

**THE RELATIONSHIP BETWEEN PSYCHOSOCIAL HEALTH AND EMOTIONAL
INTELLIGENCE**

by

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DECLARATION

STUDENT NUMBER: 655-449-0

I, the undersigned, hereby declare that this dissertation entitled '**The relationship between psychosocial health and emotional intelligence**' is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Signed

Date

Antoinette Rossouw

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My gratitude to

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ABSTRACT

THE RELATIONSHIP BETWEEN PSYCHOSOCIAL HEALTH AND EMOTIONAL INTELLIGENCE

by

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Degree: MA (Industrial and Organisational Psychology)

The general aim of this study was to research the relationship between psychosocial functioning and emotional intelligence in a sample of 69 employees in different organisational settings in South Africa. Each respondent completed the Personal Multi-Screening Inventory (PMSI) and the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). The research findings indicated that there are significant relationships between subscales of the PMSI and subscales of the MSCEIT, in that the ability to manage emotions is associated with low levels of Helplessness, Stress and Frustration, and high levels of Expectation, Satisfaction and Achievement, whereas the ability to perceive emotions is associated with low levels of Satisfaction and Achievement. A relatively high level of the ability to perceive emotions is also associated with Helplessness. It is recommended that employee wellness interventions in the workplace be enhanced through emotional intelligence mediation of negative psychosocial functioning. The study is concluded with recommendations for further research.

KEY TERMS

Cognitive-affective units, emotional intelligence, employee wellness, life-stage development, psychosocial health, systems theory.

CHAPTER 1 RESEARCH OVERVIEW

This research aims to explore the relationship between psychosocial health and emotional intelligence. The aim of this first chapter is to provide the framework for the research project, starting with the background and motivation, leading to the problem statement and the subsequent formulation of the research questions. The paradigm perspectives are explored. The research methodology is set out, followed by chapter divisions, and finally this chapter is concluded with a summary.

1.1 BACKGROUND TO AND MOTIVATION FOR THE STUDY

The motivation for this research resides in the important role employees' emotional and psychosocial well-being play in organisational performance.

The psychological state and emotional adjustment of employees can either facilitate or impair work performance (Bergh & Theron, 2004). Employees in the South African organisational context may find the workplace particularly stressful, especially those who perceive themselves as having little or no control over their contributions and tenure. Studies by Prilleltensky and Prilleltensky (2007) indicate that high levels of stress are associated with having little control and that stressed individuals are at risk of attracting a host of physical and psychological problems that can negatively impact their psychosocial health.

Financial performance and service excellence are key focus areas for leaders in industry (Muchinsky, 2006). One of the most important contributing factors to an organisation's financial bottom-line and service delivery is the wellness of the employees. Employee wellness is not only enhanced by compliance to physical health and safety regulations, but also by an organisation's ability to create an environment that is psychosocially healthy (Gilbreath, 2004). The term *psychosocial* refers to the combined influence that social factors and psychological factors have on behaviour. In this regard *psychosocial health* in the workplace refers to workplace psychosocial conditions that, when negative, are linked to various physical ailments (Gilbreath, 2004).

Hatch, Huppert, Abbott, Croudace, Ploubidis, Wadsworth, Richards & Kuh (2007) argue that experiences through the course of life can threaten or promote development of the ability to maintain overall psychosocial health or well-being. Hatch et al. (2007) refer to

wellness as enjoying psychosocial capital, the latter being the accumulation of psychosocial resources. These resources include personal and social skills or competence, the capacity to entertain positive emotions such as hope and optimism, and the inclination to embrace healthy attitudes and values.

Psychosocial health enables employees to focus on the task at hand. Whereas an organisation is responsible for creating a psychosocially healthy working environment, the personal psychosocial health of the individual employees is of equal importance. Employee wellness in the workplace should therefore be addressed from both these angles, because individuals suffering from negative psychosocial functioning, whether within the work environment or within their personal situations, compromise productivity by devoting only a fraction of their energy to their work (Gilbreath, 2004).

Another factor that is regarded as an important contributor to organisational performance is the emotional intelligence of its employees. According to Salovey, Bedell, Detweiler and Mayer (2000:504), emotional intelligence refers to 'the ability to perceive, appraise and express emotions accurately; the ability to access and generate feelings when they facilitate cognition; the ability to understand affect-laden information and make use of emotional knowledge, and the ability to regulate emotions to promote emotional and intellectual well-being'. Studies into the importance of employee emotional intelligence indicate that organisations where emotional intelligence is valued will probably show enhanced financial results (Cherniss & Goleman, 2001; Cobb & Mayer, 2000; Cooper & Sawaf, 1997; Goleman, 1995, 1998a, 1998b, 2001, 2002, 2006; Lam & Kirby, 2002; Lennick, 2007; Spencer, 2001; Weisinger, 1998).

Traditional methods and programmes aimed at equipping employees to reach higher levels of performance, for example technical training, sales training and workshops in professionalism, were primarily designed around developing work- or subject related knowledge and skills. The attitudes and habits of employees, however, also need to be addressed, and in this regard, employee wellness and development programmes can play an important role (Sparrow & Knight, 2006). Emotional intelligence, write Sparrow and Knight (2006) is largely attributed to attitudes. Employees demonstrating problematic attitude(s) may suffer from unconscious habits that were developed during childhood (Sparrow & Knight, 2006). Hatch et al. (2007) agree with Sparrow and Knight (2006) in their life-course approach to psychosocial health. The aforementioned seems to indicate that the relationship between psychosocial health and emotional intelligence lies in the

possible influence that life course experiences have on developing the psychosocial capital and the social skills that enable emotionally intelligent behaviour.

1.2 PROBLEM STATEMENT

The background and motivation for this research culminate in the following problem statement:

Considering the World Health Association's definition of health as being 'a complete state of physical, mental and social well-being' (Bergh & Theron, 2004:416), striving towards health in the workplace should entail physical, mental and social aspects. Referring to the role of psychologists and human resource practitioners, Bergh and Theron (2004) emphasize that the health of employees should be regarded as of the utmost importance for success in careers and in business. It is also apparent from the literature review (Cherniss & Goleman, 2001; Cobb & Mayer, 2000; Cooper & Sawaf, 1997; Goleman, 1995, 1998a, 1998b, 2001, 2002, 2006; Lam & Kirby, 2002; Lennick, 2007; Spencer, 2001; Weisinger, 1998), that employee's emotional intelligence is an important factor in organisational health, productivity and profitability. The question that arises as a result of the aforementioned is whether social well-being or psychosocial health and the ability to be emotionally intelligent and to demonstrate emotionally intelligent behaviour, are related.

Emotional pain is a signal that something is wrong. A person's energy is then used to solve the problem. A lack of emotional intelligence may result in a person not tapping into the emotional information and not using his or her emotional feedback to solve the problem. This may lead to further loss of energy and ultimately the person may find it very difficult to return to a state of healthy energy levels, which may result in impaired psychosocial health (Bailey & Leland, 2006).

Employees not only have work related issues to contend with. Personal situations change and volatile environmental factors for example the economy, crime and threatening unemployment impact their physical health and stress and depression levels. Anger in the workplace or the incidence of desk rage is also on the rise (Bailey & Leland, 2006). Being pre-occupied with problems results in failing energy levels and lack of concentration (Bailey & Leland, 2006). Those who have the ability to perceive, to understand, to use and to manage their emotions may find it less taxing to return to

normal energy levels by using the emotional feedback they get in times of emotional pain (Bailey & Leland, 2008).

The literature search yielded the impression that the relationship between psychosocial health and emotional intelligence is under-researched in the South African organisational context. It is important that this relationship is explored, so that those in the role of counselling troubled employees, as well as those concerned with the design of wellness interventions, consider enhancing the emotional intelligence levels of their clients in order to help them to self-manage feelings of helplessness, stress and frustration.

Against the aforementioned problem statement, the following research questions are formulated:

(i) Research questions regarding the literature review

Question 1: How are the two constructs psychosocial health and emotional intelligence conceptualised and explained by theoretical models in the literature?

Question 2: Is there a theoretical relationship between psychosocial health and emotional intelligence and if there is, how can this relationship be explained by means of an integrated theoretical model?

Question 3: What are the implications of a relationship between psychosocial health and emotional intelligence for employee wellness programmes?

(ii) Research questions regarding the empirical study

Question 1: What is the relationship between psychosocial health and emotional intelligence in a sample of respondents employed in the South African organisational context?

Question 2: What are the implications of such a relationship for employee wellness programmes and future research?

1.3 AIMS OF THE STUDY

The aforementioned research questions led to the following aims:

1.3.1 General aim of the research

The general aim of this research is to explore whether there is a relationship between psychosocial health and emotional intelligence.

1.3.2 Specific aims of the research

The aforementioned general aim consists of specific aims regarding the literature review and specific aims regarding the empirical study.

1.3.2.1 Specific aims: literature review

Research aim 1: To conceptualise and explain the two constructs psychosocial health and emotional intelligence by means of theoretical models from the literature.

Research aim 2: To design an integrated theoretical model based on the literature review in order to explain the theoretical relationship between psychosocial health and emotional intelligence.

Research aim 3: To explore the implications of a relationship between psychosocial health and emotional intelligence for employee wellness programmes.

1.3.2.2 Specific aims: empirical study

Research aim 1: To assess whether there is a relationship between psychosocial health and emotional intelligence in a sample of respondents employed in a South African organisational context.

Research aim 2: To determine the implications and to make recommendations regarding organisational practices with regard to employee wellness programmes, and future research.

1.4 PARADIGM PERSPECTIVE OF THE STUDY

Paradigms are comprehensive systems of interrelated thinking and actions. They are indispensable in providing researchers with clarification regarding the nature of their quest. Paradigms delineate the meta-theoretical underpinning of the theories and models utilized, and therefore demarcate the intellectual environment of the research (Terre Blanche, Durrheim & Painter, 2006).

1.4.1 Disciplinary context of the research

The following definitions indicate the importance of a multi-disciplinary approach to the study of people in the workplace, and in particular to psychosocial health and emotional intelligence as the focus of this research.

1.4.1.1 Psychology

Whereas sociology, social psychology, anthropology and political science all contribute to the macro understanding of group processes and organisational systems (Robbins, Odendaal & Roodt, 2004), it is the contribution of psychology that focuses our attention on the individual in the workplace. This focus includes the individual in his or her areas of learning, motivation, personality, emotions, perceptions, training, leadership effectiveness, job satisfaction, individual decision-making, performance appraisal, attitude measurement, employee selection, work design and work stress (Robbins et al., 2004:9). In the context of this study it is assumed that there is a reciprocal influence between the individual as a person with a certain level of psychosocial health and emotional intelligence ability, and the aforementioned areas because of situational impact on emotions and behaviour.

1.4.1.2 Personnel Psychology

Personnel psychology as a sub-field of industrial psychology refers to human resource management (Bergh & Theron, 2004). The study of personnel psychology focuses on individual differences, predicting a fit between candidate and job and (or) organisation through recruitment, selection, and placement. It also explores the factors that impact personnel utilisation. Personnel psychology is an important discipline to consider in this study because individual differences and personnel utilisation need serious consideration in assessing employee wellness, psychosocial functioning and emotional intelligence. In

the context of this study emotional intelligence ability in service-oriented positions is regarded as an important factor.

1.4.1.3 Positive Psychology

Positive psychology represents a shift from focusing on the negative, from being preoccupied with healing the sick or managing the worst, towards building the best on existing positive factors (Haworth & Hart, 2007). At the subjective level, positive psychology is about well-being, optimism, hope, happiness and flow. At the individual level it is the quest for love and vocation, interpersonal skill, having courage and perseverance, being original, being able to forgive and being future-oriented. At group level positive psychology translates into better citizenship that amounts to leadership, responsibility, altruism, moderation, tolerance, and work ethic (Haworth & Hart, 2007). The relevance of positive psychology for this research lies therein that employee psychosocial health and emotional intelligence are important aspects of positive psychology, and employee wellness.

1.4.1.4 Growth Psychology

The study of growth psychology explains the importance of development in the psychological adjustment of children and adults. In personality, behaviour and careers, the study of human development incorporates age-related progression and change that are genetically and psychosocially influenced from conception onwards. The importance of human growth lies in physical, social, cognitive and psychological competency development, which normally progresses along with life-stage expectations (Bergh & Theron, 2004). Growth psychology is an important discipline to consider in the study of the relationship between psychosocial health and emotional intelligence, especially because of the argument by Hatch et al. (2007) and Sparrow and Knight (2006) that psychosocial resources accumulate along life-stage developmental phases, resulting in attitudes that contribute to emotional intelligence.

1.4.1.5 Social Psychology

According to Robbins et al. (2004), social psychology focuses on the influence people exert on one another. In industrial and organisational psychology the contribution of social psychologists is the study of change and its implementation and acceptance in the workplace. In addition to this, attitudes, communication patterns, the satisfaction of

individual needs through group activities, and group decision-making processes are all important industrial and organisational areas that benefit from the investigations of social psychologists (Robbins et al., 2004). From an employee wellness perspective, the reciprocal influence between individuals is a very important factor in psychosocial health and emotional intelligence.

1.4.1.6 Psychometrics and psychological assessment

Psychometrics refer to the study of the principles and techniques involved in assessing the individual differences within, and similarities between people. Psychological assessment serves to identify attributes, select the best people (discriminate fairly), and provide feedback for personal and career development (Bergh & Theron, 2004). Psychometrics and psychological assessment are highly relevant to any empirical study and especially to this research because neither psychosocial health nor emotional intelligence can be properly assessed without psychometrically sound instruments.

1.4.2 Relevant paradigms

1.4.2.1 The humanistic paradigm

Historically, humanism developed as a reaction against Freudian psychology that was perceived as too negative, and also against behaviourism that was seen as too mechanistic. The thinking behind humanism was that individuals ought to be assisted in becoming the best selves they could be and have a positive self-regard. Humanism developed from the assumption that human beings have an innate desire to grow and develop towards self-fulfilment. This approach can clearly be seen in industrial and organisational psychology in the development of human resources (Bergh & Theron, 2004). The humanistic paradigm is relevant to this study because employee wellness implies facilitating and (or) counselling employees towards having a positive self-regard and reaching their potential.

1.4.2.2 The cognitive social learning paradigm

Cognitive social learning or social observational learning refers to the major role cognition plays in acquiring behaviour. It posits that learning also occurs through observation, even though the learner remains passive and does not demonstrate new learning so that it can be reinforced. People identify with the values and attitudes of their

significant others and (or) the groups they belong to, and this manifests in their behaviour (Jordaan & Jordaan, 1998). The cognitive social learning paradigm is highly relevant to this research because it forms part of the theoretical underpinning of emotional intelligence ability.

1.4.2.3 The functionalist paradigm

According to the functionalist paradigm, society is a complex inter-related system. This systemic character of society produces order in that social events function as contributing to its continuity (Giddens, 2002). The functionalistic paradigm approaches social theory as contributing to a person's understanding of his or her role, his or her social relationships and the impact of environmental influences. This has a very important function in pragmatism in industrial and organisational psychology in that tests, questionnaires and statistics are used as aids in ascertaining individual differences (Bergh & Theron, 2004). The functionalist paradigm underpins the theory of life-stage development because it posits that growth takes place in a complex inter-related system (Newman & Newman, 2006).

1.4.3 Theoretical models

The theoretical models applicable to this research are expounded in the literature review. Theoretical models for the literature review on psychosocial health include the life stage development model of Erikson (Newman & Newman, 2006), Von Bertalanffy's (1968) dynamic systems theory, Bronfenbrenner's (1977) ecological model, the Phenomenological Variant of the ecological model by Spencer as cited in Swanson, Spencer, Harlapani, Dupree, Noll, Ginzburg and Seaton (2003), the Developmental Niche theory of Super and Harkness (1980) and Social Role theory (Mead, 1934).

The theoretical models for emotional intelligence include the four-branch ability model of emotional intelligence of Mayer and Salovey (1997), the Emotional Competence Model of Boyatzis (1982) and the Bar-On model (Bar-On, 1985).

1.4.4 Conceptual descriptions

The main concepts namely psychosocial health and emotional intelligence will be discussed.

1.4.4.1 *Psychosocial health*

Psychosocial means that which pertains to the interaction between social factors and the psychological system (Newman & Newman, 2006). The psychological system includes the mental processes that the person needs in order to derive meaning from experiences, and to take action. Social factors are better understood when viewed as a societal system and broken down into societal influences for example social roles, rituals, cultural and social expectations, leadership styles, communication patterns, family organisation, religious ideologies, economic fluctuations, war, peace, and exposure to discrimination against, and intolerance towards, other groups. A psychosocial crisis refers to the stress people experience when they perceive conflict between societal expectations and their own competencies (Newman & Newman, 2006).

Successful resolution of the psychosocial crises encountered during the various stages of development result in psychosocial health or the psychologically healthy interaction between an individual and the societal or environmental context (Newman & Newman, 2006).

Positive psychosocial functioning (health) is described as having positive expectations for the future, overall satisfaction with life and a healthy achievement orientation (Faul, 1995).

1.4.4.2 *Emotional intelligence*

Whereas the literature provides various definitions of emotional intelligence, the definition applicable to this research is that of the ability model. Salovey et al. (2000: 504) define emotional intelligence as encompassing 'specific competencies, including the ability to perceive, appraise and express emotions accurately; the ability to access and generate feelings when they facilitate cognition; the ability to understand affect-laden information and make use of emotional knowledge, and the ability to regulate emotions to promote emotional and intellectual well-being'.

1.4.5 Central hypothesis

The central hypothesis is formulated as follows:

There is a significant relationship between individuals' level of psychosocial health and

their level of emotional intelligence.

1.5 RESEARCH DESIGN

The research design explains the various research approaches and statistical techniques that are going to be used in this study.

1.5.1 Exploratory research

According to Mouton and Marais (1992) the aim of exploratory research is to gather information from a relatively unknown field. Once information regarding the central concepts and constructs of the field are in place, the research priorities can be established.

In this study various theoretical views on psychosocial health and emotional intelligence are explored.

1.5.2 Descriptive research

Descriptive research aims to accurately describe phenomena. This can result in an in depth investigation of the variables under scrutiny which can be 'individuals, situations, groups, organisations, interactions or cultures' (Mouton & Marais, 1992:46). On the other hand the emphasis may fall on a description of the frequency of a specific characteristic or variable in a sample. In this study descriptive research applies to the conceptualisation of the constructs psychosocial health and emotional intelligence as expounded in the literature review. Descriptive research flows into correlation statistics when the researcher moves from simply listing frequencies or averages towards seeking possible relationships between the variables described (Mouton & Marais, 1992).

According to Graziano and Raulin (2004), correlation research is appropriate when the strength of a relationship between two or more variables is to be measured. Correlation research does not imply causality (de Vos, 2004), but should a consistent relationship be found, prediction is possible. Whereas one cannot use correlation research to prove a theory (de Vos, 2004), it can provide data that is either consistent or inconsistent with existing scientific theory.

In this study correlation research serves the purpose of determining whether there is a

relationship between psychosocial health and emotional intelligence.

1.5.3 Explanatory research

Whereas descriptive research explores relationships, explanatory research aims to indicate the direction of the relationship, if the relationship is causal (Mouton & Marais, 1992). In this study the aim is therefore to ascertain whether there is a causal relationship between psychosocial health and emotional intelligence, or whether psychosocial health is influenced by the ability to be emotionally intelligent.

1.5.4 Validity

The validity of research findings is enhanced when the researcher is constantly aware of the possibility that nuisance variables may contaminate the validity of the research results.

Mouton and Marais (1992) distinguish between internal and external validity, stating that internal validity depends on the valid measurement of constructs and the accuracy of the data. Research has external validity when research findings are also valid for similar studies.

In this study construct validity refers to the psychological properties of psychosocial health and emotional intelligence, and is based on reviewing scientifically sound theories and models. In the empirical research standardised measuring instruments are used.

1.5.5 Reliability

In the empirical study, reliability refers to the extent to which the measuring instruments will yield the same results should the testing be repeated (Kerlinger & Lee, 2000). Eliminating nuisance variables as far as possible ensures reliability. The reliability of the instruments used in this research has been tested and documented as such.

1.5.6 Unit of analysis

For the purpose of this research the unit of analysis is the individual. The focus is on the psychosocial health and the emotional intelligence ability of the individual with the purpose of ascertaining whether there is a relationship between psychosocial health and

emotional intelligence ability.

1.5.7 The variables

Psychosocial health is the dependent variable and emotional intelligence is the independent variable. The independent variable (in this case emotional intelligence), presumably influences the dependent variable (psychosocial health). The independent variable in research is the antecedent and the dependent variable the consequent (Kerlinger & Lee, 2000).

1.6 RESEARCH METHODOLOGY

The research is conducted in two phases, namely a literature review and an empirical study.

1.6.1 Phase 1: Literature review

The literature review consists of four steps:

Step 1: The first step is to review the literature on psychosocial theory from a life-stage development perspective and to design a model that hypothesises the possible relationship between psychosocial health and emotional intelligence.

Psychosocial health is conceptualised and explained by means of a literature search into Erikson's life stage development theory (Newman & Newman, 2006), Von Bertalanffy's (1968) dynamic systems theory, Bronfenbrenner's (1977) ecological model, the Phenomenological Variant of the ecological model by Spencer as cited in Swanson, Spencer, Harlapani, Dupree, Noll, Ginzburg and Seaton (2003), the Developmental Niche theory of Super and Harkness (1980) and Social Role theory (Mead, 1934).

Step 2: The second step in the literature review entails the paradigmatic and conceptual foundations of emotional intelligence, the theoretical basis of the construct, and the selection of appropriate definitions and models from the existing literature.

Emotional intelligence is conceptualised and explained by means of a literature research into three theoretical models of emotional intelligence, namely the ability model of Mayer & Salovey (1997), the emotional competency model of Boyatzis & Sala (2004) and the

emotional intelligence model of Bar-On (1985).

Step 3: The third step is to explore whether there is a theoretical relationship between psychosocial health and emotional intelligence.

Step 4: This step serves to design an integrated theoretical model of the research in order to explain the theoretical relationship between psychosocial health and emotional intelligence.

1.6.2 Phase 2: Empirical Research

The empirical study is conducted within the context of organisations in South Africa and consists of nine steps:

Step 1: Determination and description of the sample

The sample is drawn from employees over the age of 17 years, working in South African organisations.

Step 2: Choosing and justifying the psychometric battery

Two measuring instruments are selected, one to measure psychosocial health and one to measure emotional intelligence.

Step 3: Administration of the psychometric battery

The data is collected within organisations. Informed consent is sought through electronic mail communication. Participants who agree to participate receive instructions for the electronic completion of the questionnaires. Once finished, responses are returned electronically.

Step 4: Scoring the psychometric battery

Scoring the psychometric battery entails electronic capturing of biographical data as well as the responses to all the items on the psychosocial functioning questionnaire and the emotional intelligence test. The data is imported into an SPSS data file.

Step 5: Statistical processing of the data

The statistical techniques relevant to this study are descriptive statistics (frequencies, means, standard deviations, and Cronbach's alpha; common statistics (Pearson product moment correlation coefficients); inferential statistics (t-tests, ANOVA, Scheffé's post hoc tests).

Step 6: Formulation of the research hypotheses

The research hypotheses is formulated

Step 7: Reporting on and interpretation of the results

Statistical results are illustrated through SPSS graphs and tables. The results are also interpreted in text.

Step 8: Integration of the research findings

Conclusions from the literature review are integrated with conclusions drawn from the empirical results.

Step 9: Formulation of conclusions, limitations and recommendations

The integrated conclusions are reported, the limitations discussed and recommendations for application in the organisational context are suggested.

1.7 CHAPTER DIVISION

The chapters are logically divided to start with the framework of the research in chapter 1, which involves the background to and the planning of the empirical research. This chapter is followed by the literature review on psychosocial health (chapter 2), the literature review on emotional intelligence (chapter 3), the empirical research (chapter 4) and the research results (chapter 5). In the final chapter (chapter 6) the limitations of the research as well as recommendations for future research and for employee wellness programmes, are addressed.

Chapter 2: Psychosocial health

In this chapter the aim is to explore psychosocial health from the perspective of Erikson's (Newman & Newman, 2006), life stage development theory. Five theoretical perspectives are researched for their application to psychosocial health. These five models are mentioned in the section on theoretical models.

Chapter 3: Emotional intelligence

The aim of this chapter is the literature review on emotional intelligence. The theoretical underpinnings of the social cognitive personality theory of Mischel and Shoda (1999, 2000) are researched. Three models of emotional intelligence are described and the implications of emotional intelligence for psychosocial health and employee wellness are explored. The chapter concludes with a theoretical model integrating psychosocial health and emotional intelligence.

Chapter 4: The empirical research

The aim of this chapter is to describe the sample, the questionnaire used to assess psychosocial health and the test used to test emotional intelligence ability. The administration concerning the data collection is reported and the hypotheses is formulated.

Chapter 5: Research results

The research hypotheses are tested, and the results of the empirical study are reported by means of descriptive, common and inferential statistics.

Chapter 6: Conclusions, limitations and recommendations

In this final chapter the aim is to integrate the findings and state the conclusions. The possible application of the research findings to the field of employee wellness is mentioned. Finally the chapter is concluded with an explanation of the limitations of the study and recommendations for further research.

1.8 CHAPTER SUMMARY

This chapter provided the framework for this research project. The background and motivation, problem statement and research questions leading to the aims and the research model were followed by the research design and methodology. The chapter ended with the division of the subsequent chapters.

Chapter 2 entails the literature review on psychosocial health.

CHAPTER 2 PSYCHOSOCIAL HEALTH

In this chapter the paradigmatic and conceptual foundations of psychosocial health are discussed. Psychosocial theory is viewed from a life-stage development perspective, followed by a brief reference to systems theory, the ecological model and social role theory. This is followed by six variables influencing psychosocial health. Finally, the possible implications of psychosocial health for industrial and organisational psychology, especially emotionally intelligent behaviour in the workplace, are explored.

2.1 PARADIGMATIC FOUNDATIONS

The paradigmatic foundation of psychosocial health is rooted in the theory of human development, as formulated by Erik and Joan Erikson (Erikson, 1988 in Newman & Newman, 2006:39). Their formulation of psychosocial theory was influenced by, among others, Peter Blos, Sigmund and Anna Freud, Robert Havighurst, Jean Piaget and Robert White (Germain & Bloom, 1999).

2.1.1 Assumptions of psychosocial theory

Psychosocial theory not only identifies growth issues across the life span, it also suggests that experiences during adolescence or adulthood can assist one in reappraising or reinterpreting earlier periods of one's life because what one becomes as an adult depends to a large extent on experiences during early developmental stages (Eysenck, 2004).

The second assumption is that people are able to draw upon their resources in order to protect themselves against events and environmental threats (Pearlin & Schooler, 1978), enabling them to develop a mechanism for coping with life's challenges. Therefore, apart from the ongoing developmental interaction between the biological and the societal influences, one can shape the direction of one's development by self-regulation.

The third assumption of psychosocial theory is that culture contributes to individual development. At each life stage, there are certain demands and societal and cultural expectations that evoke individual responses, influencing the development of future capabilities (Newman & Newman, 2006). Different cultures may have widely differing views on, for example, the age of maturity. Another may disregard values that are upheld

by one community. Views on marriage and child rearing are by no means universal, and neither are views on religion and rituals (Welchman, 2000).

2.2 CONCEPTUAL FOUNDATIONS

The basic concepts of psychosocial theory are embedded in the interaction between biological, societal and psychological systems. It is within these systems that people mature, change, and subsequently modify their beliefs about themselves (Newman & Newman, 2006).

Man is unique and no two life-stories are the same. There does however, seem to be a pattern according to which people grow and mature biologically, socially and psychologically which is explained by the concepts in the following section, each of which is an important building block towards an understanding of psychosocial health. Summarized, the concepts relevant to psychosocial health explain the following: An individual, within his or her social environment and with the help of *significant relationships*, has to learn to *cope* with *psychosocial crises*. These crises require *developmental tasks* from the individual in order to overcome the crises, thereby successfully resolving the conflict presented by the *developmental stage*. The successful resolution of psychosocial crises paves the way towards *psychosocial health* (Faul, 1995).

2.2.1 Psychosocial health

Psychosocial means that which pertains to the interaction between social factors and the psychological system (Newman & Newman, 2006). The psychological system includes the mental processes that the person needs in order to derive meaning from experiences and to take action. Social factors are better understood when viewed as a societal system and broken down into societal influences for example social roles, rituals, cultural and social expectations, leadership styles, communication patterns, family organisation, religious ideologies, economic fluctuations, war, peace, and exposure to discrimination against, and intolerance towards, other groups. *Psychosocial theory* is therefore the theory of cognitive, emotional and social growth that is the result of the interaction between the social expectations that confronts the individual at each life stage, and the person's competencies with which he meets these challenges. Subsequently, a *psychosocial crisis* refers to the stress people experience when they perceive conflict

between societal expectations and their own competencies (Newman & Newman, 2006).

Successful resolution of the psychosocial crises encountered during the various stages of development result in psychosocial health or the psychologically healthy interaction between an individual and his or her societal or environmental context (Faul, 1995).

2.2.1.1 Positive psychosocial functioning

According to Schultz (1977), there does not seem to be a universally accepted clinical image of a psychosocially healthy person. The one thing that scholars do agree on is that each person is unique and to have an idiosyncratic nature is to be human. What seems best at one stage of development may be deemed a dismal failure in later life, and therefore psychosocially healthy people may be loosely defined as those who are free enough (secure enough with their selves) to experiment with different prescriptions to see which ones are validated in their daily lives (Schultz, 1977).

Be that as it may, for the purpose of this research positive psychosocial functioning (health) is described as having positive expectations for the future, overall satisfaction with life and a healthy achievement orientation (Faul, 1995).

- Positive expectations for the future

Expectation is the positive orientation of the individual towards his or her future. It involves the emotional experience of hope and the cognitive appraisal of one's life from an optimistic point of view. It is the belief that one can plan one's own future, and that what one does matters in life. It is the belief that things are possible, even if they will mean great effort and faith in oneself and the situation. It is also the belief that evil can be overcome by good and that man is inherently good and must be protected from evil (Faul, 1995:203).

- Satisfaction

Satisfaction is the unique expression of individuals as to the feelings of well-being they attach to their lives. These feelings have no specific "objective" roots, but are characterized by the unique interaction of the individual with his or her environment. It represents an overall judgment of a person's life satisfaction that has to do with a person's cognition and a person's affect (Faul, 1995:189).

- Achievement orientation

Achievement relates to the tendency of individuals to approach goals that can enhance their feelings of competence and pride. It relates to awareness within individuals of their own needs and potential and their striving to reach the goals they have set for themselves. Achievement-oriented individuals tend to strive for mastery of tasks to improve themselves and their performance and they have good development of self-attributions (Faul, 1995:174).

2.2.1.2 *Negative psychosocial functioning*

Negative psychosocial functioning is described as being frustrated in the achievement of goals, experiencing stress because of environmental demands and feeling and acting helpless because of a disintegration of goal-directedness (Faul, 1995).

- Frustration

Frustration is the reaction of the individual to the problems in himself and his environment that prevent him from the achievement of his goals and desires in life. Frustration can be produced either by delay, thwarting and (or) conflict and can lead to aggression, regression and (or) fixation. Individual responses to frustration differ to the extent that the individual is task involved or ego involved when approaching tasks, and whether he has internal locus of control or external locus of control (Faul, 1995:222).

- Stress

Stress is the state individuals reach when they experience that they can no longer respond positively to the demands of the environment. This stage is usually reached when all their internal and external resources have been exhausted, and is caused by a combination of stressful life events that demand certain adaptive strategies. These adaptive strategies are for example the individual's perception and appraisal of these events, his or her abilities to deal with the events and his or her subsequent reactions to these events (Faul, 1995:242).

- Helplessness

Helplessness can be seen as the state the individual reaches when he or she experiences that whatever he or she does, does not matter and that there is no way in which he or she can control the environmental forces in his or her life. It relates to the disintegration of goal-directed activities and living in an existential vacuum, where one can find no meaning to attach to one's life. The individual is normally exhausted in his or her coping abilities and has been under excessive stress for too long (Faul, 1995:264).

