### **3.5 THEORETICAL INTEGRATION**

The purpose of this integration is to identify the characteristics of a psychologically well individual based on the four constructs, namely self-actualisation, locus of control, sense of coherence and emotional intelligence.

### 3.5.1 Integration of characteristics

A distinction is made between intrapersonal and interpersonal characteristics. All the characteristics of the four constructs are summarised in Table 3.1. The following characteristics have been identified:

#### 3.5.1.1 Identified Intrapersonal characteristics

The intrapersonal characteristics consist of physical, cognitive, affective, and motivational characteristics.

##### a) Physical characteristics

If one compares the characteristics of the four constructs in Table 3.1, the following similarities have been found:

- participation in physical activities;
- a positive attitude or self-regard in terms of health;
- fewer physical symptoms.

It can therefore be concluded that a psychologically well individual knows that physical exercise will increase personal energy levels. This individual will have a positive self-regard and a positive attitude to health, with fewer physical ailments.

##### b) Cognitive characteristics

From the cognitive characteristics in Table 3.1, the following similarities between the four constructs have been found:

- the ability to be flexible (not to follow structure and rules strictly all the time);
- realistic and objective thought processes not influenced by emotions;
- imaginative and effective problem solving;

**Table 3.1 Comparison of identified characteristics for the four constructs**

Characteristic	Self-actualisation	Internal locus of control	Sense of coherence	Emotional Intelligence
<b>Intrapersonal</b>				
Physical	<ul style="list-style-type: none"> <li>• They have a tendency to exercise regularly to keep fit</li> <li>• they are aware of the physical functioning of the body and accept it as is</li> <li>• show sufficient energy</li> <li>• are generally physically healthy</li> </ul>	<ul style="list-style-type: none"> <li>• longer survival and better adjustment to serious diseases or injury</li> <li>• perceive life as controllable</li> <li>• have fewer physical symptoms</li> </ul>	<ul style="list-style-type: none"> <li>• participation in activities that are beneficial for his or her health</li> <li>• believe that they can only function optimally if they are healthy</li> <li>• are able to maintain their position on the health-ease of dis-ease continuum</li> </ul>	<ul style="list-style-type: none"> <li>• understand the value of frequent physical activity for mental and emotional alertness to stride with confidence.</li> <li>• have a positive attitude towards their body as well as its functioning.</li> <li>• take each refusal as a challenge and not a setback</li> </ul>
Cognitive	<ul style="list-style-type: none"> <li>• flexible and adaptable</li> <li>• will distinguish between the means to the goal and the goal itself</li> <li>• they are objective</li> <li>• imaginative</li> <li>• have the courage to evaluate situations critically and objectively</li> <li>• usually have an above-average intellect</li> </ul>	<ul style="list-style-type: none"> <li>• seek more information on situations</li> <li>• tend to retain, learn, remember and attend to more information when related to future goals</li> <li>• tend to be more cautious and calculating about their choices, involvement and personal entanglements</li> </ul>	<ul style="list-style-type: none"> <li>• structure and rules will not be strictly followed all the time, providing the opportunity to balance the current structure and rules with the current situation and potential new information</li> <li>• have the ability to make realistic judgement calls that are not controlled by emotions.</li> <li>• give you the ability to show readiness to exploit the resources</li> </ul>	<ul style="list-style-type: none"> <li>• recognition of own emotions and their effects</li> <li>• feel free of emotional dependency</li> <li>• identify and define problems</li> <li>• generation and implementation of potentially effective solutions</li> <li>• can accurately identify their strengths and weaknesses</li> <li>• know their internal states, preferences, resources and intuitions</li> </ul>

	<ul style="list-style-type: none"> <li>• apply sound judgement because they have the ability to understand themselves, their convictions, their motives</li> <li>• optimistic about people in general as well as their perception of life</li> <li>• accept their emotions and are able to control these without disrupting other activities</li> </ul>		<p>that may be potentially available</p> <ul style="list-style-type: none"> <li>• find structure (meaning) in any event.</li> </ul>	<ul style="list-style-type: none"> <li>• are self-directed and self-controlled in their thinking and actions</li> </ul>
Affective	<ul style="list-style-type: none"> <li>• experience life as meaningful</li> <li>• accept full responsibility for their feelings</li> <li>• tend to have high tolerance for frustration and experience stress as something pleasant that motivates them to better performance and bigger challenges</li> <li>• have learnt to deal with their own emotional state in such a way that it does not lead to impulsive acts or interference with the well-being of others</li> <li>• perceive themselves, others and</li> </ul>	<ul style="list-style-type: none"> <li>• have a more optimistic attitude to themselves, their abilities and life in general</li> <li>• can tolerate frustrations and can cope with stress</li> <li>• are less influenced by social pressures</li> <li>• tend to be better adjusted</li> </ul>	<ul style="list-style-type: none"> <li>• life has meaning on an emotional level</li> <li>• voice the important aspects of their lives and see these aspects as challenges to themselves</li> <li>• are in control of the situation.</li> <li>• calmness and confidence in any situation</li> <li>• able to connect on a cognitive as well as an emotional level with these challenges</li> </ul>	<ul style="list-style-type: none"> <li>• rich emotional lives giving them the opportunity to lead meaningful and full lives</li> <li>• stay composed, positive and unflappable even in difficult moments</li> <li>• take responsibility for their personal performance</li> <li>• admit their own mistakes and confront unethical actions in other</li> <li>• emotionally self-aware</li> <li>• manage their own internal states, impulses and resources to maintain their integrity</li> <li>• assertiveness and self-</li> </ul>

	the environment in a realistic way to ensure that capabilities are known and tasks are achieved			<p>actualisation</p> <ul style="list-style-type: none"> <li>• respect and accept themselves as basically good</li> <li>• feel satisfied with their lives</li> <li>• enjoy themselves and others, and know how to have fun</li> <li>• handle frustration better</li> </ul>
Motivational	<ul style="list-style-type: none"> <li>• experience freedom of choice in determining their conduct</li> <li>• do not depend on the physical and social environment for their main satisfactions</li> <li>• do not see themselves as victims of external forces</li> <li>• their lives do not solely revolve around themselves</li> <li>• these individuals are personally involved in external matters such as friends, hobbies, ideas and their careers</li> </ul>	<ul style="list-style-type: none"> <li>• are more active in their attempts to control and master the environment</li> <li>• believe that reinforcement is contingent upon their own behaviour, capacities or attributes</li> <li>• need greater independence and are resistant to subtle attempts at influence</li> </ul>	<ul style="list-style-type: none"> <li>• able to perceive their entire world as comprehensive, manageable and meaningful</li> <li>• set boundaries for themselves</li> <li>• anything that falls outside these boundaries does not seem to trouble them</li> <li>• no threat is experienced by external stressors and anxiety levels are not increased</li> <li>• stressors are seen as opportunities with possible positive results worth the energy spent on them</li> <li>• will cope successfully with the challenges and demands of the environment</li> </ul>	<ul style="list-style-type: none"> <li>• have the ability to assess the correspondence between what is experienced and what objectively exists (reality testing)</li> <li>• exhibit emotional tendencies that guide them in reaching their goals despite obstacles or setbacks</li> <li>• adapt their emotions, thoughts and behaviours to changing situations and conditions</li> <li>• stay optimistic</li> <li>• wait for and create opportunities, ready to act on them</li> <li>• can withstand adverse events and stressful situations without falling apart by actively and positively coping with stress</li> </ul>



<b>Interpersonal</b>	<ul style="list-style-type: none"> <li>• growth in others through interpersonal contact</li> <li>• capable of displaying intimacy towards others without losing the self</li> <li>• have warm relationships with family members and close friends</li> <li>• are not afraid of showing empathy and know that they can learn from other individuals</li> <li>• a desire to help others due to their optimistic and unconditional acceptance of and respect for them</li> <li>• know how to maintain a sufficient distance and not to become intrusive or possessive</li> </ul>	<ul style="list-style-type: none"> <li>• are socially sensitive and competent</li> <li>• are more likely to participate in social actions because they believe that their behaviour can bring about desired goals</li> <li>• maintain better interpersonal relationship with other individuals by coping better with their emotions and stressors</li> <li>• do not feel controlled by powerful others and will thus be in a position to trust other individuals' intentions</li> </ul>	<ul style="list-style-type: none"> <li>• will maintain positive interpersonal relationships with other individuals</li> <li>• will work along with others towards a common goal, creating possible situations where they will receive support from other people</li> <li>• relationships are built on mutual and collective support and concern</li> </ul>	<ul style="list-style-type: none"> <li>• will establish and maintain mutually satisfying relationships that are characterised by intimacy and by giving and receiving affection</li> <li>• understand and appreciate others' feelings and deal with these feelings with empathy</li> <li>• can sense other individuals' feelings, perspectives and their concerns</li> <li>• are co-operative, contributing and constructive members of social groups that create opportunities through different kinds of people</li> <li>• inspire and guide other individuals and groups to work towards a shared goal and have the ability to create group synergy</li> <li>• negotiating and resolving conflict</li> </ul>
----------------------	---	---	--	---

- self-understanding as well as an understanding of own beliefs and motives. This enables the individual to master and adapt to life's challenges (self-directed and self-controlled).
- generally optimistic.

It can be concluded that a psychologically well person will be flexible, rational and optimistic. This will enable the person to be original in problem solving and to utilise the acquired reasoning to adapt and master life's challenges. A psychologically well individual sees life as comprehensible, manageable and meaningful, demonstrating self-understanding (knowing one's own beliefs and motives).

#### *c) Affective characteristics*

Table 3.1 compares the affective characteristics of the four constructs. The following similarities have been identified:

- an experience of a meaningful life even under difficult circumstances (generally positive and optimistic);
- dealing with negative emotions (frustrations, stress and taking responsibility for personal performance);
- manages own internal states, impulses and resources (calmness and confidence in any situation).

A strong sense of psychological wellness will enable an individual to feel generally positive and optimistic. Negative feelings are not denied, but are confronted and mastered. A psychologically well person will thus manage his or her own states (frustration, anxiety), impulses and resources demonstrating a calmness and confidence in any situation.

#### *d) Motivational characteristics*

The following similarities have been found between the motivational characteristics of the four constructs (see Table 3.1):

- play an active role in their attempts to control and master the environment. This is to perceive and assess the reality of the situation, and to perceive freedom of choice;
- reach their goals and objectives in spite of setbacks. They know themselves and their potential, set boundaries for themselves and do not depend on the physical and social environment for their main satisfaction;
- life does not solely revolve around them and they will form opinions from their thoughts and feelings, and conduct their behaviour according to a set of values that will enhance happiness, meaningfulness and spiritual depth;
- stressors are seen as opportunities with potentially positive results worth the energy spent on them.

The psychologically well individual can perceive and assess the reality of situations as well as act on it. These self-reliant individuals are self-actualised and know themselves as well as their potential. A psychologically well individual will form opinions from his or her thoughts and feelings and will conduct his or her behaviour according to a set of values that will enhance happiness, meaningfulness and spiritual depth. Stressors are seen as opportunities with potentially positive results and they believe that they will reach their goals and objectives in spite of setbacks.

#### *3.5.1.2 Identified interpersonal characteristics*

The following similarities between the interpersonal characteristics of four constructs exist (see Table 3.1):

- the ability to be socially sensitive and competent by forming and maintaining mutually satisfying relationships with other people;
- providing and accepting support from others; the ability to display empathy and intimacy;

- will contribute to the common goals of the social group and will create opportunities through different people;
- will utilise and preserve their resources while mastering their environment.

Psychologically well individuals have the ability to form and maintain mutually satisfying relationships with other people. In these social relationships, the individual will accept and give support where and when needed. Empathy and intimacy towards others will come naturally for psychologically well individuals. They will contribute towards the common goals of the group and will create opportunities through different people utilising the resources.

### **3.6 SUMMARY**

In this chapter the constructs emotional intelligence, self-actualisation, the locus of control and sense of coherence have been conceptualised and characteristics of each of the constructs have been identified. This enabled the researcher to determine theoretically the characteristics of a psychologically well individual. The remaining specific aims of the literature review have now been achieved.

## **CHAPTER 4: EMPIRICAL STUDY**

The focus in this chapter will be on the empirical aspect of this research study. The first section of this chapter will discuss population and the sample, the identification and motivation for the psychometric instruments, the data collection and data analysis.

### **4.1 THE POPULATION AND SAMPLE**

This research project was conducted at a company in the Financial Services industry in South Africa. There are 1399 employees at the head-office of this company. This group of employees serves as the population in this study and a random sample of 200 was selected to participate. A minimum requirement for employment is a matriculation certificate, but the majority of employees tend to have acquired some kind of post-matriculation qualification. The business language of the company is English and therefore the employees are all proficient in English.

### **4.2 MEASURING INSTRUMENTS**

The four psychometric instruments used will be discussed in terms of the justification, aim and rationale for its inclusion in this study, administration, interpretation, validity and reliability.

#### **4.2.1 Personal Orientation Inventory (POI)**

The Personal Orientation Inventory (POI) was used to measure self-actualisation. Visser (1994) states that the POI is based on the humanistic-existential theories of Maslow, Rodgers, Perls and Riesman, with the purpose of measuring the behaviour and values of concern to the development of a self-actualised individual.

#### *4.2.1.1 Justification of inclusion*

According to Shostrom (1974, p 26), “there are no other available instruments that are specifically available to measure the concept of self-actualisation.” He concludes that there are only other standard inventories and measures of general pathology.

Van Wyk (1978) and Schulz (1994) both used the POI as part of their studies on South African samples. Both these researchers concluded that the POI’s validity and reliability is acceptable for a South African population. A possible issue that was identified with the use of the POI is that further studies needed to be done on the impact of the different cultural groups in South Africa. This, however, does not fall within the scope of this research.

The researcher is therefore comfortable using the general norm tables for the purpose of this study and has decided that it would be the appropriate questionnaire to assess the self-actualisation construct.

#### *4.2.1.2 Aim and rationale*

Hjelle and Ziegler (1976) state that the POI is a self-report questionnaire that has been devised in strict accordance with Maslow’s definition of self-actualisation (see Chapter 3). The POI thus provides an assessment of an individual’s degree of self-actualisation in a high score, and the lack of self-actualisation in a low score (Stonefield, 1999).

Maslow (1971, p 28) states that “self-actualisation can now be defined quite operationally, as intelligence used to be defined, i.e. self-actualisation is what the test tests”.

#### *4.2.1.3 Administration*

The POI is essentially a self-administering inventory that can be used in groups or for individuals (Shostrom, 1974). It consists of 150 test items. The

individual is instructed to select one statement from each pair that is most relevant to himself or herself (Stonefield, 1999). Although the POI does not have a time limit, it usually takes 30 minutes to complete (Schulz, 1994).

