

**CLARIFYING THE AFFECTIVE COMPONENT OF
PSYCHOLOGICAL WELL-BEING**

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**"In the calculus of the heart it is the ratio of positive to negative emotions
that determines the sense of well-being....."
(Daniel Goleman, 1995)**

DEDICATED TO MY BELOVED GRANDMOTHER - MY INSPIRATION

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SUMMARY

CLARIFYING THE AFFECTIVE COMPONENT OF PSYCHOLOGICAL WELL-BEING

Keywords: *Psychological well-being, affect, positive affect, negative affect, affect balance, emotions and emotional intelligence.*

The aim of this study was to clarify the affective component of psychological well-being. From the relevant literature it is clear that an affective component of psychological well-being may be distinguished, but that it is not clear what its nature is, and to what extent indicators thereof overlap with indices of general psychological well-being. It emerged that there are two main models to conceptualize this affective component namely an affect balance model in which the balance of positive and negative affect is viewed as the essence of emotional well-being and secondly, the emotional intelligence model in which the effective regulation of emotion in the self and others is viewed as the essence of emotional well-being. In addition, the literature highlights the role of different gender, age and ethnic/cultural groups as influential variables in this affective component of psychological well-being.

In an empirical investigation an availability sample of 382 individuals comprising four different age groups were involved (18-25, 26-40, 41-50 and 51-65 years). A survey was conducted on the affective component of psychological well-being (affect-balance and emotional intelligence) and general psychological well-being in a one shot cross-sectional design. In this study the affective component was operationalised with the BarOn Emotional Quotient Inventory (EQ-i) of Bar-On (1997a) and the Affectometer 2 (AFM) of Kammann and Flett (1983). Psychological well-being was operationalised from a fortigenic perspective with the Sense of Coherence Scale (SOC) of Antonovsky (1989), the Satisfaction with Life Scale (SWLS) of Diener, Emmons, Larsen and Griffen (1985) and from a pathogenic perspective with the General Health Questionnaire (GHQ) of Goldberg and Hillier (1979). Data was analyzed separately for the Total Group, different age groups, genders and cultural/ethnic groups.

Findings indicated relatively good reliability indices for all scales and sub-scales. Means

obtained on all scales and sub-scales are comparable to those reported in the literature for other similar groups. The construct validity of the EQ-i was determined by factor analyses and was found to be very much the same as in the original standardizing group. The results indicated significant differences between Men and Women, the different age groups and the White and Black Groups on the affective component of psychological well-being. The Affectometer 2 of Kammann and Flett (1983) displayed significant positive correlations with the Emotional Quotient Inventory of Bar-On (1997a). Scores obtained on indices measuring the affective component also showed significant positive correlations with scores on indices measuring general psychological well-being. The affective component contributed significantly to the prediction of psychological well-being. Factor analyses further suggests that operationalizations of the intrapersonal aspects of emotional intelligence (Bar-On, 1997a) and affect balance (Kammann and Flett, 1983) overlap with, and form a strong component of general psychological well-being. Thus, the affective component is conceptualized by the balance of positive and negative affect and aspects of emotional intelligence and proves to be a strong component of general psychological well-being. The essence of this component seems to be affect balance. Accordingly, the results of this study are mainly in support of the affect balance model. Recommendations for further research and enhancement of psychological health on a practical level were made.

OPSOMMING

VERHELDERING VAN DIE AFFEKTIEWE KOMPONENT VAN PSIGOLOGIESE WELSYN

Trefwoorde: Psigologiese welstand/welsyn, affek, positiewe affek, negatiewe affek, affekbalans, emosies en emosionele intelligensie.