2.2.2 Stages of development

Theorists that adopt the stance that human development across the lifespan is *continuous* (Berk, 2007:6) posit that the road to maturity is a process by which the immature person augments his or her skills through a continuous change in thinking, thereby developing (maturing) by gradually adding complexity to skills that were already in place since early infancy.

Stage theorists on the other hand, regard development as discontinuous, meaning that individuals understand and respond to the world in novel ways and at different levels of maturity at specific times (Berk, 2007:6). Theorists who promote the discontinuous (stage) perspective believe that development is like climbing a staircase where each step means entering into a higher (more complex) level of maturity.

There are contemporary theorists who believe changes over the lifespan are both discontinuous and continuous, that universal as well as unique individual features come into play, and that heredity and environment interact in the modification of the person's traits and capacities (Rutter, 2002).

Schaffer (2006:16) defines a stage in development as 'a distinct phase of life characterized by a unique set of mental characteristics'. Flavell (1963) in Harris and Butterworth (2002:41), distinguishes stages in development according to the following criteria:

Stages are distinguished by qualitative changes; in moving to a next stage, developing human beings are not simply able to do more, they are also able to do things differently. Flavell, Miller and Miller (1993) refer to this quality as 'reorganisation' (Schaffer, 2006:17).

There are various changes that occur simultaneously as the person goes through the transition from one stage to the next, also referred to as 'concurrency' (Schaffer, 2006:17).

Transitions from one stage to the next are rapid reorganisations across a number of areas. Flavell et al. (1993), referred to this criterion as 'abruptness'.

Whereas Erikson (1997) proposed eight stages of psychosocial development, Newman and Newman (2006) propose eleven, by adding the pre-natal stage, splitting adolescent development into early and late adolescence, and adding the very old age stage. Newman and Newman (2006) argue that the addition of the early stage of adolescence emerged from a change in the timing of the onset of puberty in our modern society. The stage of late adolescence (age 12 to 18) is significant because of the different challenges provided by changes in education systems, and by the modern variety of life choices. *Very old age* is also a modern-day stage, because advances in medical technology and healthier lifestyles result in longevity.

Each stage brings its own conflict. Consider for example, the psychosocial conflict, guilt versus initiative, during early childhood. The successful resolution of this conflict will bring about a positive experience of efficacy regarding innovation and experimentation. The developmental outcome would be a person who is confident enough to take risks in order to learn more, not only intellectually, but also socially (Newman & Newman, 2006). Thus, successful resolution of all the developmental crises theoretically results in mature behaviour. Erikson (1997) refers to psychosocial strengths that emerge, for example *hope* through the successful resolution of trust vs. mistrust in infancy, *fidelity* from that of identity vs. identity confusion, and *care* from successfully resolving the generativity vs. self-absorption crisis in adulthood.

Berk (2007) writes that whereas stage theorists seem to believe in a universal sequence of development, people live in unique personal and environmental contexts that can result in uniquely different paths towards change and maturity.

2.2.3 Developmental tasks

Masten and Reed (2002:76) define developmental tasks as 'expectations of a given society or culture in historical context for the behaviour of children in different age periods and situations, the criteria by which progress in individual development is

judged'. This involves physical, emotional, intellectual and social growth as well as developing the self-concept.

Havighurst (1972) introduced the concept of developmental tasks. He based his theory on the fact that societies have certain expectations in that it requires age-related adaptation. Maturation also plays a role. Havighurst (1972) believed that there are moments when the person is particularly sensitive, or ready to learn certain tasks. Those who learn are rewarded whereas those who do not, are subjected to disapproval. He suggests that, if a certain skill is not learned during a sensitive or teachable period, it may become difficult to acquire it later. Obviously, this differs from society to society (Welchman, 2000). Addressing the task of forming an intimate commitment with a life partner, for example, comes much later in most Western societies than in some Eastern societies or in tribal groups.

As one grows, tasks are mastered and the person's competencies to face the challenges of life are enhanced. In many instances, resilient individuals meet developmental expectations despite serious environmental threats to adaptive development (Masten & Reed, 2002).

2.2.4 Psychosocial crises

In this context the word *crises* refers to normal stresses that require adjustment to societal demands and cultural expectations at each stage of development (Newman & Newman, 2006). These demands may be for enhanced self-control, skills acquisition or a more deliberate goal orientation, and the individual tries to resolve the crisis before moving to the next developmental stage. Erikson (1980) views these crises as polarities, for example trust vs. mistrust, and autonomy vs. shame and doubt. Psychosocial theory states that each person experiences both ends of the continuum. Even in loving families where nurturing and trust abound, an infant may experience frustration or disappointment that may result in mistrust (Newman & Newman, 2006).

On the road towards adulthood the presence of psychosocial crises implies that there is a discrepancy between the developing individual's competencies and societal expectations. The process through which this discrepancy is resolved boils down to recognising that there is societal or cultural pressure, and giving it personal meaning which will result in gradual change. The individual therefore strives to maintain

coherence as a unit as well as a member of society (Masten & Reed, 2002).

With regard to the stage *identity vs. role confusion*, current theorists (Arnett, 2006; Berk, 2007; Kroger, 2007; Moshman, 2005) agree with Erikson (1997) that this stage brings about inner conflict in terms of values, plans for the future and priorities, but they prefer not to view this as a *crisis*, but as a stage in which young people construct a solid self definition, exploring many options enabling them to make life-changing decisions and commitments.

One can derive from the above that according to Erikson (1997), the underlying concepts of crisis and its resolution and subsequent readiness for the next developmental crisis are the links in the stages-of-life chain. This rather linear view is obviously not as simple as it seems because Erikson (1997) allows for the life-long possibility of looking back and working through themes from earlier stages (Welchman, 2000).

There is evidence that, given the complexity of each stage, there may be working within stages as well. Dawson and Gabrielian (2003:164) cite several researchers who have provided evidence of 'pauses or spurts, drops or shifts' during developmental transitions in childhood and adolescence (Andrich & Styles, 1994; Case, 1992; Fischer & Rose, 1994; Fischer & Silvern, 1985; Thomas, 1993; van der Maas & Molenaar, 1992; van Geert, 1998; Walker, Gustafson & Hennig, 2001).

Dawson and Gabrielian (2003) agree that subsequent stages can successfully be conquered if elements of the previous stage are in place (crisis or crises resolved). Logically, this means that each stage is more complex than its predecessor. Dawson and Gabrielian (2003) posit that this sequencing is a part of the hierarchical complexity or system, supporting the theory of stages of development. There are internally consistent formal properties defining the hierarchical complexity of each stage. Piaget's (1965) model for example (Dawson & Gabrielian, 2003:163) speaks of these properties as the *structure of the whole*.

Stage change is therefore a dynamic process involving the transformation from one complex system to an even more complex one. Considering both Piaget's (1965) *structure of the whole* and dynamic systems theory it seems probable that there may be conditions under which the developing person may appear to pause, to consolidate and (or) reorganize. According to Fischer and Rose (1999), in Dawson and Gabrielian

(2003:164), performance may only be on a single level of complexity during these pauses or plateaus.

During adulthood there are also stages or seasons of psychosocial development. Adults experience psychological challenges because of biological and social changes. These changes (transitions), according to Levinson (1986) in Berk (2007:465) last for approximately five years, concluding the previous stage and serving as preparation for the next season. There may be stable periods between the transitions, lasting about five to seven years. The stable seasons (Berk, 2007) are aimed at acquiring harmony between personal and societal demands, enhancing quality of life. Whereas psychosocial *crises* propel the developing young person towards maturity, psychological *challenges* may serve to elicit transitions from early to late adulthood, depending on the person.

2.2.5 Significant Relationships

From childhood through old age a person's number of relationships expands and shrinks. At each stage of life the network of significant relationships can be demanding, caring and meaningful; it increases one's readiness to enter into an ever-growing social life. Whereas social development has been regarded as a unidirectional influence of parents upon their children, recent theorists (Russell, Mize & Bissaker, 2002) refer to the dyadic interaction between children and parents as bi-directional. How people interact and with whom are influenced by their social context (Newman & Newman, 2006). Children change their parents' social context, and the individuality of each child influences the parents in their choice of child-rearing practices (Schaffer, 2006).

The changing social context is part of interconnected systems. These systems are for example, immediate family, other relatives, groups from work and community, schools, clubs, ethnic, and religious groups. Groups, or systems, are parts of other systems and are all at some level of social organisation. Development occurs within these social organisations, embedded in culture. It is the qualities and resources of these social organisations that influence developmental expectations and subsequently the expectations within significant relationships (Newman & Newman, 2006).

From a psychosocial (stage) perspective the positive role of the family, and especially parents as significant others, seems crucial in successfully resolving developmental

crises, especially in the identity vs. confusion life stage (Berk, 2007).

2.2.6 Coping

Newman and Newman (2006: 50), refer to Somerfield and McCrae's (2002) definition of coping as 'the conscious, adaptive efforts that people use to manage stressful events or situations, and the emotions associated with these events'. Houston (in Snyder, Rand, and Sigmon, 2002:265) defines it as 'the ability to effectively respond to a stressor so as to reduce psychological (and physical) pain'. Pearlin and Schooler (1978:3) use as their working definition 'any response to external life-strains that serves to prevent, avoid or control emotional stress'.

Coping successfully implies that one has the ability to appraise the difficult situation and then redefine it by focussing on the positive. Obviously the availability of resources like social support, finances and access to a professional advisor as well as psychological resources, for example self-esteem and mastery, enhance coping behaviour (Pearlin & Schooler, 1978). Lefcourt (2002) adds humour to this list of resources, by referring to it as a coping strategy that is emotion-focused.

Psychosocial theory posits that consistent efforts to manage developmental crises successfully result in forming the necessary basic adaptive capacities, or prime *adaptive ego qualities* (Newman & Newman, 2006:52). Moos (2002) suggests that there is interplay between context, coping and adaptation as depicted in Figure 2.1. Personal and contextual factors working with coping skills has an affect on psychosocial functioning and maturation; this develops the personal system and provides the resources for mastering the next developmental stage (Moos, 2002). Lacking these resources, inadequate mastering of the challenges posed by a developmental crisis results in the formation of maladaptive orientations, also referred to as core pathologies (Erikson, 1982 cited in Newman & Newman, 2006:52).

Core pathologies can result in people psychologically isolating themselves thereby obstructing the resolution of further crises in subsequent developmental stages. The energy that would normally be directed toward mastering the developmental tasks of a stage is directed instead toward resisting or avoiding change (Newman & Newman, 2006). Coping, on the other hand, provides the experience of competence and efficacy in facing life's challenges (Moos, 2002).

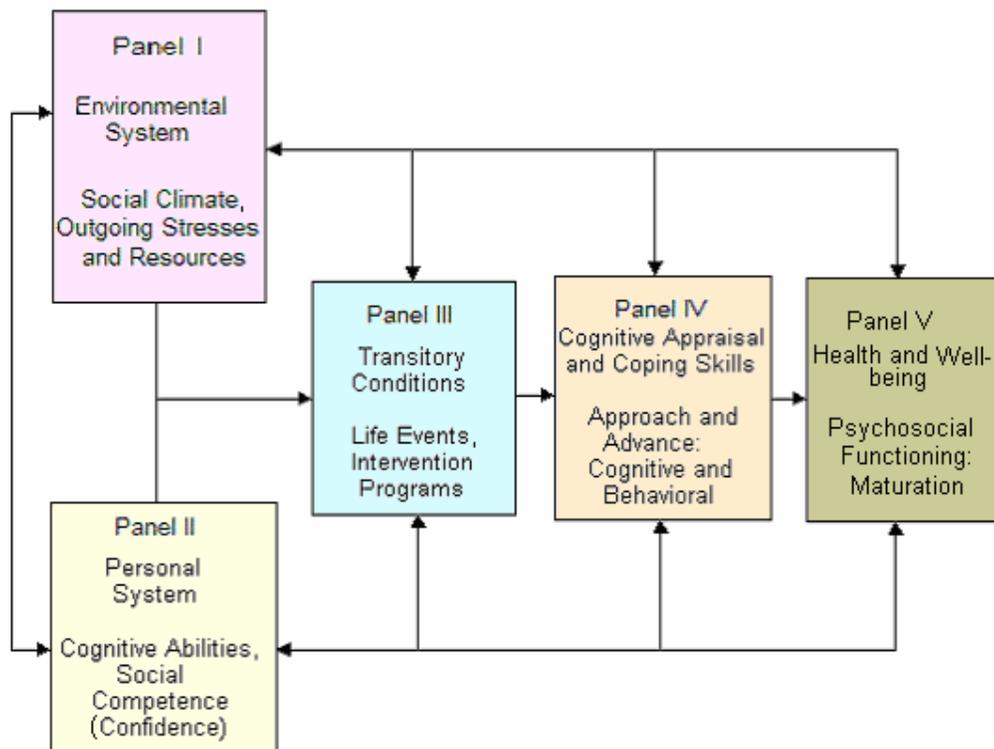


Figure 2.1 A model of the interplay between context, coping and adaptation (Moos, 2002:69).

2.3 THEORETICAL PERSPECTIVES

The dynamic systems model (Von Bertalanffy, 1968), the ecological model (Bronfenbrenner, 1977, 1993, 1999), the phenomenological variant of the ecological systems theory according to Spencer (2003) as cited in Swanson et al. (2003), Super and Harkness' (1980) developmental niche model, and the social role model (Biddle, 1979; Biddle & Thomas, 1966; Mead 1934), were chosen for their focus on systems and the environment.

The emphasis on systems and the environment is important because psychosocial theory is inextricably rooted in the interaction between biological, societal and psychological systems as played out in the environmental context. In view of human beings, this self-organising ability of the system means that behavioural change takes place when the system as a whole is ready for it (Von Bertalanffy, 1968).

2.3.1 Dynamic Systems theory

The term *dynamic system* is defined as 'any complex organisation that is composed of multiple parts, each with its own function but also involved in a pattern of reciprocal influences with other parts' (Schaffer, 2006:39). The essence of the whole, according to Von Bertalanffy (1968), lies in the relationship of its parts and therefore the system is able to maintain equilibrium and to bring about change. Dynamic systems operate along the following principles:

- Wholeness which refers to the system as an integrated whole that is greater than the sum of its parts;
- Integrity of sub-systems, which refers to complex systems that are made up of subsystems, the latter being systems in their own right;
- Stability and change, which refers to change in one part which necessarily brings about change in the whole system and
- Circularity of influence, which refers to a system's non-linear pattern of influence because of the mutual interdependency of its components (Schaffer, 2006:40).

It is especially the circularity of influence-characteristic that is of importance when human beings are viewed from a systems perspective; the different components of the system interact dynamically, allowing new structures and functions to develop which interact and influence and consequently allow the emergence of other structures and functions. This dynamic systems interaction and subsequent development is known as *epigenesis* (Schaffer, 2006:40).

Through psychosocial theory one gains an understanding of what is internally experienced when the biological, psychological and societal systems interact. When there is change in one of the three systems, this generally always brings about change in the others. Newman and Newman (2006) use the AIDS epidemic to explain this systems phenomenon. AIDS is a biological factor that significantly influences the psychological and the societal systems. AIDS brought about an urgent need for sex education, modified health care, and home-based caregivers. It affects psychologically because in many countries sufferers are stigmatised. It affects both psychologically and socially

because parents die, leaving large numbers of children to fend for themselves. Often these children have to survive without income, and it is left to grandparents or the community to care for them; often there is nobody to step into the gap, and these children may have to resort to crime to survive.

Systems theory adopts the stance that the whole is more than the sum of its components. Being able to identify the components (parts) does not bring about a full understanding of the system because there are dynamic processes and relationships within and between the parts that bring about a larger whole. Whereas its governing laws can explain each part, the system can neither violate, nor solely be explained by those laws (Von Bertalanffy, 1968).

A fundamental process guiding system change is adaptation; the system changes or adapts to prevent disorganisation brought about by the impact of environmental fluctuations (Newman & Newman, 2006). This adaptive self-regulation is the system's response to environmental change, using feedback mechanisms.

Whereas a person is part of a group, he or she is also composed of subsystems namely physical, cognitive, emotional, social and self-systems. The larger system can change, impinge and place demands on individuals, enforcing adaptive regulations and reorganisation between the subsystems in an endeavour to achieve stability (Newman & Newman, 2006).

Human behaviour takes place in a multi-layered setting (Schaffer, 2006). Bronfenbrenner's (1993) ecological model may serve to clarify this complexity to some extent.

2.3.2 The ecological model

Bronfenbrenner (1977, 1993, 1999) pioneered the developmental ecological systems approach and defined the ecology of human development as follows:

the scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which the developing person lives, and this process is affected by the relations between these settings, and by the larger contexts in which the settings are embedded (Brehm, Kassin & Fein, 2005:20).

It is the reciprocity of influence between the environment and the individual, or as Brehm et al. (2005) write, the two-directional influence between individual and environment that provides the dynamism for the individual to evolve and to continually restructure, thereby gradually designing a mould for shaping a behavioural signature.

Waddington (1957) in Harris and Butterworth (2002:38) posits that the consequences of environmental factors differ according to where and when during development these environmental changes occur. Waddington (1957) coined the phrase *epigenetic landscape*. This is his metaphor for the developmental process by which new forms emerge through interactions of the preceding form and its environment.

Initially Bronfenbrenner (1977) distinguished between the microsystem, mesosystem, exosystem and macrosystem as depicted in Figure 2.2.

2.3.2.1 *The microsystem*

The microsystem represents the interaction between child and immediate environment, and is described by Bronfenbrenner (1999) as roles, behavioural patterns, and interpersonal relations as the developing individual experiences it in the immediate environment, which is a setting with specific physical, social and symbolic features; engagement with these features is either invited or inhibited and the interaction becomes progressively more complex (Brehm et al., 2005).

2.3.2.2 *The mesosystem*

The mesosystem represents links and processes that occur between two or more settings and the developing person. Information, knowledge and attitudes link two or more microsystems through the reciprocal developmental impact of the one on the other (Gardiner & Kosmitzki, 2002).

2.3.2.3 *The exosystem*

This system describes processes between two or more settings, at least one of which does not contain the developing person, but in which events occur that have an indirect influence on the immediate setting in which the person develops. The exosystem is, for example, the community, the occupations and workplaces of the parents, and the extended family (Gardiner & Kosmitzki, 2002).

2.3.2.4 The macrosystem

This, the most complex system, consists of the customs, values, and laws that have an important influence on the developing person's culture. According to Bronfenbrenner (1993:25), the definition of the macrosystem is that it 'consists of the overarching pattern of micro-meso- and exosystems characteristic of a given culture, subcultures, or other extended social structure, with particular reference to the belief systems, resources, hazards, lifestyles, opportunity structures, life course options and patterns of social interchange that are embedded in such overarching systems'. Within a given society or culture there are similarities (consistencies) in the form and function of, for example, shopping malls and fast food restaurants (Gardiner & Kosmitzki, 2002).

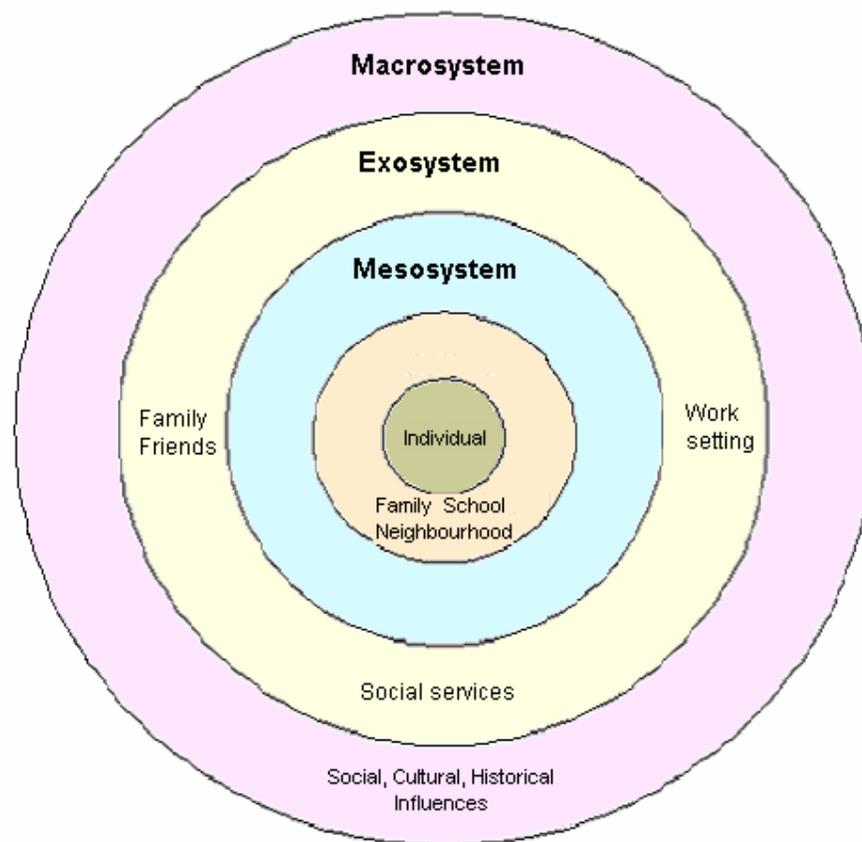


Figure 2.2 Bronfenbrenner's ecological systems theory (Gardiner & Kosmitzki, 2002:22).

2.3.2.5 *The chronosystem*

Bronfenbrenner defined the chronosystem as 'space through time: environment in the third dimension' (Gardiner & Kosmitzki, 2002:24). Gardiner and Kosmitzki (2002:24) refer in this regard to research from a life course perspective (Clausen, 1986, 1993; Elder, 1974) and to Steinberg's (1987, 1988, 1989) work in which he studied the relationship between the timing of puberty and its effects on the relationships within the family, particularly the closeness or distance between parent and adolescent (Gardiner & Kosmitzki, 2002). Time and timing are therefore environmental features and has nothing to do with the characteristics of the person, according to Bronfenbrenner as cited in Gardiner and Kosmitzki (2002:24).

2.3.2.6 *From ecological to bioecological*

Incorporating new elements into the ecological model as described above, Bronfenbrenner (1999), expands the model and creates the bioecological model that distinguishes between environment and process. According to Bronfenbrenner (1999), the processes of human life course development become progressively more complex because of the reciprocal interaction between the evolving biopsychological human organism and the people and objects in its environment. These enduring reciprocal interactions with the environment are known as proximal processes.

The characteristics of the developing person, the environment and the developmental outcomes as well as the social changes during the person's life course vary systematically and this affects the strength and direction of the proximal process (Bronfenbrenner, 1999). Note that in this model the characteristics of the person not only produce development, but are also a product of development. Bronfenbrenner (1999) emphasises the following features of the concept *proximal process*:

For development to occur the person must engage in an activity. To be effective, the activity must take place regularly and over an extended period of time. An occasional weekend of doing things with a significant other does not count, nor do activities that are often interrupted. One reason for this is that to be developmentally effective, activities must take place long enough to gradually grow in complexity. Mere repetition does not work.

Developmentally effective proximal processes are not unidirectional; there must be initiation and response in both directions. Proximal processes are not limited to interpersonal interactions; they can also involve interaction with objects and symbols. Under these circumstances, for reciprocal interaction to occur, the objects and symbols in the immediate environment must be of a kind that invites attention, exploration, manipulation, elaboration, and imagination. Proximal processes are therefore representative of complex activities that take place over time, become progressively more complicated and play out in a system that allows for growth and development.

Whereas Bronfenbrenner's (1999) model entails multiple levels of context, Spencer's (2003) phenomenological variant of ecological systems theory (PVEST) describes life-course human development *within* context (Swanson et al., 2003:748). This context or setting comprises the interaction of identity, experience and culture across all ethnic groups and thus integrates social, political and cultural issues with developmental processes with the focus on identity as considered from a cultural-ecological perspective (Swanson et al., 2003).

The phenomenological variant of ecological systems model (Swanson et al., 2003:748, 749) describes the dynamic interaction between five basic components, namely vulnerability, stress engagement, reactive coping methods, emergent identities and identity processes, as follows:

- *Net vulnerability level:* The net vulnerability level refers to potential risk contributors. For marginalised young developing people, for example the historically disadvantaged in South Africa, socio-economic conditions and race and (or) gender stereotyping may be risk factors while white privileged youth may find affluence itself being a risk factor in that they were never really required to develop coping skills. For each individual however, there may be protective factors that counter risk, for example cultural capital. The developing person's perception of risk and available protective resources are components of self-appraisal that are important to the process of identity formation.
- *Net stress engagement:* Net stress engagement refers to risks that manifest in actual real-life encounters, resulting in negative experiences that challenge the developing individual's well-being. Whereas risk and protection are potential factors, stress and support are actual manifestations experienced within context.

This component links environment to experience.

- *Reactive coping methods and support:* The third component refers to reactive coping methods and support, which are being employed to counter stressors. Reactive coping methods motivate problem-solving strategies, which are either adaptive or maladaptive.
- *Emergent identities:* Emergent identities are the fourth component of the PVEST, and this component refers to stable coping responses coupled with positive self-appraisal. Developing individuals find themselves within and between contexts that vary across family, school, neighbourhood and nation. Stable reactive coping skills, cultural and ethnic identity, social roles and self-and peer appraisal define the developing person's identity.
- *Identity processes:* The fifth PVEST component emphasises the critical importance of identity processes that can provide stability in behaviour. This component called life-stage-specific-coping-outcomes can either be negative in that the identity foundation yields adverse outcomes, or positive resulting in productive outcomes that will be manifested in good health, high self-esteem, and positive relationships.

As depicted in Figure 2.3, the PVEST model remains a dynamic framework throughout the lifespan. There will always be new risks, possible protective factors, stressors and support systems which, combined with coping strategies allow for redefinition of the self, and also impacting the way others see one. Whereas an unresolved crisis in a developmental stage influences future coping and identity formation, PVEST allows for the unresolved crisis to be captured and properly contextualised regardless of race, culture, gender or ethnicity (Swanson et al., 2003).

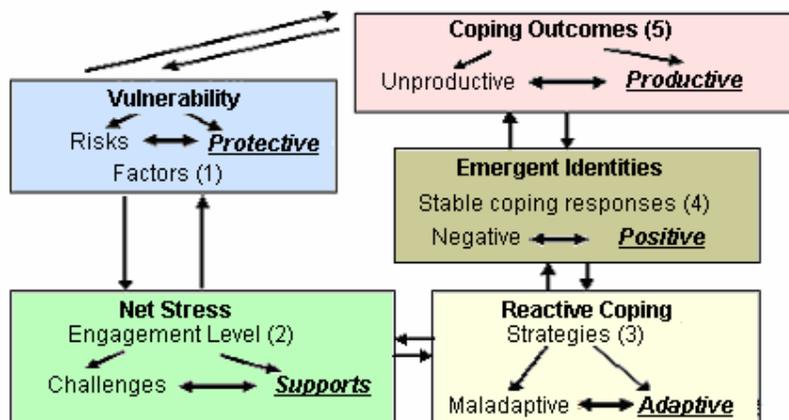


Figure 2.3 Spencer's phenomenological variant of ecological systems theory (Swanson et al., 2003:749).

2.3.3 Super and Harkness' model

Super and Harkness (1980) see the child as developing within a three-component niche. The concept of the niche originates from biological ecology where the word refers to the distinct habitats animals create.

Schaffer (2006:27) defines developmental niche as 'a child's place within a particular community, as determined by the multiple cultural influences on child development prevalent in that community'. These influences are the physical and social context (the family for example), culturally determined customs regarding childrearing and the psychology, (belief systems, developmental expectations) of the parents or primary care givers (Gardiner & Kosmitzki, 2002). The interactions of the three components or niche, along with the mutual adaptation between the niche and the individual, provide the dynamics within which the individual develops.

Super and Harkness (1980), cited in Gardiner and Kosmitzki (2002:26) expanded on their developmental niche by placing a much greater emphasis on the importance of culture in the developmental process.

2.3.4 Social role model

One definition of social role is 'any set of behaviours that has a socially agreed-upon function and an accepted code of norms' (Biddle, 1979; Biddle & Thomas, 1966; Brown, 1965 cited in Newman & Newman, 2006:81).

Social roles link people to society and people change their behaviour to conform to societal expectations. Each role is supported by other roles and its function is determined by other roles to which it is related. Roles are reciprocally linked, for example parent and child, employer and employee. This reciprocity is linked to the interdependence of people at different psychosocial stages (Newman & Newman, 2006).

Role theory distinguishes between *role enactment*, or patterned characteristics of social behaviour, *social roles*, which are the identities an individual takes up, and *role expectations* which refer to socially expected role-fulfilment behaviour. It also distinguishes between *role strain*, which is caused by too many role demands, *role gain*, referring to more roles added and *role conflict* that refers to the stress experienced by the competing demands of different roles. *Role loss* or ending of a role may be equally distressing (Berk, 2007).

The impact of social roles on development is influenced by the number of roles a person has to fulfil, identification with the role(s), the intensity with which the person fulfils role expectations, the extent to which these expectations are flexible or not, and the amount of time the fulfilment of the role consumes (Newman & Newman, 2006).

As a person moves from one developmental stage to the next, society opens up new roles according to cultural customs, as well as for example, the individual's maturity, skill level or talent. Involvement in interpersonal and group relationships contributes to the formation of a person's social identity. In modern society with its often demanding and diverse role expectations, people need to balance many varying roles, resulting in complex social identities. This is not necessarily negative. According to research (Christensen, Stephens and Townsend, 1998 in Berk, 2007:539), studying 300 middle-aged women who held multiple roles, the many roles were contributing to their enhanced life satisfaction.

The theoretical models and their main viewpoints are summarised in Table 2.1.

TABLE 2.1 THEORETICAL PERSPECTIVES ON PSYCHOSOCIAL DEVELOPMENT (BASED ON THE THEORIES OF BRONFENBRENNER (1977), MEAD (1934), SPENCER (2003) SUPER & HARKNESS (1980) and VON BERTALANFFY (1968).

THEORY	MAIN THEORETICAL PERSPECTIVE	THEORETICAL APPLICATION TO PSYCHOSOCIAL HEALTH
Dynamic Systems (Von Bertalanffy, 1968)	Epigenesis: development involves the sequential emergence of new structures and functions as a consequence of the dynamic interaction among the different components of a system	Dynamic interaction between the psychological, the physiological and the environmental systems during all life stages.
Ecological Model (Bronfenbrenner, 1977).	Development from an ecological perspective	Progressive two-directional interaction between environment, environmental changes and human being. This model entails multiple levels of contexts explaining the micro-meso-exo-macro- and chronosystems' impact on developmental crises and crises resolution
PVEST (Spencer, 2003)	Development from an identity-focused, cultural, ecological perspective	Dynamic framework throughout the life span. Unresolved crises are captured, contextualised and regardless of race, ethnicity of culture, the self is redefined.
Developmental Niche (Super & Harkness, 1980)	Development within social context, cultural context and physical context	Interactions of the physical, social and cultural, and mutual adaptation between the niche and the developing human. Importance of culture emphasised
Social Role (Mead, 1934)	Development guided by culture, customs, maturity, skill level and talent	Society opens up and requires one to fulfill roles that suit developmental stage. This role fulfillment impacts self-esteem

In summary, the aforementioned table depicts that regardless of which theoretical

perspective one embraces, the individual embarks on a journey of life stages, alongside significant others, encountering developmental crises that are resolved through tasks and coping abilities. Impact and influence happen reciprocally between the individual as a system within systems, including the multifaceted ecological system.

2.4 VARIABLES INFLUENCING PSYCHOSOCIAL HEALTH

Upon considering employee wellness in the workplace, the relevant variables influencing psychosocial health are the self, the environment and socio-cultural influences (Brehm et al., 2005).

2.4.1 The self

A brief overview of definitions of the *self* is relevant to this study, because of its importance for psychosocial health.