Schulz (1994) states that the POI answer sheet may be scored manually and confirms that doing it this way is a straightforward clerical task. A scoring template is placed over the answer sheet to determine the raw score for each scale (Stonefield, 1999). These raw scores are then plotted on the profile sheet to compile the self-actualising profile for that individual (Schulz, 1994; Stonefield, 1999).

#### *4.2.1.4 Interpretation*

Shostrom (1974) states that the interpretation of the POI may be accomplished on an individual basis, or the meaning of profile patterns may be presented in group sessions by concentrating on the overall levels of self-actualisation and, secondly, on the scores on particular scales.

The twelve POI scales are normative and give a combined profile for the respondent's self-actualisation, although the scales must be interpreted independently (Schulz, 1994; Stonefield, 1999). The Time Orientation and Support Orientation are the main scales and play an important role in personal development and interpersonal development (Knapp, 1976) but a short discussion on all twelve scales will follow (Shostrom, 1974, p5):

- The Time Orientation Scale (Ti/Tc) primarily identifies the time competence of an individual. Such a person is able to tie the past and the future to the present in a meaningful continuity, and appears to be less burdened by guilt, regrets and resentments from the past than the non-self-actualised individual.
- The Support Orientation (O/I) consists of *inner* direction and *other* direction and how this is related to self-actualisation. The Shostrom (1974) indicates that the Support Ratio illustrates that the self-

actualised person is only self-supportive to a degree: he or she may be typically self-supportive but may be more other-orientated some of the time.

- The Self-Actualising Value (SAV) measures the affirmation of primary values of the self-actualising person.
- Existentiality (Ex) measures the ability to situationally or existentially react without rigid adherence to principals.
- Feeling reactivity (Fr) provides the degree of sensitivity of responsiveness to one's own needs and feelings.
- Spontaneity (S) indicates the freedom to react spontaneously or to be oneself.
- Self Regard (Sr) measures affirmation of self because of worth or strength.
- Self Acceptance (Sa) indicates the acceptance of self in spite of weaknesses or deficiencies.
- Nature of Man (Nc) measures the degree of the constructive view of the nature of man, masculinity, femininity.
- Synergy (Sy) indicates the ability to be synergistic, to transcend dichotomies.
- Acceptance of Aggression (A) measures the ability to accept one's natural aggressiveness as opposed to defensiveness, denial and repression of aggression.
- Capacity for Intimate Contact (C) indicates the ability to develop contactful, intimate relationships with other human beings, unencumbered by expectation and obligations.

The items in the POI can be described as paired opposites; this implies that each concept is described as a positive or negative statement (Knapp, 1976). Both Schulz (1994) and Stonefield (1999) mention that scores between 50 and 60 point towards self-actualised behaviour while lower scores might indicate difficulty in personal effectiveness. Stonefield (1999) states that a person with a T score of 60 to 70 might be presented as too healthy or may



accentuate the freedom and self-actualisation of the individual. Shostrom (1974) refers to this as a Pseudo Actualising Individual.

**Table 4.1 POI scale means, standard deviations and comparison of differences between samples nominated as “Self-Actualising”, “Normal” and “Non-Self-Actualising” (Shostrom, 1974, p 24)**

POI Scale	Symbol	Self-Actualising (29)		Normal (158)		Non-self-Actualising (34)		Mean Diff. SA-NSA	CR
		Mean	SD	Mean	SD	Mean	SD		
Time ompetence	TC	18,9	2,5	17,7	2,8	15,8	3,6	3,1	4,0**
Inner directed	I	92,9	11,5	87,2	13,6	75,8	16,2	17,1	4,9**
Self-actualising value	SAV	20,7	3,6	20,2	3,0	18,0	3,7	2,7	2,9**
Existentiality	Ex	24,8	3,5	21,8	5,1	18,9	5,4	5,9	5,1**
Feeling reactivity	Fr	16,3	2,8	15,7	3,3	14,3	3,8	2,0	2,4*
Spontaneity	S	12,7	2,9	11,6	3,0	9,8	3,4	2,9	3,6**
Self-regard	Sr	12,9	1,9	12,0	2,7	10,2	3,3	2,7	4,0**
Self-acceptance	Sa	18,9	3,5	17,1	4,0	14,2	4,0	4,7	5,0**
Nature of man	Nc	12,3	2,2	12,4	1,9	11,3	2,0	1,0	2,0
Synergy	Sy	7,6	1,2	7,3	1,2	6,2	1,9	1,4	3,7**
Acceptance of aggression	A9	17,6	3,1	16,6	3,7	14,7	3,5	2,9	3,5**
Capacity for intimate contact	C	20,2	3,4	18,8	4,6	16,5	4,3	3,7	5,0**
Ration scores									
Time TC/ TI		7,7		5,1		2,9			
Support I/O		3,3		2,5		1,4			
* Significant at the .05 confidence level. **Significant at the .01 confidence level.									

#### 4.2.1.5 Validity

The following validity studies have been conducted previously on the POI. *Nominated groups:* Shostrom (1974) states that the most important test for validity of the POI is that it should discriminate between the individuals who have attained a relatively high level of self-actualisation and those who have

lower levels of self-actualisation. A study by Shostrom (1964) indicates the significant discrimination between the two groups (see Table 4.1). The self-actualising group is above the norm scales on 11 of the 12 scales and the non-self-actualising group is below the norm scales on all the scales.

**Table 4.2 Means, standard deviation and tests of significance of difference between Beginning Therapy and Advanced Therapy Groups on POI Scales. (Shostrom 1974, p 25)**

POI	Beginning <sup>1</sup>		Advanced <sup>2</sup>		
Scales	Mean	S.D.	Mean	S.D.	CR
TC	15,59	3,74	19,72	1,90	6,01**
I	81,24	13,41	104,21	8,38	8,91**
SAV	19,59	3,10	23,26	1,89	6,19**
Ex	20,11	4,87	27,21	3,18	7,49**
Fr	14,46	3,35	19,64	1,99	8,14**
S	10,68	3,17	14,82	1,78	6,97**
Sr	10,70	3,05	13,51	1,55	5,01**
Sa	15,00	3,59	20,03	3,54	6,15**
Nc	12,35	2,14	13,62	1,60	2,91**
Sy	6,65	1,32	8,31	0,83	6,54**
A	15,62	3,62	19,38	2,95	4,96**
C	17,78	4,01	23,05	2,70	6,69**
1. N = 37 2. N = 39 * Significant at the 0.05 confidence level ** Significant at the 0.01 confidence level					

*Concurrent validity:* Shostrom (1974) confirms that a study in a clinical setting, conducted by Knapp and himself, illustrates that the POI differentiated between two groups on the two major scales as well as on nine of the ten subscales (see Table 4.2).

These findings are confirmed by various other studies discussed by Shostrom (1974), as well as by a study conducted by Schulz (1994) in which he concludes that the validity of the POI for a South African sample is at a satisfactory level.

#### 4.2.1.6 Reliability

There have been numerous studies on the POI to establish reliability. Bloxom (1972, p 121) states that “the reliability coefficients range from a moderate 0,55 to a good 0,85. Only three subscales have coefficients that might be regarded as substandard (less than 0,70): A (0,55), Nc (0,66) and Fr (0,69). The A and Fr scales measure variables that are affect-related and as such may be measuring fluctuation in mood states from test to retest.”

**Table 4.3 Test-retest reliability coefficients for the POI<sup>1</sup> (Klavetter and Moagar, 1967, p 423)**

POI Scales		Test-Retest Reliability
Time competent	Tc	0,71
Inner directed	I	0,77
Self-actualising value	SAV	0,69
Existentiality	Ex	0,82
Feeling reactivity	Fr	0,65
Spontaneity	S	0,76
Self-regard	Sr	0,71
Self-acceptance	Sa	0,77
Nature of man	Nc	0,68
Synergy	Sy	0,71
Acceptance of aggression	A	0,52
Capacity for intimate contact	C	0,67

A one-week interval test-retest study by Klavetter and Moagar (1967) using a sample of 48 college students resulted in reliability coefficients for the major scales of Time competence (Tc) and Inner-Direction (I) of 0,71 and 0,77 respectively and coefficients for the subscales ranging from 0,52 to 0,82 (results as indicated in Table 4.3). Shostrom (1974) concluded that the results obtained in this study are in general at a level that is consistent with other personality inventories.

Reliability studies for the South African population have been conducted by Van Wyk (1978). The split-half reliability coefficient based on an odd-even split of the 150 items of the POI using the Spearman-Brown formula was found to be 0,73 (Van Wyk, 1978). The internal consistency was determined by using the Kuder–Richardson Formula 20 (KR-20), where a coefficient of 0,72 was obtained. The test-retest reliability for a twelve-month period before

**Table 4.4 Reliability coefficients of the POI (Van Wyk, 1978, p 118)**

POI Scales	N	Reliability coefficients:	
		KR-20	R
1. Split-half reliability	61		0,73
2. Internal consistency	61	0,72	
3. Test-retest reliability	61		
Time competent (Tc)			0,59
Inner directed (I)			0,56
Self-actualising value (SAV)			0,43
Existentiality (Ex)			0,48
Feeling reactivity (Fr)			0,69
Spontaneity (S)			0,48
Self-regard (Sr)			0,24
Self-acceptance (Sa)			0,39
Nature of man (Nc)			0,46
Synergy (Sy)			0,15
Acceptance of aggression (A)			0,51
Capacity for intimate contact (C)			0,59

re-administration of the POI showed coefficients of 0,59 and 0,56 for the two major scales. For the minor scales, Van Wyk (1978) reported test-retest reliability coefficients ranging from Synergy (Sy) of 0,15 to Feeling reactivity (Fr) of 0,69 (see results in Table 4.4).

#### **4.2.2 Locus of Control Inventory (LOC)**

The locus of control stems from Heider's attribution theory and Rotter's social learning theory (Bothma and Schepers, 1997; Els, 1999).

##### *4.2.2.1 Justification for inclusion*

The instrument was designed and developed in South Africa with the necessary validity and reliability for the South African population (Bothma & Schepers, 1997). The researcher is of the opinion that the instrument would be ideal to use in a South African context.

##### *4.2.2.2 Aim and rationale*

The Locus of Control Inventory (LOC) has been developed to address the limitations of other existing locus of control questionnaires, e.g. Rotter's I-E Scale, Health Locus of Control Scale of Wallston, the Multidimensional Health Locus of Control Scale of Wallton, the Nowicki-Strickland-Scale of Nowicki and Strickland, the Internal Powerful Others and Chance Scale of Levenson, the Economic Locus of Control Scale of Furnham and the Internal Control Index of Duttweiler (Schepers, 1995).

This inventory was developed to measure locus of control of an individual based on the following three factors (Schepers, 1995):

- Internal control: the belief that performance is dependent on things in one's own control (e.g. capabilities, behaviour or personal qualities) (Els, 1999). Thirty-four items are related to this factor.
- External control: this factor suggests the strength of an individual's belief that his or her performance is related to things outside his or her control (e.g. fate, luck, circumstances or influential people) (Els, 1999). There are 26 items related to this factor.

- **Autonomy:** Els (1999) states that this scale measures whether the respondents trust their own ability, can function confidently with independence and can come to their own decisions for problem solving. Twenty-eight items in the inventory determine this factor.

#### *4.2.2.3 Administration*

The LOC is a self-scoring questionnaire consisting of 65 test items (Schepers, 1995). The revised inventory, published in 1999, has 88 items and the inventory takes 20 to 30 minutes to complete.

#### *4.2.2.4 Interpretation*

According to Els (1999), the factors of the LOC need to be interpreted collectively, as well as coherently. An individual with a high score on internal control and autonomy and a low score on external control can be seen as a well-adapted and healthy individual. This individual will be able to cope effectively with life's stresses. The opposite is true for an individual with a low score on internal control and autonomy and a high score for external control. An individual with this score might have a tendency to blame his or her environment for non-performance or a crisis in life.

The differences between internal and external control are identified in Table 4.5. Based on this table, Els (1999) came to the conclusion that individuals with an internal locus of control seem to function more optimally than those with an external locus of control. External locus of control individuals need more guidance and take less accountability for self and others. Internal locus of control will function more autonomously from the self.

**Table 4.5      The difference in characteristics between internal and external control (Els, 1999, p 98)**

Internal control	External 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

#### 4.2.2.5 Validity

According to the designer of the LOC, the following validity studies have been conducted. The *construct validity* of the LOC is confirmed by the following initial meaningful correlations:

- The 16PF Questionnaire: Schepers (1995) indicated that individuals with a high score on Autonomy (factor Q3) and Internal Control (factor C) and a low score on External Control can be described as emotionally stable, mature, calm, assertive, independent, unconventional, analytical, free-thinking, socially outspoken, firm, responsible, intelligent, self-assured and relaxed. Individuals with low scores on Autonomy and Internal Control and a high score on External Control are the opposite of the abovementioned characteristics.
- The Jung Personality Questionnaire: Schepers (1995) states that individuals with a high score in Autonomy and Internal Control and a low score in External Control could be seen as more extroverted and

higher on intuition. Individuals with opposite scores can be seen as more introverted and with a tendency to focus more on observation.

- The 19-Field Interest Questionnaire (19VBV): Individuals who scored higher in Autonomy and Internal Control and lower in External Control indicate a higher interest in Creative Thinking (Schepers, 1995).
- The Personal, Home, Social and Formal Relation Questionnaire: Individuals with a high score in Autonomy and Internal Control and a low score in External Control seem to be better adjusted than individuals with the opposite scores in their personal, home, social and formal relations (Schepers, 1995).
- The Survey of Study Habits and Attitudes: According to Schepers (1995), there is a strong relation between adaptation in education and a high score on Autonomy and Internal Control and low scores on External Control.
- Career Development Questionnaire: Schepers (1995) found that high scores on Autonomy and Internal Control, combined with a low score on External Control, correlated with individuals who indicated higher career maturity. The opposite was true for individuals with low scores on Autonomy and Internal Control combined with a high score on External Control.

In determining the *criterion validity* of the LOC, it was found that the locus of control correlated with a compiled criterion of work success ( $r=0,62$ ). The intercorrelation was as follows (Schepers, 1995):

**Autonomy** had a 0,49 correlation with internal control and correlated negatively with external control

**Autonomy** had a  $-0,26$  correlation with external control

**Internal control** had a  $-0,17$  correlation with external control

Schepers (1995) concluded that internal control and external control are independent constructs and not opposites on a scale.