Die doel van hierdie studie was om die affektiewe komponent van psigologiese welsyn te verhelder. Vanuit die relevante literatuur is dit duidelik dat 'n affektiewe komponent van psigologiese welsyn onderskei kan word, maar die aard daarvan is nie baie duidelik nie. Daar is ook onsekerheid oor die mate waartoe die indikatore van die affektiewe komponent ooreenstem met indikatore van algemene psigologiese welsyn. Dit blyk dat daar twee modelle bestaan om die affektiewe komponent te konseptualiseer, naamlik die affek balans model waarin die positief-negatiewe affek balans beskou word as die essensie van emosionele welsyn. Tweedens bestaan daar die emosionele intelligensie model waarin die affektiewe regulering van emosie in die self en andere beskou word as die essensie van emosionele welsyn. Bykomend beklemtoon die literatuur die rol van verskillende geslagte, ouderdomsgroepe en etnies/kulturele groepe as belangrike veranderlikes in hierdie affektiewe komponent van psigologiese welsyn.

Die empiriese ondersoek is gebaseer op 'n beskikbaarheidsteekproef van 382 persone, bestaande uit vier verskillende ouderdomsgroepe (18-25, 26-40, 41-50 en 51-65 jaar). 'n Opname is gedoen ten opsigte van die affektiewe komponent van psigologiese welsyn (affekbalans en emosionele intelligensie) sowel as algemene psigologiese welsyn, deur gebruik te maak van 'n eenmalige dwarsdeursnitontwerp. In hierdie studie is die affektiewe komponent geoperasionaliseer met behulp van die BarOn Emotional Quotient Inventory (EQ-i) van Bar-On (1997a) en die Affectometer 2 (AFM) van Kammann en Flett (1983). Psigologiese welsyn is geoperasionaliseer vanuit 'n fortigene perspektief deur gebruik te maak van die Sense of Coherence Scale (SOC) van Antonovsky (1989), die Satisfaction with Life Scale (SWLS) van Diener, Emmons, Larsen en Griffen (1985), en vanuit 'n patogeen perspektief met behulp van die General Health Questionnaire (GHQ) van Goldberg en Hillier (1979). Die data is ontleed vir die totale groep sowel as

vir die verskillende ouderdoms-, geslags- en kulturele/etniese groepe.

Goeie betroubaarheidsindekse is vir alle skale en subskale gevind. Gemiddeldes van alle skale en subskale was vergelykbaar met dié wat in die literatuur gerapporteer is vir ander soortgelyke groepe. Die konstruk geldigheid van die EQ-i is bereken met behulp van faktoranalises en daar is bevind dat daar goeie ooreenkomste is met die konstruk geldigheid van die oorspronklike standaardiseringsgroep. Uit die resultate blyk daar betekenisvolle verskille tussen Man en Vrouens, die verskillende ouderdomsgroepe en die Wit en Swart groepe ten opsigte van die affektiewe komponent van psigologiese welsyn. Die Affectometer 2 van Kammann en Flett (1983) het beduidende positiewe korrelasies met die Emotional Quotient Inventory van Bar-On (1997a) getoon. Tellings verkry op indekse wat die affektiewe komponent meet het ook beduidende positiewe korrelasies getoon met tellings op indekse wat algemene psigologiese welsyn meet. Die affektiewe komponent het betekenisvol bygedra tot die voorspelling van psigologiese welsyn. Faktor analises het verder getoon dat die operasionalisering van die intra-persoonlike aspekte van emosionele intelligensie (Bar-On, 1997a) en 'n operasionalisering van affek balans (Kammann & Flett, 1983) ooreenstem met en 'n sterk komponent is van algemene psigologiese welsyn. Die affektiewe komponent is dus gekonseptualiseer deur die balans van positiewe en negatiewe affek en aspekte van emosionele intelligensie en dit is 'n sterk komponent van psigologiese welsyn. Die belangrikste deel van hierdie komponent blyk dus om affek balans te wees. Hiervolgens dui die resultate van hierdie studie dus op 'n ondersteuning van die affek balans model. Aanbevelings vir verdere navorsing en die praktiese verbetering van psigologiese gesondheid is gemaak.