Schaffer (2006:75) refers to William James (1890) who undertook the first scientific analyses into the self and distinguished between the I-self (the self as organiser and interpreter of experiences) and the Me-self (our definition of ourselves regarding personal qualities, being of a certain age, gender and ethnicity). According to Schaffer (2006) the I-self is now referred to as self-awareness, and the Me-self as self-concept.

Cooley (1902) in Harter (2006:146) proposed the concept of the 'looking glass self' to metaphorically describe adult self-esteem as social-psychologically determined because others' opinion of self plays a significant role in the development of one's self-appraisal.

2.4.1.1 The self-concept

The self-concept develops through the ability to see oneself as a distinct entity, through mirroring oneself in others (Brehm et al., 2005:67). Brehm et al. (2005) refer to the relational theory of Anderson and Chen (2002), which states that a person uses his or her past and present relationships with significant others to arrive at a sense of who he or she is. Brehm et al. (2005:67) consider five sources of the self-concept, namely 'introspection, our perceptions of our own behaviour, the influences of other people, autobiographical memories and cultural influences'. By utilising these sources, people develop a specific mental representation of themselves (Schaffer, 2006). This is the representation of who they are. Knowing who one is, is highly relevant in the quest for

psychosocial health (Faul, 1995).

2.4.1.2 *Self-esteem*

Mruk (2006:10) approaches the challenge of defining self-esteem, from William James' (1890) pronouncement that self-esteem is the ratio of what one actually accomplishes to what one is supposed to accomplish, given one's potentialities. This approach emphasizes effective action or competence and accomplishments (Mruk, 2006). Secondly, according to Rosenberg (1965) in Mruk (2006:10) self-esteem must be seen in terms of feelings of being worthy.

In his final analysis Mruk (2006:12), proposes Branden's (1969) definition of self-esteem namely that it 'entails a sense of personal efficacy and a sense of personal worth. It is the integrated sum of self-confidence and self-respect. It is the conviction that one is competent to live and worthy of living'. Self-esteem, therefore, consists of *competence*, which refers to effective behaviour, *worthiness*, or a sense of being good and deserving of respect, and finally *competence and feelings of being worthy*, which speaks of a connection between what one does and how one feels about oneself. Hewitt (2002), Cast and Burke (2002) and Etaugh and Bridges (2004) also support the definition that emphasises competence and worth. It seems though, that competence must be perceived by others before it can play a contributory part in enhancing self-esteem, because Hart, Atkins and Tursi (2006) write that the broad consensus on a definition of self-esteem posits that it is a product of self-evaluations and the *appraisals of others*. This reminds of Cooley's (1902) 'looking glass' metaphor (Harter, 2006:146).

Whereas literature on self-esteem is vast and varied (Crocker, 2006; Ellis, 2006; Goldman, 2006; Greenier, Kernis & Waschull, 1995; Harter, 1996; Kernis, 1995; Marsh, 1986, 1996; Marsh, Craven & Martin, 2006; Mruk, 1999, 2006; Ninot, Delignieres & Fortes, 2006; Tesser, Wood & Stapel, 2005; Trzesniewski, Roberts, Robbins & Caspi, 2004; Wood, Tesser & Holmes, 2008), to mention but a few studies, its relevance as a variable of psychosocial health compels one to narrow it down to self-esteem in developmental context, (Harter, 1996; Pope, McHale & Craighead, 1998) and, flowing from that, the role of self-esteem in psychosocial health.

There are rather conflicting views on self-esteem and healthy psychological functioning. Goldman (2006:132) refers to research that link subjective well-being (Myers & Diener,

1995) and enhanced self-confidence (O'Brien & Epstein, 1988) to high self-esteem, but he also cites findings that high self-esteem undermines healthy self-views by stifling recognition of one's positive and negative qualities. According to Tennen and Herzberger (1987), in Goldman (2006:132) people with high self-esteem typically incline towards attributing success to their own brilliance and failures to external sources. Goldman, Kernis, Piasecki and Hermann (2004) found a relationship between high self-esteem and narcissism (Goldman, 2006:132).

It is important to note that a person's self-esteem is not cast in stone. Brehm et al. (2005:69), referring to the work of Heatherton and Polivy (1991), suggest that self-esteem varies from moment to moment as one responds to joyful or sad events, success, failure, negative or positive social interaction, and other life experiences. One can therefore derive from this that self-esteem, like behaviour, is highly situational and influenced by environmental factors. Changes in social situations combined with problems in self-verification result in a decline in the energy reservoir of self-esteem. Positive environmental factors cooperate as a resource of self-esteem, but like any other resource, it can become depleted, leaving the person feeling inefficient, unaccepted and distant from the group (Cast & Burke, 2002). This fluctuating characteristic of self-esteem is of the utmost importance in psychosocial health, because knowledge of this can prevent a person from isolating the self and losing hope when energy levels are low.

Leary, Schreindorfer and Haupt (2004) suggest that self-esteem is sensitive to perceived social rejection-exclusion on the one hand, and acceptance-inclusion on the other. They distinguish between 'state-self-esteem' and 'trait-self-esteem'. State-self-esteem refers to fluctuating or transient feelings about oneself, the highs and lows of which are not only dependent on the situation, but also include negative or positive feelings about oneself, for example pondering whether one has made the right impression, have succeeded, or behaved inappropriately. Individual differences in trait-self-esteem refer to effects that culminate over time and that inform a person's perception of being included or excluded (Leary et al., 2004).

Social groups play a significant part in our self-esteem, according to Cast and Burke (2002), who suggest that self-verification occurs when the social group verifies our role identity. Verification of the role identity serves to increase an individual's worth-base and efficacy-base self-esteem and serves as a mechanism to buffer negative emotions that occur when self-verification is being perceived as a problem (Cast & Burke, 2002).

Individuals desire self-esteem; it motivates them to form and maintain relationships thereby stabilising social groups and work teams, thus directing behaviour (Cast & Burke, 2002). This desire for self-esteem is probably the same as the desire to be socially included (Leary et al., 2004).

In the context of life-span development the support, approval and acceptance from significant others seem critical in the development of high esteem, and in having an openness to boldly express thoughts and feelings (Harter, 1998), as cited by Etaugh and Bridges (2004:146). Physical appearance however, also plays a significant role. Correlations between physical appearance and self-esteem, writes Harter (2006:145), referring to Harter (1999), range between .65 and .82. Individuals who base their self-esteem on perceived attractiveness reported an inclination to disparage their physical appearance, devalue their self-esteem, and to suffer from depression (Harter, 2006).

Self-esteem as a variable in psychosocial functioning is therefore of the utmost importance because it serves to direct behaviour or as the American Psychological Association (2002) puts it, 'high self-esteem has long been associated with healthy psychological adjustment' (Etaugh & Bridges, 2004:145).

2.4.2 Environmental influences

According to Zimbardo (Myers, 2004: viii), predicting what someone was like or might do would depend on the situation. Myers (2004:3) cites Jean-Paul Sartre as having believed that human beings are 'first of all beings in a situation'. According to Myers (2004:4), social psychology is 'the scientific study of how people think about, influence and relate to one another'. All of this thinking, influencing and relating, however, happen within the context of situations and environmental influences.

From a developmental perspective many people have to fight their way through negative environmental influences for example poverty, physical and mental abuse and emotional hardship and rejection. These settings have a significant impact on self-esteem and self-respect, which in turn, influence psychosocial health (Saarni, 2002).

Environmental influences in the workplace can be psychosocially sound or psychosocially pathological and can therefore impact employee wellness (Gilbreath, 2004). According to Gilbreath (2004), supervisors can create a psychosocially healthy work environment by minimising roll stress and uncertainty. Other contributions to

psychosocially healthy work environments include balance between subsystems to prevent burnout (Theorell, 2003), balance between job demands and control (Karasek, 1990), enhancing employee self-efficacy through positive feedback and ensuring that employees enjoy the ultimate person-environment fit (Gilbreath, 2004).

2.4.3 Socio-cultural factors

Social culture or the norms, rules, roles, beliefs, values, rites and customs of a society are factors that influence psychosocial development and health. Culture is a guiding force in that it prescribes certain roles and settings and brings certain meaning to actions (Newman & Newman, 2006).

One of the assumptions of psychosocial theory is the fundamental contribution of culture to individual development. This is borne out, to some degree, by Diener and Diener (1995) who found a higher correlation between self-esteem and life satisfaction in individualist, than in collectivist cultures.

Whereas psychosocial theory views biological maturation as the stimulus for stage changes, what happens within the stage is cultural adaptation to changing economic, environmental and intercultural conditions. Psychosocial stages emerge as a product of the changing person and the mechanisms of culturally influenced socialisation (Newman & Newman, 2006).

Probably the least complicated way to describe the impact of culture on psychosocial functioning is through the lens of collectivism and individualism. Individualism is the worldview that guides social behaviour towards attaining personal goals and ambitions, and these may not necessarily coincide with the best interest of the group. Values prescribe competition, personal achievement, and conflict between what is best for the group and what is best for the individual. In the individualistic society this conflict is resolved by choosing to pursue personal gratification first. In a collectivistic society social behaviour is geared towards the well being of the collective (Triandis, 1995).

Although the third assumption of psychosocial theory is that culture contributes to individual development, one of the theory's weaknesses is precisely this, namely the male, euro centric perspective that dominates it and much of its supporting research, resulting in a heavy leaning towards individualism at the expense of social relatedness (Newman & Newman, 2006). Individualistic societies, for example, allow very little time

for young people to explore their identities and make important career decisions, whereas in more traditional societies children receive specific guidance from an early age as to their vocations. In a collectivistic society goals shared by the family, tribe, work group or religious associates are given precedence over the individual's own goals, and therefore guides behaviour towards the altruistic. Individually experienced conflict between own expectations and that of the group is resolved by behaving in the best interest of the group (Triandis, 1995). Obviously this must impact heavily on the different ways developmental crises are perceived and resolved in a collectivist society as opposed to an individualistic context.

The principle of cultural determinism (Benedict, 1934) provides an appreciation for the implications of socio-cultural influence on psychosocial functioning. According to this principle, a person's specific culture moulds his or her psychological experiences through presenting challenges, expecting certain behavioural accomplishments and providing resources. Culture is a more important factor than biology in determining whether different stages of development will be experienced as stressful or not. Cultures differ in their expectations regarding life choices, the timing of life choices and the range of choices and resources that are available for those confronted with significant decisions, resulting in distinct characteristics and skill levels at specific periods in life.

2.5 IMPLICATIONS FOR EMOTIONAL INTELLIGENCE

It is hypothesised that there is a positive relationship between psychosocial health and emotional intelligence. Lopes, Brackett, Nezlek, Schütz, Sellin and Salovey (2004:1019) refer to research results (Eisenberg, Fabes, Guthrie & Reiser, 2000; Halberstadt, Denham & Dunsmoore, 2001) that suggest that the capacity to decode, understand and regulate emotions (dimensions of emotional intelligence) is associated with social and emotional adaptation. Lopes et al. (2004) conclude their research into the relationship between emotional intelligence and social interaction with the suggestion that a person can contribute to his or her social interactions by developing a better understanding of emotion management strategies. The results of this research leave the distinct impression that emotional intelligence is interwoven with social and emotional adaptation, and social adaptation and emotional adaptation are associated with psychosocial health (Newman & Newman, 2006).

2.6 IMPLICATIONS FOR EMPLOYEE WELLNESS

Wellness can be defined as the 'interdependent balance among physical, emotional, spiritual, intellectual and social health' (Csiernik, 1995:4).

Employee wellness therefore refers to both the physical and psychological health of the workforce. For the purpose of this research, the focus is on employee *psychosocial health* or psychosocial well-being. Wellness therefore, refers to positive employee life experiences and includes satisfaction, job satisfaction, satisfaction with remuneration packages, healthy relationships with co-workers, attachment to the job, and happiness (Danna & Griffin, 1999). Employees who enjoy psychosocial health have realistic expectation for the future, are satisfied with their lives in general, and are achievement oriented (Faul, 1995).

Young people entering the job market need to have a healthy identity which translates, according to Erikson (Berk, 2007:400) into a sense of physical, psychological and social well-being, or 'a feeling of being at home in one's body, a sense of knowing where one is going and an inner assuredness of anticipated recognition from those who count' (Erikson, 1968:165).

The opposite of a healthy identity is role confusion, or the result of unresolved earlier conflicts or limited life choices, which may leave the person directionless. Apart from all the other complexities, feeling directionless in the workplace can result in a very costly experience for the young entry level candidate, both financially and emotionally when he or she experiences self as the proverbial square peg in a round hole (Greenhaus, Callanan & Godshalk, 2000).

Employees who are not psychosocially healthy may resort to tardiness, absenteeism, being pre-occupied with the negative impact of other life choices, addiction and insubordination. General ill health and unhappiness may impact the workplace negatively and is not conducive to creativity and profitability (Gilbreath, 2004).

2.7 CHAPTER SUMMARY

In this chapter psychosocial theory was discussed from a life-stage perspective, exploring the impact of systems and variable contexts on the developing individual. Psychosocial health was explored and contrasted with problematic psychosocial

functioning because successful resolution of developmental crises or positive learning that took place during the developmental stages impacts on coping-ability, self-esteem and self-concept, acceptance or rejection of the social role and adjustment to environmental impact. The importance of psychosocial health for industrial and organisational psychology from an employee wellness point of view was discussed.

Chapter 3 entails the literature review on emotional intelligence.

CHAPTER 3 EMOTIONAL INTELLIGENCE

In this chapter the discussion of the paradigmatic and conceptual foundations of emotional intelligence will be followed by an exploration of the theories underpinning three different models of emotional intelligence. A discussion of current research on variables influencing individuals' emotional responses is followed by an attempt to explore the implications of emotional intelligence for industrial and organisational psychology, with special reference to employee wellness.

3.1 Paradigmatic and conceptual foundations

The paradigmatic foundation of emotional intelligence includes the work of Bandura (1977), Rotter (1982), Mischel (1968), and Mischel and Shoda (1999, 2000).

3.1.1 Paradigmatic Foundations

This research focuses on the study of emotional intelligence from the perspective of social cognitive learning theories. The history of social cognitive learning theory can be traced back to, among other theories, Bandura's (1977) modelling research and the social cognitive personality theory of Mischel and Shoda (1999, 2000).

3.1.1.1 Bandura

In his theoretical justification Bandura (1977) questions the wisdom of ascribing behaviour to impulses and goes on to cite the work of Mischel (1968) in stating that, whereas the, albeit empirically limited impulse theories may aid in interpreting past behaviour, they are lacking in predictive power (Bandura, 1977). He also critically views behaviour theory's emphasis on environmental stimulus, and advocates the social learning view of interaction for its reciprocity, emphasizing behaviour, other personal factors and environmental factors as determinants of each other.

Bandura's (1977) main contribution to the development of social-cognitive theories, according to Cervone and Shoda (1999), lies in his finding that social learning can be acquired through observation. First-hand experience is therefore not the sole requirement for social learning. This theory requires a closer look at the high-level cognitive processes that come into play during learning through observation. It follows

that the observational technique, along with other cognitive techniques, changed the way psychologists viewed behaviour-change, setting the stage for cognitive-behavioural therapy. From an industrial and organisational psychology viewpoint it explains how organisational culture as identified by the structure, rules, procedures, values, expectations, and norms is observed by employees and how culture guides their behaviour and emotional reaction in the workplace (Glomb & Liao, 2003; Schein, 2004, in Van Fleet & Griffin, 2006:702).

According to Cervone and Shoda (1999), Bandura's (1977) research proved that an individual has the capacity towards self-regulatory capabilities. This changed psychologists' view of man from that of a passive victim, to the recognition that man's personality development can be influenced, and influenced pro-actively through social learning.

3.1.1.2 Rotter

In a discussion of the cognitive-affective personality systems theory of Mischel (1968) and Mischel and Shoda (1999, 2000), it is necessary to mention the influence of the basic assumptions underpinning Rotter's (1982) social learning theory, especially because of his emphasis on environmental or situational influences. Rotter's (1982) theory rests on the following five basic assumptions:

- Humans interact with their meaningful environments;
- Human personality is learned;
- The basic unity of personality;
- Motivation is goal directed;
- People are capable of anticipating events.

Rotter's (1982) primary interest was the prediction of behaviour. According to his theory, the analyses of the variables, *behaviour potential* (likelihood of the occurrence of a given behaviour in a specific situation), a person's *expectancy of being reinforced*, a person's *preference for a particular reinforcement* and perceived cues from the *psychological situation*, accurately predict behaviour.

Rotter (1982:318) defines the psychological situation as 'a complex set of interacting cues acting upon an individual for any specific time period'. Rotter (1982) posits that these cues are the determinants of behaviour-reinforcement and reinforcement-reinforcement sequences, the latter referring to a person's anticipation that the ultimate goal reinforces the value of each event within the sequence leading up to it.

3.1.1.3 *Mischel*

Apart from the fact that Mischel studied under Rotter, his own experience with attempts to predict performance using trait scores (Mischel, 1968) led him to conclude that the low correlations between traits and behaviour are not the result of an unreliable measuring instrument, but that inconsistencies in behaviour are due to situational variables. Mischel (1968) argued that even if perfectly reliable measures were available, specific behaviours will probably not always predict traits accurately, because a person may be wholly conscientious, for example in his academic endeavours, while displaying a total lack of commitment in some other areas of personal responsibility. There is a unique interaction between a specific situation and the person's competencies, interests, goals, values, and expectancies and this predicts behaviour (Mischel, 1968).

Therefore, whereas Mischel (1973) regards personal traits or dispositions as important predictors of behaviour, he emphasises the importance of the situation in which the behaviour occurs.

3.1.1.4 *Mischel and Shoda*

Mischel and Shoda (1999, 2000) and Shoda (2004), regard behaviour as a product of both stable personality traits and the situation within which the behaviour occurs. Mischel & Shoda (1999, 2000) subsequently proposed the cognitive-affective personality system in an attempt to reconcile stable personality traits and situational impact. Stable personality traits within an individual combined with variable behaviour across situations, although seemingly presenting a paradox, is actually a predictor of behaviour because it represents patterns of variation within the person (Feist & Feist, 2006). The cognitive-affective personality system allows man a stage upon which to change his act from situation to situation, whilst adhering to the script of meaningful behaviour. What makes the behaviour meaningful is the consistency (stable patterns of variation) with which a person adapts his behaviour from situation to situation. It is precisely these stable

patterns that make behaviour predictable because of knowledge of 'how and when' cognitive-affective units are affected (Mischel & Shoda, 1999).

Cognitive-affective units encompass the psychological, physiological and social person variables and emphasise behaviour in certain situations (what one *does*), rather than personality (what one *is*), as defined by global traits. Cantor (1990: 735), refers to this as 'the having and the doing sides of personality'. Cognitive-affective units include encoding strategies, expectancies, beliefs, competencies, self-regulatory plans and strategies, emotions, moods and goals (Mischel & Shoda, 1999).

Behaviour is affected by personal constructs and encoding strategies (Feist & Feist, 2006). Mischel and Shoda (2000:159) state that individual differences are determined by representation of the self and of the possible selves that individuals imagine themselves to be. Individual differences in encoding strategies result in individual differences in cognitive transformation of environmental stimuli.

Whereas behaviour encompasses what people overtly and covertly do in extremely complex social and interpersonal events (Mischel, 1973), cognitive competencies refer to an individual's belief of what he or she can and cannot do in any given situation. According to Mischel and Shoda (2000), personal beliefs of one's experienced self-efficacy, of attribution styles, mastery, of perceived self-control and of one's theory about self and the social world have converged into certain expectancies about one's behavioural outcomes. Through observation and learning, people construct their own beliefs regarding behavioural outcomes and therefore knowledge of these beliefs is a more accurate predictor of performance than actual ability (Feist & Feist, 2006).

Although behaviour is to a considerable extent controlled by external social monitoring of one's actions, an individual's self-constructed beliefs of behavioural outcomes allow for self-regulatory systems and plans. This self-regulation is clear, not only from behaviour-regulation because of constraints and social monitors, but also through self-imposed standards or goals that lead to self-produced consequences (Mischel, 1973). Whereas behaviour may be situation-specific, individuals adopt contingency rules to guide behaviour even in the absence of, and sometimes despite, situational pressure. These contingency rules are used when deciding appropriate behaviour (how to), standards and goals of behaviour (what the behaviour must achieve) and consequences of the behaviour (success or failure to reach standards and goals). Contingency rules vary from

person to person depending on earlier history, recent instructions and (or) situational data (Mischel, 1973).

For many years personality research focused on individual differences according to the hypothesised dimensions of the psychologist, while neglecting the individual's personal expectancies (Mischel, 1973). According to the hypothesised dimensions of the psychologist, consistent behaviour depends on unchanging expectancies and beliefs. Consider racism as an example. To a certain extent racism is a matter of attributing certain negative traits to other races, resulting in consistently negative expectancies and either avoidant or aggressive behaviour towards the other group. Add to this a person's goal-directedness, personal interests and rigidity in clinging to so-called values and the behaviour of the racist becomes highly predictable. Expectancies and beliefs are, however, subject to change in the event of a person acknowledging incongruence between attribution and the actual behaviour of another, making prediction of behaviour less accurate (Feist & Feist, 2006). In the above-mentioned example this works both ways: the racist, upon changing his or her beliefs, becomes hesitant in predicting the behaviour of the other group, while predicting the racist's behaviour becomes less accurate, because of his or her hesitancy.

Cognitive- affective units, or cognitive social learning person variables, serve as an aid in conceptualising person-situation interactions. A person *constructs* or generates a diverse set of situational-linked behaviours; people *encode and categorize* events; they have *expectancies* about outcomes, have *subjective values* regarding outcomes and have *self-regulatory systems and plans*, even in the absence of environmental pressure and (or) social monitoring (Mischel & Shoda, 2000).

Cognitive-affective units are the mediators in a network of relations constituting the structure of the personality system. In this system, patterns of variability in social cognition, affect and action across situations, result in an individual's 'personality signature' (Mischel & Shoda, 2000:165). This signature is visible in characteristic behaviour from situation to situation. Whereas 'the structure of the personality system can remain stable across situations' (Mischel & Shoda, 2000:165) the *personality state* changes as the situation changes, or when situational features are differently encoded or transformed through cognition and emotion (Mischel & Shoda, 2000).

3.1.2 Conceptual foundations

The social cognitive theories, in particular the cognitive-affective personality systems theory (Mischel, 1968, 1999; Mischel & Shoda, 1999, 2000), provide the paradigmatic foundation for the concept affect, the affect states (emotion and mood), and the related concept of emotional intelligence.

It seems as though there are many perspectives on the concepts *affect*, *mood* and *emotion* (Averill, 1991; Ekman, 1994; Fiedler & Bless, 2006; Forgas, 2006; Frijda, 2000; Johnson-Laird & Oatley, 2000; Lazarus, 1994; Mayne & Bonanno, 2001; Smith & Kirby, 2000; Zajonc, 2000), and therefore it is useful to view these concepts under the heading *evaluative constructs* (Weiss, 2002:23). According to Weiss' (2002), evaluative construct taxonomy (Figure 3.1) *mood* and *emotion* are classified as affect, and therefore references to affect in this section, are references to mood and emotion by implication.

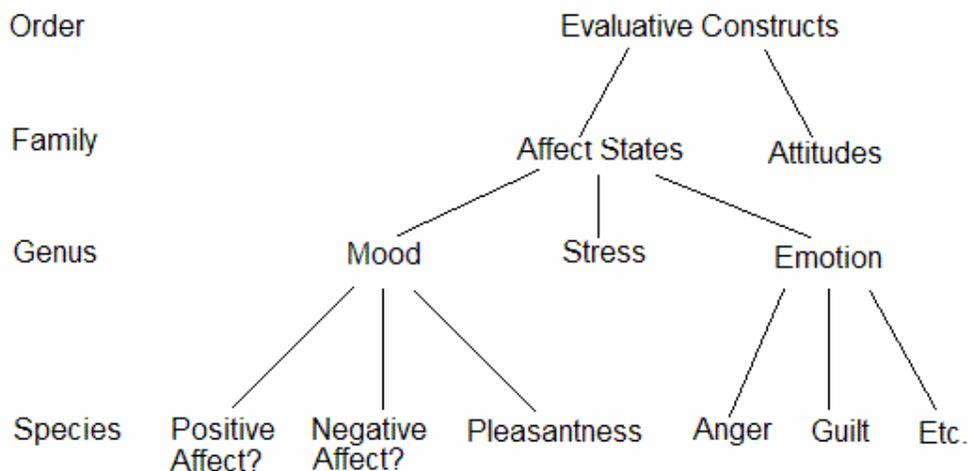


Figure 3.1 Evaluative construct taxonomy according to Weiss (2002:23).

3.1.2.1 Affect

According to Mowday and Sutton (1993) organisational behaviourists' emphasis on the importance of cognition may result in theory that portrays a workforce whose behaviour is completely devoid of emotions. Since 1993 however, write Brief (2001:132) affect has been used explicitly to enhance understanding of the nature of supervisor-subordinate interactions (Glomb & Hulin, 1997), to better understand employee withdrawal

behaviours (Pelled & Xin, 1999), employee–customer relations (Pugh, 2001), performance appraisal judgments (Robbins & DeNisi, 1998), and organisational justice (Weiss, Suckow, & Cropanzano, 1999).

According to Mischel and Shoda (2000:159), the processing of social data, beliefs regarding the self and one's personal future as well as coping behaviour are intensely influenced by affect (Bower, 1981; Contrada et al., 1990; Foa & Kozak, 1986; Forgas, 1995; Smith & Lazarus, 1990; Zajonc, 1980). Negative feedback about performance, according to Mischel and Shoda (2000), received by a person already in a negative affective state may produce a far more demoralising effect than the negative feedback itself merits.

3.1.2.2 Emotion

Watson (2000:3) defines an emotion as 'a distinct, integrated, psycho-physiological response system; in essence, an emotion represents an organized, highly structured reaction to an event that is relevant to the needs, goals, or survival of the organism'.

Emotion, writes Weiss (2002), is not a single thing but must rather be considered as a response or responses produced by unified physiological, subjective and behavioural components. Weiss (2002:24) refers to Frijda's (1993) summary of the components of emotion as experiential affect or the subjective appreciation of affect, the person - situation - object connected with the experiential element, the physiological changes within the person and the action tendencies (within discrete emotions) emanating from the person.

Mayer (2001) regards emotion, motivation and cognition as a trilogy that is a functionally defined system capable of managing diverse operations that involves both neuropsychological mechanisms and acquired schemata. The emotion system alters chemical transmitters, alters skeletal-muscular systems in facial expressions, and serves to alter motives, cognitions, and subjective experience that collectively create instances of fear, happiness and anger. Fear or anxiety makes blood pressure rise and facial grimacing may occur. Neurological preparedness and past learning (experience) serve the emotion system as the detectors of perceived threats.

According to Frijda (2000), emotions can be described as operating on the two levels of intrapersonal states and interpersonal states, the latter concerning the relationship

between a subject and an object, and the former being feelings, being in a state of arousal, or experiencing certain motor patterns. The choice of level has theoretical implications, writes Frijda (2000) and a definition of emotion depends on the viewpoint taken. Frijda (2000) does however mention certain processes that seem to envelope the different theories and he defines emotion units at higher levels as 'complexes made up of basic processes, such as feelings of pleasure or pain, individual facial expression components, particular appraisals, and particular action plans and activation states' (Frijda, 2000: 62). Frijda (2000:59) distinguishes multi-component phenomena that lead to states in the individual, called *emotions*. These multi-component phenomena are:

- The phenomenon that salient events intrude upon goal-directed behaviour (Elster, 1999 in Frijda, 2000:60). The goal-directed behaviour phenomenon is also mentioned by Johnson-Laird and Oatley (2000), and in Mandler's (1975:108) theory that emotions occur when plans are interrupted. Salient events may also result in unplanned behaviour, thoughts, and events that affect the person emotionally.
- The phenomenon of the changing relationship an individual has with the environment, and especially with other people in the environment, which reminds of Mischel's (1973) person-situation theory.

The work that Johnson-Laird and Oatley (2000) did regarding emotion is of importance in the study of emotional intelligence, because in the first instance they argue that the cooperating cognitive system depends on an individual's fully developed reflexive self which depends to some extent on the way in which individuals experience other people's reactions. Secondly they argue that, when social plans become problematic, a sequence of emotions may be initiated starting with undeveloped emotion which, after considerable reasoning, (appraisal) might develop into a fully complex emotion. Their work therefore supports the notion of emotion as reflexive information processing and suggests a system of cognitive- affective reciprocity.

3.1.2.3 *Mood*

Watson (2000: 4) defines moods as 'transient episodes of feeling or affect' and adds that, 'as such, moods are highly similar to the subjective, experiential components of emotions'. Several studies (Watson & Clark, 1984, 1997; Watson, Clark & Tellegen,

1988) show strong correlations between anxiety and general negative mood, suggesting that examinations, shock, pain, anticipation of pain, failure and (or) criticism will be associated with increases in general negative affect.

In an attempt to distinguish between mood and emotion, Weiss (2002:24), refer to studies (Frijda, 1993; Larsen, 2000; Morris, 1989) suggesting that differences in intensity and duration are the distinguishing features. He argues against the usefulness of such a distinction and prefers 'diffuseness' (Weiss, 2002:24) as the operative word in clarifying the difference, stating that emotions are usually affect relating to a particular situation, object or person, whereas moods lack this kind of foundation and usually exist as background to affect.

Social interaction is strongly associated with positive mood (Watson, 2000), which is not surprising, as it does not usually represent threat or crisis. According to Watson (2000:65), between-subjects studies (Beiser, 1974; Bradburn, 1969; Phillips, 1967; Watson, 1988a; Watson & Clark, 1997a) showed that individual differences in positive affect consistently relate to various indexes of social behaviour. These indexes are the frequency of contact, satisfaction with relatives, friends, meeting new people and involvement in society (Watson, 2000). This pattern was also found in within-subject studies, which showed that recent social interaction had a significant effect on short-term positive mood elevation, and almost never related to negative mood (Watson, 2000). Social interaction can, however, entail having an argument with another, which represents a psychological threat, and is therefore associated with an elevation in negative mood (Rook, Sorkin & Zettel, 2004; Watson, 2000:65).

According to Clark and Watson (1988), 'positive affect, ebbs and flows with the daily tide of events, whereas negative affect crashes upon us in times of trouble only to disappear just as quickly when the storm is over' (Watson, 2000:65). This quote, although poetically sound and apparently true, poses the question as to why negative events have such a profound, albeit short-lived, impact on moods, while positive events merely allow for 'ebbs and flows' of positive affect. Watson (2000:82) argues that negative experiences lead to negative affect which has a 'crisis-driven quality', because of the need to manage and (or) avert impending doom, while the function of positive affect is to ensure high levels of energy, enthusiasm, alertness and resourcefulness in order to *sustain* the performance necessary for survival.

3.1.2.4 *Emotional Intelligence*

In 1920 E.L.Thorndike (Goleman, 2001:16), then professor of educational psychology at Columbia Teachers College, introduced what he called *social intelligence*, as one of the capacities that individuals have. Goleman (2001:16) quotes Thorndike as having written that 'social intelligence is the ability to understand and manage men and women, boys and girls – to act wisely in human relations'. This ability, wrote Thorndike (Goleman, 2001:16), while abundantly clear in everyday life, 'eludes the formal standardised conditions of the testing laboratory'.

Thorndike (1920) in Goleman (2001:16) proposed that social intelligence might be evaluated in laboratory circumstances by describing the emotions seen in pictures of emotive facial expression. He felt, however, that the absence of real life situations would make the results less accurate, a view that Mischel (1968) shares with him.

In 1937 Saul Sterne and Robert Thorndike revisited the work of E L Thorndike and suggested the different areas of social intelligence as 1) an individual's attitude towards politics, economics and values, 2) an individual's social knowledge, for example general information about society and 3) an individual's social adjustment, the latter being measured by introversion and extroversion questionnaires (Goleman, 2001). Sterne and Thorndike, according to Goleman (2001), also reviewed the 1926 George Washington Social Intelligence Test that measured judgment in social situations and relationship problems, ability to match words with the names of emotions, and the ability to match facial expression with corresponding emotions. They concluded however, that attempts to measure the ability to deal with people had actually failed (Goleman, 2001).