#### *4.2.2.6 Reliability*

Schepers (1995) indicated that the three scales of the LOC were submitted to item analysis. In the reliability of the original questionnaire developed in 1995, the three factors were determined by calculating the Cronbach's alpha coefficient. The alpha coefficient of the three factors was: External Control 0,80, Internal Control 0,77 and Autonomy 0,80. Schepers (1995) concluded that the items proved to be reliable. The Cronbach alpha coefficients of the 1999 Edition were 0,88 (Autonomy), 0,87 (External Control) and 0,82 (Internal Control).

### **4.2.3 Sense of Coherence Scale (SOC Scale)**

The sense of coherence construct refers to a global orientation to one's inner and outer environment that is assumed to be a meaningful determinant of location and movement on the health ease or disease continuum. The Sense of Coherence (SOC) Scale has been developed to provide one way of testing assumptions (Antonovsky, 1993).

#### *4.2.3.1 Justification for inclusion*

Antonovsky (1993) states that the SOC scale was developed to optimise the sense of coherence construct in a closed questionnaire. The SOC scale has also been used in a variety of studies worldwide (including South Africa) and has been accepted as a culture-free questionnaire (Antonovsky, 1993).

In previous studies conducted in South Africa by Van Eeden (1996) and Walker (2002), the SOC scale was used to confirm a correlation between psychological wellness and sense of coherence. The researcher is thus of the opinion that Antonovsky's SOC scale would be an appropriate measurement tool to use as part of the battery for the study of psychological wellness.

#### *4.2.3.2 Aim and rationale*

The SOC Scale was developed to measure the sense of coherence as a global orientation and not specifically only to measure the components of comprehensibility, manageability and meaningfulness (Antonovsky, 1993).

In constructing the SOC Scale, Antonovsky (1993) made the theoretically guided choice to have each scale item include four facets that describe the stimulus as well as a fifth, a SOC facet, which expresses one of the three components of Sense of Coherence (comprehensibility, manageability or meaningfulness). This enabled the SOC Scale to represent a wide variety of stimuli in the questionnaire.

#### *4.2.3.3 Administration*

The SOC Scale consists of twenty-nine (29) five-facet items with a seven-point semantic differential scale with two anchoring phrases (Antonovsky, 1993). There are eleven items for the comprehensibility dimension, ten items for the manageability dimension and eight items for the meaningfulness dimension.

Thirteen of the twenty-nine items are formed negatively and the administrator of the questionnaire has to reverse the scoring so that a high score always indicates a strong Sense of Coherence (Antonovsky, 1993).

The SOC Scale takes about 15 – 20 minutes to complete and this systematic, closed questionnaire was developed for either self-completion or an interview process (Antonovsky, 1993).

#### *4.2.3.4 Interpretation*

Antonovsky (1987) states that an individual with a strong Sense of Coherence will be high 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 individual expects that the stimuli that will be encountered in the future will be predictable, or when they come as a surprise they will be manageable and explicable. The person can thus make sense of them. The opposite will be true for an individual with a low score on comprehensibility (Antonovsky, 1987).

A high sense of manageability score will mean that the individual “will not feel victimised by events or feel that life treats one unfairly” (Antonovsky, 1987, p18). Such individuals acknowledge that disastrous things will happen, but know that they will be able to cope and will not grieve endlessly. An individual with a low sense of manageability would feel like a victim as a result of the events of life (Antonovsky, 1987).

An individual who speaks of important areas in his or her life that are crucial to making sense of things should have a strong sense of meaningfulness. The meaning of the important areas should make not only cognitive sense to the individual but also emotional sense. These areas are referred to as life challenges that are worthy of emotional investment and commitment – life thus makes sense emotionally (Antonovsky, 1987). A person with a low sense of meaningfulness would feel that his or her life does not make sense.

There are situations in which an individual might be high on one or two of the components and low on the remaining component. Table 4.6 explains the prediction of the coherence of the individual. In types 1 and 8 the pattern will be quite stable and the world of the individual will be perceived as coherent (high score) or incoherent (low score). According to Antonovsky (1987), types 2 and 7 will rarely be found because high manageability is dependent on high comprehensibility.

**Table 4.6**      **Dynamic interrelatedness of the SOC components**  
**(Antonovsky, 1987, p 20)**

	<b>Components</b>			
<b>Type</b>	<b>Comprehensibility</b>	<b>Manageability</b>	<b>Meaningfulness</b>	<b>Prediction</b>
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 down
6	High	Low	Low	Pressure to move down
7	Low	High	Low	Rare
8	Low	Low	Low	Stable

Antonovsky (1987) further mentions that types 3 and 6 have a tendency to instability. The high comprehensibility combined with a low manageability will possibly force the manageability to change. The direction for the change will be directed by the sense of meaningfulness.

With type 5, the person is high on comprehensibility, high on manageability and low on meaningfulness. This will force the profile down. Type 4, according to Antonovsky (1987), is the most interesting. Such a person may show a thoughtful spirit, trying to search for understanding and resources. “There is no guarantee for success, but there is a chance” (Antonovsky, 1987, p 21).

#### *4.2.3.5 Validity*

Antonovsky (1993) states that the key validity question should be whether the SOC Scale measures what it purports to measure. He conducted the following validity testing:

*Content, face and consensual validity:* Due to the facet approach used to construct the scale, Antonovsky (1993) states that it constitutes a reasonably representative sample of the theoretical aspect of the Sense of Coherence construct. An item for the questionnaire was only included “after three

colleagues familiar with the theory had independently concurred that it indeed referred clearly to one and only one of the three SOC components” (Antonovsky, 1993, p 727). Each item was developed to express only one element of each of the facets and finally each item was chosen to represent a definite profile. The author concludes that the SOC scale deductively promoted content validity.

The consensual validity was determined by the reaction of colleagues to the published SOC scale and was concluded to be high (Antonovsky, 1993). Given the substantial diversity of the people studied with the instrument, as well as the numbers of researchers using the scale (Antonovsky, 1993), it can be concluded that the scale has content validity.

*Construct validity (convergent and discriminant validity):* As part of a research project, Rumbaut, Anderson and Kaplan (n.d.) administrated a twenty-two-item SOC scale on a sample of 336 undergraduates along with two additional instruments (Antonovsky, 1987; 1993). In unpublished reports, Rumbaut et al (n.d.) found a correlation of 0,64 between the two SOC scales. Another researcher confirms these findings and revealed a correlation of 0,72 between the two measures in a second study (Antonovsky, 1993). According to the Antonovsky (1993) unpublished research by Colby refers to a construct called “Adaptive Potential”. In this unpublished work, Colby found a correlation of 0,75 between the two measurements of the constructs. These studies conclude the convergent validity of the SOC scale (Antonovsky, 1993). Supportive evidence of discriminant validity is found in research done by Hart, Hittner and Paras (1991) who commented on the lack of a relationship between SOC and an interpersonal support measure. This may be seen as proof that the SOC operates autonomously of socially based stress resistance resources (Antonovsky, 1993).

*Criterion validity:* On criterion validity Antonovsky (1993, p 729) writes, “the crucial question is whether the SOC scale does correlate (preferably

predictably) with phenomena, external to the SOC, with which the theory argues it should be correlated.”

According to Antonovsky (1987), one criterion validity study is available. Rumbaut et al (n.d.) used the SOC on a group of 302 undergraduate students. With factor analysis, the researchers managed to reduce the battery to a twenty-two-item questionnaire. This questionnaire was used on a sample of 102 college students, elderly persons and Indochinese refugees. This study confirmed that the “new” SOC scale measured the SOC concept as they had accepted it. This study indicated and confirmed a reasonable degree of internal consistency and criterion validity.

#### *4.2.3.6 Reliability*

The following reliability studies have been published:

*Internal consistency:* The Cronbach alpha measure of internal consistency gives a result, un-weighted for sample size, of 0,91 in eight published studies on the SOC-29 (Antonovsky, 1993). A constant high internal consistency has been found in groups of diverse populations of different western cultures and languages.

*Test-retest:* Antonovsky (1993) states that the theoretical model of the SOC predicates that an individual's SOC will stabilise by the end of young adulthood, showing minor variations in patterns and usually only due to major changes in life. Unfortunately, only a few actual test-retest studies have been reported.

One study conducted with Israeli retirees and a kibbutz control group gave a result of 0,52 and 0,56 respectively between the first and second interview scores (Antonovsky, 1993) conducted after one year, and 0,54 and 0,55 respectively after two years. Unpublished statistics on 53 Serbian teaching training students indicated a one-year test-retest correlation of 0,86 and

amongst Afrikaner farmers and businessmen, a test-retest correlation of 0,97 after five weeks.

#### **4.2.4 Bar-On Emotional Quotient Inventory (EQ-i)**

The following discussion will explore the justification for inclusion, the aim and rationale of the questionnaire, the administration, interpretation, validity and reliability.

##### *4.2.4.1 Justification for inclusion*

According to Schutte and Malouff (1999), there are currently three inventories that specifically evaluate emotional intelligence. The first inventory is the Emotional Intelligence Scale of Schutte that assesses perception, understanding, expression, regulation and harnessing of emotion in the self as well as in others (Schutte & Malouff, 1999). This brief self-report is identified as a reasonable choice for an inventory of global emotional intelligence, but can be too brief for a confirmatory factor analysis of emotional intelligence as a construct of psychological wellness.

The second inventory identified for measuring emotional intelligence is the EQ-i (Schutte and Malouff, 1999). With the enormous number of research findings presented, the EQ-i is clearly valid and reliable. This inventory has previously been used in South Africa and several of the validity studies are based on South African samples (Bar-On, 1997). Walker (2002) has also identified correlations between psychological wellness and the Bar-On EQ-i within a South African context.

The third inventory is the Multifactor Emotional Intelligence Test (Schutte and Malouff, 1999). This instrument assesses the ability to perceive emotions, understand emotions and manage emotions. Schutte and Malouff (1999) commented that many of the scale items call for subjective judgements by the test taker and this makes the scoring of the responses a difficult task.

Due to the above as well as to the fact that Bar-On originally refers to the EQ-i scale as a measure of psychological well-being (Schutte and Marlowff, 1993), the researcher decided to use the Emotional Quotient Inventory (EQ-i) as measuring instrument for the emotional intelligence construct.

#### *4.2.4.2 Aim and rationale*

The EQ-i attempts to “satisfy the need for an empirically developed, multifactorial and theoretically eclectic test of emotional intelligence” (Bar-On, 1997, p 7). The Bar-On EQ-i is a well-constructed tool that measures a clearly defined and important concept of emotional intelligence. The results provide valuable information on the respondent’s ability to deal with environmental demands and pressures (Bar-On, 1997).

The inventory divides the concept of emotional intelligence into fifteen subscales (conceptual components) that measure the following: emotional self-awareness, assertiveness, self-regard, self-actualisation, independence, empathy, interpersonal relationships, social responsibility, problem solving, reality testing, flexibility, stress tolerance, impulse control, happiness and optimism (Schutte & Malouff, 1993).

#### *4.2.4.3 Administration*

The Bar-On EQ-i is a commercially sold 133-item self-report inventory with fifteen clinical subscales and two validity subscales (Schutte & Malouff, 1993). The inventory can be administered via the item booklet and mail-in response sheets, the item booklet and the fax-in response sheets, the EQ-i QuickScore form and the BarOn EQ-i software (Bar-On, 1997). For the purpose of this research the booklet and fax-in response sheets have been used.

The 133 items of the EQ-i are divided between the fifteen subscales as well as the three validity scales, with seven to nine items per subscale (Bar-On, 1997). A composite scale is calculated with the sum of all of the subscale items to give an overall total of emotional intelligence and five composite



scales were created by the grouping of similar types of subscales (Bar-On, 1997).

The language usage in the inventory was assessed and Bar-On (1997) states that a grade six to seven reading level in English would give the necessary comprehension to the test incumbent.

#### 4.2.4.4 Interpretation

Bar-On states (1997) that in order to interpret the respondent's scores on various scales, raw scores are converted to standard scores. Standard scores in the EQ-i are calculated from raw scores to ensure that each scale and subscale have the same mean score (100) and standard deviation (15). To enhance the accuracy of the interpretation, the standard score computations are gender and age-specific within the same population sample (Bar-On, 1997). The interpretation guidelines of the scores are presented in Table 4.7.

**Table 4.7** Interpretive guidelines for BarOn EQ-i scale scores  
(Bar-On, 1997, p 40)

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 – underdeveloped emotional capacity, requiring improvement
70 – 79	Very low – extremely underdeveloped emotional capacity, requiring improvement
Below 70	Markedly low – atypically impaired emotional capacity, requiring improvement

Approximately 68% of respondents would achieve scores within 15 points of the mean (between 85 and 115). A larger group of 95% will score within 30 points of the mean (between 70 and 130) and basically all respondents will achieve scores within 34 points of the mean (between 55 and 145). If a

respondent has an overall score that is below 70 or above 130, it is seen as atypical and it would need some investigation (Bar-On, 1997).

High scores indicate that emotional skills are well developed and functional in the respondent while low scores suggest a deficiency and recommend some improvements. A respondent with extremely high or low scores could be the result of an overly positive or negative response style (Bar-On, 1997). This may have an impact on the validity of the profile (discussed in point 4.2.4.5).

#### *4.2.4.5 Validity*

Bar-On (1997) used nine types of validity studies to confirm the validity of the EQ-i. Brief summaries of the results are as follows:

*Content and face validity:* Content and face validity is an indication of how well items are thought to cover the domain of each of the scales and how easily they are understood by the respondent (Bar-On, 1997). This type of validity can be obtained by a systematic approach in which the items were generated and selected. The author states that proofreaders played a role by reading the completed inventory and giving suggestions with regards to the specific wording of the items. A statistical process called item analysis examined the effectiveness of this validation process.

*Factorial validity:* Factorial validity confirms that the subscale structure of the inventory is empirically and theoretically justified (Bar-On, 1997). Methods used to analyse the validity are: factor analysis, exploratory factor analysis, confirmatory factor analysis and second order confirmatory factor analysis (Bar-On, 1997). The author concludes that although it is extremely difficult to model emotional intelligence perfectly, the subscale structure of the EQ-i appears to be a great help to human resources, organisational development, professional and mental health practitioners owing to the strong theoretical basis and good empirical support.

*Construct validity:* Bar-On (1997) states that the construct validity was carried out by correlating the EQ-i subscale scores with various scales scores of other measures (Sixteen Personality Factor Questionnaire, Minnesota Multiphasic Personality Inventory, Eysenck Personality Questionnaire, Personality Assessment Inventory, Ninety Symptom Check List, Personality Orientation Inventory, Short Acculturation Scale, Beck Depression Inventory, Zung Self-Rating Depression Scale, Kirkcaldy Quality of Life). The construct validity of the subscales was high enough to give ample support to the belief that the subscales measure what they are supposed to measure, but not too high to indicate duplication of existing inventories (Bar-On, 1997).