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CHAPTER 1

INTRODUCTION AND PROBLEM STATEMENT

1.1. INTRODUCTION

This research study is part of a greater research project, namely *The clarification and enhancement of psychosocial well-being* (Wissing, 1998). The theme of this particular study is the clarification of the affective component of psychological well-being.

In this chapter the problem statement, aims and hypotheses of this specific study will be presented, in order to introduce the reader to the layout of this research project. A terminology description will also be included at the end of the chapter.

1.2. PROBLEM STATEMENT

A new psychological paradigm in which the focus falls on the origins, nature, and enhancement of well-being and health is developing (Wissing & Van Eeden, 1998). A shift has occurred from one which focuses on illness (pathogenic approach) to one which now focuses on strengths (fortigenic/salutogenic approach). The World Health Organization (WHO) has defined optimal health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (WHO, 1999). Accordingly several holistic models of health have been proposed, for example those of Eberst (1984), Crose, Nicholas, Gobble & Frank (1992), Witmer and Sweeney (1992) and Adams, Bezner, and Steinhardt (1997). The affective component is regarded as an important dimension of health in all of these models.

According to Wissing and Van Eeden (1998) psychological well-being is seen to be multi-dimensional with regard to facets of the self that are involved, for example affect, cognition, and behaviour. Furthermore, sense of coherence (Antonovsky, 1987), satisfaction with life (Diener, Emmons, Larsen & Griffen, 1985a) and affect balance (Bradburn, 1969; Kammann & Flett, 1983) are seen to be good indicators of general psychological well-being (Wissing & Van Eeden, 1998).

Emmons (1986 & 1992) views the construct of psychological well-being as consisting of the following components: positive affect, negative affect and life satisfaction. This

definition of psychological well-being thus has an emotional component in the form of affect, and a cognitive component in the form of life satisfaction (Pavot & Diener, 1993). Eberst (1984) states that the emotional and mental dimensions historically have been seen either as one element or as two closely related elements. However, as more research becomes available, a definite difference is emerging. Mental health can be seen as "knowing" or "cognition", while emotional health relates more to "feeling". He recognizes this difference as the "expression of emotion" (emotional) and the "control of emotion" (mental) (Eberst, 1984). With the availability of this new data it is evident that the mental and emotional aspects of humanness should be viewed as two separate dimensions of human health and not merely as one isolated element. According to Haworth, Jarmen and Lee (1997) when people are assessed on their psychological well-being and perceptions of happiness, they typically refer to two types of evaluations, the first concerned with cognitive states such as satisfaction or contentment, the second related to affective states such as the degree to which they experience emotions which are pleasant or unpleasant, how they control these and utilize them to their advantage. Therefore, it can be presumed that a definite affective component of psychological well-being does exist, however, the nature and quality of this affective component of psychological well-being has not as yet been empirically clarified.

Bradburn (1969) distinguished between positive and negative affect. Happiness is defined as the balance between the two (Ryff, 1989; Ryff & Keyes, 1995). These two dimensions (positive and negative affect) were found to have different correlates - hence, the argument arose that positive and negative affect are distinct dimensions of well-being and that the balance between them serves as an index of happiness - a general affect balance measure (Ryff, 1989). Diener and Larsen (1993) propose that the frequency of positive and negative affect indicates affective well-being. The overall level of well-being is conceptualized as the extent to which these positive feelings predominate over the negative feelings, and this is reflected in the general affect balance measure (Kammann & Flett, 1983).

This initial model of affect balance was recently challenged by a model in which effective emotional regulation was seen as the determining factor of affective well-being. Consequently Salovey and Mayer (1990), Goleman (1995) and Bar-On (1997a) suggested a framework for understanding such emotional regulation which they defined

as emotional intelligence. The emotional intelligence framework suggests that there may be individual differences in people's abilities to exert effective control and effective balance over their emotional lives (Salovey & Mayer, 1990).