When considering the ability model of Mayer and Salovey (1995, 1997), it is historically significant that Sterne and Thorndike concluded that social intelligence probably represents a number of different abilities or social habits and attitudes. They suggested further investigation of real life events and situations in order to probe the nature and significance of an individual's ability to manage and understand others (Goleman, 2001).

Whereas the idea of emotional or social intelligence was left on the back burner until the emergence of Gardner's (1985) model of multiple intelligences, even David Wechsler (1952) acknowledged the existence of 'affective capacities' (Goleman, 2001:17). Even though Gardner's (1985) theory of multiple intelligences cannot be regarded as a

theoretical model of emotional intelligence, it is worth mentioning because of the contribution his theory had made towards current theoretical models of emotional intelligence.

Gardner (1985), in his theory on multiple intelligences, distinguishes between linguistic-, musical-, logical-mathematical-, spatial, bodily-kinaesthetic- and personal intelligences. Whereas one has a choice, writes Gardner (1985), in deciding whether or not to employ one's musical or linguistic intelligences, there are pressures to employ one's personal intelligences. In this same vein, Goleman (2005: xx) cites news reports covering juvenile delinquency, gunshots over negligible slights, and children murdered by parents or stepparents, and he refers to these and like instances of lack of impulse control, as 'emotional ineptitude'. This phrase seems to be the exact opposite of emotional intelligence, and if 'emotional ineptitude' (Goleman, 2005: xx) is at the core of the senseless pain cited above then the pressure to employ personal intelligences is indeed acute.

In his exploration of personal intelligences Gardner (1985:237), refers to the work of Sigmund Freud and William James and states that, whereas these two scholars represented different traditions in psychology and also differed in their philosophical approaches, their focus on the individual self set them apart. Referring to the emphasis both these scholars placed on self-growth and the importance thereof in coping with one's surroundings, Gardner (1985) writes that it is fair to say that both these psychologists inclined towards the idea of personal intelligences. Whereas Freud's interest hovered around own knowledge of the self, regarding one's interest in others as merely a means towards a better understanding of self with the view of achieving one's own goals, William James' focus included relationship with the environment (Gardner, 1985). According to Gardner (1985), James' emphasis inclined towards gaining self-knowledge for the good of the whole community.

Against this background of partial consensus between Freud and James, Gardner (1985) develops his theory around personal intelligences, one can almost say, with a two-pronged approach. On the one hand he considers the intrapersonal capacity to access one's own feelings (Gardner 1985) and, on the other hand, the interpersonal ability to take note and distinguish emotions in and among other individuals (Gardner 1985). Considering the Mayer-Salovey-Caruso ability mode (Mayer, Caruso & Salovey, 1999) the operative words here are certainly *capacity* and *ability*.

Gardner's (1985) approach therefore is a view on personal intelligence as a combination of intrapersonal intelligence and interpersonal intelligence. Gardner (1985) posits that intrapersonal intelligence is not merely to be seen as having a sense of one's own feelings or a sense of self, but that this sense results from a fusion of both intrapersonal and interpersonal learning. He refers to this sense of self as the balance that individuals strike between the voices of inner feelings and the expectations of other persons (Gardner, 1985). Therefore, whereas he adopts a two-pronged approach (interpersonal intelligence and intrapersonal intelligence), he states that neither can develop without the other (Gardner 1985). The importance of studying the personal intelligences, according to Gardner (1985), is grounded in the very fact that life demands knowing oneself and knowing others, just as it demands that one develops knowledge regarding objects and sounds. He emphasises the role others play in forming a sense of self, and consequently theorises against the self, or 'core self' as the main source of behaviour. According to Gardner (1985:252), 'a person is better thought of as a collection of relatively diverse masks' which is employed as the situation demands. Although Gardner (1985:252) does not refer to Mischel (1968), this reminds of the latter author's theory that perceived inconsistencies in behaviour are due to situational variables (Feist & Feist 2006).

According to Salovey and Mayer (1990) and Mayer and Salovey (1995:197), emotional intelligence is defined as 'the capacity to process emotional information accurately and efficiently, including that information relevant to the recognition, construction, and regulation of emotion in oneself and others'. Mayer and Salovey (1997: 10) and Salovey et al. (2000:504) later define emotional intelligence as 'the ability to perceive accurately, appraise and express emotion; the ability to access and (or) generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth'.

For the purpose of this research, the aforementioned definition of emotional intelligence by Mayer and Salovey (1997) is regarded as the most applicable, because it underpins the ability model. The consistent use of the word *ability* emphasizes Mayer and Salovey's (1997) heavy reliance on intelligence, or cognitive competence, in defining emotional intelligence. The definitions by Weisinger (1998) and Cooper and Sawaf (1997) also mention 'the intelligent use of emotions' (Weisinger, 1998:xvi) and 'the ability to sense, understand and effectively apply emotions' (Cooper & Sawaf, 1997: xiii), indicating a strong preference for defining emotional intelligence in terms of cognitive ability.

3.2 THEORETICAL MODELS

The models discussed in this section are representative of emotional intelligence as an ability, aptly referred to as ‘the ability model’ (Salovey & Mayer, 1990), emotional intelligence as a mix of competencies, coping mechanisms and general mood, namely the Bar-On (1985) model (Geher, 2004) and emotional intelligence as effectively demonstrated social skills, known as Boyatzis’ Emotional Competence Model (Geher, 2004).

The model applicable to this research is the ability model of Mayer, Caruso and Salovey (2000).

3.2.1 The ability model

The ability model defines emotional intelligence ‘as a set of abilities’ (Cobb & Mayer, 2000:15). It is argued that this ability involves intelligence for the perception of, and abstract reasoning about information that emerges from feelings. Research findings (Mayer, Caruso & Salovey, 1999; Mayer, DiPaolo & Salovey, 1990; Mayer & Salovey, 1993; Salovey & Mayer, 1990) underwrite this statement. It is not within the ambit of this chapter to enter into an in-depth discussion of all these studies, suffice to state that ‘aspects of emotional intelligence appear to be *abilities*, in the traditional sense that can be measured through the use of tasks’ (Mayer et al., 1990:77). Mayer, et al. (1990) also state that empathy (a pre-requisite for perceiving emotions in others) is a quality that requires skill (ability), and therefore their findings bolster the case of the ability model disciples.

The main value of the ability model is that it emphasises the existence of emotional intelligence and if it exists it qualifies as *intelligence*, just as general IQ does (Cobb & Mayer, 2000). General intelligence is concerned with many related groups of mental abilities of which verbal, spatial and related logical information processing are sub-skills (Mayer et al., 2000). The operative construct here is *information processing*. The ability to process self-related, emotional information is therefore intelligence. This model focuses only on emotional reasoning, while excluding values and behavioural objectives (Cobb & Mayer, 2000).

The Mayer and Salovey (1997) model of emotional intelligence describes four classes (branches) of skills in hierarchical order according to complexity. Salovey et al.

(2000:507) later refined this model into an emotional intelligence framework. This framework describes the specific competencies each class of skills encompasses (Salovey et al., 2000), and whereas the 1997 model's hierarchical order moved from *regulation of emotions* to *perception, appraisal and expression of emotion* (Salovey & Sluyter, 1997), the refined framework starts with the perception of emotion, literally turning the (1997) hierarchical order upside down. Salovey et al. (2000:506) confirm that regulation of emotion is a more complex skill and state that 'the more sophisticated skills of each branch depend on skills from the other branches' (Table 3.1).

TABLE 3.1 OVERVIEW OF THE FOUR-BRANCH MODEL OF EMOTIONAL INTELLIGENCE (MAYER, SALOVEY & CARUSO, 2002:7)

Branch name	Brief description of skills involved
Perceiving Emotions (Branch 1)	The ability to perceive emotions in oneself and others, as well as in objects, art, stories, music and other stimuli
Facilitating Thought (Branch 2)	The ability to generate, use, and feel emotion as necessary to communicate feelings, or employ them in other cognitive processes
Understanding Emotions (Branch 3)	The ability to understand emotional information, how emotions combine and progress through relationship transitions and to appreciate such emotional meanings
Managing Emotions (Branch 4)	The ability to be open to feelings, and to modulate them in oneself and others so as to promote personal understanding and growth

Mayer et al., (2000) write that the concept of emotional intelligence as an ability was developed from a series of articles (Mayer et al., 1990; Mayer & Salovey, 1993; Salovey & Mayer, 1990), the first of which empirically demonstrated that a single ability factor (emotional intelligence) could be derived from abilities to identify emotion from three kinds of stimuli namely colours, faces and designs. Mayer and Geher (1996) used stories to examine the understanding of emotion and concluded that the underlying factor resembled intelligence (Mayer et al., 2000).

In their initial work on emotional intelligence, Salovey and Mayer (1990) draw attention to the 'cooperative relationship between reason and emotion' (Salovey et al., 2000:506). Human beings are not, write Salovey et al. (2000), predominantly rational nor predominantly emotional, but their successful coping with life is dependent on an integrated functioning of both rational and emotional capacities. This capacity to reason about emotional information, to draw inferences from this information and to respond in emotionally effective ways was described as emotional intelligence.

Salovey and Mayer (1990) and Mayer and Salovey (1997) defined emotional intelligence as 'the ability to perceive and express emotions, to understand and use them, and to manage emotions so as to foster personal growth'. In their later work (Salovey et al., 2000: 504) redefine emotional intelligence as encompassing 'specific competencies, including the ability to perceive, appraise and express emotions accurately; the ability to access and generate feelings when they facilitate cognition; the ability to understand affect-laden information and make use of emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual well-being'. This definition thus describes emotional intelligence as the competencies that form the foundation of the ability model, or the *emotional intelligence framework*. This framework consists of four hierarchically ordered classes of skills (Brackett & Salovey, 2004) and sub skills, namely perception of emotion, emotional facilitation of thinking, understanding emotion, and managing emotions.

3.2.1.1 *Perception of Emotion*

This ability enables perception of emotion in oneself, in others and in stimuli for example people's voices, music, and works of art. Perceiving emotion in oneself is related to a greater level of self-awareness, a lower level of alexithymia and lower levels of ambivalence regarding the expression of emotion. Perceiving emotion in others means having the ability to be affect sensitive, to have affect-receiving ability as well as non-verbal sensitivity (Mayer & Salovey, 1997).

3.2.1.2 *Emotional Facilitation of Thinking*

Emotional facilitation of thinking encompasses the ability to use emotions to think rationally, logically and creatively. This ability therefore, relies on harnessing feelings to assist reasoning, problem-solving, decision-making and interpersonal communication. Brackett and Salovey (2004:182), refer to theories (Isen, 1987; Palfai & Salovey, 1993; Schwarz, 1990; Schwarz & Clore, 1996) that posit that diverse 'mental sets' are created. These 'mental sets' relate to different reasoning tasks.

3.2.1.3 *Understanding of Emotion*

Understanding emotions refers to the capacity to analyse emotions and this ability involves language. People skilled in this area have a well established vocabulary of *feeling* words and they understand that emotions combine, change and develop from

one emotion to the next; they demonstrate an appreciation for the relationships between the different descriptions of diverse states of emotion, and they are probably adept at highlighting the core meaning of emotional experiences (Brackett & Salovey, 2004).

3.2.1.4 *Management of Emotion*

The management of emotions refers to the ability to regulate or manage emotions in oneself and to effectively help others to manage their emotions. It relies on the accurate labelling of feelings in order to discriminate between them and subsequently improve self-monitoring through appropriate strategies. According to Brackett and Salovey (2004:183), research (Catanzaro & Greenwood, 1994; Salovey, Mayer, Goldman, Turvey & Palfai 1995) shows that people differ in their perceived self-efficacy to manage their emotions. People also differ in their effectiveness at helping others to manage their emotions.

3.2.2 **The Bar-On or mixed model**

According to the definition of the Bar-On model, 'emotional and social intelligence is a cross-section of inter-related emotional and social competencies that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands and pressures' (Bar-on, 2004:117). The social competencies comprise the following five key components:

- The ability to be aware of, understand and express one's emotions;
- The ability to understand others' emotions and relate with people;
- The ability to manage and control emotions;
- The ability to manage change, adapt and solve problems of a personal and interpersonal nature, and
- The ability to generate positive mood and be self-motivated.

Referring to the work of Weschler (1943) who described motivation as a conative factor, Bar-On (2004:117) writes that self-motivation (the fifth component above) acts as a *facilitator* of emotionally intelligent behaviour and that it cannot be regarded as a

component of the construct *emotional intelligence*. The five composite scales, comprising the 15 sub-scales that are measured by the Bar-On EQ-I provide a better understanding of the Bar-On model (Table 3.2). The sub-scales are briefly defined as follows (Bar-On, 2004):

- *Self-regard*: Being aware of, understand, accept and respect oneself.
- *Emotional self-awareness*: To recognise and understand one's feelings.
- *Assertiveness*: To express feelings, beliefs and thoughts and defend one's rights in a non-destructive manner.
- *Independence*: To be self-directed and self-controlled in one's thinking and actions and to be free of emotional dependency.
- *Self-actualisation*: To realise one's potential capacity.
- *Empathy*: To be aware of, understand and appreciate the feelings of others.
- *Social responsibility*: Demonstrating oneself as a contributing and constructive, cooperating member of one's social group.
- *Interpersonal relationship*: To establish and maintain mutually satisfying relationships that are characterised by emotional closeness and by giving and receiving affection.
- *Stress tolerance*: To withstand adverse events and stressful situations without 'falling apart' by actively coping with stress.
- *Impulse control*: To resist or delay an impulse, drive or temptation to act.
- *Reality testing*: To assess the correspondence between what is subjectively experienced and what exists.
- *Flexibility*: To adjust one's emotions, thoughts and behaviour to changing situations and conditions.

- *Problem solving*: To identify and define problems as well as to generate and implement potentially effective solutions.
- *Optimism*: To look to the brighter side of life and to maintain a positive attitude even in the face of adversity.
- *Happiness*: To feel satisfied with oneself, enjoy oneself and others and to have fun.

TABLE 3.2 THE FIVE COMPOSITE SCALES AND THE FIFTEEN SUBSCALES OF THE BAR-ON MODEL AS ADAPTED FROM BAR-ON (2004).

Intrapersonal	Interpersonal	Stress Management	Adaptability	General Mood
<ul style="list-style-type: none"> • Self-regard • Emotional Self-awareness • Assertiveness • Independence • Self-Actualisation 	<ul style="list-style-type: none"> • Empathy • Social Responsibility • Interpersonal Relationship 	<ul style="list-style-type: none"> • Stress Tolerance • Impulse Control 	<ul style="list-style-type: none"> • Reality-testing • Flexibility • Problem-solving 	<ul style="list-style-type: none"> • Optimism • Happiness

3.2.3 Boyatzis: the emotional competence model

The constructs underlying the Boyatzis model (Boyatzis & Sala, 2004) of emotional competence are the competencies that individuals use or express, clustered under self-awareness, self-management, social awareness and relationship management (Boyatzis & Sala, 2004:175). According to Boyatzis and Goleman (Boyatzis, Goleman & Rhee, 2000:343), emotional competence is defined as a person's demonstration of 'the competencies that constitute self-awareness, self-management, social awareness, and social skills at appropriate times and ways in sufficient frequency to be effective in the situation'. Boyatzis and Sala (2004:149), cite Boyatzis' (1982) definition referring to emotional intelligence as 'an emotional intelligence competency' that 'is the ability to recognize, understand, and use emotional information about oneself and (or) others that leads to or causes effective or superior performance'.

Boyatzis' (1982) reference to emotional intelligence as a *competency/construction of competencies* that can be *demonstrated* means that it should predict real life outcomes

in the form of behaviour or sets of behaviour. Behaviour results from the underlying resolve that Boyatzis and Sala (2004:149) refer to as 'intent'.

TABLE 3.3 THE SCALES AND CLUSTERS OF THE EMOTIONAL COMPETENCE INVENTORY VERSION 2 (ECI-2) (ADAPTED FROM BOYATZIS & SALA, 2004).

CLUSTER 1	CLUSTER 2	CLUSTER 3	CLUSTER 4
Self-Awareness	Self-Management	Social Awareness	Relationship Management
<ul style="list-style-type: none"> • Emotional Self-Awareness • Accurate Self-Assessment • Self-Confidence 	<ul style="list-style-type: none"> • Emotional Self-Control • Achievement • Initiative • Transparency • Adaptability • Optimism 	<ul style="list-style-type: none"> • Empathy • Service Orientation • Organizational Awareness 	<ul style="list-style-type: none"> • Inspirational Leadership • Influence; • Conflict Management • Change Catalyst • Developing Others • Teamwork and Collaboration

The competencies described above are built on a basic contingency theory of effective performance and a holistic personality theory (Boyatzis, 1982; Boyatzis & Sala, 2004). As far as effective performance is concerned, it is believed that people can maximize their performance if their capabilities or talents meet the demands of the environment (Boyatzis & Sala, 2004). These demands in organisational context are role responsibilities and tasks. This reminds of Csikszentmihalyi's (1990) theory of flow which posits that, if a task is too simple, (demands from the environment too low) people are under-utilised and become bored, whereas tasks that are beyond the capabilities of people (environmental demands too high) over-extend them, resulting in stress.

Whereas there are shared theoretical perspectives between the ability model, the mixed models and the Boyatzis demonstrated competency model, the ability model of Mayer, Caruso and Salovey (2000) was selected for this research because this model posits that emotional intelligence is an ability that can be measured as such.

TABLE 3.4 THREE MODELS OF EMOTIONAL INTELLIGENCE (BASED ON BAR-ON, 2004; BOYATZIS & SALA, 2004; MAYER, CARUSO & SALOVEY, 2000).

Bar-On Model (Bar-On, 2004)	Boyatzis' Competency Model (Boyatzis & Sala, 2004)	Ability Model (Mayer, Caruso & Salovey, 2000)
<ul style="list-style-type: none"> • Intrapersonal Awareness • Understanding • Expression • Managing and Control of emotions. • Interpersonal Awareness • Understanding • Managing emotions. • Ability to Adapt • Solve Problems • Facilitate EI through general positive mood • Self-motivation 	<ul style="list-style-type: none"> • Self Awareness • Self Management • Social Awareness • Social Skills • Relationship Management 	<ul style="list-style-type: none"> • The ability to: • Perceive • Facilitate (use) • Understand and • Manage Emotions

3.3 VARIABLES INFLUENCING EMOTIONAL INTELLIGENCE

Individuals' emotional responses differ due to variables that influence their interaction with a situation presented by the environment. The key variables of importance in this research are socio-cultural influences, gender influences and cognitive and personality influences (Gardner, 1985; Goleman, 1995).

3.3.1 Socio-cultural influence

Whereas many forms of intelligence, for example mathematical adeptness or spatial processing are virtually the same all over the world, personal intelligence, according to Gardner (1985) is determined by cultural history. This, albeit true, poses the question as to whether personal intelligence (knowledge of self and of others) may indeed be regarded as *intelligence*. Gardner's (1985) theory around this is that personal intelligence, being culturally and historically determined, may be regarded as

controlling and regulating the other forms of intelligence. This is abundantly apparent in South Africa, where the white people opted for the more Western approach of individualisation, while the black people are far more community oriented. This difference between people living in the same country is historically and culturally determined (Gardner, 1985). Do these cultural and historical determinants of personal intelligence, and ultimately emotional intelligence, result in ownership of emotional intelligence for some, but not for others? Certainly not. Gardner (1985) concludes that every society grants its people at least an implied sense of *self*, rooted in the individual's own personal knowledge and emotions. The differences across cultures however, lie in the different interpretations of a sense of self as supported by the culture, history and environment of the individual. Emotional intelligence, in some Eastern cultures for example, may mean to never divulge negative emotions, or to refrain from insulting others by making eye contact.

3.3.2 Gender influences

According to Brody and Hall (2000), who studied gender differences using self-report, writing samples, verbal content, social interaction observations and facial expressions, females are generally more expressive of both positive and negative emotions than men are. However, Brody and Hall (2000) caution that gender differences should not be generalized as they are often specifically related to situations and (or) cultures. They found that women were not as strong as men in recognising non-verbal affective facial, behavioural and vocal cues, expressing anger, whereas in other contexts, women were superior in decoding affective expressions. Male respondents, according to Brody and Hall (2000), generally reported less feelings of fear, embarrassment, shame, anxiety and vulnerability, and higher levels of pride, contempt and loneliness than women. This may be attributed to the male role of provider, to competitiveness in the marketplace, to individualism and (or) to independence.

According to Brody and Hall (2000:344), men might refrain from displaying emotions, either through facial expression or by verbalising feelings even while experiencing higher levels of physiological arousal. On the other hand, Brody (1997) as cited in Brody and Hall (2000:344), found that male offspring from fathers who were or are involved in their caring, express more warmth and fear, while the daughters of fathers who are involved in their upbringing, express more competition and less fear and sadness, than their same-sex peers.

Boyatzis and Sala in Geher (2004:174) also report research results indicating gender differences. Female respondents rated themselves higher, and were also rated higher by others (males and females included). The authors mention though, that reports in the literature are inconclusive and that some ratings report no gender difference, whereas others found differences on specific competencies (Boyatzis & Sala, 2004). According to a study conducted by Cavallo and Brienza (2007) on 358 managers of the Johnson and Johnson Consumer and Personal Care Group, peers rated females higher than males on emotional self-awareness, conscientiousness, developing others, service orientation and communication. Supervisors however, only rated females higher than males on adaptability and service orientation.

3.3.3 Cognitive ability and personality influences

Considering the paradigmatic foundation of emotional intelligence, namely the social-cognitive theory of personality, a closer study of the influence of cognitive ability and personality, as variables of emotional intelligence, seems logical. On the other hand, one may question whether emotional intelligence actually does have a significant influence on one's performance, as Goleman (1995) claims.

In their exploration of a relationship between emotional intelligence and individual cognitive performance, Lam and Kirby (2002) examined the results of individual performance and how this relates to general intelligence, as well as to overall emotional intelligence and to the components of emotional intelligence, namely perceiving emotions, understanding emotions and regulating emotions. Their results supported three out of their four hypotheses, namely that overall emotional intelligence, perceiving emotions and regulating emotions all contributed to individual cognitive-based performance over and above the level attributable to general intelligence, and that the relationship was positive.

Lam and Kirby's (2002) results confirmed that understanding emotions did not contribute to individual cognitive-based performance over and above the level attributable to general intelligence.

According to Gordon Allport in Robbins (1993:100), personality is 'the dynamic organisation within the individual of those psychophysical systems that determine his unique adjustment to his environment'. This 'unique adjustment' may predict emotionally

intelligent behaviour, or not. In Figure 3.2 the impact of the aforementioned variables on behaviour (either emotionally intelligent or not) is depicted.

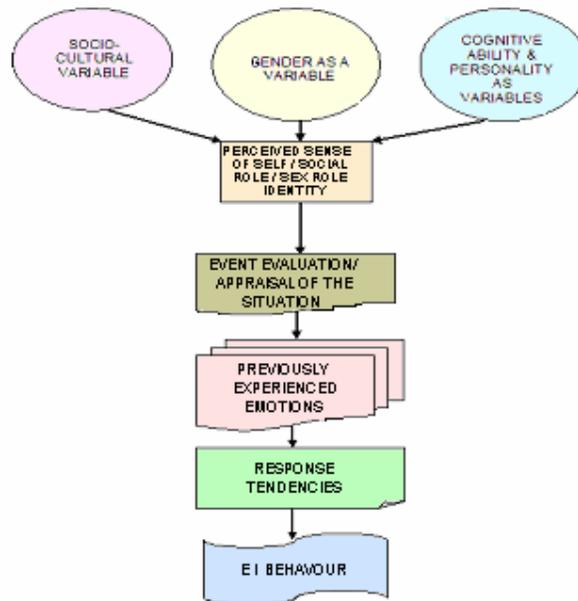


Figure 3.2 The impact of three variables on emotionally intelligent behaviour (based on Brody & Hall, 2000; Boyatzis & Sala, 2004; Gardner, 1985; Lam & Kirby, 2002).

3.4 THEORETICAL INTEGRATION

Central to the social-cognitive approach is Bandura's (1977) social learning and self-regulatory theory. Bandura called for theories that predict behaviour, and this was also Rotter's (1982) primary interest. Mischel's (1984) reply to this was that situational variables impact on the whole being of the person, and therefore inconsistencies in behaviour are actually what make behaviour stable. Mischel and Shoda (Feist & Feist, 2006:529) developed the cognitive-affective personality system from the precept that behaviour is a product of stable traits and situational fluctuations.

Cognitive social learning person variables (cognitive-affective units) aid in conceptualising person-situation interactions; people construct situation-linked behaviours through encoding and categorizing events. Because of individual differences people expect different outcomes, have their own subjective values regarding the expected outcomes and have self-regulatory systems in place, whether there is

perceived pressure from the environment or not. Cognitive-affective units therefore act as mediators between the varied patterns in social cognition, in affect and in their actions across situations, and the result of this mediation is an individual's personality signature. This *signature* is the characteristic behaviour one sees (and usually can predict) from situation to situation. Mischel and Shoda (2000) state that although the structure of the personality system remains stable across situations, the personality state changes as the changing situational features require different encoding or different cognitive and emotive transformation (Mischel & Shoda, 2000).

The question that arises from the aforementioned is what the *personality signature and behaviour* in Figure 3.3 look like in terms of emotional intelligence, and that depends on the emotional intelligence model one ascribes to. For the purpose of this research the ability model of Mayer and Salovey (1995) is the benchmark against which the *personality signature and behaviour* can be measured and therefore *personality signature and behaviour* must resemble the ability to perceive emotions in self and in others, the ability to understand emotions, to use emotions to facilitate thinking and to manage emotions in self and in others.

There is evidence that socio-cultural influences, gender and cognitive ability impact emotional intelligence. The research by Lam and Kirby (2002) however, emphasise cognitive ability as an important variable. Lam and Kirby (2002) found a positive relationship between overall emotional intelligence and individual cognitive-based intelligence, between perceiving emotions and individual cognitive-based intelligence and between managing emotions and individual cognitive-based performance, over and above the level attributable to general intelligence.

When considering Rotter's (1982) stance regarding environmental and situational impact on behaviour, Bandura's (1977) social learning theory and Mischel and Shoda's (2000) cognitive-affective personality system, the thread that binds is that these theories become practical phenomena during the life-stage development of human beings. Variables impacting human development result in psychosocial functioning, or social behaviour, but of equal importance are human responses to social learning as well as the person variables or the cognitive-affective units of analysis people adopt when situational changes need mediation.

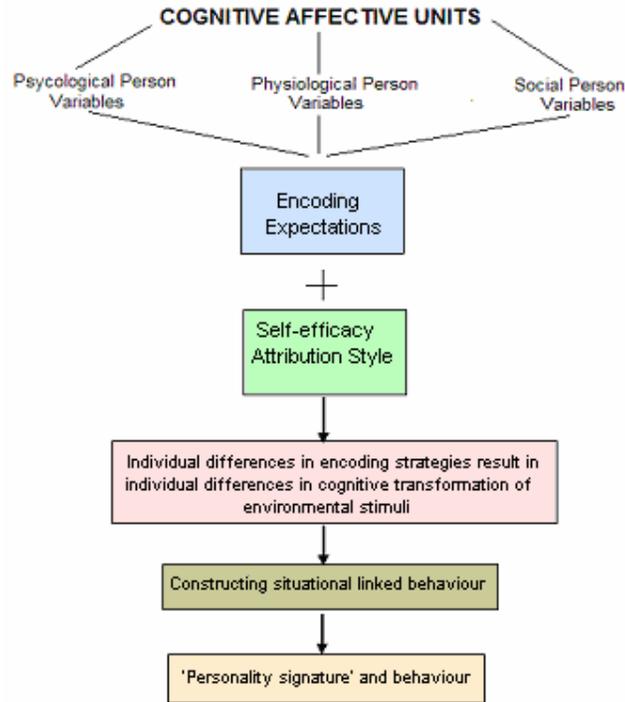


Figure 3.3 Diagrammatic presentation of the cognitive-affective flow based on the theory of Mischel and Shoda (2000).

Whereas it is far too idealistic to want organisations to employ only those who are psychosocially healthy, and (or) emotionally intelligent, it is debatable whether testing for psychosocial health is on the one hand legal and on the other hand a true predictor of creativity and productivity. It is, however, hypothesised that there may be a relationship between psychosocial health and emotionally intelligent behaviour, and apparently there is a relationship between emotionally intelligent behaviour and organisational productivity and profits (Brackett, Mayer & Warner, 2004; Cherniss, 2001; Goleman, 1995, 1998b, 2002, 2005, 2006; Lennick, 2007; Mount, 2006; Sala, 2006), to mention just a few studies.

Life-stage development and psychological, physiological and social person variables impact feelings and behaviour (psychosocial functioning). Psychosocial functioning is either healthy in that the person enjoys high levels of satisfaction, expectation and achievement, or pathological in that helplessness, stress and frustration abound. The assumed hypothesis is that there is a relationship between psychosocial health and emotional intelligence because healthy feelings and healthy behaviour depend upon psychosocial health as well as upon emotional intelligence ability (Figure 3.5).

3.5 IMPLICATIONS FOR PSYCHOSOCIAL FUNCTIONING

Psychosocial functioning refers to the way one behaves (functions) in a social context. Healthy psychosocial functioning implies positive social behaviour that benefits both the individual and the group (Gilbreath, 2004).

Referring to Mayer and Salovey's (1997:10) framework of emotional intelligence, the question now arises as to whether adults in the workplace can be trained to have the ability to be emotionally intelligent. There may be a relationship between psychosocial functioning and emotional intelligence in that the behaviour that accompanies problematic psychosocial functioning, for example frustration (anger), helplessness (depression) and stress may overshadow or even obliterate emotionally intelligent behaviour (Bailey & Leland, 2006). Consider for example, anger or rage as negative psychosocial functioning; the hostile adult may fail to demonstrate regulation of emotion because of the need to vent his or her anger. The depressed adult may find it difficult, if not impossible to draw on his or her social competencies, even though these may be newly learnt. A person experiencing an extremely stressful situation may revert to demonstrating old behaviour minutes after exposure to emotional intelligence training. On the other hand, emotional intelligence ability may facilitate self-management and give the person the tools to manage negative emotions so that he or she can regain the energy needed to be creative and productive (Vermeulen, 1999).

Dulewicz and Higgs (2000:350) refer to studies (Fineman, 1997; Höpfl & Linstead, 1997) suggesting that although the capabilities to demonstrate emotionally intelligent behaviour are developed during childhood, there is a plastic potential about the core of these capabilities that allows for development and change during adulthood. This indicates that adult training in emotional intelligence is viable, but the question remains as to whether trainees will be able to develop and change in a sustainable way if they are not shown the link between the utilisation of emotional intelligence to prevent the downward spiral of negative psychosocial functioning.

3.6 IMPLICATIONS FOR EMPLOYEE WELLNESS PROGRAMMES

Promoting wellness in an organisation means that employee wellness is incorporated in the organisational strategy, and adopted into the organisation's culture. This implies that the role players, for example management and labour representatives become involved

and remain supportive of programmes and interventions that address the physical and the psychological wellness of employees (Matlala, 1999). It is through people (employees) that organisations can be effective in realising their financial goals, and excellence in the workplace requires a psychosocially healthy workforce (Gilbreath, 2004).

According to Cherniss (2001), an organisation's effectiveness is influenced by the emotional intelligence of employees. Cherniss's (2001) model of emotional intelligence and organisational effectiveness shows that leadership, human resource functions and organisational climate interrelate, influence and are influenced by emotional intelligence (Figure 3.4). Human Resource factors impact upon leadership and emotional intelligence, which impact upon organisational climate. The relationship borne out of the reciprocity between Human Resource functions, leadership and climate, impacts upon individual emotional intelligence, group emotional intelligence and organisational effectiveness.