*Convergent validity:* Convergent validity assesses whether the instrument correlates with external measures believed to tap the same or similar constructs. Several research studies were conducted to compile the necessary data and Bar-On (1997) confirmed that the studies included self-assessments and observer ratings as well as measures of acculturation, attributional style, coping with occupational stress, job performance and work satisfaction. Bar-On (1997) concluded that the results of the above studies demonstrated more than adequate convergent validity.

*Divergent validity:* This form of validity explores what the scales are not measuring in addition to what they are actually measuring, in addition to and together with construct and convergent validity (Bar-On, 1997). In addition to the EQ-i's extensive construct and convergent validation, Bar-On (1997) concluded that the EQ-i measures what it is supposed to measure.

*Criterion-group validity:* Bar-On (1997) states that the criterion validity of the EQ-i is supported to the extent that the EQ-i produces high scores in the appropriate consistent areas for groups known to be strong in particular areas, and low scores in subscales that reflect areas of known weakness for certain groups.

*Discriminant validity:* Bar-On (1997) states that various discriminant validity studies have been conducted on the EQ-i. This form of validity confirms the inventory's capability to distinguish between individuals who are more emotionally intelligent and those who are less emotionally intelligent. It was concluded that all of the EQ-i's subscales succeeded in indicating differences in the compared samples (Bar-On, 1997).

*Predictive validity:* Examining the general level of the concurrent and discriminant validity can determine the predictive validity of an inventory (Bar-On, 1997). By studying the concurrent and discriminant validity, the researcher came to the conclusion that the EQ-i's predictive ability is more than satisfactory.

#### 4.2.4.6 Reliability

Bar-On (1997) indicates that two basic types of reliability studies (internal consistency and retest reliability) have been conducted on the EQ-i. The *internal consistency* was examined by using the Cronbach alpha and the results indicated a very good reliability (Bar-On, 1997).

For the *retest reliability* two South African groups were used with a retest period of one and four months respectively. The average retest reliability coefficient after one month is 0,85 and 0,74 for the four months period (Bar-On, 1997).

From the above-mentioned studies it can be concluded that the EQ-i has adequate reliability (Bar-On, 1997).

This concludes Step 2 of the Empirical Study.

### **4.3 DATA COLLECTION (Step 3)**

The randomly selected sample was requested to attend a two-and-a-half-hour session in groups of 20 – 30 people. In this session they completed the four paper-based inventories along with a biographical inventory designed for the purpose of this study. After 12 sessions, the full sample had completed the inventories.

The paper-based inventories (all marked with a unique number to identify the inventories of each participant) were scored and loaded onto a spreadsheet for the statistical analysis and interpretation.

### **4.4 DATA ANALYSIS (Step 4)**

In this section the statistical methods used to analyse the data and the process followed in analysing and interpreting the data will be discussed.

#### **4.4.1 Descriptive statistics**

- The raw scores of the inventories were loaded into the Statistical Package for Social Sciences (SPSS). The SPSS package is suggested as it has its origin in the social sciences. The package has “the most comprehensive and widely used scientific and survey research product lines available” according to the website ([www.spss.com](http://www.spss.com)). The package is able to collect and analyse critical clinical data.
- From these raw scores the general descriptive statistical analysis is completed to identify the frequencies, the valid percentages and the standard deviations (minimum scores, maximum scores and averages). The purpose of these statistical analyses is to evaluate the accuracy of the data.

- Descriptive group statistics for gender, managerial responsibilities and race will be investigated. These group statistics will include (Christensen, 1994):
  - i. Mean Scores – to determine the arithmetic average of a group of numbers.
  - ii. Standard Deviation – to measure the extent to which a group of scores differs from the mean.
  - iii. Levene's test for Equal variances – this method will analyse the homogeneity of the variances experienced and will indicate whether one needs to use the equal or the unequal variances assumed. Milliken and Johnson (2002) confirm that Levene's Test for equal variances will fit the individual models to separate datasets, compute the residuals and carry out an analysis of variance on the absolute value of the residuals.
  - iv. Independent Sample T-Test for Equality of means - this is a statistical test to analyse data collected from a two-group between-subjects design. With this method the objective is to determine whether the group mean difference score is so large that it could not reasonably be attributed to chance.
  - v. Significance level – to measure the probability that the observed difference is a chance difference. In the case of this research project, two hypotheses will be tested:
    - $H_0$ : group 1 = group 2 (equal variances assumed) and
    - $H_1$ : group 1  $\neq$  group 2 (equal variances not assumed).

One of the hypotheses needs to be rejected in the analysis of the data. If equal variances are assumed it will indicate that the results will be explained by two parallel lines. In the case where equal variances are not assumed non-parallel lines will be used to explain the results. In the case of non-parallel lines, one would need to analyse specific parameters to explain the variances (Milliken & Johnson, 2002). It is not, however, the purpose of this study to explain these differences in the specific parameters.
- The results of these tests will be presented in Tables 5.12 to 5.14.

- The research will be concluded by drawing conclusions and identifying possible recommendations from the research questions as well as specific recommendations for the sample group from the Financial Services Company.

#### **4.4.2 Determining Principal Components for the POI**

- Before the actual exploratory factor analysis could be applied, the practicality of an exploratory factor analysis with thirty-three factors was investigated. After various discussions between the researcher and the statistician, it was decided to investigate the option of analysing the subscales of the inventories.
- In the case of both the LOC and the SOC, the subscales were determined when the inventories were scored. Even the EQ-i had identified clearly distinguishable composite scale scores. These scales are constructed as follows:
  - i. Intrapersonal: Emotional Self-Awareness, Assertiveness, Self-Regard, Self-Actualisation and Independence
  - ii. Interpersonal: Empathy, Interpersonal Relationships and Social Responsibility
  - iii. Adaptability: Problem Solving, Reality Testing and Flexibility
  - iv. Stress Management: Stress Tolerance and Impulse Control
  - v. General Mood: Happiness and Optimism
- No clear subscales have been distinguished for the POI (Schulz 1994; Shostrom, 1974; Stonefield, 1999) and as with previous studies (for example, Schulz ,1994), principal components for the POI will be determined by using the Principal Component Analysis as extraction method and Oblimin with Kaiser Normalization (converged in six interactions) method as rotation. According to Cureton and D'Agostino (1983), the principal component analysis is the most acceptable method to reduce the total number of variables. Two second order factors have been identified for the POI (see the POI Pattern Matrix Table 5.5).

#### 4.4.3 Exploratory factor analysis

According to McDonald (1985), a factor analysis is a “generic term for a somewhat vaguely delimited set of techniques for data processing, mainly applicable to the social and biological sciences”. He further confirms that these techniques have been generated for the interpretation of correlative relationships amongst a number of measurements made on a number of measurable entities and therefore it was decided to explore the data using this process.

- The next step is to conduct the exploratory factor analysis on the thirteen identified factors. According to Stonefield (1999, p 103), an exploratory factor analysis “explores empirical data in order to observe characteristic features and intriguing relationships without imposing a definite model on the data”. The author further states that this method is usually used to observe and assess the latent scores of variations and covariations in observed measurables. The principle axis factoring extracting method with an oblique rotation that consists of a direct Oblimin with the Kaiser normalisation will be used as the method to conduct the exploratory factor analyses. The principle axis method has been suggested due to the fact that it is a computational method of extraction (Cattell, 1978). The method leads “via an initial principal components solution, to a subsequent plotting of roots to determine the number of factors by scree, K-G, sokal’s and other “significance of residual’ tests” (Cattell, 1978, p 517). The author concludes that this will be followed by the iteration of communalities to the given factor number.
- These results will be presented in the Factor Correlation Matrix Table (Table 5.15), the Total Variance Explained Table (Table 5.16), the Pattern Matrix Table (Table 5.17) and the Factor Correlation Table (Table 5.18).



#### **4.5 Summary**

In Chapter 4 the researcher focused on the population, the sample, the measurement instruments used as well as the research methodology followed in the empirical phase of the study.

## CHAPTER 5: RESEARCH RESULTS

In chapter 5 the research results will be reported, interpreted and integrated.

### 5.1 BIOGRAPHICAL DATA

The following biographical data have been gathered to analyse the sample identified.

#### 5.1.1 Distribution of sample according to business units

The distribution of the sample according to business units is presented in Table 5.1. The biographical information indicates that the majority of the sample (84,5%) has been randomly selected from business units 1, 2 and 3 in the organisation. The results obtained will thus specifically apply to these units.

**Table 5.1      Distribution of sample according to business unit**

	Business Unit	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	59	29,5	29,5	29,5
	2	50	25,0	25,0	54,5
	3	60	30,0	30,0	84,5
	4	1	0,5	0,5	85,0
	5	22	11,0	11,0	96,0
	6	8	4,0	4,0	100,0
	Total	200	100,0	100,0	

### 5.1.2 Distribution of sample according to employment period

The distribution of the sample according to the employment period is presented in Table 5.2. According to the results, the majority of the sample (30,2%) has been employed by the organisation for a period of thirteen to thirty-six months. The smallest portion (10,6%) is the group of employees who have been employed by the company for a period of more than 120 months. It can therefore be concluded that employees tend to remain in the organisation's employment for a period of two to three years. Less than one percent (0,5%) of the sample did not indicate the period of their employment in the organisation.

**Table 5.2**      **Distribution of sample according to months of employment**

	Employment in Months	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 - 12 months	51	25,5	25,6	25,6
	13 - 36 months	60	30,0	30,2	55,8
	37 - 72 months	37	18,5	18,6	74,4
	73 - 120 months	30	15,0	15,1	89,4
	More than 120 months	21	10,5	10,6	100,0
	Total	199	99,5	100,0	
Missing	Not indicated	1	0,5		
	Total	200	100,0		

### 5.1.3 Distribution of sample according to responsibility

The allocation of responsibilities of the sample (Table 5.3) refers to the split between those employees in the sample group with management responsibilities (17,5%) and those with non-management responsibilities (82,5%). It is clear that the management group is smaller than the non-

management group. This split will be explored in the descriptive group statistics.

**Table 5.3 Distribution of sample according to responsibility**

	Responsibility	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Management	35	17,5	17,5	17,5
	Non-management	165	82,5	82,5	100,0
	Total	200	100,0	100,0	

#### 5.1.4 Distribution of sample according to gender

The distribution of the sample according to gender is reflected in Table 5.4. Women form the majority of the group with a representation of 62%, while men represent 38% of the sample group. The researcher will use gender as one of the biographical variables for further discussion in the research.

**Table 5.4 Distribution of sample according to gender**

	Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	124	62,0	62,0	62,0
	Male	76	38,0	38,0	100,0
	Total	200	100,0	100,0	

#### 5.1.5 Distribution of sample according to racial groups

The distribution of the sample according to racial groups is presented in Table 5.5. The non-white group represents 35% of the total sample. It can be concluded that the company has more white employees than non-white. For further interpretation of the statistics, the African, Coloured and Indian groups will be combined and this combined group's results will be interpreted along with the white group.

**Table 5.5** Distribution of sample according to racial groups

	Race	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	African	31	15,5	15,5	15,5
	Coloured	22	11,0	11,0	26,5
	Indian	17	8,5	8,5	35,0
	White	130	65,0	65,0	100,0
	Total	200	100,0	100,0	

### 5.1.6 Distribution of sample according to age groups

The distribution of the sample according to age is reflected in Table 5.6. The table indicates that 79,5% of the sample is younger than 35 years. From these results it would seem that the workforce of the company is, relatively speaking, fairly young.

**Table 5.6** Distribution of sample according to age groups

	Age Groups	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-24 years	48	24,0	24,0	24,0
	25-29 years	55	27,5	27,5	51,5
	30-34 years	56	28,0	28,0	79,5
	35-39 years	18	9,0	9,0	88,5
	40-44 years	11	5,5	5,5	94,0
	45-49 years	6	3,0	3,0	97,0
	50-54 years	2	1,0	1,0	98,0
	55-59 years	4	2,0	2,0	100,0
	Total	200	100,0	100,0	

This concludes step 1 of the empirical study.

## 5.2 DESCRIPTIVE STATISTICS

The statistics are included to check the integrity of the data and to provide an overview of the statistics.

### 5.2.1 Descriptive statistics of sample

The results of the descriptive statistics of the sample are as follows:

#### 5.2.1.1 *The Personal Orientation Inventory (POI)*

To allow for a logical flow of the research process, the descriptive statistics as well as the principal component analysis results for the POI will now be discussed.

**Table 5.7 Descriptive statistics: POI**

	N	Minimum	Maximum	Mean	Std. Deviation
POI Tc Time competence	200	7	24	15,32	2,914
POI I Support ratio	200	39	103	78,43	11,019
POI SAV Self-actualising value	200	9	27	19,65	2,729
POI Ex Existentialism	200	7	28	16,73	4,179
POI Fr Feeling reactivity	200	5	20	13,17	2,919
POI S Spontaneity	200	2	17	11,59	2,639
POI Sr Self regard	200	1	15	9,15	3,729
POI Sa Self acceptance	200	5	21	13,37	3,390
POI Nc Nature of Man	200	5	15	11,37	1,693
POI Sy Synergy	200	2	9	6,69	1,499
POI A Acceptance of aggression	200	6	22	14,90	3,405
POI C Capacity for Intimate Contact	200	4	24	16,95	3,952
Valid N (listwise)	200				

*a) Descriptive statistics for the POI*

Table 5.7 presents the minimum and maximum scores obtained for each factor of the POI as well as the mean and standard deviation. This is to ensure that the POI was correctly administered. There are no invalid responses.

The mean profile of the sample group tends to be in the normal range with only Self-Regard (Sr) slightly below the normal range. Existentiality (Ex) and Self-Acceptance (Sa) are on the lower side of the normal range.

*b) Principal Components of the POI*

The Principal Component Analysis was conducted on the twelve POI factors. The final factors were then grouped with the identified principal components factors, where the values determined indicate a stronger correlation score to the value of unity. Two clearly distinguishable principal components were identified and the results are presented in Table 5.8.

*i) POI Factor 1 (Self-awareness)*

Table 5.8 present the results of the principal component analysis. POI Factors reside with the first principal component: Support Ratio (0,890), Acceptance of Aggression (0,863), Feeling reactively (0,844), Capacity for intimate contact (0,843), Self-acceptance (0,842), Spontaneity (0,823), Existentialism (0,640) and Time competence (0,420).

Characteristics that can be associated with these factors are: self-supportive but also others orientated, acceptance of one's own natural aggression, awareness of responsiveness to own needs, the ability to develop intimate and meaningful relationships with others, accepting one's strengths and weaknesses, being able to be oneself, being able to react to situations without adherence to rigid principals and, lastly, the ability of the individual to live in the present unburdened by guilt.