The term emotional intelligence does not yet appear in dictionaries; as such, its definition is still an unsettled issue, as are the boundaries of this new domain in research. According to Salovey and Mayer (1990:198) emotional intelligence is formally defined as "the ability to monitor one's own and other's feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and actions". Bar-On (1997b:14) describes the concept as an "array of non-cognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures". As such, he depicts one's emotional intelligence as an important factor in determining one's ability to succeed in life and as directly influencing one's general well-being (i.e. one's present mental condition or overall degree of emotional health). Goleman (1995) and Witmer and Sweeney (1992) even go so far as to say that "toxic" emotions (negative affect states such as : fear, anger, sadness, disgust and loneliness) put one's health and psychological well-being at as much risk as does chain-smoking and that emotional balance can help protect our health and well-being. Goleman (1995:57) adequately states, "In the calculus of the heart it is the ratio of positive to negative emotions that determines the sense of well-being...".

It is thus clear from the above discussion that different conceptualizations of the affective component of psychological well-being exist. It has also not been empirically determined to what degree the constructs of affect balance (Bradburn, 1969) and emotional intelligence (Bar-On, 1997a; Goleman, 1995 and Salovey & Mayer, 1990) refer to the same or different aspects of affective well-being. It is furthermore unclear to what extent there is an overlap between these specific indices of psychological well-being and the overall general psychological well-being factor. It is thus important to clarify the affective component (i.e. affect balance and emotional intelligence) of psychological well-being. From the literature it is also not clear whether any differences in the manifestations of affect balance and emotional intelligence (as a component of psychological well-being) occur among different genders, age groups and/or ethnic groups.

The main research question to be addressed in this study is: what is the nature of the affective component of psychological well-being as found in theory as well as on the basis of an empirical study.

The specific questions are:

1. What is the nature of the affective component of psychological well-being as depicted in the literature?
2. What is the reliability of all the measuring instruments used and the level of overall psychological well-being in the present research group?
3. What is the construct validity of the Bar-On Emotional Quotient Inventory (EQ-i) for this specific group of South African subjects?
4. Are there any significant differences in the manifestation of this affective component among different gender, age groups or ethnic/cultural groups?
5. What is the link, if any, between affect balance indices and emotional intelligence indices?
6. What is the link, if any, between these affective indices and indices measuring general psychological well-being?
7. Can these affective components predict the degree of general psychological well-being?
8. Does this affective component overlap with general psychological well-being?

1.3. AIMS

The general aim of this study is to theoretically and empirically explore and clarify the affective component of psychological well-being.

The specific aims are:

1. To analyze the nature of the affective component of psychological well-being from the literature;
2. To determine the reliability of all the measuring instruments used and the level of overall psychological well-being in the present research group;

3. To determine the construct validity of the Bar-On Emotional Quotient Inventory (EQ-i) for this specific group of South African subjects;
4. To determine whether there any significant differences in the manifestation of this affective component among different gender, age groups or ethnic/cultural groups;
5. To determine to what degree scores on the scale that measures affect balance (happiness) correlate with scores on the scale that measures emotional intelligence;
6. To determine to what degree these affective component scales scores, correlate with scores on scales that measure general psychological well-being;
7. To determine to what degree the affective component predicts general psychological well-being;
8. To determine to what degree the affective component overlaps with general psychological well-being.

1.4. HYPOTHESES

1. No hypothesis can be inferred for this first aim since it is of a descriptive nature.
2. With regard to this second aim no hypothesis will be stated.
3. With regard to this third aim no hypothesis will be stated.
4. Significant differences do exist in the manifestation of the affective component among different gender, age groups and ethnic/cultural groups.
5. There are significant correlations between the scores on the scales that measure affect balance (happiness) and the scores on the scales that measure emotional intelligence.
6. There are significant correlations between the scores on the scales that measure the affective component and the scores on scales that measure general psychological well-being.
7. This affective component can predict general psychological well-being.
8. This affective component does overlap with general psychological well-being.