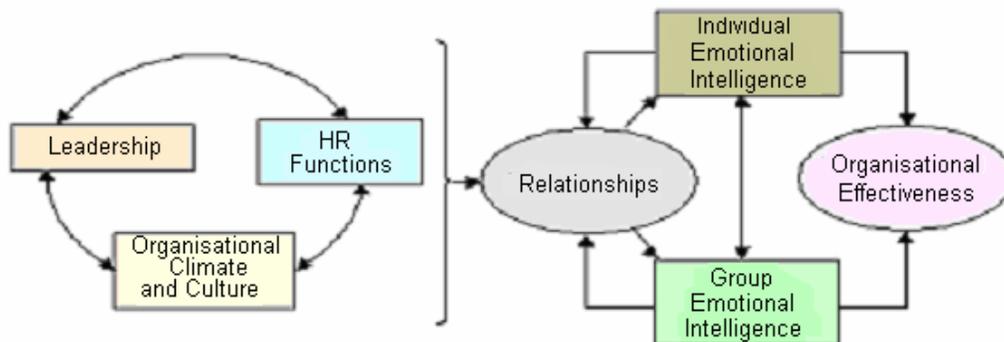


Figure 3.4 A model of emotional intelligence and organisational effectiveness (Cherniss & Goleman, 2001: 8).

Group emotional intelligence, writes Watkin (2000), is fast becoming more important than the individual knowledge of employees. According to Watkin's (2000) figures, an employee needs only 15% to 20% of the required knowledge to be able to do his or her job and therefore the scientific data seems to highlight the emotional intelligence of the group as the differentiating element (Watkin, 2000:91).

Scientifically therefore, it seems to make sense to view emotional intelligence as an ability, and to incorporate its test usage in the selection process. In fact, the 15fq+[®], a

personality questionnaire based on the work of Cattell (1946) claims to measure, among other dimensions, *emotional resilience*. This questionnaire is often used in personnel selection in South Africa. If it is considered fair labour practice, not to mention scientifically sound, to partially base selection decisions on a self-report personality questionnaire for the sake of ascertaining whether a candidate is prone to mood swings or not, it may be more scientific to measure his or her ability to perceive emotion in self and others, to use emotions to think rationally, to understand emotions and to be able to manage it (Mayer & Salovey, 1997).

Employee wellness interventions focused upon empowering supervisors to create positive psychosocial work environments and enabling subordinates to manage their psychosocial health through emotional intelligence techniques may result in growing a happier and a more productive workforce (Gilbreath, 2004).

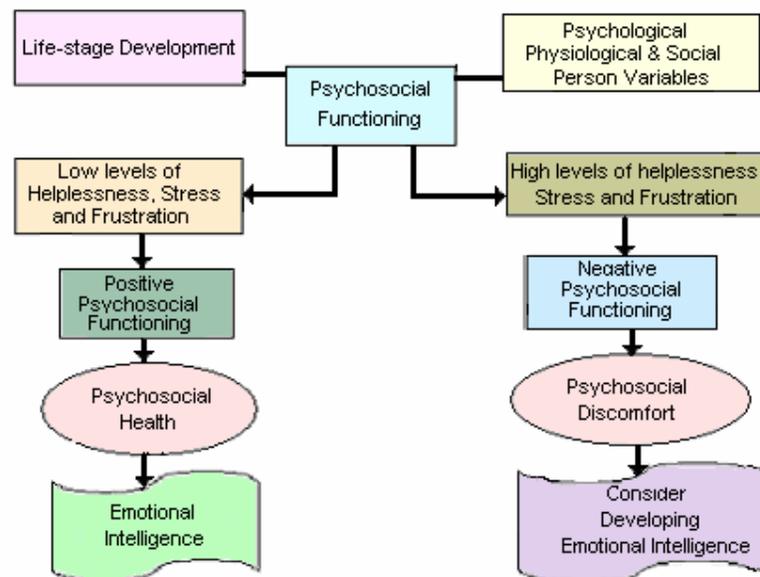


Figure 3.5 Theoretical research model based on psychosocial theory of development according to Erikson (Newman & Newman, 2006), and cognitive-affective personality theory of Mischel and Shoda (1999).

3.7 CHAPTER SUMMARY

In this chapter the paradigmatic and theoretical underpinnings of emotional intelligence were discussed. Various models of emotional intelligence were viewed, with the Mayer- and Salovey (1995) model as the benchmark. The different variables that may

influence emotional intelligence were mentioned, with reference to some existing research into these variables. Finally emotional intelligence was considered for its possible relationship with psychosocial health, and for the importance of this relationship for industrial and organisational psychology, in particular employee wellness programmes. The chapter was concluded with an integrative model to illustrate the warp of cognitive-affective personality theory and the weft of psychosocial theory in weaving the fabric of human social behaviour as either emotionally competent, or not.

This concludes the literature review.

Chapter 4 entails the empirical part of this research.

CHAPTER 4

EMPIRICAL RESEARCH

In this chapter, the empirical part of this study is described. The aim is to state the statistical procedures that were used to investigate whether there is a relationship between psychosocial health and emotional intelligence. The chapter gives an overview of the steps followed in the research process, and includes the research method, the sampling technique, the measuring instruments and the data management. The research hypotheses are also outlined. This phase of the study consists of the following nine steps:

- Step 1 Determination and description of the sample
- Step 2 Choosing and justifying the psychometric battery
- Step 3 Administration of the psychometric battery
- Step 4 Scoring of the psychometric battery
- Step 5 Statistical processing of the data
- Step 6 Formulation of the research hypotheses
- Step 7 Reporting on and interpretation of the results
- Step 8 Integration of research findings
- Step 9 Formulation of conclusions, limitations and recommendations.

In this chapter, the first four steps will be covered. The remainder will be addressed in chapters 5 and 6.

4.1 DETERMINATION AND DESCRIPTION OF THE SAMPLE

The determination and description of the biographical characteristics of the sample is the first step in the research design.

4.1.1 Population sample and participants

There are many definitions of *population* (Arkava & Lane, 1983:27; Bless & Higson-Smith, 2000:85; McBurney, 2001:248; Powers et al., 1985:235; Seaberg, 1988:240; as cited in de Vos, 2004:198), but the simplest definition seems to be Mc Burney's (2001:248) reference to *population* as the 'sampling frame'. De Vos (2004:199) summarises this as units of persons, units of events or case records, or organisation units. A sample is therefore regarded as a subset of the population.

Cohen's (1988:103) sample size tables were studied in the planning stages of this research because of the cost involved in using the Mayer-Salovey-Caruso-Emotional Intelligence Test, the motivation being a scientifically significant sample size, without unnecessary expenditure. According to Cohen (1988), a sample of 68 respondents is sufficient when considering effect size of .05 and statistical power of .80 for a correlation study.

The criteria for suitable respondents were a high level of English language proficiency, age (17 years and older) and being gainfully employed in a South African organisation. The relatively high level of English language proficiency is necessary to understand the questions in the Mayer -Salovey-Caruso Emotional Intelligence Test because of the emotion terms used (Mayer, Salovey, Caruso & Sitarenios, 2001). The Personal Multi-screening Inventory, although available in other languages, was also presented in English.

Ten organisations were approached of which 7 agreed to allow staff the time and internet access to complete the Personal Multi-screening Inventory and the Mayer-Salovey-Caruso Emotional Intelligence Test, provided that their employees did so of their own volition. Initially, 153 individuals were contacted electronically and asked whether they would be willing to participate in the research. Ninety one (91) of the 153 individuals volunteered to participate and were given passwords and usernames and instructions. Of the 91, only 35 actually returned fully completed and usable responses. A further 73 individuals from the same 7 organisations were approached and 34 of them returned fully completed and usable responses. The final sample therefore comprised of only 69 participants (Table 4.1).

The 7 organisations from which participants were drawn, comprised of one insurance

firm, a college for higher education, a personnel agency, a firm of industrial and organisational psychologists, a manufacturing organisation, the hospitality industry, and information technology. The participants who responded comprised of clerks and receptionists, consultants, psychologists, managers, information technology specialists, and teachers.

TABLE 4.1 INITIAL AND FINAL SAMPLE SIZE

Organisation	Number of employees approached	Number of voluntary participants	PMSI and MSCEIT sent out	Final PMSI and MSCEIT returned and used	Data not usable
1	12	6	6	6	0
2	8	8	8	8	0
3	35	20	20	0	0
4	50	25	25	2	0
5	41	25	25	12	1
6	4	4	4	4	0
7	3	3	3	3	0
1 – 7 (2 nd appeal)	73	73	73	34	0
Sub-total	153	91	91	35	3
TOTAL	226	164	164	69	4

4.2 CHOOSING AND JUSTIFYING THE PSYCHOMETRIC BATTERY

The consideration given to the selection of the psychometric battery was guided by the literature review. The investigation into the literature on psychosocial health led to the Personal Multi-Screening Inventory, which measures feelings and behaviour on 6 dimensions. These dimensions are helplessness, stress, frustration, expectation, satisfaction and achievement (Faul, 1995).

The Mayer-Salovey-Caruso Emotional Intelligence Test (hereafter referred to as the MSCEIT) was chosen because it tests emotional intelligence as an ability and not as a self-perceived skill (Mayer, Salovey & Caruso, 2002).

Biographical data was obtained by questions posed at the start of the MSCEIT. Unfortunately these questions did not include marital status, and this information was obtained through a respondent follow up.

4.2.1 The Personal Multi-Screening Inventory (PMSI)

The Personal Multi-Screening Inventory, hereafter referred to as the PMSI, was designed to assess levels of helplessness, stress and frustration as indicators of negative psychosocial functioning and levels of expectation, satisfaction and achievement orientation as indicators of psychosocial health.

4.2.1.1 Theoretical basis for the development of the PMSI

The main theoretical basis for the development of the PMSI is psychosocial theory as expounded by life-stage development. Erikson's (Newman & Newman, 2006) work on the successful resolution of life-stage crises concludes that there is a negative or a positive outcome at the end of each stage, for example trust vs. mistrust, and autonomy vs. shame and doubt. This translates into human strengths and problems, pain and pleasure, or feeling and behaving in a functional or dysfunctional way.

According to Faul (1995) positive human functioning is mainly described in terms of three aspects:

- The way in which individuals are motivated and committed to being achievement oriented in their transactions with their environment.
- The way in which individuals experience satisfaction in their transactions with their environment.
- The way in which individuals enjoy optimistic expectations for the future that stimulate positive and satisfactory transactions.

Human dysfunction (Faul, 1995) is mainly described in terms of the following aspects:

- The way in which individuals are being frustrated in achieving their goals and dreams.
- The way in which individuals experience stress as a result of environmental demands that are too high.
- The way in which individuals experience helplessness when achievement

orientation or goal directedness collapses.

Conclusions about the presence of personal, emotional, interpersonal, spiritual and physical functioning are always based on the value base of the person who draws the conclusion; a strength or problem is non-existent until defined and such definitions are made in terms of someone's value base (Faul & Hanekom, 2006).

4.2.1.2 The rationale of the PMSI

The PMSI was developed as a therapeutic tool to measure a client's perceived helplessness, stress and frustration, and expectation, satisfaction and achievement (Faul & Hanekom, 2006).

4.2.1.3 Scales of the PMSI

The Likert scales of the PMSI are divided into two main groups namely those three that measure positive psychosocial functioning and those three that measure negative psychosocial functioning. These six dimensions are measured by 265 items. The items measure the respondents' inner interaction as well as his or her behaviour (Faul & Hanekom, 2006).

(i) Positive psychosocial functioning:

Positive psychosocial functioning is measured along the dimensions achievement, satisfaction and expectation (Faul, 1995).

(ii) Negative or problematic psychosocial functioning:

Negative psychosocial functioning (Faul, 1995) is measured along the dimensions helplessness (depression), stress and frustration (anger).

4.2.1.4 Scoring and interpretation

Each subscale of the PMSI was designed to measure the magnitude of the construct that is being investigated. Thus, if one person has a helplessness score of 32 and another has a score of 44, it will be concluded that the second person perceives him or herself as more helpless than the first one (Faul, 1995).

Lower scores on the negative constructs (Sections B, C and D), represent the relative absence of problems in these areas of personal functioning, whereas higher scores on the positive constructs, (Sections A, E, F and G); represent the relative absence of problems in these areas of personal functioning. Higher scores on the negative constructs and lower scores on the positive constructs represent more serious problems in these areas. The subscales each have a clinical cutting score that is useful for interpretation purposes (Faul & Hanekom, 2006). Clinical cutting scores are indicated on graphs to ease interpretation (Faul & Hanekom, 2006). The signs on the interpretation lines for the positive sections (A, E, F and G) can be interpreted in the following manner (Faul & Hanekom, 2006):

(i) *Purple, UNDER ACTIVATED:*

There is reliable proof that the person has a clinical problem that justifies therapeutic intervention in the area being measured. The problem is so severe that there is the distinct possibility that such a low scoring client may attempt violence against self or others, or demonstrate irrational behaviour (Faul & Hanekom, 2006).

(ii) *Red, UNDER ACTIVATED:*

There is reliable proof that the person has a clinical problem that justifies therapeutic intervention in the area being measured (Faul & Hanekom, 2006).

(iii) *Blue, UNCERTAIN AREA:*

Scores that are within this clinical cutting score range can be interpreted as client uncertainty. The client and other sources must provide information to decide if the client falls in the optimal activated area or the under activated area (Faul & Hanekom, 2006).

(iv) *Green, OPTIMALLY ACTIVATED:*

This indicates reliable proof that the person does not have a problem that justifies clinical intervention in that area (Faul & Hanekom, 2006).

(v) *OVER ACTIVATED:*

This indicates reliable proof that the person does not have a problem in that area, but it is possible that the person is overemphasizing the positive part of his or her functioning

(Faul & Hanekom, 2006).

The signs on the interpretation lines for the negative sections (Sections B, C and D) can be interpreted as follows:

(vi) *UNDER ACTIVATED:*

This indicates reliable proof that the person does not have a problem in that area which justifies clinical intervention, but it is possible that the person is under-emphasizing the negative part of his or her functioning (Faul & Hanekom, 2006).

(vii) *Green, OPTIMALLY ACTIVATED:*

This indicates reliable proof that the person does not have a problem in that area which justifies clinical intervention (Faul & Hanekom, 2006).

(viii) *Blue, UNCERTAIN AREA:*

This is the clinical cutting score range area where it is uncertain if the client has a clinical problem which justifies therapeutic intervention. The client and other sources must provide information to decide if the client falls in the optimal activated area or the over activated area (Faul & Hanekom, 2006).

(ix) *Red, OVER ACTIVATED:*

There is reliable proof that the person has a clinical problem that justifies therapeutic intervention in the area being measured (Faul & Hanekom, 2006).

(x) *Purple, OVER ACTIVATED:*

There is reliable proof that the person has a clinical problem that justifies therapeutic intervention in the area being measured. The problem is so severe that there is the distinct possibility that such a high scoring client may attempt violence against self or others (Faul & Hanekom, 2006).

4.2.1.5 *Validity of the PMSI*

(i) Content validity

The findings reported that the content validity coefficients on the different PMSI subscales range between 0.41 and 0.84, with a mean validity coefficient of 0.67 for the scale as a whole.

The acceptable standard for the content validity coefficient is 0.50 and most of the scales meet this requirement, whereas 21 of the subscales meet the higher standard of 0.60. Only three of the subscales do not meet the requirement of 0.50. These scales are the subscales for Compulsive behaviour, Physical Health and Hygiene. These three scales can benefit from more research to identify items that present the domain of possible items in a better manner than the current items (Faul & Hanekom, 2006).

It can be concluded that the content validities for 33 of the 36 subscales are of acceptable nature and that these PMSI subscales have acceptable content validity coefficients. Furthermore, because the subscale items correlate with their own total scores and not with the total scores of all other subscales it is fair to conclude that the PMSI has good content validity (Faul & Hanekom, 2006).

(ii) Construct validity and discriminant construct validity

At the item level of analysis, the PMSI subscales must correlate well with the aspects they are theoretically supposed to correlate with (their own subscale total scores) which indicates convergent construct validity. Moreover, the PMSI subscale items must also correlate much lower with the aspects, theoretically, they should not correlate with (the remaining subscale total scores), indicating discriminant construct validity (Faul & Hanekom, 2006). The item-analysis done to test content validity also serves as the basis for the testing of construct validity on the item level of analysis (Faul & Hanekom, 2006).

The items on the different subscales correlate higher with their own total scores than with any of the other subscale total scores. The mean own item total correlation over all the subscales for the **overall sample** is 0.67, with the mean item total correlation with the other subscales, a 0.25 correlation. These correlation scores confirm convergent and discriminant validity on the item level of analysis for all the different samples (Faul & Hanekom, 2006).

Because of their poor performance in content and construct validities as well as the Cronbach alpha scores, it was decided to exclude the following three subscales from the final version of the scale: Compulsive behaviour, Health, and Hygiene (Faul & Hanekom, 2006).

4.2.1.6 Reliability of the PMSI

According to the results of studies conducted by Faul and Hanekom (2006), the Cronbach alpha coefficients on the different PMSI subscales ranged between 0.73 and 0.96, with a mean alpha coefficient of 0.88 for the scale as a whole. The standard error of measurement ranged between 1.60 and 3.61 with a mean of 2.23. Most of the subscales meet the requirements of an alpha higher than 0.80 for use in clinical practice, with 13 of the subscales that meet the higher standard of 0.90. There are however three exceptions, namely the subscales Compulsive Behaviour, Health and Hygiene (Faul & Hanekom, 2006). According to Faul and Hanekom (2006), these three subscales can benefit from further research to make them more reliable. The PMSI is being subjected to ongoing psychometric investigation, but the results already obtained suggest that it performs well.

4.2.1.7 Reason for choice

The literature review on psychosocial functioning led to the PMSI because it is theoretically grounded in the life-stage theories. It is clear from literature (Hatch et al., 2007; Haworth & Hart, 2007; Sparrow & Knight, 2006; Stewart, Ricci, Chee, Hahn & Morgenstein, 2003) that employees who suffer from helplessness (depression) stress and frustration may impact the organisational financial bottom-line negatively.

4.2.2 The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT)

The MSCEIT will be discussed in terms of theoretical basis, rationale, scales, administration, scoring and interpretation, validity and reliability, and motivation for choice.

4.2.2.1 The theoretical basis for the development of the MSCEIT

The MSCEIT is designed to measure emotional intelligence as the ability to perform tasks and solve emotional problems (Mayer et al., 2002). It measures actual abilities and

the scores are relatively unaffected by the respondent's self-concept, emotional state, response set or other confounding interferences (Mayer et al., 2002).

Although a person's emotional intelligence can be described by a single performance level (e.g. competent or skilled) the MSCEIT distinguishes between experiential and strategic emotional intelligence, which are linked to the four central areas of emotional intelligence namely the accurate perception of emotions, use of emotions to facilitate thinking, understanding emotions and managing emotions for personal growth (Mayer & Salovey, 1997).

4.2.2.2 Rationale of the MSCEIT

The rationale behind the development of the MSCEIT was to develop an instrument to measure the capacity to reason using feelings, or to put it in another way, to measure the capacity of feelings to enhance thought (Mayer et al., 2002).

4.2.2.3 Scales of the MSCEIT

The MSCEIT is designed to measure the four branches of emotional intelligence corresponding to the Mayer and Salovey (1997) model of emotional intelligence. These four branches are divided into two areas namely experiential emotional intelligence and strategic emotional intelligence. Experiential emotional intelligence measures the respondent's ability to perceive emotional information, to relate it to other sensations, e.g. colour and taste and to use emotional information to facilitate thought. Experiential emotional intelligence therefore covers the two branches known as the ability to perceive emotions in self and others, and the ability to use emotions to improve thinking (Mayer et al., 2002).

Strategic emotional intelligence measures the respondent's ability to understand emotional information and be able to use it for planning and self-management. This area therefore covers the remaining two branches of the four-branch model namely understanding emotions in self and in others and managing emotions in self and in others. Understanding emotions in self and in others means the understanding of the complexities of emotional meanings, emotional transitions and emotional situations (Mayer et al., 2002).

The MSCEIT have 8 Likert scales representing 8 tasks. Each of the four branches has two sections (two tasks), for example the ability to perceive emotions (one of the branches of the model) is tested through the tasks in Section A and B, which require responses to the emotional information in faces and pictures (Table 4.2). The test has 141 items and the tasks entail that the respondent identifies emotions expressed by faces, generate a mood and solve problem with that mood, define the causes of different emotions, understand the progression of emotions and determine how best to include emotions in thinking about self and others (Mayer, Caruso & Salovey, 2005).

TABLE 4.2 STRUCTURE OF THE MSCEIT (Adapted from Mayer et al., 2002).

Overall Scale	Two areas	Four Branches	Task level	
Emotional Intelligence	Experiential EI	Perceiving emotions	Faces Pictures	Section A Section E
		Using emotions to facilitate thought	Facilitation Sensations	Section B Section F
	Strategic EI	Understanding emotions	Changes Blends	Section C Section G
		Managing emotions	Emotion management Emotion relations	Section D Section H

4.2.2.4 Administration of the MSCEIT

There are various ways in which the MSCEIT can be administered. Item booklets are available and response sheets can be faxed or sent by mail or courier, in which case the electronically generated reports will be returned to the test administrator.

For research purposes and because only data sets were ordered, the electronic version of the test was used in this study. Respondents were given the web address, access code and password and all the instructions were immediately available online. The test is therefore completed on the Internet and the test administrator is informed thereof via an electronically generated mail message. The test administrator then uses his or her username and password to access his or her account and requests the generated rapport or in this case, the data set.

4.2.2.5 *Scoring and interpretation of the MSCEIT*

The test administrator has two options for scoring the MSCEIT (Mayer et al., 2002). The one option is to score the correctness of the participant's responses as judged by a general consensus criterion. The other option is to use an expert criterion.

Whereas general consensus and expert consensus may reflect the same level of emotional intelligence ability there may be discrepancies, but according to Mayer et al. (2002) the empirical evidence pertaining to this issue is of little significance. Mayer et al. (2002) do state however, that theoretically it seems likely that responses that agree with general consensus may indicate that the person is more conventional in his or her emotional intelligence, whereas the more emotionally sophisticated may respond more correctly to the expert consensus. In this study the general consensus criterion was used.

The MSCEIT is interpreted according to the scores achieved for Total emotional intelligence and for the two main areas namely Experiential emotional intelligence and Strategic emotional intelligence. These two main areas are broken down into branch scores namely perceive emotions, use emotions, understand emotions and manage emotions.

(i) Total emotional intelligence

The total emotional intelligence score provides an overall index of the person's emotional intelligence (Mayer et al., 2002).

(ii) Area scores

The Experiential emotional intelligence score refers to the respondent's ability to perceive emotional information and to relate it to other sensations, e.g. colour and taste. Experiential emotional intelligence is also an index of the ability to use emotions to facilitate thought. Strategic emotional intelligence scores provide an index of the respondents' understanding of emotional information and his or her ability to use it for planning and for self-management (Mayer et al., 2002).

(iii) *Branch scores*

The perceiving emotions score is an indication of the respondent's ability to identify emotions in self and in others. The facilitating thought score refers to the degree to which the respondent is able to use emotions to improve thinking. The score for understanding emotions indicates the ability to manage the complexities of emotional meanings, emotional transitions and emotional situations. The emotional management score registers the respondent's ability to manage emotions in his or her own life and in others (Mayer et al., 2002)

The resource and the personal summary report of the MSCEIT provide results in graph form for each of the four branch scores, as well as the tasks associated with each branch. The total score, experiential area, strategic area, perceiving emotions, using emotions, understanding emotions, and managing emotions are interpreted on a continuum which ranges from *improve* to *expert* (Mayer et al., 2002)

- *Improve*: This means that the respondent may have some difficulty in this area.
- *Consider developing*: Whereas this is not an area of strength, the respondent is encouraged to enhance this area.
- *Competent*: The respondent has sufficient skill to perform in this area with some degree of success.
- *Skilled*: This is an area of strength.
- *Expert*: This may be a highly developed area of expertise; the score suggests that the respondent has great potential in this area (Mayer et al., 2002).

4.2.2.6 *Validity and reliability of the MSCEIT*

A scale or a test is valid when it measures what it is supposed to or claims to measure and this implies that inferences made from using valid scales or tests will be useful and will have meaning. There are three main categories of validity namely content validity, criterion-related validity and construct validity (Finchilescu, 2002).

(a) Content validity

A test has content validity when the test items were drawn from the domains that the test is supposed to cover (Finchilescu, 2002). In the case of the MSCEIT, the domains are derived from the four-branch model which, after considerable literature research led the developers to distinguish the domains as the ability of emotional perception, facilitating thought (using emotions), emotional understanding and emotional management (Mayer et al., 2002).

Content validity can be ascertained through determining face validity and (or) having the test or scale independently evaluated by expert judges. Face validity refers to the appearance of the test or scale, and is concerned with whether it appears to measure what it intends to measure. In ascertaining validity through expert judgement the strength of the relevance of the scale items against the content domain of the construct being measured is judged by authorities on the content or subject matter (Finchilescu, 2002).

According to Mayer et al., (2002:37), Pusey (2000), analysed the face validity of the MSCEIT RV 1.1 by recording participant thoughts and reactions after taking this previous version of the test. The participant's thoughts and reactions were coded by two independent raters and the interrater reliability was $r = .83$. The subtest with the highest face validity was the *faces* test.

(b) Structural (or Factorial) validity

Structural validity refers to the number of things a test measures. The MSCEIT measures two Area levels, and eight tasks divided into four Branch levels. Mayer et al. (2002) report that mathematical interpretations of the test support such scoring by examining the item and task intercorrelations; this examination informs the existence of latent factors that correspond to the divisions mentioned. Confirmatory factor analysis supports the scoring methods (Mayer et al., 2002).

(c) Construct validity

Construct validity refers to the test as being a good operationalisation of the concept it is supposed to measure, and requires that all other forms of validity be assessed. It also includes a critical assessment of the logic underlying the concept as well as the concept's (and the test's) relation to other concepts within the same discipline. Although

Mayer et al. (2002) claim construct validity for the MSCEIT on the grounds of their theory of emotional intelligence and the aforementioned validities, they also mention that construct validity is generally determined over time and the authors therefore postpone their final word on it for the time being.

Reliability refers to the accuracy or the precision of the measuring instrument. It can also be described as the degree of agreement between two sets of scores that were arrived at independently when using the same instrument, according to Bostwick and Kyte (1981) as cited in de Vos (2004:168).

Mayer et al. (2002) report the reliability of the MSCEIT in Table 4.3

TABLE 4.3 RELIABILITY OF MSCEIT AND ITS SUB-AREAS AND BRANCHES (MAYER ET AL., 2002)

Scale Group	Scale	Reliability*	
		General Scoring	Expert Scoring
	Scores Recommended for interpretation		
Overall	Total EIQ	93	91
Area Scores	A. Experiential	90	90
	B. Strategic	88	86
Branch Scores	1. Perceiving	91	90
	2. Facilitating	79	76
	3. Understanding	80	77
	4. Managing	83	81
Branch 1: Perceiving Emotions	A. Faces	81	82
	E. Pictures	88	87
Branch 2: Facilitating Thought	B: Facilitation	64	62
	F: Sensations	65	56
Branch 3: Understanding Emotions	C: Changes	70	68
	G: Blends	66	62
Branch 4: Managing Emotions	D: Emotion Management:	69	64
	H: Emotional Relations	67	64

*Split-half reliabilities are reported at the total test, area, and branch levels due to item heterogeneity. Coefficient alpha reliabilities are reported at the subtest level due to item homogeneity.

4.2.2.7 *Motivation for choice*

The decision to choose the MSCEIT as the instrument to test emotional intelligence was based on the fact that it claims to test emotional intelligence as being an ability. This is not a self-report tool, and there are *right* and *wrong* answers (Mayer et al., 2002). Mayer et al. (2002) claim that the test measures respondents' ability to perform specific tasks and to solve emotional problems. It is not merely aimed at collecting subjective self-assessments of emotional skills (Mayer et al., 2002).

4.2.3 **Limitations of the psychometric battery**

Whereas the majority of the normative data for the MSCEIT came from the United States of America, data from the United Kingdom, Canada, Malta, South Africa, Australia, Switzerland, Scotland, the Philippines, India, Slovenia and Sri Lanka was also used. According to Mayer et al. (2002) the overall favourable reactions from participants support the international applicability of the instrument. The test was administered in English to English-speaking respondents at all the data collection sites. The normative data for the PMSI, however, was not drawn from such a wide internationally representative sample. Data for the standardisation of the PMSI was collected in South Africa (Faul & Hanekom, 2006).

4.2.4 **Ethical issues**

The ethical aspects that were considered during data collection were first of all that there was no pressure on potential respondents to participate. Secondly, all the respondents were informed about the reason for their participation, namely research, but they were also given the opportunity to ask for feedback on their results. This was explained to the potential participants via electronic mail. This electronic mail message also included the undertaking to keep their responses confidential. The electronic versions of both the test and the questionnaire have a section in the beginning that informs the potential respondent and gives him or her the opportunity to consent to, or decline to participate.

The Employment Equity Act 55 (1998) requires that psychometric tests and assessments are valid, reliable, fair and not biased against any employee or group of employees. The assessments used in this study comply with the requirements stipulated by the Act.

4.2.5 Administration of the psychometric battery

The administration of the battery was done electronically. Potential participants were requested to participate via electronic mail. Those that responded favourably were given the names of the relevant websites, as well as full instructions and access codes in the form of usernames and passwords. Once the respondents have completed the Mayer-Salovey-Caruso-Emotional Intelligence Test and the Personal Multi- screening Inventory, the administrator (researcher) was informed by electronically generated mail, and the responses were available.

4.2.6 Scoring of the psychometric battery

The MSCEIT and the PMSI can be scored manually as well as electronically. In this study, both instruments were scored electronically. All the data was converted into an SPSS data file (SPSS 15 for Windows 2007-2008). This software was used to manage the data, compute the necessary statistical analyses and present the output in tables and (or) graphs.

4.2.7 Statistical data processing

Raw data derived from psychometric batteries usually comprise of meaningless numbers. Statistical data processing is done to analyse the data so that meaningful information can be derived from its interpretation. The statistical data processing is discussed in more detail in the next chapter (Chapter 5) and includes frequency distribution, internal consistency reliability analysis, and correlations between variables:

4.2.7.1 Frequency distribution

Babbie (2004:401) defines frequency distribution tables as describing 'the number of times the various attributes of a variable are observed in a sample'. The frequency distribution in this study includes those for age, gender, marital status and race.

4.2.7.2 Internal consistency reliability analysis

Internal consistency is estimated by the Cronbach alpha coefficient formula. The Cronbach alpha can be seen as the reliability coefficient averages resulting from performing all the possible split-half analyses (Finchelescu, 2002). Cronbach alpha tests

were done on all four sub-scales of the MSCEIT, the six subscales measuring negative psychosocial functioning and the six subscales measuring positive psychosocial functioning.

4.2.7.3 Correlations between variables

Whereas the strength of a relationship can be gauged from a scatter plot, the Pearson product-moment correlation coefficient was used in this study to provide a numerical value to indicate the degree of correlation and (or) lack of correlation between the variables (Lachenicht, 2002).

4.2.8 Analysis of variance (ANOVA)

An ANOVA is performed to test for possible differences between the means of more than two groups of subjects (Durrheim, 2002). Should there be significant comparison between the group means the result will be a significant effect.

ANOVA helps to manage the problem of inadvertently rejecting at least one null hypothesis in a set of comparisons (Durrheim, 2002). It counters the increase in alpha that occurs when more than two group means are compared, because it uses a single calculation and tests all comparisons simultaneously.

In this study analysis of variance was employed to compare the means of the three age groups of respondents.

4.2.8.1 Mean scores, and the difference of mean scores for the different groups

The Analysis of Variance (ANOVA) test is used for testing the significance of the difference in mean scores for three independent samples, and the T-test for two independent samples. The question that needs to be answered by the statistical output of these tests is whether it can safely be concluded that the samples are so different that they were drawn from two population groups, (unequal variances) or whether the output suggests that the two samples come from a single population group (equal variances) (Nunez, 2002). In the tests performed in this study the differences in mean scores were investigated for age, gender, race and marital status groups.