The above-mentioned characteristics indicate that POI Factor 1 can be defined as having knowledge and understanding of oneself as well as the impact one has on others. POI Factor 1 will be called *Self-awareness*, a key characteristic of the self-actualised individual (Schulz, 1994).

**Table 5.8** POI pattern matrix<sup>a</sup>

POI Factors	Component	
	POI Factor 1 (Self-awareness)	POI Factor 2 (Value Systems)
Support Ratio (I)	<b>0,890</b>	0,165
Acceptance of aggression (A)	<b>0,863</b>	- 0,155
Feeling reactivity (Fr)	<b>0,844</b>	
Capacity for intimate contact (C)	<b>0,843</b>	
Self acceptance (Sa)	<b>0,842</b>	- 0,167
Spontaneity (S)	<b>0,823</b>	
Existentialism (Ex)	<b>0,640</b>	0,263
Time competence (Tc)	<b>0,420</b>	0,374
Nature of man (Nc)	- 0,193	<b>0,863</b>
Synergy (Sy)	0,108	<b>0,776</b>
Self-actualising value (SAV)	0,489	<b>0,496</b>
Self-regard (Sr)	0,262	<b>0,358</b>
Extraction Method: Principal Component Analysis Rotation Method: Oblimin with Kaiser Normalization a. Rotation converged in 6 interactions		

*ii) POI Factor 2 (Value Systems)*

The POI Factor 2 consists of the following original POI Factors: Nature of Man (0,863), Synergy (0,776), Self-actualisation value (0,496) and Self-regard (0,358).

Characteristics that identify this group are: a constructive view of the nature of man, an ability to be synergistic, to transcend dichotomies, the ability to affirm the primary values of a self-actualised person and the affirmation of self because of worth. These characteristics all seem to be related to a description of the manner in which the world and the self are perceived. This scale deals



with what a self-actualised person holds dear or important to himself and to what helps to guide him or her through life. The scale will therefore be called *Value-systems* of the self-actualised individual.

#### 5.2.1.2 *The Locus of Control Inventory (LOC)*

In Table 5.9 the minimum and maximum, the mean and standard deviation scores obtained are reflected. As confirmed by the results reflected in the table, the sample does not exceed the minimum and maximum scores reflected in the 1999 edition of the LOC. The responses are therefore valid. The mean scores indicate a higher score on Autonomy and Internal Control and a lower value on External Control. This corresponds with Schepers' (1995) findings.

**Table 5.9 Descriptive statistics: LOC**

	N	Minimum	Maximum	Mean	Std. Deviation
LOC Autonomy:	200	131	233	187,04	20,369
LOC External Control	200	35	128	84,87	19,908
LOC Internal Control	200	125	196	167,17	13,325
Valid N (listwise)	200				

#### 5.2.1.3 *The Sense of Coherence Scale (SOC)*

The minimum, maximum, mean and standard deviation scores are displayed in Table 5.10. According to this table, the maximum scores obtained by the sample groups are consistent with the maximum value of the SOC factors. The mean score of the sample indicates that the results of the SOC tend towards the higher scores on the three factors. This is an indication that the sample's pattern is more stable and their world is perceived as coherent (see Chapter 4).

**Table 5.10 Descriptive statistics: SOC**

	N	Minimum	Maximum	Mean	Std. Deviation
SOC Comprehensive	200	28	77	47,91	9,152
SOC Manageability	200	29	70	49,98	8,116
SOC Meaningfulness	200	27	56	44,57	6,332
SOC Total Score	200	89	190	142,48	20,131
Valid N (listwise)	200				

#### 5.2.1.4 The EQ-i

Table 5.11 presents the minimum, maximum and mean scores. The EQ-i minimum and maximum scores of the sample (Table 5.4) indicate that the administration was successful.

In interpreting the mean score of the sample, it can be concluded that the average scores suggest that the group displays an adequate emotional capacity. The minimum score indicates that there were some individuals with growth opportunities.

The mean scores indicate a normal distribution. It is not, however, the aim of this study to indicate the spread of the participants in the normal distribution.

**Table 5.11 Descriptive statistics: EQ-i**

	N	Minimum	Maximum	Mean	Std. Deviation
TOTAL EQ	200	62	137	99,42	13,751
EQ INTRAPERSONAL	200	60	134	100,68	14,551
EQ NTERPERSONAL	200	60	129	97,83	14,496
EQ STRESS MANAGEMENT	200	54	135	98,78	15,048
EQ ADAPTABILITY	200	68	135	100,44	13,376
EQ GENERAL MOOD	200	62	127	100,76	13,072
Valid N (listwise)	200				

From the above-mentioned discussions on the measuring instruments the validity of the administration of the four instruments can be accepted.

### 5.2.2 Descriptive statistics of sub-groups

Christensen (1994) indicates that researchers need to identify the significance level they would like to apply in their study. For the purpose of this research the 0,05 significance level was used. This means that the differences identified in the study will only be accepted as real differences in situations where they are so large that it could have occurred by chance only five times in 100 (Christensen, 1994). In situations where the significance score (Sig) for Levene's test indicates a value smaller than 0,05, equal variances will not be assumed and the  $H_0$  will be rejected. In situations where the value is larger than 0,05, equal values will be assumed and  $H_1$  will be rejected (Milliken and Johnson, 2002).

#### 5.2.2.1 Managerial Responsibilities

In the biographical data, managerial responsibilities had the most significant number of mean differences. In these descriptive group statistics there were eight significant differences in the data (see Table 5.12). These significant differences are as follows:

- **LOC Autonomy:**

LOC Autonomy refers to the ability of an individual to function confidently with independence and to come to his or her own decisions. In this scale the mean scores had a value of 193,77 for managerial responsibilities and 185,61 for non-managerial responsibilities. According to Levene's test, the  $H_0$  was rejected and the significance of the scores (p-scores) was 99% for equal variance not assumed. It can therefore be concluded that individuals in a managerial role will measure higher on psychological autonomy.

- **LOC External Control:**

LOC External Control refers to the strength of an individual's belief that performance is related to things outside his or her control. The mean scores for this factor were 72,31 for managerial responsibilities and 87,54 for non-managerial responsibilities. The significance score for this factor was calculated at 100% for equal variances assumed and the  $H_1$  hypothesis was rejected. This is an indication that the external environment plays a greater role in the life of non-managerial employees than in that of managerial employees.

- **SOC Comprehension:**

The SOC Comprehension refers to the extent to which the individual sees the stimuli as clear, ordered and structured with consistent information at present as well as in the future. The mean scores, reflected in Table 5.12, were 51,17 (managerial responsibilities) and 47,22 (non-managerial responsibilities). The significance according to the p-score is 98% for equal variances assumed and the  $H_1$  hypothesis was rejected. This indicates that this will be true in situations where the groups are equal to one another. Managerial staff members tend to have a better cognitive understanding of their own situation and that of the environment.

- **SOC Meaningfulness:**

SOC Meaningfulness indicates the extent to which the individual feels that life makes emotional rather than cognitive sense. This mean scores obtained on this scale were 47,46 for managerial responsibilities and 43,96 for non-managerial responsibilities. The mean scores have high significance value for both the equal variance assumed (99,7%) and the  $H_1$  hypothesis was rejected. It can be concluded that leaders generally feel that life make sense on an emotional level and not only on a cognitive level. Managerial staff tends to experience life as more meaningful.

- **SOC Manageability:**

SOC Manageability indicates the extent of an individual's perception that the necessary resources are adequate and available. The mean scores obtained were 52,37 for managerial responsibilities and 49,48 for non-managerial responsibilities. This factor has a high significance value for equal variance



- **EQ Stress Management:**

EQ Stress Management refers to the stress endurance of the individual before he or she “falls apart”. The mean scores obtained were 103,91 for managerial responsibilities and 97,54 for non-managerial responsibilities. This factor has a high significance value for the equal variance assumed (97,4%). The results seem to indicate that managerial staff tends to have better stress management capabilities.

- **EQ Adaptability:**

EQ Adaptability indicates how successfully one is able to cope with environmental demands by effectively evaluating and dealing with problematic situations. The mean scores obtained were 104,20 for managerial responsibilities and 99,64 for non-managerial responsibilities. This factor indicates an acceptable significance value for the equal variance assumed (94,3%) but not a high significance for the  $H_0$  hypothesis. Managerial staff may be more adaptable than their non-managerial counterparts.

- **POI Factor 2 (Value Systems):**

POI Factor 2 (Value Systems) is defined as that which an individual holds dear or important in guiding them through life. The mean scores obtained were 0,3984366 for managerial responsibilities and -0,0845169 for non-managerial responsibilities. This factor has a high significance value for the equal variance assumed (99,1%) and the difference in the mean score is not statistically as a result of chance. The results seem to indicate that managerial staff have a better understanding of what guides them in life.

From the differences identified, it seems that the higher scores achieved by the managerial group (LOC Autonomy, SOC Comprehension, SOC Meaningfulness, SOC Manageability, EQ Stress Management, EQ Adaptability and POI Value Systems, as well as the higher score achieved by the non-managerial group on LOC External Control) are not related to chance and can be interpreted as significant.

#### 5.2.2.2 Gender

The mean scores for the gender groups (see Table 5.13) are relatively close and none of the p-scores indicate any significance in the variances for the gender groups. This may confirm a general statement that the factors are interpreted in a similar way by both males and females. This may be interpreted that the inventories do not clearly distinguish between the responses of the two genders.

#### 5.2.2.3 Race Groups

The descriptive statistics reveal significant differences in the following factors: LOC External Control, SOC Comprehension, SOC Meaningfulness, POI Factor 1 (Self-Awareness) and POI Factor 2 (Attitude). All the findings that are seen as significant rejected the  $H_1$  hypothesis. The findings will be discussed individually below.

- **LOC External Control:**

LOC External Control refers to the strength of an individual's belief that performance is related to things outside his or her control. The mean scores (see Table 5.14) obtained were 89,24 for the other group and 82,52 for the white group. The mean scores have a high significance when equal variances are assumed (98,2%). This scale deals with the influence and importance of the external environment on individuals. The other group scored higher and it can be concluded that the external environment is more important to the other group (a communitive/ubuntu culture) than to the white group (individualistic culture). These findings seem to be statistically true for all groups due to the high significance scores obtained.

- **SOC Comprehension:**

This scale deals with the extent that the individual sees the stimuli as clear, ordered, structured as well as providing consistent information currently and in the future. This needs to make cognitive sense to the individual. On this factor, mean scores were 45,31 for the other group and 49,31 for the white group (see Table 5.14). The significance obtained for equal variances

### Table 5.13 Gender statistics

Group Statistics					Levene's Test for Equality of Variances		T-test for Equality of Means		
Factors	Gender	N	Mean	Std Deviation	F	Sig.	Equal Variances	Mean Diff	Sig. (2- tailed) p-score
LOC Autonomy:	Female	124	185,13	21,437	4,753	0,030	Assumed	-5,016	0,091
	Male	76	190,14	18,205			Not	-5,016	0,079
LOC External Control	Female	124	84,12	20,376	0,747	0,388	Assumed	-1,984	0,495
	Male	76	86,11	19,191			Not	-1,984	0,489
LOC Internal Control	Female	124	166,91	13,914	0,850	0,358	Assumed	-0,668	0,732
	Male	76	167,58	12,383			Not	-0,668	0,725
SOC Comprehension	Female	124	47,47	8,964	0,291	0,590	Assumed	-1,164	0,384
	Male	76	48,63	9,467			Not	-1,164	0,391
SOC Manageability	Female	124	49,94	7,805	0,406	0,525	Assumed	-0,109	0,927
	Male	76	50,05	8,653			Not	-0,109	0,929
SOC Meaningfulness	Female	124	44,57	6,303	0,072	0,788	Assumed	0,007	0,994
	Male	76	44,57	6,421			Not	0,007	0,994
EQ Intrapersonal	Female	124	100,67	14,017	0,200	0,655	Assumed	-0,041	0,985
	Male	76	100,71	15,479			Not	-0,041	0,985
EQ Interpersonal	Female	124	97,41	13,654	2,697	0,102	Assumed	-1,102	0,603
	Male	76	98,51	15,845			Not	-1,102	0,616
EQ Stress Management	Female	124	99,53	13,745	4,493	0,035	Assumed	1,993	0,365
	Male	76	97,54	16,986			Not	1,993	0,389
EQ Adaptability	Female	124	100,07	13,065	0,417	0,519	Assumed	-0,954	0,626
	Male	76	101,03	13,936			Not	-0,954	0,631
EQ General Mood	Female	124	100,80	12,534	0,641	0,424	Assumed	0,088	0,963
	Male	76	100,71	13,991			Not	0,088	0,964
POI Factor 1 (Self- Awareness)	Female	124	0,0282679	0,99477236	0,011	0,917	Assumed	0,07438912	0,611
	Male	76	-0,0461213	1,01338961			Not	0,07438912	0,613
POI Factor 2 (Value Systems)	Female	124	0,0610337	1,04721378	0,220	0,640	Assumed	0,16061503	0,271
	Male	76	-0,0995813	0,91575588			Not	0,16061503	0,256
* Indicates significance on variances are not equal									
** Indicates significance on variances when equality is assumed									