4.2.8.2 Scheffé's post hoc test (pair wise comparisons)

Scheffé's pair wise comparison test is executed in cases where the researcher wants to know which specific population means have underlying differences (Steyn, Smit & du Toit, 1994). This test is more conservative than other similar post hoc tests, thereby minimising the risk of making a Type I error. According to this technique all the possible comparisons between the averages are calculated pair wise without exceeding the specified level of significance. In this study this test was used to examine the underlying differences in the means with respect to the three age groups.

4.2.9 Statistical significance

Statistical significance, according to Babbie (2004), refers to the likelihood that sampling error may be responsible for observed relationships in a sample. Whereas a sample statistic usually provides the best estimate of the corresponding population parameter, perfect correspondence between statistic and parameter seldom exists and there is only the probability that the parameter falls within a specific range or *confidence interval*. *Probability* implies a degree of uncertainty within the specific range that can be attributed to normal sampling error (Babbie, 2004). It is improbable however, that sampling error alone can be responsible for out-of-range-parameters.

Statistical significance of relationships derived from data sets is therefore always expressed as probabilities. Table 4.4 provides levels of statistical significance and illustrates for example that *significant at the 0.05 level* means that the probability of sampling error alone being responsible for the relationship, is no more than 5 in 100 (Babbie, 2004). In this study the sample size is rather small (N=69) and because of this, and the exploratory nature of the statistical analysis, significance levels of up to 10% are accepted for relationships, instead of the 5% which is normally required in confirmatory statistics (Garson, 2006).

TABLE 4.4 LEVELS OF STATISTICAL SIGNIFICANCE

Probability	Level	Significance
p	0.10	Significant for exploratory research with a relatively small sample
p	0.01 – 0.05	Significant
p	0.001 – 0.01	Very significant
p	0.001	Extremely significant

4.2.10 Formulation of the research hypotheses

According to Kerlinger and Lee (2000), hypotheses give direction to the inquiry. An hypothesis is a statement that generally or specifically declares the relationship between variables which are measurable or potentially measurable. Kerlinger and Lee (2000) distinguishes between the null hypothesis and the alternative hypothesis by explaining that the null hypothesis proposes no relationship between the variables, and this is tested against the alternative hypothesis, which suggests that there is a relationship.

For the purpose of this study, the following hypotheses are formulated:

H₀₁ There is no significant relationship between psychosocial health and emotional intelligence.

H₁₁ There is a significant relationship between psychosocial health and emotional intelligence.

4.3 CHAPTER SUMMARY

Chapter 4 covered the first six steps in the empirical research namely determination and description of the sample, choosing the psychometric battery, the administration of the psychometric battery, the scoring of the psychometric battery, the data processing techniques utilised and the formulation of the research hypotheses.

The contents of chapter 5 entails step 7 of the empirical research, namely reporting and interpretation of the results.

CHAPTER 5 RESEARCH RESULTS

In this chapter, step 7 of the research results is discussed. This entails the analysis and interpretation of the data through descriptive, explanatory and inferential statistics.

According to Babbie (2004:442), descriptive statistics 'present quantitative descriptions in a manageable form'. This includes descriptions of single variables, group variables, and the difference and association between variables, while inferential statistics refer to 'the measures used for making inferences from findings based on sample observations, to a larger population' (Babbie, 2004:458). The objective of explanatory research is to test predictions and hypotheses (Rubin & Babbie, 2007).

Because of the small sample size (69), and the exploratory nature of the statistical analysis, significance levels of up to 10% are accepted for relationships instead of the 5% that is normally required in confirmatory statistics (Garson, 2006).

5.1 DESCRIPTIVE STATISTICS

The purpose of descriptive and exploratory statistics is to organise and summarise observations (statistical results) so that they are easier to comprehend (Minium, King & Bear, 1993).

5.1.1 Reporting on item-reliability and Cronbach alpha coefficients (PMSI & MSCEIT)

Reliability is the proportion of error variance to the total variance yielded by a measuring instrument, subtracted from 1.00 where the index 1.00 represents perfect reliability (Kerlinger, 1986:408).

Reliability analyses were carried out on the following three groups of data, by using Cronbach's alpha coefficient:

- Group 1: PMSI (negative) variables
- Group 2: PMSI (positive) variables

- Group 3: MSCEIT (emotional intelligence) variables

Table 5.1 summarises the results of this analysis.

TABLE 5.1 RELIABILITY STATISTICS (CRONBACH'S ALPHA) (N=69)

Data Group	Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	No of variables
1.PMSI (negative)	.904	.908	6
2.PMSI (positive)	.897	.898	7
3.MSCEIT(EI)	.788	.790	5

5.1.2 Interpretation of item-reliability and Cronbach alpha coefficients

The relatively high values of Cronbach's alpha coefficients, especially in the case of the PMSI where the alphas are above 0.80, indicate a high degree of reliability of the data, as discussed in chapter 4. The two instruments can therefore be regarded as psychometrically acceptable for the purpose of this study.

5.1.3 Reporting on frequency distributions

5.1.3.1 *Distribution of respondents by age*

Figure 5.1 illustrates the frequency distribution of the ages of the 69 respondents:

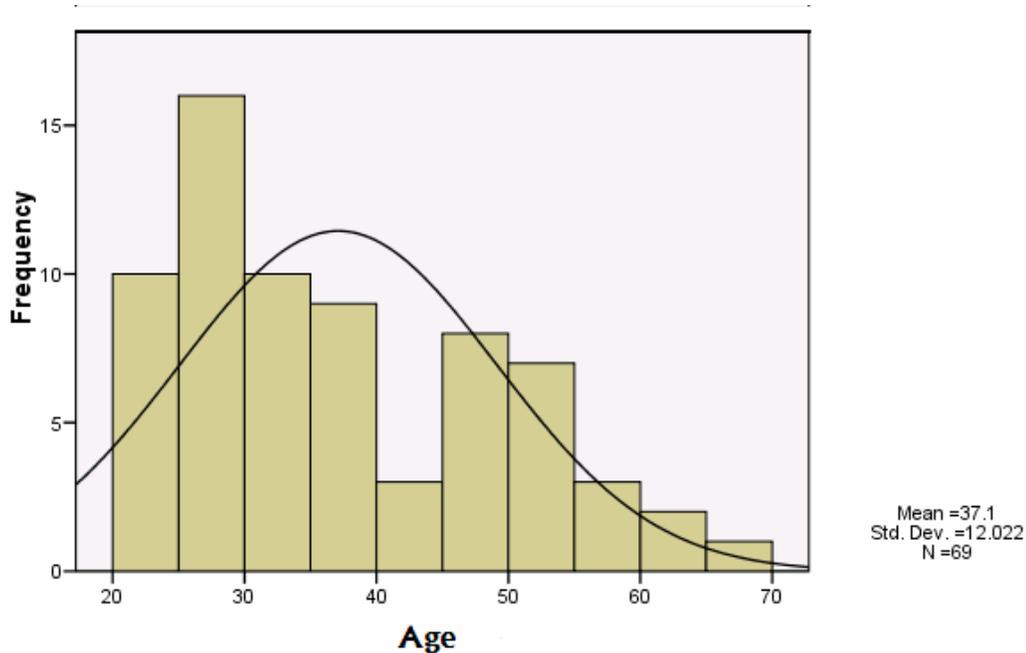


Figure 5.1 Distribution of respondents by age

The histogram (Figure 5.1) shows that the age distribution is slightly positively skewed, with a mean age of 37.1 and a standard deviation of 12.02. The largest group of respondents (N=17) is between 25 and 30 years of age. There seems to be an under-representation of respondents in the 40 to 45 years age group.

Upon considering the life stage development as discussed in chapter 2, the implication of the mean age (37.1 years) is that, according to the normative model of Erikson (1997), the developmental tasks for this age group are generativity and integrative thinking. Generativity means a concern for guiding the next generation. Integrative thinking has social and emotional implications in that it means that one is open and flexible and able to learn from different perspectives and value systems (Papalia, Sterns, Feldman & Camp, 2002).

For the purpose of comparison the respondents were divided into three age groups of approximately equal size, as shown in Table 5.2.

TABLE 5.2 MEAN AGE AND SAMPLE PERCENTAGES OF THE THREE AGE GROUPS (N=69).

DISTRIBUTION OF RESPONDENTS ACCORDING TO AGE GROUPS								
< 29 years			29 to 41 years			> 41 years		
Count	Mean	Table %	Count	Mean	Table %	Count	Mean	Table %
N=22	25.0	31.9%	N=24	33.9	34.8%	N=23	52.0	33.3%

The reason for dividing the respondents into three groups is to describe and compare the mean PMSI and MSCEIT scores for the different age groups, in order to see whether age has an influence on the relationships (correlations) and the mean scores.

From a developmental perspective, the three age groups fall within *young adulthood* and *middle adulthood*. According to Papalia et al. (2002) psychosocial development in *young adulthood* (age approximately 20 to 40 years) is characterised by relatively stable personality styles, choices regarding relationships and personal lifestyle, and parenthood for most people. Psychosocial development in *middle adulthood* (age approximately 40-65 years) typically entails a continued sense of identity. During this stage stressful midlife transition may occur, elderly parents may need care, and children may leave home (Papalia et al. (2002).

5.1.3.2 *Distribution of respondents by gender*

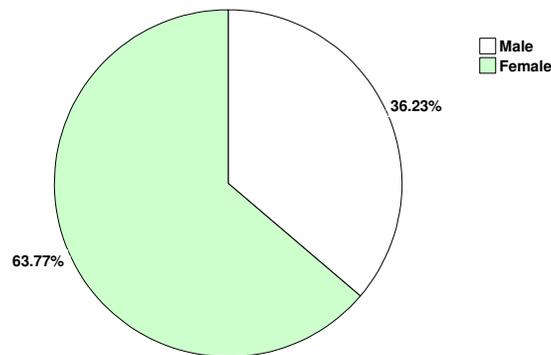


Figure 5.2 Distribution of respondents by gender

Figure 5.2 shows that 63.8% of the respondents were female, and 36.2% were male.

Although the two gender groups are not equally represented, both the groups are large enough to produce meaningful data. The reason for distinguishing between male and female is important because gender is seen as a variable influencing emotional intelligence (Boyatzis & Sala, 2004; Brody & Hall, 2000; Ciarrochi, Chan & Caputi, 2000).

5.1.3.3 *Distribution of respondents by marital status*

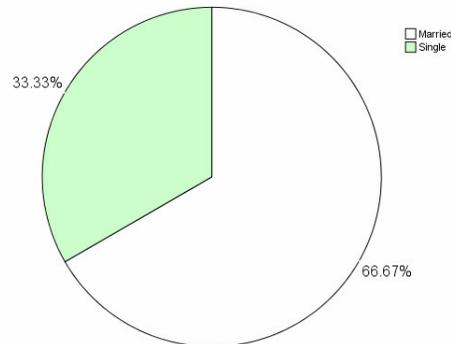


Figure 5.3 **Distribution of respondents by marital status**

Figure 5.3 shows that two-thirds of the respondents were married, and one-third single. Marital status has a very definite influence on emotion regulation (Snyder, Simpson & Hughes, 2006) and is therefore an important factor in this study. The sample is predominantly married females nearing their middle adulthood developmental stage (mean age = 37 years). During this stage people typically experience stressful midlife transitions, the double responsibility of caring for their offspring as well as their elderly parents and (or) being left with the proverbial 'empty nest' after launching their children (Papalia et al. (2002).

5.1.3.4 Distribution of respondents by race

The following pie graph shows the frequency distribution by race.

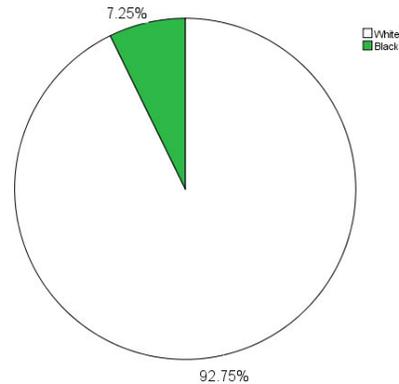


Figure 5.4 Distribution of respondents by race

Figure 5.4 shows that the majority of respondents (92.75%) were whites.

This implies that comparisons made between the two race groups are not meaningful, because the black group consists of only 5 respondents.

A further implication, however, is that the results are predominantly applicable to the white respondents.

5.1.4 Interpretation of frequency distribution

The frequency distribution results indicate that the respondents in this sample are predominantly white, married and female with a mean age of 37 years. Lachman's (2004) research into the challenges faced by women in their middle age indicate that this period of their lives is usually characterized as complex, because of the multiple roles they have to fulfil. Lachman (2004) mentions balancing work and family life, psychological changes and physical changes associated with aging as factors that can pose challenges for women in their midlife. Whereas some women may regard this life stage as a crisis, others may view it as exciting and challenging.

5.1.5 Reporting on means and standard deviations

The following table represents the Personal Multifactor Screening Inventory (PMSI) mean scores (percentages) and standard deviations of the sample.

TABLE 5.3 PMSI VARIABLES' MEAN SCORE (PERCENTAGE) AND STANDARD DEVIATIONS (N=69).

PMSI Variables	Mean %	Std. Deviation	N
Helplessness GBS	23.36	15.358	69
Helplessness IIS	20.74	15.256	69
Stress GBS	25.88	14.124	69
Stress IIS	27.72	16.174	69
Frustration GBS	23.87	17.268	69
Frustration IIS	26.70	14.909	69
Expectation GBS	73.94	12.591	69
Expectation IIS	76.26	14.899	69
Satisfaction GBS	68.99	15.576	69
Satisfaction IIS	71.25	16.389	69
Achievement GBS	77.97	14.237	69
Achievement IIS	74.30	13.772	69
Overall Psychosocial Health	74.54	11.28	69

GBS: General Behavioural Scale
IIS: Inner Interaction Scale

The mean scores in the first column of Table 5.3 are the percentages scored by the respondents with regard to the various PMSI variables. The first six variables (*Helplessness GBS* and *IIS*, *Stress GBS* and *IIS* and *Frustration GBS* and *IIS*) are negative variables, i.e. a low score in these subscales means healthy psychosocial functioning, whereas a high score is problematic. The opposite is true for the rest of the variables, which means that a high score in *Expectation GBS* and *IIS*, *Satisfaction GBS* and *IIS* and *Achievement GBS* and *IIS* implies healthy psychosocial functioning and vice versa. The subscales as defined by Faul (1995) can briefly be described as follows:

- *Helplessness GBS (general behavioural scale)*: The level of helplessness behaviour demonstrated, for example visible signs of the disintegration of goal-directed activities.
- *Helplessness IIS (inner interaction scale)*: The level of the feelings of helplessness experienced by the respondent.

- *Stress GBS (general behavioural scale)*: This refers to demonstrated stress as observed in behaviour, for example muscular aches, clenching of fists, and crying.
- *Stress IIS (inner interaction)*: The level of the respondents' perceived stress.
- *Frustration GBS (general behavioural scale)*: The outwards signs of perceived frustration, for example irritation and (or) impatience.
- *Frustration IIS (inner interaction scale)*: Refers to the level of frustration experienced by the respondent.
- *Expectation GBS (general behavioural scale)*: The visible signs that the person is optimistic and hopeful about the future.
- *Expectation IIS (inner interaction scale)*: The positive feelings of hope and optimism experienced.
- *Satisfaction GBS (general behavioural scale)*: The demonstration (behaviour) which indicates that the person is generally satisfied with life.
- *Satisfaction IIS (inner interaction scale)*: The feelings associated with being satisfied with life.
- *Achievement GBS (general behavioural scale)*: The visible signs of being achievement orientated which is seen, for example, in the way a person pursues goals.
- *Achievement IIS (inner interaction scale)*: The inner drivers perceived by the person who has a high level of achievement orientation.
- *Psychosocial health (PSH) or overall PSH*: The overall positive or overall negative average score of the respondent. A person who has an overall negative score has high levels of helplessness, stress and (or) frustration and relatively low levels of expectation, satisfaction and achievement.

To summarise, the GBS (general behavioural scale) measures behaviour and the IIS

(inner interaction scale), measures feelings.

The recommended score for optimal psychosocial health is >79% (Faul & Hanekom, 2006). In this study the mean percentage for all the positive subscales is lower than 79%, which indicates that the average psychosocial health of the sample is less than optimal, although positive.

TABLE 5.4 MSCEIT MEAN SCORES AND STANDARD DEVIATIONS (N=69)

MSCEIT Variables	Mean Score	Std. Deviation	N
Perceiving	94.87	12.11	69
Using	98.12	13.42	69
Understanding	92.99	9.89	69
Managing	97.32	8.11	69
Overall EI	94.80	10.65	69

The MSCEIT variables are described as follows (Caruso & Salovey, 2004):

- *Perceiving emotions*: This is also referred to as identifying emotions, and is the ability to know what self and others feel, to show feelings, to express negative and positive emotions and to talk about emotions.
- *Using emotions*: The ability to think creatively and to use emotions to improve thinking, to inspire others, to remain focused even when emotions are strong (not become overwhelmed) and to use feelings to inform and change beliefs and opinions.
- *Understanding emotions*: To make the correct assumptions about people, to know what to say, to be able to predict how others may feel, to have a rich emotional vocabulary, to understand that one can experience conflicting emotions and to have overall sophisticated emotional knowledge.
- *Managing emotions*: To have the skill to allow emotions to inform decision-making and energise adaptive behaviour; to calm down, elevate or maintain a mood as desirable, to cheer others up or calm them down, to be open to feelings and to lead a rich emotional life; to connect to people and to inspire others.

- *Overall emotional intelligence*: The total emotional intelligence score as a summary of the respondent's performance on the MSCEIT (Mayer & Salovey, 1997).

The values in the second column (Table 5.4) are the mean scores obtained in the MSCEIT test. These are not percentages but emotional intelligence scores. A high value means high emotional intelligence in that particular subscale. According to Mayer et al. (2002), the qualitative interpretation of scores that range between 90 and 99 represent a low average emotional intelligence (Table 5.5). The mean scores for all the scales are in the low average range.

TABLE 5.5 GUIDELINES FOR INTERPRETING MSCEIT SCORES (Mayer et al., 2002).

EIQ RANGE	QUALITATIVE RANGE
69 or less	Consider development
70 – 89	Consider improvement
90 – 99	Low average score
100 – 109	High average score
110 – 119	Competent
120 – 129	Strength
130+	Significant strength

The responses for perceiving emotions and using emotions showed a higher diversity (spread) than those for understanding, managing and overall emotional intelligence.

5.1.6 Interpretation of means and standard deviations

The sample represents a predominantly white, female, married group of people, in their mid-life stage. The mean scores of the PMSI indicate that there is a tendency towards troubled psychosocial functioning, because the healthy score for the subscales *helplessness*, *stress* and *frustration* should be less than 22 %. The *stress inner interaction* mean scores indicate that some of the individuals in the sample appear to suffer from a high level of stress. Considering the age group, the possibility of mid-life transition and subsequently midlife crisis, is not something to be overlooked, as this can impact psychosocial health negatively. Crisis behaviour may include stress or anxiety and depression (Schreuder & Coetzee, 2006). The fact that there are so many married women in the sample poses the question as to whether marital status plays a positive role in mediating stress, or whether the demands of a family add to the level of stress. According to Hazan and Shaver (2004) and Pietromonaco, Barrett and Powers

(2006), spouses or partners may look to each other in times of distress, but they may not necessarily help each other to regulate it; in some instances partners or spouses may actually hinder the others' effort to regulate distress.

According to Hunter, Sundel and Sundel (2002), work is psychologically good for most women in their midlife. Compared to women who stay at home, women in their midlife who are gainfully occupied report better physical health, less anxiety and depression and greater well-being. This report by Hunter et al. (2002) seems to support the findings of this study in that the psychosocial health of the group (which consists mainly of working women in their midlife) is positive, although not optimal.

The MSCEIT results indicate that the emotional intelligence of this group of respondents is in the low average range. Mayer et al. (2000), support the developmental hypothesis regarding emotional intelligence, and posit that it develops with age and experience. If this is indeed the case, and there are researchers who differ (Day & Carroll, 2004), then the under-representation of respondents in the older (>41 years old) group, may account for this low average score.

5.2 EXPLANATORY STATISTICS

In an attempt to obtain a high level of precision where it comes to estimating the direction and the degree of relationships, coefficients of correlations, also known as product-moment coefficients, can be calculated. These coefficients of correlations are calculated between sets of ordered pairs. Should the pairs vary together, or covary (high values with high, medium values with medium and low values with low), there is a relation, which can be either positive or negative. If the pairs do not vary together, or covary, it can be said that there is no relation (Kerlinger, 1986).

5.2.1 Reporting on Pearson product-moment correlations

The Pearson product-moment correlation coefficient is used to provide a numerical value to indicate the degree of correlation and (or) lack of correlation between the variables (Lachenicht, 2002).

Table 5.6 gives a summary of the Pearson product moment correlation coefficients for correlations between the thirteen PMSI variables (column 1) and the five MSCEIT variables (columns 3 to 7). The significant correlations are shaded in the table.

TABLE 5.6

**PEARSON PRODUCT MOMENT CORRELATIONS BETWEEN
THE PMSI AND MSCEIT VARIABLES (N=69)**

		Perceiving MSCEIT	Using MSCEIT	Under- standing MSCEIT	Mana- ging MSCEIT	Overall MSCEIT
Helplessness GBS (PMSI)	Pearson's r	.196(*)	.101	-.042	-.192(*)	.058
	Sig. (1- tailed)	.053	.205	.367	.057	.317
	N	69	69	69	69	69
Helplessness IIS (PMSI)	Pearson's r	.168(*)	.168(*)	.008	-.181(*)	.092
	Sig. (1- tailed)	.084	.084	.473	.068	.225
	N	69	69	69	69	69
Stress GBS (PMSI)	Pearson's r	.087	.015	-.040	-.219 (**)	-.024
	Sig. (1- tailed)	.238	.452	.372	.035	.421
	N	69	69	69	69	69
Stress IIS (PMSI)	Pearson's r	.172(*)	.052	.101	-.221 (**)	.075
	Sig. (1- tailed)	.079	.337	.204	.034	.270
	N	69	69	69	69	69
Frustration GBS (PMSI)	Pearson's r	-.100	-.095	-.135	-.192(*)	-.179(*)
	Sig. (1- tailed)	.208	.219	.134	.057	.071
	N	69	69	69	69	69
Frustration IIS (PMSI)	Pearson's r	.135	.114	.043	-.231 (**)	.052
	Sig. (1- tailed)	.135	.175	.364	.028	.336
	N	69	69	69	69	69

*** Correlation is significant at the 0.01 level (1-tailed).

** Correlation is significant at the 0.05 level (1-tailed)

* Correlation is significant at the 0.10 level (1-tailed)

TABLE 5.6 (CONTINUED)

		Perceiving MSCEIT	Using MSCEIT	Under- standing MSCEIT	Mana- ging MSCEIT	Overall MSCEIT
Expectation GBS (PMSI)	Pearson's r	-.125	.083	-.114	.019	-.058
	Sig. (1- tailed)	.153	.250	.175	.438	.317
	N	69	69	69	69	69
Expectation IIS (PMSI)	Pearson's r	-.126	.121	.061	.202 (**)	.063
	Sig. (1- tailed)	.150	.160	.310	.048	.304
	N	69	69	69	69	69
Satisfaction GBS (PMSI)	Pearson's r	-.328(***)	-.076	-.018	.163(*)	-.146
	Sig. (1- tailed)	.003	.267	.443	.091	.116
	N	69	69	69	69	69
Satisfaction IIS (PMSI)	Pearson's r	-.231 (**)	-.006	-.072	.168(*)	-.087
	Sig. (1- tailed)	.028	.481	.277	.083	.238
	N	69	69	69	69	69
Achievement GBS (PMSI)	Pearson's r	-.083	.024	-.017	.109	-.004
	Sig. (1- tailed)	.250	.421	.444	.187	.488
	N	69	69	69	69	69
Achievement IIS (PMSI)	Pearson's r	-.220 (**)	-.006	-.038	.156(*)	-.069
	Sig. (1- tailed)	.035	.480	.377	.100	.285
	N	69	69	69	69	69
Overall PSH (PMSI)	Pearson's r	-.195(*)	-.025	-.012	.232 (**)	-.040
	Sig. (1- tailed)	.054	.419	.461	.028	.373
	N	69	69	69	69	69

*** Correlation is significant at the 0.01 level (1-tailed).

** Correlation is significant at the 0.05 level (1-tailed)

* Correlation is significant at the 0.10 level (1-tailed)

Of the 5 x 13 (=65) correlations 20 were significant. Of these, 13 showed a significant (but weak) correlation at the 10% level, 6 at the 5% level, and only 1 at the 1% level. The latter ($r = 0.328$) can explain only 10.8% of the variance ($r^2 = 10.7584$).

Correlation coefficients for the entire sample show that low levels of the negative PMSI variables namely *helplessness GBS* (behaviour), *helplessness IIS* (feeling), *stress GBS* (behaviour), *stress IIS* (feeling), *frustration GBS* (behaviour), and *frustration IIS* (feeling), and high levels of the positive PMSI variables namely *expectation IIS* (feeling), *satisfaction GBS* (behaviour), *satisfaction IIS* (feeling), *achievement IIS* (feeling) and *overall PSH* (psychosocial health) are associated with high levels of *managing emotions* and vice versa. This confirms the assumption of the proposed theoretical model in that there is a relationship between psychosocial health and emotional intelligence. From the aforementioned results it seems as though it is specifically the ability to manage emotions that is associated with positive psychosocial health. This finding is also supported by the research findings of Lopes et al. (2004), which shows that the ability to manage emotions is associated with enhanced social interaction. According to Caruso and Salovey (2004), the ability to manage emotions means to be skilled in determining the root cause of emotional discomfort and to integrate this emotional information with all the available rational, logical data before making a decision and (or) taking the appropriate action. It follows quite logically that people who are able to manage their emotions can do the necessary emotional maintenance so that they can retain their positive psychosocial functioning (health).

The results of this study also indicate that the ability to *perceive emotions* is associated with low levels of *satisfaction GBS* (behaviour) and *IIS* (feeling) and low *achievement IIS* (feeling), and relatively high levels of *helplessness GBS* (behaviour) and *IIS* (feeling), *stress IIS* (feeling) and low *overall psychosocial health*. According to Caruso and Salovey (2004), people who are able to perceive emotions know what others feel (read people accurately), they talk about feelings, and are able to recognise and express their own feelings. *Satisfaction* represents an overall judgment of life satisfaction that has to do with a person's cognition and a person's affect' (Faul, 1995:189), whereas *achievement* relates to the tendency of individuals to approach goals that can enhance their feelings of competence and pride (Faul, 1995:174).

Participants who appear to be able to perceive or identify emotions accurately therefore seem less satisfied, and this appears to impact their psychosocial health negatively. Their feelings and behaviour are indicative of helplessness and according to Faul (1995), perceived helplessness is detrimental to one's level of satisfaction and one's motivation to achieve.

Table 5.7 gives a summary of the significant correlations between the PMSI and MSCEIT-variables. **Column 3** of Table 5.7 shows the Pearson correlation coefficients for the **entire sample**. Table 5.7 also shows the significant correlations for the sub-groups of respondents. These are indicated by **X (negative r)** or **Y (positive r)** in the appropriate cells of the table. The values of the correlation coefficients are, however, only given for the **entire** sample (in column 3 of the table). Groups in which correlations are most noticeable are *age* and *marital status*. The correlations with regard to race are not very meaningful, because the black group comprised of only 5 respondents.

In summary, it was expected that healthy psychosocial functioning would correlate positively with emotional intelligence scores and vice versa, but the results of the correlation table (Table 5.7) show that this is not always the case. The emotional intelligence variable *managing emotions* correlated positively with high levels of positive functioning and overall psychosocial health and low levels of negative functioning. *Perceiving emotions* correlated negatively with the PMSI variables *satisfaction GBS* (behaviour) and *IIS* (feeling), *achievement IIS* (feeling), and *overall PSH* (psychosocial health) and it *correlated positively with helplessness GBS* (behaviour) and *IIS* (feeling), and *stress IIS* (feeling).

Effect size refers to the magnitude or the strength of the independent variable. The strongest correlation in this study (*satisfaction GBS* with *perceiving emotions*), has a correlation coefficient of $r = -0.328$, which represents medium practical effect size (Cohen, 1988).

**TABLE 5.7 SUMMARY OF SIGNIFICANT CORRELATIONS: PMSI & MSCEIT
(N = 69)**

All Respondents			Groups (Sig. ≤ 0.10, indicated with X)								
PMSI Variable	MSCEIT Variable	Correlation Coefficient (Entire sample)	Age			Gender		Marital Status		Race	
			A1	A2	A3	G1	G2	M1	M2	R1	R2
Helplessness GBS	Managing	X -0.192*		X						X	
Helplessness IIS	Managing	X -0.181*		X		X				X	Y
Stress GBS	Managing	X -0.219**					X		X	X	
Stress IIS	Managing	X -0.221**		X		X				X	
Frustration GBS	Managing	X -0.192*		X			X			X	Y
Frustration IIS	Managing	X -0.231**				X				X	
Expectation IIS	Managing	Y +0.202**							Y	Y	
Satisfaction GBS	Managing	Y +0.163*							Y	Y	
Satisfaction IIS	Managing	Y +0.168*	Y						Y	Y	
Achievement GBS	Managing									Y	
Achievement IIS	Managing	Y +0.156*					Y			Y	
Overall PSH	Managing	Y +0.232**	Y			Y	Y		Y	Y	

*** Significant at the 0.01 level (1-tailed).
 ** Significant at the 0.05 level (1-tailed)
 * Significant at the 0.10 level (1-tailed)
 X Negative correlation coefficient
 Y Positive correlation coefficient

A1: Age group < 29 years
 A2: Age group 29 to 41 years
 A3: Age group > 41 years
 G1: Male
 G2: Female

M1: Married
 M2: Single
 R1: White
 R2: Black

TABLE 5.7 (CONTINUED)

All Respondents			Groups (Sig. ≤ 0.10, indicated with X)								
PMSI Variable	MSCEIT Variable	Correlation Coefficient (Entire sample)	Age			Gender		Marital Status		Race	
			A 1	A2	A3	G1	G2	M1	M2	R1	R2
Helplessness GBS	Perceiving	Y+0.196*		Y			Y		Y	Y	
Helplessness IIS	Perceiving	Y+0.168*						Y	Y		
Stress IIS	Perceiving	Y+0.172*		Y		Y		Y			
Stress GBS	Perceiving				Y	Y					
Satisfaction GBS	Perceiving	X-0.328***	X	X		X	X	X	X	X	
Satisfaction IIS	Perceiving	X-0.231**		X				X		X	
Achievement IIS	Perceiving	X -0.220**		X			X		X	X	
Overall PSH	Perceiving	X -0.195**		X						X	
Frustration IIS	Perceiving			Y	Y						
Expectation GBS	Perceiving			X			X				
Helplessness GBS	Using		Y								
Helplessness IIS	Using	Y+0.168*				Y		Y			Y
Achievement GBS	Using				Y						
Achievement IIS	Using				Y						
Satisfaction GBS	Using		X						X		
Expectation GBS	Using				Y						
Expectation IIS	Using										Y
Expectation GBS	Understanding				X			X			X

*** Significant at the 0.01 level (1-tailed).

** Significant at the 0.05 level (1-tailed)

* Significant at the 0.10 level (1-tailed)

X Negative correlation coefficient

Y Positive correlation coefficient

A1: Age group < 29 years

A2: Age group 29 to 41 years

A3: Age group > 41 years

G1: Male

G2: Female

M1: Married

M2: Single

R1: White

R2: Black

TABLE 5.7 (CONTINUED)

All Respondents			Groups (Sig. ≤ 0.10, indicated with X)								
PMSI Variable	MSCEIT Variable	Correlation Coefficient (Entire sample)	Age			Gender		Marital Status		Race	
			A1	A2	A3	G1	G2	M1	M2	R1	R2
Helplessness IIS	Understanding							Y			
Stress GBS	Understanding								Y		
Stress IIS	Understanding							Y			
Frustration GBS	Understanding									X	
Frustration IIS	Understanding										Y
Achievement IIS	Understanding					X					
Satisfaction IIS	Understanding							X			
Frustration GBS	Overall EI	X-0.179*	X						X		
Expectation GBS	Overall EI			X							
Helplessness IIS	Overall EI							Y			Y
Stress IIS	Overall EI							Y			

*** Significant at the 0.01 level (1-tailed).
 ** Significant at the 0.05 level (1-tailed)
 * Significant at the 0.10 level (1-tailed)
 X Negative correlation coefficient
 Y Positive correlation coefficient

A1: Age group < 29 years
 A2: Age group 29 to 41 years
 A3: Age group > 41 years
 G1: Male
 G2: Female

1: Married
 M2: Single
 R1: White
 R2: Black

As discussed in chapter 4, low scores on the PMSI sub-scales *helplessness GBS* (general behaviour scale) and *helplessness IIS* (inner interaction scale), *stress GBS* and *stress IIS*, and *frustration GBS* and *frustration IIS*, indicate positive psychosocial health. High scores on the positive sub-scales of the PMSI, *expectation GBS* and *expectation IIS*, *satisfaction GBS* and *satisfaction IIS*, and *achievement GBS* and *achievement IIS*, indicate positive psychosocial health.

The following correlations were found for the age group < 29 years:

- *Positive correlations:* There are positive correlations between *satisfaction IIS* and

managing emotions, and between *overall psychosocial health (PSH)* and *managing emotions*.

- *Negative correlation*: There is a negative correlation between *satisfaction GBS* and *perceiving emotions*, and between *frustration GBS* and *overall emotional intelligence*.

The following correlations were found for the age group >29 – 41:

- *Positive correlations*: There are positive correlations between *helplessness GBS* and *perceiving emotions* and between *stress IIS* and *perceiving emotions*.
- *Negative correlations*: There are negative correlations between *helplessness (IIS and GBS)* and *managing emotions*, *stress IIS* and *managing emotions*, and between *frustration GBS* and *managing emotions*. There are also negative correlations between *satisfaction (IIS and GBS)* and *perceiving emotions* and between *achievement IIS* and *perceiving emotions* and *overall PSH* and *perceiving emotions*. There is a negative correlation between *frustration GBS* and *overall emotional intelligence*.

The following correlations were found for the age group >41 years.

- *Positive correlations*: There are positive correlations between *stress GBS* and *perceiving emotions*, *frustration IIS* and *perceiving emotions* *achievement GBS* and *using emotions*, *achievement IIS* and *using emotions*, and *expectation GBS* and *using emotions*.
- *Negative correlations*: The only negative correlation for this age group is between *expectation GBS* and *understanding emotions*.

The following correlations were found for the male respondents:

- *Positive correlations*: There are positive correlations between *helplessness IIS* and *perceiving emotions*, and *stress IIS* and *perceiving emotions*. There is also a positive correlation between *helplessness IIS* and *using emotions*.

- *Negative correlations:* There are negative correlations between *satisfaction (GBS and IIS)* and *perceiving emotions*.

The following correlations were found for the female respondents:

- *Positive correlations:* There are positive correlations between *expectation IIS* and *managing emotions*. There are positive correlations between *satisfaction (IIS and GBS)* and *managing emotions*, and between *overall psychosocial health (PSH)* and *managing emotions*. There are positive correlations between *helplessness (IIS and GBS)* and *perceiving emotions* and between *helplessness IIS* and *using emotions*.
- *Negative correlations:* There are negative correlations between *stress GBS* and *managing emotions*, *satisfaction GBS* and *perceiving emotions*, *achievement IIS* and *perceiving emotions*, and *frustration GBS* and *overall emotional intelligence*.

The following correlations were found for the married group of respondents:

- *Positive correlations:* There are positive correlations between *helplessness IIS* and *perceiving emotions* and *stress IIS* and *perceiving emotions*, and between *helplessness IIS* and *using emotions*.
- *Negative correlations:* There are negative correlations between *satisfaction GBS* and *IIS* and *perceiving emotions*.

The following correlations were found for the not-married (single) group:

- *Positive correlations:* There are positive correlations between *expectation IIS* and *managing emotions*, and between *satisfaction (IIS and GBS)* and *managing emotions*. There is also a positive correlation between *overall psychosocial health (PSH)* and *managing emotions*, and between *helplessness (IIS and GBS)* and *perceiving emotions*.
- *Negative correlations:* There are negative correlations between *stress GBS* and *managing emotions*, and between *satisfaction GBS* and *perceiving emotions*.

5.2.2 Interpretation of Pearson's product-moment correlation coefficients

Salovey et al. (2000) confirm that regulation of emotion is a more complex skill than perceiving, using or understanding emotions. Emotion regulation or the ability to manage emotions entails reflecting on emotions and blending emotions and thought, thereby enhancing effective decision-making (Caruso & Salovey, 2004). For the purpose of this study psychosocial health is defined as demonstrating adequate levels of satisfaction, expectation and achievement orientation (Faul, 1995). From the above research results it may be concluded that the respondents in this study may attribute their levels of psychosocial health to their ability to manage (regulate) emotions.).

High levels of the ability to perceive emotion in self and others correlate positively with *helplessness GBS* and *IIS*, and negatively with *satisfaction GBS* and *IIS* and *achievement IIS* as well as with *overall psychosocial functioning*. Caruso and Salovey (2004) also refer to this ability as *identification of emotions* and mention that the most critical skill in identification or perception of emotions is the ability to differentiate between real and fake emotions. The individuals in this sample who appear to have the ability to perceive emotions report that they behave and feel helpless. They also report that their satisfaction is low and that their achievement is low. *Satisfaction* refers to feelings of well-being and *achievement* refers to the tendency to strive for mastery of tasks and self-improvement (Faul, 1995). It seems as though the respondents in this sample experience that their ability to *perceive* emotions makes them vulnerable to *helplessness* (the disintegration of goal-directed activities) which negatively impacts their levels of well-being and achievement.

High levels of the negative PMSI variable *helplessness IIS* is also weakly associated with high levels of the emotional intelligence variable, *using emotions*. Using emotions is defined as the ability to think creatively, to inspire people, and to be able to remain focused when emotions are strong. People skilled in using emotions can feel what others feel, and they use emotional data to change beliefs and opinions (Caruso & Salovey, 2004). Low levels of *frustration GBS* is weakly associated with high levels of *overall emotional intelligence*, and vice versa. *Frustration* is defined as one's reaction to problems in self and (or) the environment that prevents one from achieving one's goals (Faul, 1995).

Table 5.7 (summary of correlations) shows that the *psychosocial health (PSH)* of the age

group 29 – 41 years is associated with the emotional intelligence variables *perceiving emotions* and *managing emotions*, while the *psychosocial health (PSH)* of the age group > 41 years corresponds better with the emotional intelligence variable *using emotions*. It appears that in the case of the age group 29 - 41 there is a significant negative correlation between managing emotions and the PMSI variables, which means that their ability to manage emotions influences their levels of *Helplessness GBS* (behaviour) and *Helplessness IIS* (feeling), *Stress IIS* (feeling) and *Frustration GBS* (behaviour). In the age group >41 the significant correlations between *Perceiving emotions* and *Stress GBS* (behaviour) and *Frustration IIS* (feeling) seem to indicate that their level of ability to *Perceive emotions* influences their levels of negative psychosocial functioning.

Table 5.7 also shows that the *psychosocial health (PSH)* of the married group corresponds best with the emotional intelligence variables *perceiving emotions* and *understanding emotions*, while for the single group, *psychosocial health (PSH)* corresponds best with the emotional intelligence variable *managing emotions*. It therefore appears as though the married respondents' levels of ability to perceive and understand emotions influence their psychosocial health, whereas the psychosocial health of the single group is influenced by the level of their ability to manage emotions.

5.3 INFERENCE STATISTICS

The inferential statistics used in the research are multiple linear regression, t-tests, analysis of variance (ANOVA) and Scheffé's post hoc test. T-tests are used to test the significance of the differences in mean scores for two independent samples. The ANOVA is used to test the significance of the differences in mean scores for three independent samples. A post hoc test is used to ascertain the underlying differences in the means of the three age groups (Durrheim, 2002).

5.3.1 Reporting on multiple linear regression analysis

Multiple linear regression analysis is used to analyse the common and separate influences of two or more independent variables on a dependent variable (Kerlinger & Lee, 2000). In this study multiple regression analysis is used to examine the influence of emotional intelligence on psychosocial health.

A multiple linear regression analysis was performed on each of the thirteen dependent variables (i.e. the PMSI variables which appear in the first column of Table 5.6) with

the five independent variables (i.e. the four MSCEIT subscale variables and overall emotional intelligence).

'Multiple regression analysis studies the effects and the magnitudes of the effects of more than one independent variable on one dependent variable using principles of correlation and regression' (Kerlinger, 1986:527). Multiple regression analysis enables one to calculate the value of the dependent variable, from the values of the independent variables using a so-called regression equation.

The fundamental regression equation is of the form

$$Y' = a + b_1X_1 + \dots + b_kX_k$$
 where Y' is the dependent variable and X_1 to X_k the independent variables.

Multiple linear regression analysis is reported along the following steps:

(i) *The entering and removing of independent variables*

Method selection allows one to specify how independent variables are entered into and removed from the analysis. Using different methods, a variety of regression models can be constructed from the same set of variables. In this analysis the stepwise method was followed which constructed two models (Tredoux, 2002). The variables entered and removed from the model are listed (Table 5.8).

(ii) *The Multiple Regression Coefficient*

In Table 5.9 a model summary is given, showing the values of R (the Multiple Correlation Coefficient), R square, Adjusted R Square and standard error of the estimate. The value of R^2 is an estimate of the prediction power of the regression analysis (Tredoux, 2002).

If an Independent variable is added or removed, the value of R Square changes. If the R^2 change associated with a variable is large, that means that the variable is a good predictor of the dependent variable (Tredoux, 2002).

(iii) *Analysis of variance table*

Table 5.10 gives an analysis-of-variance table, showing the significance for the two models.

(iv) *Regression Coefficients*

Finally, Table 5.11 gives the regression coefficients from which the regression equations for the two models can be constructed (Unstandardised Coefficients) as well as the t-values and the significance for the two models.

TABLE 5.8 **VARIABLES ENTERED/REMOVED ^a**

Model	Variables Entered	Variables Removed	Method
1	Perceiving	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	Managing	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a Dependent Variable: Satisfaction GBS

TABLE 5.9 **MODEL SUMMARY**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.328(a)	.108	.095	14.821
2	.413(b)	.170	.145	14.401

a Predictors: (Constant), Perceiving

b Predictors: (Constant), Perceiving, Managing

TABLE 5.10 **ANOVA^c**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1780.107	1	1780.107	8.104	.006(a)
	Residual	14716.878	67	219.655		
	Total	16496.986	68			
2	Regression	2808.495	2	1404.247	6.771	.002(b)
	Residual	13688.491	66	207.401		
	Total	16496.986	68			

a Predictors: (Constant), Perceiving

b Predictors: (Constant), Perceiving, Managing

c Dependent Variable: Satisfaction GBS

TABLE 5.11 COEFFICIENTS

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	109.077	14.196		7.684	.000***
	Perceiving emotions	-.423	.148	-.328	-2.847	.006**
2	(Constant)	68.591	22.822		3.005	.004**
	Perceiving emotions	-.503	.149	-.391	-3.381	.001***
	Managing emotions	.494	.222	.257	2.227	.029*

a. Dependent Variable: Satisfaction_GBS

*** $\rho \leq 0.001$

** $\rho \leq 0.01$

* $\rho \leq 0.05$

5.3.2 Interpretation of multiple linear regression analysis

Only two significant regression equations could be obtained, namely, that of *satisfaction GBS* with *perceiving emotions* (model 1) and *satisfaction GBS* with *perceiving* and *managing emotions* (model 2). All the other correlation coefficients were too small to give a meaningful regression equation. In model 1 the value of R^2 is only 0.108 (model 1, Table 5.9), which means its prediction value is only 10.8%. According to Model 2 (see Table 5.9), Satisfaction GBS can be predicted from Perceiving and Managing with a R^2 value of only 0.17, or a prediction value of 17% that is slightly better than the 10,8% of model 1. The regression equation mentioned constructed from the coefficients table (Table 5.11), according to model 2, is as follows:

$$\text{Satisfaction GBS} = 68.591 - (0.503 \times \text{Perceiving}) + (0.494 \times \text{Managing})$$

The minus sign of the *perceiving* term and the plus sign of the *managing* term mean that higher *perceiving* will cause lower *satisfaction GBS* and vice versa, and the higher the level of *managing emotions*, the higher *satisfaction GBS* would be, and vice versa. Schematically this can be represented as ‘forces’ working in on *satisfaction GBS*:

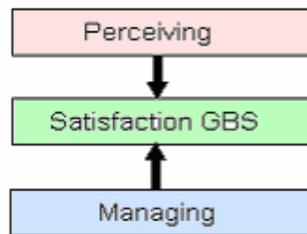


Figure 5.5 Schematic representation of the regression equation

The ability to *perceive emotions* will repress the level of *satisfaction*, while the ability to *manage emotions* will heighten the level of *satisfaction*, and vice versa.

5.3.3 Reporting on differences in mean scores

In the case of age groups, an analysis of variance (ANOVA) test was carried out to find out if the three groups differ significantly with respect to their mean PMSI and MSCEIT scores, while in the case of gender, race, and marital status the differences were tested by means of T-tests (two independent samples). The difference between an ANOVA and a T-test is basically that the ANOVA allows for testing the influence of more than one independent variable on more than two groups of subjects (Durrheim, 2002), whereas the T-test is an inferential test that determines whether the difference in the means of two samples indicate that they are drawn from two different samples or from a single sample (Nunez, 2002).

The results of these tests are summarised in Tables 5.12 and 5.13 (age), Table 5.14 (gender), Table 5.15 (marital status) and Table 5.16 (race).

5.3.3.1 Reporting on differences in mean scores: age

In Table 5.12 a summary of significant differences in the mean scores of the three age groups is given.

TABLE 5.12 SIGNIFICANT DIFFERENCES IN THE MEAN SCORES WITH REGARD TO AGE GROUPS (N=69)

VARIABLE	AGE GROUP	N	MEAN	STD DEVIATION	SIGNIFI-CANCE
Managing emotions (MSCEIT)	<29	22	92.18	7.90	.000****
	29 - 41	24	100.69	6.60	
	>41	23	99.69	6.72	
Overall EI (MSCEIT)	<29	22	90.35	9.26	.061*
	29 - 41	24	97.76	11.18	
	>41	23	96.76	9.24	

Significance levels: **** $p \leq 0.001$
 *** $p \leq 0.01$
 ** $p \leq 0.05$
 * $p \leq 0.10$

Two significant differences were found, namely that for *managing emotions* (MSCEIT) and *overall* (MSCEIT). The levels of significance are 1% and 10% respectively

A Scheffé post hoc test (pair wise comparisons) was also carried out to compare the 3 age groups (Table 5.13).

TABLE 5.13 SCHEFFÉ'S POST HOC TEST FOR MULTIPLE COMPARISONS: AGE

Dependent Variable	(I) Age groups	(J) Age groups	Mean Difference (I-J)	Std. Error	Sig.	90% Confidence Interval	
						Lower Bound	Upper Bound
Managing emotions	<29	29 - 41	-6.95156(***)	2.14759	.008***	-11.6418	-2.2613
		>41	-8.89959(****)	2.16980	.001****	-13.6383	-4.1609
	29 - 41	<29	6.95156(***)	2.14759	.008***	2.2613	11.6418
		>41	-1.94803	2.12309	.658	-6.5848	2.6887
	>41	<29	8.89959(****)	2.16980	.001****	4.1609	13.6383
		29 - 41	1.94803	2.12309	.658	-2.6887	6.5848
Overall EI	<29	29 - 41	-6.04806	3.05734	.149	-12.7251	.6290
		>41	-6.83127(*)	3.08896	.095*	-13.5774	-.0851
	29 - 41	<29	6.04806	3.05734	.149	-.6290	12.7251
		>41	-.78320	3.02246	.967	-7.3841	5.8177
	>41	<29	6.83127(*)	3.08896	.095*	.0851	13.5774
		29 - 41	.78320	3.02246	.967	-5.8177	7.3841

Significance levels: **** $p \leq 0.001$ ** $p \leq 0.05$
 *** $p \leq 0.01$ * $p \leq 0.10$

5.3.3.2 Interpretation of differences in mean scores: age

The ANOVA results indicate that there are two variables that differ significantly with respect to the three age groups, namely *managing emotions* and *overall emotional intelligence* (Table 5.12). In order to ascertain where the differences lie, a post hoc Scheffé test was carried out.

The Scheffé's test (Table 5.13) shows that for managing emotions the <29 years old age group differs significantly from the other two groups, while in the case of the overall score, the < 29 years of age group differs only from the 29 - 41 years of age group (Table 5.13). In both these cases the mean score for managing emotions of the younger group (< 29 years) was significantly lower. The successful management of emotions refers to the skill one has to integrate emotions and thought in order to enhance effective decision-making (Caruso & Salovey, 2004). It seems that this young group of respondents may not have such a high level of the skill to manage emotions as the older respondents appear to have. According to Papalia et al., (2002), there are several studies (Blanchard-Fields & Orion, 1987; Folkman & Lazarus, 1980; Labouvie-Vief, Hakim-Larson & Hobart, 1987) that indicate that older adults are better able to regulate their emotions to adapt to situational demands.

Research results differ as far as age and emotional intelligence are concerned. Fariselli, Ghini and Freedman (2006) studied the emotional intelligence in a sample of 405 respondents between the ages 22 and 70. Their respondents were predominantly female and the largest age group was between 31 and 60 years. Fariselli et al. (2006) concluded that older people are only slightly more likely to have accumulated a higher level of emotional intelligence through life experience. Although Mayer et al. (2000) posit that emotional intelligence develops with age and experience, this developmental hypothesis could not be supported by the research results of Day and Carroll (2004).

5.3.3.3 Reporting on differences in mean scores: gender

Table 5.14 summarises the significant differences in mean scores with regard to gender.

TABLE 5.14 SIGNIFICANT DIFFERENCES IN THE MEAN SCORES WITH REGARD TO GENDER (N=69)

VARIABLE	STATUS	N	MEAN	STD DEVIATION	SIGNIFICANCE
Stress GBS (PMSI)	Male	25	21.40	13.05	.046**
	Female	44	28.43	14.22	

Significance levels
 **** $\rho \leq 0.001$
 *** $\rho \leq 0.01$
 ** $\rho \leq 0.05$
 * $\rho \leq 0.10$

Research indicated that women seem to fare significantly better than men on all four scales of the MSCEIT (Ciarrochi, Chan & Caputi, 2000; Day & Carroll, 2004; Mayer & Geher, 1996). In this study, however, the independent samples t-test showed that the mean score of only one variable, namely, *stress GBS* (PMSI) differs significantly as far as gender is concerned, with a higher mean value for the female group, than for the male group (Table 5.14).

5.3.3.4 Interpretation of differences in mean scores: gender

The relatively high level of stress among women (in this case mostly white, married, working women in their midlife) may be attributed to role conflict (Hochschild, 1995). It is interesting, however, that it is the GBS (general behaviour) component of their level of stress that differs significantly from that of the male respondents. This means that the significant difference does not lie in the respondents' experience of stress, or their stress inner interaction (IIS) but in their behaviour (GBS) that is indicative of stress. Stress behaviour, for example, include frequent crying, showing signs of irritability, anxiety and anger. Physical symptoms may include headaches, hypertension, stomach-aches, muscle aches and fatigue (Faul & Hanekom, 2006; Papalia et al., 2002). The men in this sample seem to manage their stress better than the women do. This was also found in a study by Stein, in Murray (1998), who analysed the assessment results of 4500 men and 3200 women and found that men have a higher tolerance for stress than women.

5.3.3.5 Reporting on differences in mean scores: marital status

Table 5.15 gives a summary of the significant differences in the mean scores with regard to marital status.

TABLE 5.15 SIGNIFICANT DIFFERENCES IN THE MEAN SCORES WITH REGARD TO MARITAL STATUS (N=69)

VARIABLE	STATUS	N	MEAN	STD DEVIATION	SIGNIFICANCE
Understanding	Married	46	94.9676	10.04982	.017**
	Single	23	89.0220	8.44556	
Managing	Married	46	99.2233	7.26312	.005***
	Single	23	93.5278	8.53784	
Overall	Married	46	96.5912	10.36390	.048**
	Single	23	91.2366	10.52085	
Frustration_GBS	Married	46	21.24	14.084	.073*
	Single	23	29.13	21.737	
Frustration_IIS	Married	46	24.59	13.392	.097*
	Single	23	30.91	17.096	

Significance levels **** $p \leq 0.001$
 *** $p \leq 0.01$
 ** $p \leq 0.05$
 * $p \leq 0.10$

The married respondents appear to be more emotionally intelligent than the single people regarding *understanding* of emotions, *managing emotions* and *overall emotional intelligence*. *Understanding emotions* implies having the ability to understand people, to predict feelings, have a rich emotional vocabulary, know what the right verbal responses would be, understand that others and self can have conflicting emotions, and have highly developed, sophisticated knowledge of emotions (Caruso & Salovey, 2004). *Managing emotions* refer to emotion regulation and the ability to enhance decision-making by incorporating and acknowledging the data supplied by emotions (Caruso & Salovey, 2004).

The other significant difference between the married group and the single group is that the married group appears to experience less *frustration inner interaction* or feelings of being frustrated, and they seem to display less *frustration behaviour* than the group who is single. *Frustration inner interaction* refers to the feelings associated with one's negative response to having plans thwarted or need-fulfilment deferred (Faul, 1995; Jordaan & Jordaan, 1998), whereas *frustration behaviour* (as measured by the frustration General Behavioural Scale) refers to the outward signs of frustration for example a demonstration of anger and (or) despair (Faul, 1995).

5.3.3.6 Interpretation of differences in mean scores: marital status

According to the research results depicted in Table 5.17, the married respondents in this study have higher levels of the ability to *manage emotions* and *understand emotions*, and higher *overall emotional intelligence* than the respondents in the single group. Although the results of this study cannot be generalised, literature concurs that the ability to manage emotions may be associated with partner support as experienced in romantic relationships and marriage (Brackett, Warner and Bosco, 2005; Cutrona, 1996; Hazan & Shaver, 2004; Pietromonaco, Barrett & Powers, 2006). According to Guerrero and Floyd (2006), on the other hand, people who are able to encode, decode and manage their expression of emotion generally are better equipped to enter into, and maintain a close relationship.

5.3.3.7 Reporting on differences in mean scores: race

Table 5.16 gives a summary of the difference in mean scores for the two race groups.

TABLE 5.16 SIGNIFICANT DIFFERENCES IN MEAN SCORES WITH REGARD TO RACE

VARIABLE	RACE	N	MEAN	STD DEVIATION	SIGNIFICANCE
Stress GBS (PMSI)	White	64	26.77	14.12	.063*
	Black	5	14.60	8.82	
Stress IIS (PMSI)	White	64	28.69	16.14	.032**
	Black	5	15.40	11.80	
Frustration GBS (PMSI)	White	64	25.25	17.02	.016**
	Black	5	6.20	9.176	
Frustration IIS (PMSI)	White	64	27.78	14.85	.029**
	Black	5	12.80	6.61	
Overall (PMSI)	White	64	73.85	11.38	.069*
	Black	5	83.35	4.55	
Managing (EI)	White	64	97.91	7.84	.032**
	Black	5	89.88	8.70	

Significance levels: **** $p \leq 0.001$ ** $p \leq 0.05$
 *** $p \leq 0.01$ * $p \leq 0.10$

As far as race is concerned, significant differences were found for five psychosocial variables (*stress GBS*, *stress IIS*, *frustration GBS*, *frustration IIS*, *achievement GBS*) and one emotional intelligence variable (*managing emotions*). The differences illustrated in

this section are, however, not very meaningful, because of the small number of black respondents.

5.3.3.8 Interpretation of differences in means scores: race

Stress IIS refers to inner experience or feelings of tension and (or) pressure. *Stress GBS* refers to the behaviour that indicates that the person is experiencing stress, for example crying, clenching of fists, nervousness and (or) muscular tension. *Frustration inner interaction and frustration general behaviour* (feelings of frustration and the demonstration of being frustrated) refer to negative feelings and reactions associated with anger and (or) despondency whereas *achievement GBS* refer to the positive behaviour indicative of goal-oriented actions (Faul, 1995). Table 5.18 shows that the black respondents in this study experience less stress and less frustration, and do not demonstrate such high levels of stress and frustration behaviour as the white respondents. The white respondents in this study, however, appear to be more skilled in managing their emotions than the black respondents.

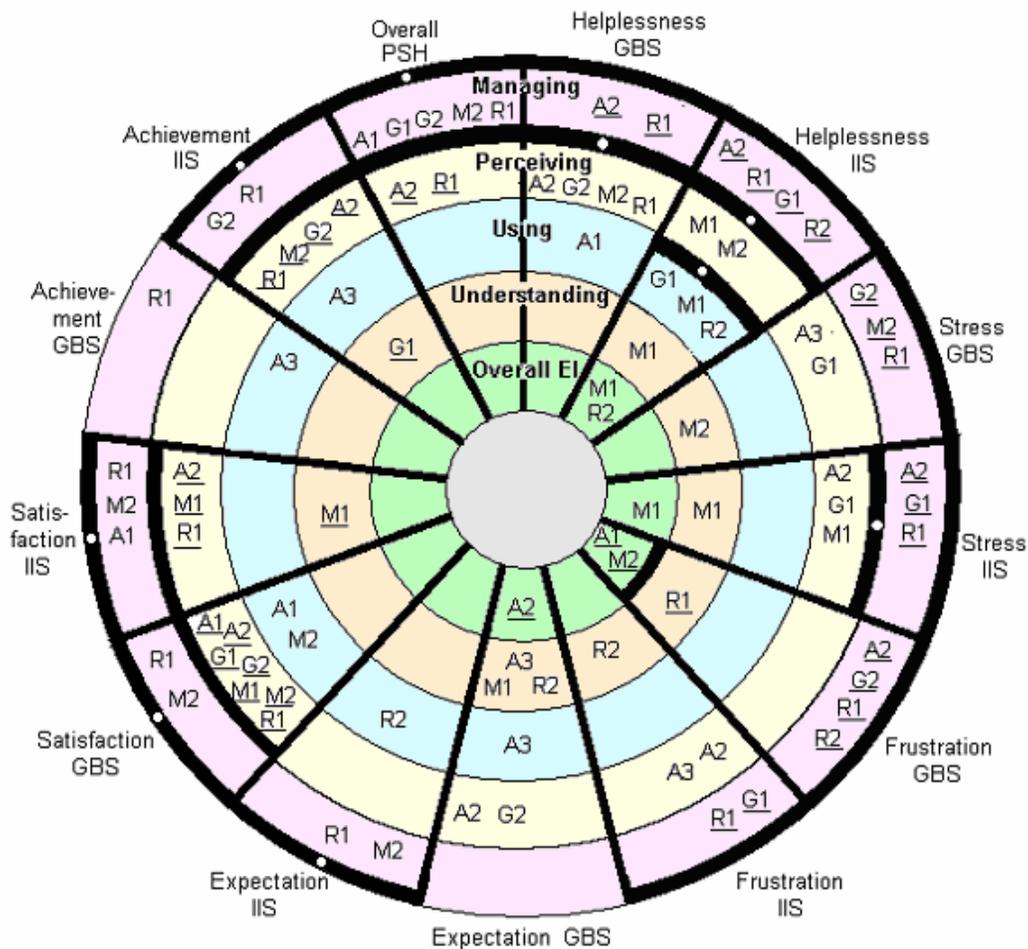
In summary, it is interesting to note that as far as psychosocial health variables are concerned, the black respondents generally seem to have a higher level of psychosocial health than the whites, whereas the opposite is the case with the emotional intelligence variable, managing emotions.

5.4 INTEGRATION OF RESEARCH FINDINGS

The objective of this study was to find out whether there is a relationship between psychosocial health and emotional intelligence, using the Personal Multi-factor Screening Inventory (PMSI) to measure psychosocial health, and the Mayer-Salovey-Caruso- Emotional Intelligence Test (MSCEIT) to measure emotional intelligence ability.

Significant relationships were found between the positive subscales of the PMSI and MSCEIT with respect to the *managing emotions* subscale. It was also found that *helplessness, stress and frustration* are associated with a low level of the ability to *manage emotions*. High levels of the negative PMSI variables *helplessness GBS, helplessness IIS, stress IIS* and low levels of the positive PMSI variables *satisfaction GBS, satisfaction IIS, achievement IIS*, and low overall psychosocial health are associated with high levels of the emotional intelligence variable *perceiving emotions*, and vice versa.

Figure 5.6 gives a schematic ('dartboard') representation of the research results. The five concentric rings represent the five MSCEIT (EI) variables from *managing* (outer ring) to *overall emotional intelligence* (inner ring), while the thirteen 'slices' represent the thirteen PMSI (psychosocial health) variables from *helplessness GBS* to *overall PSH* arranged clockwise as shown in the diagram. The symbols in each segment show which groups of the sample (see legend) correlate with regard to the MSCEIT and PMSI that is defined by the segment. Symbols which are underlined indicate a negative correlation. In cases where the variables defined by a segment also correlate with regard to the **entire sample**, the outer (ring) margin of the segment is **blackened**. In cases where the correlation is positive, the blackened border contains a white spot. For example, the variables *helplessness GBS* (PMSI) and *managing emotions* (MSCEIT) correlate negatively for the entire sample as well as for the A2 and R1 groups.



A1: Age group < 29 years
 A2: Age group 29 to 41 years
 A3: Age group > 41 years
 G1: Male
 G2: Female

M1: Married
 M2: Single
 R1: White
 R2: Black

Figure 5.6 Schematic representation of research results

The finding that a high level of the ability to *perceive emotions* is associated with problematic psychosocial health is interesting. This finding is supported by the research results of a study by Ciarrochi, Deanne and Anderson (2002). Ciarrochi et al. (2002) studied the role of emotional intelligence in understanding the link between stress, depression, hopelessness and suicidal ideation, and found that respondents low in managing emotions and high in perceiving emotions reported higher levels of suicidal ideation.

5.5 SUMMARY OF DECISIONS ON RESEARCH HYPOTHESES

The research results indicated that there is a relationship between positive psychosocial functioning (health) and the ability to manage emotions. The findings suggest that the ability to manage emotions (as the independent variable) assists in maintaining healthy levels of satisfaction, expectation and achievement.

As mentioned, the participants in this sample who appear to have the ability to perceive emotions report that they behave and feel helpless. They also report that their satisfaction is low and that their achievement is low. It seems as though their ability to perceive emotions makes them vulnerable to helplessness, which negatively impacts their levels of satisfaction and achievement. This finding underwrites the work of Salovey et al. (2000) where they conclude that managing or regulating emotions is a more complex ability than using, understanding or perceiving emotions. It is possible that the ability to perceive emotions can actually be detrimental to the person's feeling of wellbeing if the ability to manage emotions is under-developed. Perceiving negative emotions in self and others without the ability to manage those emotions can possibly result in low satisfaction and low achievement orientation.

From the discussion of the research results, the following conclusions are drawn regarding the research hypotheses (Table 5.17):

TABLE 5.17 CONCLUSIONS REGARDING THE RESEARCH HYPOTHESES

RESEARCH HYPOTHESES	ACCEPT /REJECT
H01: There is no significant relationship between psychosocial health and emotional intelligence.	Reject
H1: There is a significant relationship between psychosocial health and emotional intelligence.	*Partially accepted

*Due to limited findings.

5.6 CHAPTER SUMMARY

In chapter 5 the research results were discussed and the findings were interpreted.

Chapter 6 entails the conclusions and the limitations of the study as well as recommendations for employee wellness and for future research.

CHAPTER 6 CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

As stated in chapter 1 the discussion in this chapter will revolve around the conclusions drawn from this research, followed by the limitations of the study. Finally, recommendations are made for employee wellness programmes in organisations, and for future research.