**Table 5.14 Race groups statistics**

Group Statistics					Levene's Test for Equality of Variances		T-test for Equality of Means		
Factors	Race	N	Mean	Std Deviation	F	Sig.	Equal Variances	Mean Diff	Sig. (2-tailed) p-score
LOC Autonomy:	Other	70	185,00	21,163	0,000	0,999	Assumed	-3,131	0,301
	White	130	188,13	19,925			Not	-3,131	0,310
<b>LOC External Control</b>	<b>Other</b>	<b>70</b>	<b>89,24</b>	<b>19,268</b>	<b>0,231</b>	<b>0,632</b>	<b>Assumed</b>	<b>6,720</b>	<b>**0,022</b>
	<b>White</b>	<b>130</b>	<b>82,52</b>	<b>19,922</b>			<b>Not</b>	<b>6,720</b>	<b>0,021</b>
LOC Internal Control	Other	70	168,13	14,597	0,328	0,567	Assumed	1,482	0,454
	White	130	166,65	12,617			Not	1,482	0,474
<b>SOC Comprehension</b>	<b>Other</b>	<b>70</b>	<b>45,31</b>	<b>9,689</b>	<b>1,739</b>	<b>0,189</b>	<b>Assumed</b>	<b>-3,993</b>	<b>**0,003</b>
	<b>White</b>	<b>130</b>	<b>49,31</b>	<b>8,566</b>			<b>Not</b>	<b>-3,993</b>	<b>0,004</b>
SOC Manageability	Other	70	48,81	9,045	1,528	0,218	Assumed	-1,801	0,135
	White	130	50,62	7,531			Not	-1,801	0,158
<b>SOC Meaningfulness</b>	<b>Other</b>	<b>70</b>	<b>43,07</b>	<b>6,798</b>	<b>1,559</b>	<b>0,213</b>	<b>Assumed</b>	<b>-2,305</b>	<b>**0,014</b>
	<b>White</b>	<b>130</b>	<b>45,38</b>	<b>5,938</b>			<b>Not</b>	<b>-2,305</b>	<b>0,018</b>
EQ Intrapersonal	Other	70	100,06	16,305	3,115	0,079	Assumed	-0,966	0,655
	White	130	101,02	13,569			Not	-0,966	0,673
EQ Interpersonal	Other	70	98,66	13,358	1,152	0,284	Assumed	1,237	0,555
	White	130	97,38	15,105			Not	1,237	0,541
EQ Stress Management	Other	70	98,29	16,543	0,839	0,361	Assumed	-0,753	0,737
	White	130	99,04	14,239			Not	-0,753	0,748
EQ Adaptability	Other	70	100,87	14,329	0,734	0,392	Assumed	0,671	0,736
	White	130	100,20	12,885			Not	0,671	0,744
EQ General Mood	Other	70	99,09	12,652	0,228	0,634	Assumed	-2,584	0,183
	White	130	101,67	13,252			Not	-2,584	0,178
<b>POI Factor 1 (Self-Awareness)</b>	<b>Other</b>	<b>70</b>	<b>-0,2556768</b>	<b>1,04205916</b>	<b>1,463</b>	<b>0,228</b>	<b>Assumed</b>	<b>-0,39334891</b>	<b>**0,008</b>
	<b>White</b>	<b>130</b>	<b>0,1376721</b>	<b>0,95249108</b>			<b>Not</b>	<b>-0,39334891</b>	<b>0,010</b>
<b>POI Factor 2 (Value Systems)</b>	<b>Other</b>	<b>70</b>	<b>-0,2293616</b>	<b>1,09903545</b>	<b>2,674</b>	<b>0,104</b>	<b>Assumed</b>	<b>-0,35286396</b>	<b>**0,017</b>
	<b>White</b>	<b>130</b>	<b>0,1235024</b>	<b>0,92338698</b>			<b>Not</b>	<b>-0,35286396</b>	<b>0,024</b>
* Indicates significance on variances are not equal									
** Indicates significance on variances when equality is assumed									

- **SOC Meaningfulness:**

SOC Meaningfulness indicates the extent that the individual feels that life makes sense emotionally rather than cognitively. In Table 5.14 the mean

scores obtained for this factor were 43,07 (other races) and 45,38 (white). The significance of these scores measured 99,4% where equal variance is assumed. This indicates that the mean score findings can be seen as true in the majority of cases.

- **POI Factor 1 (Self-Awareness):**

This POI factor measures the individual's ability to have knowledge and an understanding of self. The mean scores obtained for this factor (Table 5.14) were -0,2556768 for the others, indicating a slight lack of self-awareness as defined, and 0,1376721 (a slight preference) for the white group. The significance of these mean scores is 99,8% for equal variances assumed.

- **POI Factor 2 (Value systems):**

This scale indicates that which the individual holds dear or important to him- or herself and that which guides him through life (attitude). In this study the mean scores obtained were -0,2293616 for the other group indicating a lack of this component and 0,1235024 for the white group (see Table 5.14). The significance of these findings is 98,7% for equal variances assumed.

### 5.3 EXPLORATORY FACTOR ANALYSIS

The results of the exploratory factor analysis on the four inventories will be discussed below.

#### 5.3.1 Total Variances Explained

The next step was to conduct an exploratory factor analysis on the thirteen second order factors using the Principle Axis Factoring Extraction method. Table 5.15 indicates the correlations between the thirteen factors. From these results the negative correlation (as indicated in Chapter 3) of LOC External Control with the other factors is confirmed. It can therefore be concluded that an individual with a high score on External Control may be less inclined to psychological wellness.

Other observations from this table are that the two POI factors correlate relatively weakly with the other factors. The only stronger correlation with the POI factor exists between the POI Factor 1 (Self awareness) and the EQ Intrapersonal factor (0,468). To obtain a better understanding a factor analysis was done.

The results of the intercorrelation matrix will now be discussed. The principal axis method factors are postulated by determining the Eigenvalues greater than unity. Initial Eigenvalues with a total value higher than one, typically indicates a strong extraction (Child, 1990). All values smaller than 0,1 are not indicated in the results and can be seen as insignificant.

Table 5.16 indicates that 66,170% of the variations on the thirteen factors are explained by extracting the three factors with Eigenvalues higher than unity (6,210; 1,238 and 1,155). This means that 66,170% of the second order factors can be explained by the first three factors determined by the Principal Axis Factoring Method.

To determine how the thirteen factors relate to the three new extracted factors a factor analysis was done using Principal Axis Factoring as extraction method (a simple structure rotation) and the Oblimin with Kaiser Normalization as rotation method.

Table 5.15 Factor correlation matrix

Factors	LOC Autonomy	LOC External Control	LOC Internal Control	SOC Com- prehension	SOC Manage- ability	SOC Meaningful- ness	EQ Intra- personal	EQ Inter- personal	EQ Stress Management	EQ Adaptability	EQ General Mood	POI Factor 1 (Self- Awareness)	POI Factor 2 (Value System)
LOC Autonomy	<b>1,000</b>	-0,362	0,624	0,435	0,522	0,428	0,688	0,431	0,453	0,617	0,607	0,365	0,176
LOC External Control	-0,362	<b>1,000</b>	-0,180	-0,372	-0,482	-0,315	-0,384	-0,175	-0,497	-0,426	-0,231	-0,224	-0,194
LOC Internal Control	0,624	-0,180	<b>1,000</b>	0,284	0,337	0,434	0,452	0,459	0,303	0,440	0,411	0,152	0,118
SOC Comprehension	0,435	-0,372	0,284	<b>1,000</b>	0,609	0,490	0,530	0,307	0,519	0,511	0,466	0,193	0,179
SOC Manageability	0,522	-0,482	0,337	0,609	<b>1,000</b>	0,662	0,640	0,421	0,596	0,546	0,466	0,308	0,280
SOC Meaningfulness	0,428	-0,315	0,434	0,490	0,662	<b>1,000</b>	0,574	0,399	0,386	0,420	0,586	0,278	0,316
EQ Intrapersonal	0,688	-0,384	0,452	0,530	0,640	0,574	<b>1,000</b>	0,570	0,540	0,719	0,822	0,468	0,294
EQ Interpersonal	0,431	-0,175	0,459	0,307	0,421	0,399	0,570	<b>1,000</b>	0,400	0,508	0,625	0,142	0,207
EQ Stress Management	0,453	-0,497	0,303	0,519	0,596	0,386	0,540	0,400	<b>1,000</b>	0,736	0,528	0,109	0,184
EQ Adaptability	0,617	-0,426	0,440	0,511	0,546	0,420	0,719	0,508	0,736	<b>1,000</b>	0,623	0,195	0,204
EQ General Mood	0,607	-0,231	0,411	0,466	0,586	0,555	0,822	0,625	0,528	0,623	<b>1,000</b>	0,324	0,306
POI Factor 1 (Self Awareness)	0,365	-0,224	0,152	0,193	0,308	0,278	0,468	0,142	0,109	0,195	0,324	<b>1,000</b>	0,383
POI Factor 2 (Value system)	0,176	-0,194	0,118	0,179	0,280	0,316	0,294	0,207	0,184	0,204	0,306	0,383	<b>1,000</b>

**Table 5.16 Total variance explained**

Factors	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation of Squared Loadings (a)
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	<b>6,210</b>	47,766	47,766	5,826	44,815	44,815	4,893
2	<b>1,238</b>	9,521	57,288	0,736	5,665	50,479	2,385
3	<b>1,155</b>	8,882	<b>66,170</b>	0,635	4,887	55,366	4,435
4	0,812	6,249	72,419				
5	0,753	5,791	78,210				
6	0,676	5,202	83,412				
7	0,525	4,038	87,450				
8	0,424	3,265	90,710				
9	0,353	2,713	93,428				
10	0,302	2,321	95,749				
11	0,233	1,790	97,539				
12	0,202	1,558	99,097				
13	0,117	0,903	100,000				
Extraction Method: Principal Axis Factoring							
(a) When factors are corrected, sums of squared loadings cannot be added to obtain a total variance							

### 5.3.2 Rotated Factor Scores and Factor Correlation Results

Table 5.17 indicates the rotated factors scores and the three factors will now be discussed separately. In the cases where the relation is smaller than 0,1 the value is not indicated. The negative scores indicate an absence or lack of that specific original factor. The higher the relation is to unity (one), the stronger the correlation. Child (1990) states that in sample sizes greater than 100, factor analysts see loadings having a value of  $\pm 0,3$  or greater as meaningful. This rule will be applied for the results obtained in this study.

**Table 5.17 Pattern matrix (a)**

	Factors		
	1 Psychological Adjustment	2 Self- Actualisation	3 Stress Management
EQ GENERAL MOOD	<b>0,713</b>	0,185	
EQ INTERPERSONAL	<b>0,711</b>		
LOC Internal Control	<b>0,684</b>		
LOC Autonomy:	<b>0,642</b>	0,115	+ -0,112
EQ INTRAPERSONAL	<b>0,636</b>	0,292	+ -0,170
EQ ADAPTABILITY	<b>0,512</b>	-0,155	<b>+ -0,496</b>
SOC Meaningfulness	<b>0,300</b>	0,294	+ -0,268
POI Factor 1 (Self Awareness)		<b>0,673</b>	
POI Factor 2 (Value Systems)		<b>0,458</b>	
EQ STRESS MANAGEMENT	0,168	-0,223	<b>+ -0,812</b>
LOC External Control	0,135	-0,105	<b>-0,650</b>
SOC Manageability	0,136	0,244	<b>+ -0,611</b>
SOC Comprehension	0,134		<b>+ -0,553</b>
Extraction Method: Principal Axis Factoring. Rotation Method: Oblimin with Kaiser Normalization.			
a Rotation converged in 9 iterations. Factor 3 has been reflected			

The factor correlation results are stated in Table 5.18. In a correlation study one seeks to describe the degree of the relationship that exists between the measured factors. Table 5.18 indicates that there is a positive correlation between factor 1 and factor 3 (0,599). Factor 2 correlates 0,381 with factor 1 and 0,382 with factor 3. All three factors have a positive correlation with one another and thus a possible correlation with psychological wellness. The three factors will be individually discussed and defined in the following section.

**Table 5.18**                      **Factor correlation matrix**

Factor	1 Psychological Adjustment	2 Self- Actualisation	3 Stress Management
1	1,000	0,381	+0,599
2	0,381	1,000	+0,382
3*	+0,599	+0,382	1,000
Extraction Method: Principal Axis Factoring. Rotation Method: Oblimin with Kaiser Normalization. * Factor 3 has been reflected			

#### 5.3.2.1 Factor 1: Psychological Adjustment

From Table 5.17 the following high loadings have been identified: EQ General Mood (0,713), EQ Interpersonal (0,711), LOC Internal Control (0,684), LOC Autonomy (0,642), EQ Intrapersonal (0,636). EQ Adaptability (0,512) and SOC Meaningfulness (0,300) indicate a moderate and low loading respectively.

To define factor 1 it is important to investigate the original factors that correlated with this factor. They are as follows:

- **EQ General Mood:**

This factor measures the ability to enjoy life as well as one's outlook on life and overall feeling of contentment. This includes the Happiness and Optimism scale of the EQ-i. Individuals that measure high on Happiness and Optimism are usually cheerful, positive, hopeful and optimistic individuals who enjoy life. They help to generate an uplifting and positive atmosphere in the workplace and this is a motivational component in problem solving and stress tolerance (Bar-On, 1997).

- **EQ Interpersonal:**

EQ Interpersonal draws on interpersonal skills and functioning of an individual and includes the Interpersonal Relationship, Empathy and Social

Responsibilities scales of the EQ-i. A high score on this factor indicates responsible and dependable individuals with good social skills who interact, understand and relate well with others (Bar-On, 1997).

- **LOC Internal Control:**

Internal control is the belief that your performance is dependant on things in your own control such as capabilities, behaviour or personal qualities (See Chapter 3).

- **LOC Autonomy:**

Measures whether the respondents trust their own ability, can function confidently with independence and can come to their own decisions in problem solving.

- **EQ Intrapersonal:**

This composite scale measures the awareness of the inner self and includes the following EQ-i subscales: Emotional Self-Awareness, Assertiveness, Self-Regard, Self-Actualisation and Independence. Individuals who score high on this scale are in touch with their feelings, feel good about themselves and feel positive about what they are doing. They can express their feelings, are independent, strong and confident in disclosing their ideas and beliefs.

- **EQ Adaptability:**

This determines how successfully one is able to cope with environmental demands by effectively evaluating and dealing with problematic situations. The subscales included in this score are: Problem Solving, Reality Testing and Flexibility.

- **SOC Meaningfulness:**

This is the extent to which an individual feels that life makes sense emotionally rather than cognitively.

Themes that emerge from the above are: positiveness, performance dependent on things in own control, self confidence, independence, good social skills, awareness of the inner self, coping with environmental demands and life making sense emotionally. These themes, when grouped together, evidently build up to the following conclusions:



- the ability in dealing with the self
- the ability to deal (or control) the environment
- the ability to maintain effective interpersonal relationships.

These conclusions will indicate psychological wellness if the relationship between them is optimal. This factor is broad and complex and is therefore identified as *Psychological Adjustment*. These findings are in line with the theoretical definition of psychological wellness as determined in Chapter two of this research study.

#### 5.3.2.2 Factor 2: Self-actualisation

The two identified POI Factors (Self Awareness and Value Systems) correlate with the second factor, strongly with a correlation of 0,673 and moderately 0,458 respectively (see Table 5.17). The second identified factor consists of the two POI factors:

- **POI Self-Awareness:**

This scale can be defined as having knowledge and understanding of oneself.

- **POI Value systems (attitudes):**

This scale can be defined as that which an individual holds dear or important and helps them to guide themselves through life (attitude).

From these definitions and the results in Table 5.17 it can be seen that the concept of self-actualisation, and the theme of personal growth that is associated with self-actualisation, is a clearly defined factor in this explorative factor analysis.

It can therefore be concluded that although self-actualisation is the oldest of the four constructs it is a stand alone concept that plays an important role in psychological wellness. One can thus say that *Self Actualisation* is the way in which an individual can achieve psychological wellness.