6.1 CONCLUSIONS

The main aim of this study was to investigate the relationship between psychosocial health and emotional intelligence. In the next section the conclusions drawn from this investigation are noted, by revisiting the specific research objectives regarding the relationship between psychosocial health and emotional intelligence. These conclusions include the literature review and the empirical findings.

6.1.1 Conclusions regarding the literature review

The aim of the literature review was to conceptualise psychosocial health and emotional intelligence, followed by theoretical models of these two constructs. The literature review is concluded with an integrated model to explain the possibility of a relationship between psychosocial health and emotional intelligence.

6.1.1.1 The first objective: To conceptualise and explain the two constructs psychosocial health and emotional intelligence.

The first objective, namely to conceptualise and explain the constructs psychosocial health and emotional intelligence, was achieved in chapter 2, *Psychosocial health* and chapter 3, *Emotional intelligence*.

In particular, the following conclusions are made:

Psychosocial health was conceptualised as the positive interaction between biological, societal and psychological systems. It is within these systems that people mature, change, and subsequently modify their beliefs about themselves (Newman & Newman,

2006).

According to the literature review psychosocial functioning can be either healthy or pathological. Positive psychosocial functioning (health) is regarded as being generally satisfied with one's life, having hope (expectation) for a positive future and being achievement orientated. Negative psychosocial functioning is regarded as generally suffering from feelings of helplessness, stress and frustration (Faul, 1995).

Emotional intelligence was conceptualised as paradigmatically related to the concepts affect and affective states, emotion and mood (Mischel, 1999; Mischel & Shoda, 1999, 2000).

Salovey et al. (2000: 504) define emotional intelligence as encompassing 'specific competencies, including the ability to perceive, appraise and express emotions accurately; the ability to access and generate feelings when they facilitate cognition; the ability to understand affect-laden information and make use of emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual well-being'.

Bar-On (2004:117) also refers to emotional intelligence as abilities comprising the following five key components:

- The ability to be aware of, understand and express one's emotions;
- The ability to understand others' emotions and relate with people;
- The ability to manage and control emotions;
- The ability to manage change, adapt and solve problems of a personal and interpersonal nature, and
- The ability to generate positive mood and be self-motivated

According to Boyatzis (1982) in Boyatzis and Sala (2004:149) emotional intelligence is a competency that entails having the ability to recognize, understand, and use emotional information about oneself and (or) others thus leading to or causing effective or superior performance. Whereas the aforementioned theories differ in exact definition the conclusion that can be drawn from the literature review is that emotional intelligence

enables people to be aware of emotion as an important dimension of their being. In the industrial and organisational context, this means that leaders and employees should be aware of emotions to facilitate their decision-making, to enable harmonious collaboration and to build sound business relationships.

The literature review is concluded with an integrated model to explain the possibility of a relationship between psychosocial health and emotional intelligence.

6.1.1.2 The second objective: To design an integrated theoretical model to explain the theoretical relationship between psychosocial health and emotional intelligence

The second objective, namely to design an integrated theoretical model was achieved in chapter 3.

In particular, the following conclusions are made:

Chapter 3 is concluded with a theoretical model (Figure 3.5) of the relationship between psychosocial health and emotional intelligence, the assumption being that life-stage development and psychological, physiological, person variables and psychosocial health influence emotional intelligence.

There is a theoretical link between Bandura's (1977) social learning theory, Rotter's (1982) work regarding environmental and situational impact on behaviour, and Mischel and Shoda's (1999) cognitive-affective personality system. The theoretical link not only lies in the influence that the situation has on human behaviour, but also in the fact that the aforementioned theories become practical phenomena during the life-stage development of human beings. Variables impacting human development result in psychosocial functioning or social behaviour. However, of equal importance is human response to social learning as well as the person variables or the cognitive-affective units of analysis people adopt when situational changes need mediation.

The theories underpinning emotional intelligence are therefore part of life-stage development, and as such cannot be separated from psychosocial health or problematic psychosocial functioning. This leads to the hypothesis that competence in emotional intelligence flows from psychosocial health, (Figure 3.5) the latter being the result of a person's successful resolution of developmental crises.

6.1.1.3 The third objective: To explore the implications of a relationship between psychosocial health and emotional intelligence for employee wellness programmes

The ability to perceive emotions in self and in others, to understand emotions, to use emotions to facilitate thinking and decision-making and to manage emotions, is important for healthy psychosocial functioning because when one is able to perceive, understand, use and manage for example, a negative emotion, one minimises the debilitating effects thereof, namely feelings of helplessness, stress and (or) frustration (Faul & Hanekom, 2006). The relationship between psychosocial health and emotional intelligence therefore bodes well for employee wellness, because employees can be trained to use their emotional intelligence skills to self-manage their psychosocial health. Employees who are psychosocially healthy, can positively impact organisational productivity and creativity (Gilbreath, 2004).

6.1.2 Conclusions regarding the empirical study

In this section the conclusions drawn from the empirical results are discussed. The objectives of the empirical study was to assess whether there is a relationship between psychosocial health and emotional intelligence in a sample of employees, to determine the implications of such a relationship and to make recommendations regarding employee wellness programmes and future research.

Based on the findings, hypothesis H01 was rejected and H1 accepted. Findings regarding each of the research objectives and the hypothesis that merit discussion will be presented as conclusions.

6.1.2.1 The first objective: To assess whether there is a relationship between psychosocial health and emotional intelligence in a sample of respondents employed in the South African organisational context.

- *Conclusion 1: There is a relationship between psychosocial health and emotional intelligence*

The positive (healthy) psychosocial dimensions, namely satisfaction, expectation and achievement, are significantly and positively associated with the ability to manage emotions. From psychosocial theory as expounded by Newman and Newman (2006) and considering that the PMSI was developed from this perspective, this conclusion

underwrites the hypothesis that there is a relationship between psychosocial health and emotional intelligence because psychosocial health is regarded as the positive culmination of resolved developmental crises. If developmental crises were successfully resolved and one is psychosocially healthy the mental representation one has of others is positive. According to research (Bowlby, 1965, 1982, 1979, 1980; Pietromonaco, Barrett & Powers, 2006), this positive representation of others translates into adult emotion regulation (or) the ability to manage emotions.

- *Conclusion 2: There is a relationship between marital status (being married) and the ability to manage emotions*

Elaborating on the aforementioned attachment theory of Bowlby (1965, 1982, 1979, 1980), Hazan and Shaver (2004), view adult romantic (marital) relationships in the same light as that of infants and their care-givers, and suggest that partners seek out each other in times of distress. Previous romantic relationships may also be utilised by adults as internal models or mental representations. The conclusion drawn from this is that the ability to manage emotions may be more advanced in married people, in this case mostly married females, because of the emotional support their attachment to a life-partner provides. Cutrona (1996) also refer to responsive infant care giving as the foundation of the trust adults experience in their partners as being supportive during times of stress.

Brackett, Warner and Bosco (2005) researched the relationship between the quality of romantic relationships in young adults and their MSCEIT scores, and found that where both partners scored low on emotional intelligence, they also self-reported low levels of emotional depth, low levels of support for each other, and high levels of conflict. These respondents also viewed their relationships more negatively than those with higher scores for emotional intelligence.

Salovey et al. (2000) confirm that regulation of emotion is a more complex skill than perceiving, using or understanding emotions, and therefore there is merit in the finding that positive psychosocial health is associated with a high level of the ability to manage emotions.

- *Conclusion 3: There is a negative relationship between the ability to perceive emotions, and satisfaction GBS and IIS and achievement IIS as well as with overall psychosocial functioning.*

The participants in this sample who appear to have the ability to perceive emotions report that they behave and feel helpless. They also report that their satisfaction is low and that their achievement is low. It seems as though their ability to perceive emotions makes them vulnerable to helplessness which impacts their levels of satisfaction and achievement negatively. This finding is supported by the results of a study by Ciarrochi, Deanne and Anderson (2002), which indicate that emotional intelligence contributes to understanding the link between stress, depression, hopelessness and suicidal ideation. People who score high in perceiving emotions experience the impact of stress far more negatively than their less perceptive counterparts. Ciarrochi et al. (2002) also found higher levels of suicidal ideation in those high in perceiving emotions and low in managing emotions. There are two explanations for this, according to Ciarrochi et al. (2002). The one explanation is that some people choose to be less perceptive as a deliberate shield against the onslaught of stress. The other explanation is that those low in perceiving emotions are actually sensitive to stress, but they simply do not realise that it is impacting them negatively; they are probably more confused about what they are feeling, and show less coherence between their negative feelings and their stress levels (Ciarrochi et al., 2002).

- *Conclusion 4: The level of stress behaviour experienced by female respondents is high compared to the level of stress behaviour experienced by male respondents.*

The group of women in this study are predominantly white, gainfully employed, married and nearing their mid-life. Apart from the usual challenges of mid-life that may cause stress, for example physical changes, role ambiguity, having to cope with teenage or young adult off-spring, and (or) having to care for elderly parents, women in general seem to report higher levels of stress than men. In a study conducted among 1566 women and 1250 men between the ages 18 and 65, women reported higher levels of chronic stress and higher minor day-to-day-stressors (Matud, 2004). Even though there was no real difference in the number of stressful life events the respondents experienced in the two years prior to the study, the women felt less in control of their life events than the men, and they also rated their life events as more negative. The women listed family and health related issues as their stressors, while the men experienced relationships, finances and work-related problems as more stressful (Matud, 2004).

It is interesting that the results from the PMSI indicate that the women in this study report

significantly higher levels of stress behaviour than the men, but their inner interaction of stress, or their feelings of stress do not show a significant difference from that of the stress inner interaction of the men. It may be that women react differently to and report differently on their experience of stress. This seems to be the case in the aforementioned study by Matud (2004) where it is clear that although the men and women in the study did not experience different life events, the women did report that they felt less in control and more negative.

6.1.2.2 The second objective: To determine the implications and to make recommendations

Two main conclusions can be drawn regarding the implications for employee wellness, and recommendations for future research

- *Conclusion 1: Implications for employee wellness practices*

The research results show that there is a relationship between psychosocial health and emotional intelligence, but the question that arises from this is whether this finding has implications for employee wellness practices. It is well-known from research that emotional intelligence in the workplace enhances the financial bottom-line (Cherniss & Goleman 2001; Cobb & Mayer, 2000; Cooper & Sawaf, 1997; Goleman, 1995, 2001, 2002, 2006; Lam & Kirby, 2002; Lennick, 2007; Spencer, 2001; Weisinger, 1998). Psychosocial health in the workplace, according to Gilbreath (2004) refers to the combined impact of social factors and psychological factors that, when negative, can result in physical ailments. Employee wellness practices should therefore include interventions that address psychosocial health in order to enhance satisfaction, expectation and achievement orientation, as well as to eliminate or minimise problematic attitudes that may hinder productivity and emotional intelligence development (Sparrow & Knight, 2006).

Research results in industrial and organisational psychology that do not contribute towards strategies to enhance return on investment, are unlikely to be taken seriously in the hard currency world of work today. This is especially true for research into possible variables that may impact the wellness of employees, and subsequently their productivity. Although there is enough proof that employees' high level of emotional intelligence positively impact the financial bottom-line as stated in chapter 1 and chapter

3, technical training still seems to overshadow soft skills interventions (Sappey & Sappey, 1999).

Traditionally employee wellness programmes were concerned with alcohol abuse prevention in the workplace (Barak & Bargal, 2000), and today many wellness interventions still focus on physical activity (exercise), tobacco, alcohol and drug cessation, weight management, self-care, the prevention of coronary heart disease, stress management, fatigue management and ergonomics (Hunnicuttt & Leffelman (2008). This is a rather negative and reactive approach.

Employee assistance programmes (EAP's) generally involve assisting employees in budgeting, family responsibility, serious illness and injury, career concerns, depression, divorce and separation, substance addictions, emotional and personal problems and conflicts, grief, parenting and work performance issues. There is a quest for collaboration between EAP and employee wellness as implied by Csiernik's (1995:4) definition of wellness as an 'interdependent balance among physical, emotional, spiritual, intellectual and social health'. (Derr & Lindsay, 1999) also call for collaboration between EAP and employee wellness, because a team of cooperating specialists represents a more professional way forward, and can provide a streamlined service that may positively impact return on the financial investment incurred in developing an organisation's workforce.

With the aforementioned in mind, the first implication of the relationship between psychosocial health and emotional intelligence for employee wellness programmes, would be to consider this in the light of the financial bottom-line of the organisation. This implies that strategies to enhance employee performance take this information into account, which also implies buy-in from those in senior management positions. Whereas a substantial amount of literature and suggested interventions have bombarded the corporate world since Goleman's (1995) best seller, it seems as though the psychosocial health of employees has not been addressed. The relationship between psychosocial health and emotional intelligence does not mean that by addressing the one, the other will automatically fall into place. In light of the findings of this study it is apparent that the link between psychosocial health and emotional intelligence needs to be highlighted for employees.

The implication of this study's results for employee wellness can therefore be described

as a prescription for a holistic inner interaction and behavioural transition in employees, so that they can see the relationship between their psychosocial health and their emotional intelligence. Once this awareness is clarified, employees can use their emotional intelligence training to manage their psychosocial inner interaction (personal world), which will then have a positive impact on their psychosocial behaviour. This holistic approach ideally implies proactive interventions with regular feedback sessions so that the use of emotional intelligence to enhance psychosocial health, and vice versa, becomes a habit.

Considering that managing emotions is regarded as the most complex emotional intelligence ability according to Mayer and Salovey (1997), training in the ability to manage emotions will necessarily entail that emotions must first be recognised (perceived). Those unhealthy feelings of helplessness, stress and frustration must be perceived and labelled before they can be understood. At this stage a person should already start feeling more in control of his or her psychosocial state. This kind of intervention (training) is empowering and the end goal should be that employees learn to self-manage their psychosocial functioning (Faul & Hanekom, 2006).

The second implication for employee wellness is that whereas the initial assessment and training may be done for all participants, feedback and subsequent interventions will have to be done on a one-on-one basis and this may be regarded as time-consuming and therefore not financially viable. It would therefore probably be necessary for employee wellness professionals to assess a small number of employees, provide feedback and give regular follow-up interventions, and re-assess psychosocial health and performance appraisals after considerable growth has been achieved, in order to prove that the return on investing in proactive employee well-being, is worthwhile.

The third implication for organisational employee wellness is that, if a proper needs analysis is done, there is a possibility of proactive intervention. A needs analysis in this regard means an assessment of the level of employee psychosocial health and emotional intelligence. This approach is proactive (Faul & Hanekom, 2006), and therefore employees are actually taught to self-manage the negative emotional impact of the ever-changing world of work, family responsibilities, vulnerability to crime and the rising cost of living.

Although the results of this study cannot be generalised to the wider population, it

indicates that women tend to experience higher level of stress than men. The implication of this for employee wellness interventions is that stress among women, and the debilitating effect this can have on their families and their co-workers, their attention to detail and their general health, can be addressed by introducing options that grant them greater control, as part of employee wellness policy. Haynes, LaCroix and Lippin (1987) studied working women and the effect of employment, their occupation, their family responsibilities and their behaviour on their health, and concluded that low control over one's job is extremely stressful, especially when combined with high performance demands. By introducing employee wellness policies to eliminate low control experienced by women, stress can be alleviated at least to some extent.

Upon considering the statement by Tobin (1993) that the contract between employers and the workforce has changed from a promise of *lifetime employment* to a *lifetime of employability*, organisations should at least make the commitment of equipping employees with self-awareness and self-confidence to manage their emotional world, thereby reducing the anxiety associated with job insecurity. Employee wellness interventions that address the psychosocial health of the work environment, as well as that of the individual employees (Gilbreath 2004), better the lives of employees in such a way that they mature and become more employable. According to Sappey and Sappey (1999), social skills (as in developing employee emotional intelligence) are transportable and highly valued and organisations can provide this, benefit from it while the person is in their employ, and better prepare the employee to face changes.

- *Conclusion 2: Implications for future research*

The literature review indicates that there is a theoretical relationship between psychosocial health and emotional intelligence. The significant subscale correlation coefficients are useful for further research with a larger and a more representative sample.

A multivariate regression analysis rendered only one significant regression equation for the psychosocial health subscale variable satisfaction GBS in terms of the emotional intelligence subscale variables perceiving emotions and managing emotions. Participants who scored high in satisfaction, scored low in perceiving emotions and vice versa. Those who scored high in managing their emotions also scored high in satisfaction. The practical implications of this relationship are that the ability to perceive

emotions may render a person less satisfied. On the other hand, if the person is able to manage the perceived emotion, he or she can regain satisfaction. This relationship between dimensions of emotional intelligence and dimensions of psychosocial health seems to indicate that knowledge of emotional intelligence and self-knowledge may interact to enhance psychosocial health. This conclusion may pave the way for future research, for example, if a substantially larger sample of research participants is assessed, it may prove that the ability to perceive emotions is in fact a disability in the absence of the ability to manage emotions. The impact that this may have on employee wellness is that programmes should highlight this for employees. This kind of awareness would be empowering, in that the employee will have the knowledge and the skills to overcome the debilitating and (or) demotivating perceptions of negative emotions, by utilising his or her knowledge that with proper intervention, the ability to manage (negative) emotions can be developed and used.

6.1.3 Conclusions regarding the central hypothesis

The empirical study supported the central hypothesis, namely that individuals' level of psychosocial health can be associated with their level of emotional intelligence.

6.1.4 Conclusions about contributions to the field of industrial and organisational psychology

The findings of the literature review and empirical findings contributed in the following manner to the field of industrial and organisational psychology

One of the contributions from the literature review is that the workforce needs to change with the times. Sparrow and Knight (2006:6) table the changes that take place in society and match these with the demands that these changes place on employees. Globalisation and fierce competition, for example, require that employees have to manage relationships better in order to collaborate creatively in teams. The rate at which new innovations hit the marketplace demands higher flexibility and creativity, which leaves very little time to wallow in feelings of helplessness and frustration. The removal of bureaucracy brings about decentralisation of authority, and employees are given higher levels of responsibility. Employees are required to have the skills to manage the practical demands of the job as well as the stress associated with decision-making. Sparrow and Knight (2006) suggest changing the individual's intention by getting their

emotional intelligence aligned with their here and now purpose. They refer to this alignment as change at the limbic level which means enabling the person to add value with less effort, or to quote Sparrow and Knight (2006:59) directly, 'more performance for less stress'.

According to Sappey and Sappey (1999) fierce competition results in limited product differentiation where it comes to price, and therefore, in times of extreme pressure, people management skills become crucial because a high standard of friendly service may become the only real factor that draws revenue. A high standard of employee commitment is also important and employees who enjoy optimal psychosocial health are able to give the organisation that kind of loyalty.

The contribution to industrial and organisational psychology practice, therefore, is that professionals dealing with wellness in the workplace may find that employees who suffer from psychosocial pathology may benefit from emotional intelligence training, thereby enhancing their ability to perceive, understand, use and manage their emotions, so that feelings of helplessness (depression) stress and frustration can be recognised, understood and managed before becoming debilitating energy consumers that negatively impact creativity, flexibility and productivity. David (2006) delivered a paper at the 3rd European conference on positive psychology, and presented findings on the role of emotional intelligence in coaching interventions. The research results David (2006) referred to showed that emotional intelligence abilities were significantly related to better psychological well-being and he suggests that emotional intelligence assessment is used in employee interventions.

The empirical findings contributed new knowledge regarding the relationship dynamics between the variables psychosocial health and emotional intelligence, and differences between gender, age, race and marital groups. Due to the empirical limitations as indicated below, the usefulness of this study is restricted to the demographic confines of the sample population.

Previous research that indicate that women generally score better in emotional intelligence assessments (Ciarrochi, Chan & Caputi, 2000; Day & Carroll, 2004; Mayer & Geher, 1996) inform industrial and organisational psychologists that a selection decision between a male and a female incumbent based on emotional intelligence scores, may be regarded as unfair labour practice because the woman would be seen to have an unfair

advantage.

The findings suggest that psychosocial health is related to emotional intelligence and therefore organisations wishing to enhance the general levels of work-life satisfaction, engagement, and motivation of their employees should strive to incorporate principles of psychosocial health and emotional intelligence in wellness practices and general life skills training of employees.

6.2 LIMITATIONS OF THIS STUDY

The literature review on psychosocial health was limited to Erikson's (1988), developmental perspective on psychosocial health incorporating systems theory (Bertalanffy, 1968), Bronfenbrenner's ecological theory (1979), the phenomenological variant of ecological systems theory (Spencer, 2003), developmental niche by Super and Harkness (1980) and role theory (Mead, 1934).

The literature review on emotional intelligence was limited by reviewing three models of emotional intelligence, namely the Bar-On model (2004), the emotional competence model of Boyatzis (2004) and the ability model of Mayer et al. (1990; 1995).

The limitations of the empirical study are the relatively small sample size and the under representation of black and male respondents. It may be regarded as a limitation that the Mayer-Salovey-Caruso-Emotional Intelligence Test was standardised according to data that was collected world-wide (Mayer et al., 2002), whereas the data collection for the Personal Multi-Screening Inventory was collected in South Africa only (Faul, 1995).

The findings of this study, albeit informative, cannot be generalised to include the wider population because of the under representation of black and male respondents, and because of the small sample.

6.3 RECOMMENDATIONS

Based on the findings, conclusions and limitations of this study, the following recommendations for industrial and organisational psychology and further research are made:

6.3.1 Recommendations for industrial psychologists working in the field of employee wellness.

The literature review culminates in a model that suggests that there is a theoretical basis for a link between the psychosocial theory of development according to Erikson (Newman & Newman, 2006) and the cognitive-affective personality theory of Mischel and Shoda (1999). It is the reciprocal (theoretical) influence between psychosocial health and emotional intelligence that informs industrial psychologists to consider focussing on a possible lack of emotional intelligence ability, when managing employee wellness. (Sparrow & Knight, 2006).

According to Sparrow and Knight (2006) employees today want a working environment that provides fulfilment and the opportunity to develop holistically. This requires that leaders in organisations recognise that employee development can benefit from a positive psychosocial work environment (Gilbreath, 2004) as well as employee wellness programmes aimed at enhancing the personal psychosocial health of the employee. The main aim should be to be proactive thereby empowering employees to have life strategies in place to cope with major changes and everyday stressors.

The design and content of employee wellness interventions aimed at developing the workforce towards enhanced organisational performance need to include emotional intelligence as well as allow time and expertise to unpack the possible psychosocial origins (unresolved developmental crises) of negative attitudes and debilitating habits, on an individual bases. Employees need to see the link between their psychosocial health, their unresolved issues and their emotional intelligence ability or lack of ability. Once this awareness is cultivated wellness interventions should be very successful. This approach may alleviate problematic workplace behaviour and may be a proactive way to maximise employee wellness, and ultimately organisational performance.

It is recommended that employees be coached in understanding their role in the strategic plan of the organisation. An employee who is comfortable with his or her role and the contribution it can make towards reaching the organisation's goals can view himself or herself as part of the system, which will strengthen his or her self-esteem because of the experience of being accepted and included (Leary et al., 2004). The next step would be to assist the employee in his or her own personal vision clarification including career goals. This ties in with performance management. Having a realistic, attainable vision for

the future elevates expectation (hope), which is an indispensable human condition (Averill, 1991; Hutson & Perry, 2006). An ordinary SWOT analysis (strengths, weaknesses, opportunities and threats) would suffice to guide the employee towards his or her goal. The third step would be to enhance the self-awareness of the employee and this can be done through using the PMSI. Results from the PMSI and (or) other assessments (EI) will indicate whether there are psychosocial problems or social skills developmental needs that have to be addressed.

Regular newsletters with motivational content, industrial theatre presentations, and uplifting videos and posters can create an environment that makes employees aware that their well-being is of paramount importance, and that proactive life skills development and self-management training programmes are available. Organisations exhibit health and safety posters; psychological wellbeing posters are equally important.

Knowledge of the impact of negative psychosocial health is an important diagnostic tool for industrial psychologists interested in organisational systems dynamics, because it is in the pathological relationships within the organisation that one can see the unresolved developmental crises and unfinished issues unfold. People who suffer from unresolved anger, for example, do not operate in the 'here and now'. This can have a negative impact on the group as a whole, resulting in the group becoming a closed system that ignores reality. In healthy groups people are in touch with reality and they make a conscious effort to develop; in unhealthy groups there is stagnation (Bion, 1984).

The employee must be regarded as a self-system, as a contributor to the organisation as a system, as a person within a family and within a community system.

An employee wellness programme cannot be made compulsory. An organisational culture of proactive employee development can however, make it as natural a part of employment as a pension scheme or medical insurance.

6.3.1.1 A recommended model for employee psychosocial wellness relevant to this study

The importance of acknowledging positive emotions and using the energy and motivation they provide must always remain part of a discussion or training in emotional management. Positive emotions are important life forces.

Negative emotions or problematic psychosocial functioning can be alleviated once it is acknowledged, labeled, understood and managed as illustrated in Figure 6.1.

Utilising the results of this study to inform the design of an employee wellness programme aimed at addressing psychosocial health and emotional intelligence, it is necessary to understand the importance of the ability to identify emotions. Employees who do not have this ability, need to be coached to recognise their feelings and to have the necessary vocabulary to name their emotions. Emotion identification is the first step in emotion management. This awareness informs that there is discomfort that needs to be managed, otherwise a psychosocial problem may take root (Faul & Hanekom, 2006).

The second step would be to understand why the emotion is present. This may, for example, involve introspection and (or) discussions with outsiders to gain new perspectives

The third step would be to use the insight gained from understanding the emotion, to assist cognition in problem solving.

The fourth step would entail the actual, practical managing of the emotion and (or) the situation, in order to alleviate the discomfort. This can take the form of changing one's internal dialogue, accepting responsibility for skewed perceptions, or deciding on emotional detachment by setting boundaries. Where other parties are involved, it may mean conflict management (Bush & Folger, 1997).

Employees need to be coached in as many emotion management techniques as possible, and the outcomes need to be an ever-growing ability to use the techniques to feel better. This will empower employees to be sensitive to their inner interactions and to self-manage their reaction to the onslaughts of life (Faul & Hanekom, 2006).

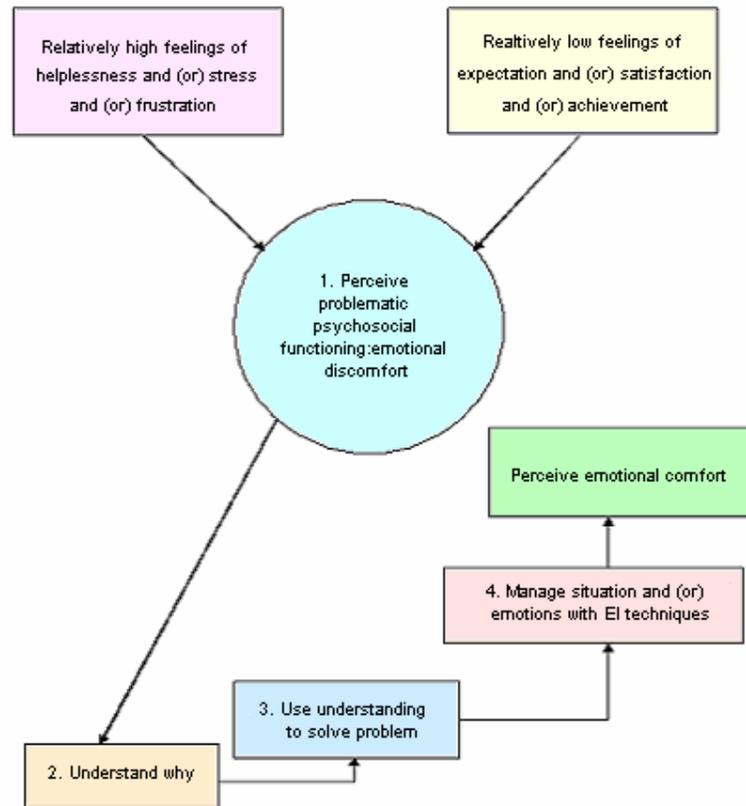


Figure 6.1 Model for managing psychosocial discomfort with emotional intelligence, based on the research conclusions.

6.3.2 Recommendations for future research

Future research aimed at improving on this study, may entail adding a third variable, namely *general health*. Organisations lose millions in revenue because of absenteeism or lost productive time (LPT) due to sickness, according to Hargrave and Hiatt (2004). By exploring whether there is a relationship between emotional intelligence, psychosocial health and physical (general) health, new knowledge can be contributed to industry that, when properly applied, may lower absenteeism figures and the incidence of premature death due to stress and related diseases.

A study that explores the difference between healthy emotion management and unhealthy emotion suppression would also render valuable insight because of the negative physiological impact the latter can have on the individual (Pauls, 2004).

It is also recommended that an employee wellness programme is developed which will address the role of the organisation in ensuring a psychosocially healthy work environment, as well as group and individual interventions structured towards coaching employees to use emotional intelligence techniques to manage their psychosocial health.

The Personal Multi-screening Inventory (PMSI) used in this study, also provides scores on other subscales, for example self-perception, the perception of having social support, dependency on others and (or) substances, physical functioning and spirituality. It is recommended that the relationship between emotional intelligence and one or more of these subscales are explored, because these scales may be associated with high or low emotional intelligence and results from such studies may provide deeper insight into the role of psychosocial health in emotionally intelligent management of emotions and behaviour.

Future research may also prove interesting if other measures of emotional intelligence are used, for example the Bar-On Eqi (Bar-On 2004) and the Emotional Competency Inventory (ECI-2) of Boyatzis and Sala (2004). The Bar-On Eqi (Bar-On, 2004) would provide own emotional intelligence scores as perceived by the respondent, whereas the ECI-2 (Boyatzis & Sala, 2004) would provide a 360-degree perspective on the respondent's emotional intelligence. Comparisons between the relationship of psychosocial health and the three measures (MSCEIT, Bar-On Eqi and ECI-2) could prove interesting differences between the different approaches to measure emotional intelligence, and psychosocial health.

The findings that women have overall higher emotional intelligence than men (Ciarrochi, Chan & Caputi, 2000; Day & Carroll, 2004; Mayer & Geher, 1996), may be researched to find out whether empathy plays a mediating role in emotional intelligence. Stein cited in Murray (1998) analysed the responses of 4500 men and 3200 women who completed emotional intelligence assessments, and found that women scored higher on empathy scales than men.

6.3.3 INTEGRATION OF THE RESEARCH

The overall objective of this study was to ascertain whether there is a relationship between the psychosocial health and the emotional intelligence of the participating sample of employees, and this was achieved. The core finding is that it is especially the

emotional intelligence ability of managing emotions that correlate with most of the psychosocially healthy dimensions of satisfaction, expectation and achievement. This contributes to the knowledge base in that the developers of employee wellness interventions may design programmes that focus on enhancing the ability to manage emotions.

The finding that the ability to perceive emotions is associated with low levels of satisfaction and elevated levels of helplessness, is supported by other research as well (Ciarocchi et al. 2002), and should therefore not be regarded as applicable to this study only.

In conclusion, if employee wellness was only about backaches and injury on duty, premature heart disease and pregnancy leave, career decisions and performance, it could be said that the workforce is treated like machines. Machines are serviced so that they do not have mechanical failure, and when they do, the nuts and bolts are tightened or replaced. Employees are an organisation's most important asset. They are unique individuals who want to bring their talents, skills, abilities and personalities to work. They leave nothing behind, but take their whole selves to the workplace everyday. Therefore, let those in the business of looking after employees, do so proactively with their overall humanity, wellbeing and happiness in mind. Employees are not merely to be 'serviced', they are to be assisted and coached, nurtured and empowered towards becoming who they are meant to be. Industrial psychologists, human resource practitioners and managers should embrace the opportunity to contribute to employee wellness.

6.4 CHAPTER SUMMARY

This is the chapter that ends this dissertation by summarising the conclusions that were drawn from the literature review and the empirical study, followed by the limitations of the research. The chapter, and the study, was concluded with recommendations for application in the field of industrial and organisational psychology, with specific reference to employee wellness.

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