### 5.3.2.3 Factor 3: Stress Management

The final factor consists of the following: EQ Adaptability (+0,496 – moderate loading), EQ Stress Management (+0,812 – high loading), LOC External Control (-0,650 – high loading), SOC Manageability (+0,611 – high loading) and SOC Comprehension (+0,553 – moderate loading). These loadings seem to form a definite third factor. Each of the components for factor 3 will now be discussed.

- **EQ Adaptability:**

This determines how successfully one is able to cope with environmental demands by effectively evaluating and dealing with problematic situations. The subscales included in this score are: Problem Solving, Reality Testing and Flexibility.

- **EQ Stress Management:**

The Stress Management composite scale score consists of the Stress Tolerance and Impulse Control subscales. The value obtained for this factor means that there is stress endurance and that the individual will not “fall apart” or lose control when exposed to stressful situations. Such individuals are calm, tend not to be impulsive and work well under pressure. This factor indicates that these people can deal with tasks that are stressful or anxiety provoking or that contains elements of danger (Bar-On, 1997, p 45).

- **LOC External Control:**

This factor suggests the strength of an individual’s belief that his or her performance is related to things outside his or her control (e.g. fate, luck, circumstances or influential people). The results indicate that an individual with a high score on this factor will measure lower on the other scores due to the negative correlation.

- **SOC Manageability:**

SOC Manageability refers to an individual’s perception that the necessary resources are adequate and available to enable him to be in control. This will mean that an individual will not feel victimised by events nor feel that life has treated him unfairly.

- **SOC Comprehension:**

This refers to the extent to which the individual sees the stimuli encountered now as well as in the future as clear, ordered, structured and consistent. These perceptions make cognitive sense.

This factor, if compared with the characteristics identified for psychological wellness (Theoretical integration - Table 3.1), indicates an ability to deal with the environment and the stressors associated with the environment without seeming to be dependent on powerful others. Due to the fact that these characteristics seem to be in line with an individual indicating strong signs of psychological wellness, it can therefore be concluded that this factor will be known as "*Stress Management*".

#### **5.4 SUMMARY**

In this chapter, step 5 of the empirical study was completed and the results and interpretations were indicated. The conclusions, limitations and recommendations of the research will be discussed in Chapter 6.

## CHAPTER 6: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

This chapter consists of the conclusions and limitations for the study as well as recommendations for future research.

### 6.1 CONCLUSIONS

The following conclusions were reached during the study:

#### 6.1.1 Conclusions – literature review

The following conclusions were made from the literature review:

- The first specific aim of this study was to conceptualise psychological wellness. This was achieved by defining the concept of psychological wellness, followed by discussions of various wellness models to identify the different dimensions of the concept. The researcher found that psychological wellness is multidimensional and functions in a complex system that will change with time and place, as well as with the integration of the different dimensions. For an individual to function optimally these dimensions need to be in balance.

The dimensions refer to aspects of the self (intrapersonal, affective and cognitive behaviour, spirituality, personal growth) as well as other domains of life (interpersonal, social and contextual, in love and work).

- The next aim of the study was to conceptualise the four related constructs. The constructs were defined as follows:  
*Self Actualisation* was defined as a never-ending growth process of purposeful striving, optimal development and becoming a more fully functioning and mature individual. It was seen as an end-of-being state of fullest realisation of one's potential.

*Locus of control:* In this study, the researcher focused on internal locus of control and this was defined as the ability of an individual to perceive reinforcement in the environment as a result of his or her own behaviour.

*Sense of coherence* was defined as the individual's orientation to life crises and the ability to react to stressors in a positive manner.

*Emotional intelligence* was defined as a person's non-cognitive capabilities, competencies and skills that enable the individual to cope with environmental demands and pressures and the emotions that these evoke.

- As has been shown by previous research (see Chapter 3) that these four constructs are related to psychological wellness, the third and final specific aim for the literature review could be concluded by determining theoretically the characteristics of a psychologically well individual. They are as follows:

*Physical characteristics:* A psychologically well individual knows that physical exercise will increase personal energy levels. This individual will have a positive attitude to health, suffering fewer physical ailments, and will have a positive self-regard.

*Cognitive characteristics:* It could be concluded that a psychologically well person will be flexible, rational and optimistic. These qualities will enable the person to be original in problem solving, using the acquired reasoning to adapt and master life's challenges. A psychologically well individual will see life as comprehensible, manageable and meaningful, demonstrating self-understanding (knowing his or her own beliefs and motives).

*Affective characteristics:* A strong sense of psychological wellness will allow an individual to feel generally positive and optimistic. Negative feelings will not be denied, but rather confronted and mastered. A psychologically well person will thus manage his or her own states (frustration, anxiety), impulses and resources demonstrating a calmness and confidence in any situation.

*Motivational characteristics:* The psychologically well individual will perceive and assess the reality of situations and act on it. These self-reliant individuals are self-actualised and know themselves, as well as

their potential. A psychologically well individual will form opinions from his or her thoughts and feelings and will conduct his or her behaviour according to a set of values that will enhance happiness, meaningfulness and spiritual depth. Stressors are seen as opportunities with possible positive results and these individuals believe that they will achieve their goals and objectives in spite of setbacks.

*Interpersonal characteristics:* Psychologically well individuals have the ability to form and maintain mutually satisfying relationships with other people. In these social relationships, they accept and give support where and when needed. Empathy and intimacy towards others comes naturally for a psychologically well individual. They will contribute towards the common goals of the groups and will create opportunities by encouraging different people to use the resources.

The specific aims of the literature review have been reached and the research questions related to the literature review have been answered.

## **6.1.2 Conclusions – empirical review**

The following conclusions were reached in the empirical review:

### *6.1.2.1 Conclusions for the descriptive group statistics*

The following conclusions can be made about the results of the descriptive group statistics:

#### *a) Managerial responsibilities*

- LOC Autonomy is an important differentiation between leadership roles and followers. Managers do believe in their abilities and will function more independently, confidently and will be able to reach decisions in problem solving. However, these results seem to be true in situations where the groups are not equal to one another and this needs to be investigated

further to determine where the differences between the group scores lie. This is not, however, the purpose of this research.

- LOC External Control plays a greater role in the non-managerial responsibilities group. The leaders (managerial responsibilities) should keep this in mind in order to create the right environment for the employees in terms of recognition, rewards, growth opportunities, performance feedback, training and development.
- Managers will, in the majority of situations, have a better comprehension of life (in other words, life will make cognitive sense to them) than the non-managerial responsibilities group. They can communicate this comprehension to the members of their teams to enhance performance.
- Managers do believe that the necessary resources are available and will not feel victimised by events in their lives. The higher score on SOC Manageability will enable them to take control of situations and develop their ability to make decisions.
- Managers generally feel that life make sense on an emotional level and not only on a cognitive level (SOC Meaningfulness). They should provide guidance to their employees to create meaningful working environments.
- Managers have the tendency to cope better with stressors in their day to day functioning (EQ Stress Management). They will remain calm, work well under pressure and generally will not leap to impulsive conclusions. This characteristic will make help the manager to keep his team calm as well.
- The EQ Adaptability difference indicates that managers have a tendency to make a substantial contribution (in terms of problem solving and realistic expectations) within the workplace. This characteristic distinguishes managers from their teams and develops better leadership abilities.
- The mean scores of the POI Factor 1 (Value System) might be an indication that there is a difference in interpretation of what guides individuals through life among those with managerial responsibilities (leaders) and those without. If one compares this finding with that of the LOC External Control the researcher is of the opinion that the individuals

with managerial responsibilities might be driven by a more internal process than the individuals without the managerial responsibilities.

*b) Gender*

- None of the mean score differences analysed in Table 5.10 indicated any significance assumed on the variances on the two stated hypotheses. This confirms that the differences obtained in the mean score can be statistically explained as the consequence of chance. This may confirm that the inventories do not distinguish between the genders.

*c) Race Groups*

- The results of this study indicated that the white group scored higher on SOC Comprehension than the other group. Therefore it can be concluded that the white group has a tendency to interpret the stimuli as clear, ordered, structured and the information as consistent currently as well as in the future. Life will make cognitive sense to them. The cultural differences as well as managerial responsibilities should have an influence on the results and interpretation and this needs to be investigated further.
- SOC Meaningfulness scale indicates that life has a tendency to make more sense on an emotional level for the white group than for the other group. This might be due to the fact that meaningfulness might be defined according to Western culture, without making provision for African cultures. This, as well as the leadership split within the race groups, requires further investigation.
- The scores on the POI Factor 1 (Self-awareness) indicate that the white group has a greater capacity for knowledge and an understanding of the self. Again, the perception of Self-awareness should be explored within the different race groups in South Africa before these results can be confirmed.
- The mean scores of the POI Factor 1 (Value System) might be an indication that there is a difference in interpretation of what guides the various race groups through life. This finding must, however, be explored before it can be confirmed.



### 6.1.2.2 Conclusions from explorative factor analysis

The following conclusions can be made from the explorative factor analysis:

- The SOC Meaningfulness factor indicates a low loading on all three identified factors (0,300, 0,294 and 0,268 respectively). This may be an indication that SOC Meaningfulness is not necessarily the most important component of the three identified factors or even of psychological wellness, but that a psychologically well individual must be able to identify a basic “meaningfulness” in his day to day functioning and life. This finding may be linked to other theories in the psychological field such as Herzberg’s Motivational theory, which claims that hygienic factors need to be present although these do not assist with the actual motivation of an individual (Robbins et al, 2003).
- Self-actualisation is a strong concept in its own right and although it is the oldest of the four constructs, it plays a key role in psychological wellness.
- An individual’s ability to feel empowered in controlling his or her environment will enhance psychological wellness. Empowerment will thus play an important part in development programmes, especially in areas such as coaching and mentoring.
- Themes that emerge from the discussions are: positiveness, performance dependent on things within one’s control, self-confidence, independence, good interpersonal skills, awareness of the inner self, coping with environmental demands and stresses, life making sense emotionally, feeling that life treats one fairly and self-actualisation. In comparing these results with those of the theoretical characteristics identified in Table 3.1 (Chapter 3) there are significant coincidences between the sets of characteristics.

The identified factors confirm the research done by Compton (2001) who states that psychological wellness can be obtained by adopting a tripartite model that includes three factors: subjective wellness (the psychological adjustment and stress management factors identified in this research),

personal growth (self-actualisation) and other-centred religiosity (not discussed in this research). Research done by Adams et al. (2000), based on the Adams, Bezner and Steinhardt model discussed in chapter 2, suggests that the spiritual factor refers to having a purpose in life and confirms the link between psychological wellness and spiritual wellness in the overall wellness of an individual. The authors hypothesised that if one of the inventories measured the spiritual wellness of an individual, a high correlation would exist between psychological wellness and spiritual wellness.

This concludes the first specific aim of the empirical study as the factor structure of psychological wellness has been determined.

## **6.2 HYPOTHESIS OF THE RESEARCH**

Based on the study the following hypothesis are formulated:

- Self-actualisation, internal locus of control, sense of coherence and emotional intelligence has a strong relation with psychological wellness.
- A psychologically well individual will have similar characteristics to an individual measuring high on self-actualisation, internal locus of control, sense of coherence and emotional intelligence.
- Based on the study Psychological Adjustment, Self-actualisation and Stress Management are constructs of psychological wellness.

## **6.3 LIMITATIONS OF THE RESEARCH**

The following limitations were identified:

### **6.3.1 Limitations – literature review**

- Spirituality as a concept was not included or measured.
- There was a lack of published resources on certain constructs.
- As self-actualisation is an older construct within the psychological research field, it was difficult to find recent literature as the current emphasis of research is on emotional intelligence.

### **6.3.2 Limitations – empirical review**

- No instrument was identified to determine the levels of psychological wellness of the sample. This meant that although the relationship could be established in the theoretical literature study, the researcher could not prove the correlation between psychological wellness and the four identified constructs in the empirical study. This was not, however, the aim of the study.
- The sample group did not represent the racial split of the South African population, making it difficult to draft conclusions for certain race groups. The sample is, however, representative of the employees at the financial institution. Further investigation into the race group differences should be conducted before final recommendations can be made on the race group results.
- Further investigation into the LOC External Control finding is needed because these results might relate to the cultural differences between the groups, where one group tends to be more community or group orientated than the other. The impact of the managerial responsibilities should also be looked at more closely along with the racial groups owing to the highly significant score obtained in the managerial responsibilities in the sample (see point 5.4.1). This was not, however, the purpose of this study.
- The self-actualisation subscale of the EQ-i could not be isolated from the EQ Intrapersonal factor and evaluated in the explanatory factor

analysis. It would be interesting to investigate the relation of this scale to the Factor 2.

- The managerial responsibilities were not indicated in the race group comparisons. Four of the factors (LOC External Control, SOC Comprehension, SOC Meaningfulness, and POI Factor 2 (Value Systems) identified as significant in the race groups were also identified as significant in the managerial responsibilities.

## **6.4 RECOMMENDATIONS**

The following recommendations for future research, as well as the practical implications of this study, are suggested:

### **6.4.1 Recommendations for future research**

- Investigate the relation between the Self-actualisation factor (factor 2) and self-actualisation in the EQ Intrapersonal sub-scale. The low loading of the EQ Intrapersonal scale (0,292) with the Self-actualisation factor (factor 2) in Table 5.17 might indicate a stronger relationship between these factors.
- Investigate the possibility that psychological wellness can be obtained by developing an individual's self-actualisation levels. This supports Compton (2001) findings in terms of the stable self identity.
- Investigate a possible single second-order factor that might underly Table 5.18 with further Eigenvalue calculations.
- Investigate and confirm the correlation between psychological wellness and spiritual wellness.
- Investigate the possibility of designing and compiling an instrument that measures the entire notion of psychological wellness.
- Further investigation of the LOC External Control finding is needed because these results might relate to the cultural differences between the groups, where one group tends to be more community or group

orientated than the other. The impact of the managerial responsibilities would also need to be investigated along with the racial groups as a result of the highly significant score obtained on the managerial responsibilities in the sample (see point 5.4.1). It must be kept in mind that this was not the purpose of this study.

- Investigate the understanding of concepts such as Self-actualisation and Sense of Coherence from a South African perspective.
- Investigate the relationship between psychological wellness and spiritual wellness.

#### **6.4.2 Recommendations for practical applications**

- Include psychological wellness concepts in coaching and mentoring programmes.
- Include self-actualisation, locus of control, sense of coherence and emotional intelligence in leadership development.
- Be aware of the need for external control factors in the motivation of staff members in non-managerial positions.

In identifying the recommendations of the research the final specific aim of this study has been reached.

#### **6.5 SUMMARY**

This chapter concludes the final three steps of the research study. The general aim of the study, to determine the factor structure of psychological wellness based on four constructs, namely self-actualisation, locus of control, sense of coherence and emotional intelligence, has been achieved.

## REFERENCES

- Abramovitz, M. (2001). What is your emotional IQ? Emotional intelligence can affect your mental and physical health, as well as those around you. *Current Health*, 2, 28(4), p 13-18.
- Adams, T.B., Bezner, J.R. & Steinhardt, M.A. (1997). The conceptualisation and measurement of perceived wellness: integrating balance across and within dimensions. *Journal of American Health Promotion*, 11(3), p 208-218.
- Adams, T.B., Bezner, J.R., Drabbs, M.E., Zambarano, R.J. & Steinhardt, M.A. (2000). Conceptualisation and measurement of the spiritual and psychological dimensions of wellness in a college population. *Journal of American College Health*, 48 (4), p 165-173.
- Allport, G.W. (1961). *Pattern and Growth in Personality*. New York: Holt, Rinehart and Winston.
- Antonovsky, A. (1987). *Unraveling the mystery of health*. San Francisco: Jessey-Bass.
- Antonovsky, A. (1992). Can attitudes contribute to health? *Advances: The Journal of Mind-Body-Health*, 8(4), p 33-39.
- Antonovsky, A. (1993). The structure and properties of the sense of coherence scale. *Social Science and Medicine*, 36 (6), p 725-733.
- Antonovsky, A. & Sourani, T. (1988). Family sense of coherence and family adaptation. *Journal of Marriage and the Family*, 50 (1), p 79-92.
- Bar-On, R. (1998). *BarOn Emotional Quotient Inventory - Facilitator's Resource Manual*. Toronto: MultiHealth System Inc.

Bar-On, R. (1997). *BarOn Emotional Quotient Inventory - Technical Manual*. Toronto: MultiHealth System Inc.

Bell, B.J. (1980). *An examination of locus of control, personality traits, and selected demographic variables as factors relating to the success of first-year students in an associate degree nursing program*. Denton: North Texas State University.

Benjamin, P., Looby, J. (1998). Defining the nature of spirituality in the context of Maslow's and Rogers's theories. *Counseling and Values*, 42(2), p 92-100.

Bernardi, R.A., (2001). Stress, locus of Control and Longevity. *Business Forum*, 26 (3, 4), p 27-33.

Bloxom, B. (1972). The Personal Orientation Inventory. In O.K. Buros (ed.), *The Seventh Mental Measurements Yearbook*. (p 290-292). New Jersey: Gryphon Press.

Bothma, A.C. & Schepers, J.M. (1997). The role of locus of control and achievement motivation in the work performance of black managers. *Journal of Industrial Psychology*, 23 (3), p 44-52.

Boyatzis, R.E. and Van Oosten, E., (2003). A leadership imperative: building the emotionally intelligent organisation. *Ivey Business Journal Online*, 67 (i3) p NA (6).

Bradburn, N.M. (1969). *The structure of psychological wellbeing*. Chicago: Aldine Publishing Company.

Cattell, R.B. (1978). *The scientific use of factor analysis in Behavioral and Life Sciences*. New York: Plenum Press.

Child, D. (1990). *The essentials of factor analysis*. London: Cassell Educational Limited.

Christensen, L.B. (1994). *Experimental Methodology*. Needham Heights: Ally & Bacon.

Cilliers, F. (2001). The role of sense of coherence in group relations training. *Journal of Industrial Psychology*, 27 (3), p 13-18.

Coetzer, E.L. & Schepers, J.M. (1997). Die verband tussen lokus van beheer en die werksprestasie van swart bemarkers in die lewensversekeringsbedryf. *Journal of Industrial Psychology*, 23 (1), p 34-41.

Compton, W.C. (2001). Towards a tripartite factor structure of mental health: subjective well-being, personal growth and religiosity. *The Journal of Psychology*, 135 (5), p 486 -500.

Cooper C.L. & Locke, E.A. (2000). *Industrial and organizational psychology*. Padstow: T.J. International Ltd.

Cooper C.L. & Payne R. (1990). *Causes, coping and consequences of stress at work*. Chichester: John Wiley & Sons.

Cooper, R. & Sawaf, A. (1997). *Executive EQ*. London: Orion Business Books.

Cowen, E.L., (1994). The enhancement of psychological wellness: challenges and opportunities. *American Journal of Community Psychology*. 22 (2), p 149-179.

Cureton, E.E. and D'Agostino, R.B. (1983). *Factor analysis: an applied approach*. New Jersey: Lawrence Erlbaum Associates Inc.



Douglas, C., Frink, D.D. and Ferris, G.R. (2004). Emotional intelligence as a moderator of the relationship between conscientiousness and performance. *Journal of Leadership and Organizational Studies*. 10(3), p 2-14.

Du Plessis, H. & Potgieter, T. (2000). Terrific Trio: Emotion, Business and Drama. *People Dynamics*, 18 (9), p 34-36.

Els, D.A., (1999). *Die stimulering van interne lokus van beheer by werknemers binne 'n finansiële instelling*. Potchefstroom: PU vir CHO.

Els, D.A., Linde, L.H. & Rothmann, S. (2001). Die evaluering van 'n ontwikkelingsprogram gerig op werknemers se lokus van beheer. *Journal of Industrial Psychology*. 27 (3), p 24-29.

Foxman, P. (1974). *Cognitive controls and personality integration*. Unpublished doctoral dissertation, George Peabody College, Nashville, TN.

Garson, B.E. & Stanwyck, D.J. (1997). Locus of Control and Incentive in Self-Managing Teams. *Human Resource Development – Quarterly*. 8(3), p 247-258.

Gibbs, N. (1995). The EQ Factor. *Time Magazine*, 146 (14), p 68-75.

Gibson, E. (1983). Development of knowledge about intermodal unity. *Piaget and the foundations of knowledge*. Hillsdale: Erlbaum.

Goleman, D. (1998). *Working with emotional intelligence*. London: Bloomsbury Publishing.

Harber, R. (1969). *Information-processing approaches to visual perception*. New York: Holt, Rinehart & Winston.

Hart, K.E., Hittner, J.B. & Paras, K.C. (1991). Sense of coherence, trait anxiety and the perceived availability of social support. *Journal of Res. Pers.*, 25, p 137-145.

Haynes, S.N. & O'Brien, W.H. (2000). *Principles and practice of behavioural assessment*. New York: Kluwer Academic / Plenum Publishers.

Heider, F. (1958). *Psychology of interpersonal relations*. New York: Wiley.

Hjelle, L.A. & Ziegler, D.J., (1987). *Personality theories: Basic Assumptions, Research and Applications*. (2<sup>nd</sup> ed.). New York: Mc Graw-Hill.

Heiman, T., (2004). Examination of the salutogenic model, support resources, copying style and stressors among Israeli university students. *The Journal of Psychology*, 138 (6), p 505-520.

Jahoda, M. (1958). *Current concepts of positive mental health*. New York: Basic Books Inc.

Johnsen, G.A. (1995). *Sense of coherence, perceived health, and the performance of health-promoting behaviours*. Ann Arbor: U.M.I.

Jordaan, W. & Jordaan, J. (1992). *Man in Context*. Johannesburg: Lexicon Publishers.

Keegan, G (2002). The humanistic approach. *Psychology review*, 9 (2), p 6-9.

Klavetter, R.E. & Moagar, R.E. 91967). Stability and Internal Consistency of a measure of Self-Actualisation. *Psychological Reports*, 21, p 422-424.

Knapp, R. (1976). *Handbook for the Personal Orientation Inventory*. San Diego, Calif: Edits.

Kozma, A., Stones, M.J. & McNeil, J.K. (1991). *Psychological wellbeing in later life*. Toronto and Vancouver: Butterworths Canada Ltd.

Lefcourt, H.M. (1981). *Research with the locus of control construct*. New York: Academic Press.

Lefcourt, H.M. (1982). *Locus of Control - current trends in theory and research*. London: Lawrence Erlbaum Associates.

Le Roux, C.A., Schmidt, C. & Schepers, J.M. (1997). Achievement motivation, locus of control and individuality as predictors of participative management in the SA Educational environment. *Journal of Industrial Psychology*, 23 (3), p 1-8.

Lewin, K. (1938). *The conceptual representation and measurement of psychological forces*. Durham NC: Duke University Press.

Lubit, R. (2004). The tyranny of toxic managers: applying emotional intelligence to deal with difficult personalities. *Ivey Business Journal Online*, 68 (4), p 1-8.

Maslow, A.H. (1954). *Motivation and Personality*. New York: Harper & Brothers Publishers.

McCormick, E.J. & Ilgen, D. (1989). *Industrial and organisational psychology*. London: Unwin Hyman.

McDonald, R.P., (1985). *Factor analysis and related methods*. New Jersey: Lawrence Erlbaum Associates, Inc.

Meyer, W.F., Moore, C. & Viljoen, H.G., (1995). *Personality Theories – from Freud to Frankl*. Johannesburg: Lexicon Publishers.

Milliken, G.A. & Johnson, D.E. (2002). *Analysis of Messy Data. Volume III: Analysis of Covariance*. Boca Raton: Chapman & Hall/CRC.

Moomal, Z. (1999). The relationship between meaning in life and mental wellbeing. *S.A. Journal of Psychology*, 29 (1), p 36-41.

Moore, D.M. & Dwyer, F.M. (1997). Effect of colour-coding on locus of control. *International Journal of Instructional Media*, 24, (2), p 145-151.

Mouton, J. & Marais, H.C. (1996). *Basic Concepts in the methodology of the social sciences*. Pretoria: Penrose Book Printers.

Phillips, W.M. (1980). Purpose in life, depression and locus of control. *Journal of Clinical Psychology*, 36, p 661-667.

Prichett, P. & Pound, R. (n.d.). *The employee handbook for organisational change*. Dallas, Texas: Prichett & Associates Inc.

Reker, G. (1977). The purpose-in-life test in an inmate population: an empirical investigation. *Journal of Clinical Psychology*, 33, p 688-693.

Robbins, S.P., Odendaal, A. & Roodt G. (2003). *Organisational Behaviour – Global and South African Perspectives*. Cape Town: Pearson Education SA.

Rogers, C.R. (1961). *On becoming a person: A therapist's view of psychotherapy*. Boston: Houghton Mifflin Co..

Rotter, J.B., (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General & Applied*. 80 (1). Whole No 609.

Rumbaut, R.G., Anderson, J.P. & Kaplan, R.M. (n.d.). Stress, health and the sense of coherence. *Geriatric Medicine and the Social Sciences*. Philadelphia: Saunders.

Salovey, P. & Mayer, J.D., (1993). The intelligence of emotional intelligence. *Intelligence* 17, p 433-442.

Sammon, S.D., Reznikoff, M. & Geisenger, K.F. (1985). Psychosocial development and stressful life events among religious professionals. *Journal of Personality and Social Psychology*, 48, p 676-687.

Schultz, D., (1977). *Growth Psychology: Models of the healthy personality*. Monterey, California: Brooks/Cole Publishing Company.

Schulz, G.M. (1994). *Reliability and validity of the Personal Orientation Inventory in South Africa*. Pretoria: Unisa.

Schepers, J.M. (1995). *Die lokus van beheer vraelys: konstruksie en evaluerende van 'n nuwe meetinstrument*. Johannesburg: RAU.

Schutte, N.S. & Malouff, J.M. (1999). *Measuring Emotional Intelligence and related constructs*. New York: The Edwin Mellen Press.

Seeman, J. (1989). Toward a Model of Positive Health. *American Psychologist*. 44 (8), p 1099-1109.

Shostrom, E.L. (1964). An Inventory for the measurement of Self-Actualisation. *Educational and Psychological Measurement*, 24 (2), p 207-218.

Shostrom, E.L. (1974). *Manual for the Personality Orientation Inventory*. (rev. ed.). San Diego, California: EDITS.

Smit, G.J. (1991). *Psigometrika*. Pretoria: Gutenberg Printers.

Snyder, C.R. & Lopez, S.J. (2002). *Handbook of Positive Psychology*. New York: Oxford University Press.

Spector, P.E. (1988). Development of the work of locus of control scale. *Journal of Occupational Psychology*, 61, p 335-340.

Statistical Package for Social Sciences Incorporated. *Leading Organisations Empowered by SPSS Predictive Analytics*. Retrieved and downloaded July 1, 2005, from the World Wide Web: <http://www.spss.com>.

Stonefield, N. (1999). *Confirmatory factor analysis of the Personal Orientation Inventory (POI)*. Pretoria: Unisa.

Strauser, D.R. & Lustig, D.C. (2003). The moderating effect of sense of coherence on work adjustment. *Journal of Employment Counseling*. 40 (3), p 129-141.

Strümpfer, D.J.W. (1990). Salutogenesis: A new paradigm. *SA Journal of Psychology*, 20 (4), p 265-276.

Sunbul, A.M. (2003). An analysis of relations among locus of control, burnout and job satisfaction in Turkish high school teachers. *Australian Journal of Education*, April, 47(1) p 58-73.

Theron, S.W. (n.d). *Measurement of Locus of Control*. Paper read at the Congress on Psychometrics, presented by The society for Industrial Psychology of S.A.

Vaillant, G.E. (1978). Natural history of male psychological health: VI. Correlates of successful marriage and fatherhood. *American Journal of Psychiatry*. 135, p 653-659.

Van Eeden, C., (1996). *Psigologiese Welstand en Koherensin*. Ongepubliseerde Ph.D. tesis, Potchefstroom: PU vir CHO.

Van Wyk, J.D., (1978). *Die Identifisering van Terapeutiese Potensiaal*. Unpublished Doctorial Dissertation. University of Stellenbosch.

Visser, C. (1994). *'n Psigometriese ondersoek na psigologiese optimaliteit*. Pretoria: Unisa.

Walker, H. (2002). *Clarification of the affective component of psychological wellbeing*. Paper presented at the International EQ Conference, 19-20 June 2002. Durban, S.A.

Walsh, R. & Shapiro, D.H. (1983). *Beyond health and normality: Explorations of exceptional psychological wellbeing*. New York: Van Notstrand Reinhold Company Inc.

Wapner, S. (1981). Transactions of persons-in-environments: some critical transitions. *Journal of Environmental Psychology* . 1, p 223-239.

Wapner, S. (1987). A holistic, developmental, systems-orientated environmental psychology: some beginnings. *Handbook of environmental psychology*. New York: Wiley.

Witmer, J.M. & Sweeney, T.J. (1992). A holistic model for wellness and prevention over the life span. *Journal of Counselling and Development*. 71, p 140-148.

Yarnell, T.D. (1971). Purpose-in-life test: further correlates. *Journal of Clinical Psychology*. 27, p76-79.