1.5. TERMINOLOGY

The main constructs used in this investigation will be conceptualized in greater detail in Chapter 2. The brief description of the terms which follow is included with the aim of orientating the reader to the basic nature of the main concepts used in this study.

1.5.1. AFFECT

Affect or emotion is a term whose precise meaning psychologists and philosophers have quibbled over for more than a century. In its most literal sense, the Oxford Dictionary defines affect as "An Emotion or desire influencing behavior" (Pearsall, 1999:466) and emotion as "A strong feeling, such as joy, anger or sadness - Instinctive or intuitive feeling as distinguished from reasoning or knowledge" (Pearsall, 1999:22). According to Diener, Suh, Lucas, and Smith (1999) moods and emotions, which together are labeled affect, represent people's on line evaluations of the events that occur in their lives. Russell and Carroll (1999:3) define affect "as genuine subjective feelings and moods, rather than thoughts about specific objects or events". In the literature affect/emotion has been defined in many different ways (Salovey & Mayer, 1990; Mayer & Salovey, 1993; Salovey, Hsee & Mayer, 1993) sometimes as a mood, or a feeling of state, or a blend of feelings, or a general happiness or sometimes as a sense of well-being. For the purpose of this study affect and emotion shall be used synonymously.

There are hundreds of emotions, along with their blends, variations, mutations, and nuances. According to Salovey & Mayer (1990) emotions can be viewed as organized responses, crossing the boundaries of many psychological subsystems, including the physiological, cognitive, motivational, and experiential systems. Emotions/affects typically arise in response to an event, either internal or external, that has a positively or negatively valenced meaning for the individual. Emotions/affects can also be distinguished from the closely related concept of mood in that emotions are shorter and generally more intense.

In many literature sources consulted the structure of affect can be accounted for by at least two dimensions of positive and negative affect, and the structure of predispositions towards various affects also confirms to a two-dimensional model (i.e. positive affectivity

and negative affectivity) (Bradburn, 1969; Diener, Larsen, Levine & Emmons, 1985b; Ryff, 1989; Diener & Larsen, 1993; Ryff & Keyes, 1995). Positive affect consists of pleasant emotions or feelings such as joy and happiness, whereas negative affect consists of unpleasant emotions or feelings such as sadness or fear (Emmons & Diener, 1985). Furthermore, according to Huebner and Dew (1996) positive and negative affect ratings both refer to emotional responses (e.g. frequency of feelings such as sadness or happiness).

For the purpose of this study the affective component of psychological well-being will be conceptualized and operationalised in terms of the degree of positive negative affect balance, and the degree of emotional intelligence.

1.5.2. PSYCHOLOGICAL WELL-BEING

The construct psychological well-being is conceptualized from a salutogenic paradigm in this investigation. The main focus lies on psychological health, degree of life satisfaction, sense of coherence and positive negative affect balance as conceptualized in Wissing and Van Eeden (1994) (and not on the degree of pathology or the absence of pathology as conceptualized traditionally within the pathogenic paradigm). Other terms (found in the literature) which are used synonymously with psychological well-being are, psychological health, positive health, mental health and psychological wellness (Seeman, 1989; Crose, et al., 1992; Witmer & Sweeney, 1992; Winett, 1995).

After completing a theoretical and empirical investigation Wissing and Van Eeden (1994) identified a relatively strong general psychological well-being factor. This factor is comprised of a combination of specific affective, cognitive, behavioural and interpersonal qualities. The scales which best yielded the above conclusions were the Sense of Coherence Scale of Antonovsky (1987,1993), the Affectometer 2 of Kammann and Flett (1983) and the Satisfaction with Life Scale of Diener et al., (1985a).

For purposes of this study however, the Affectometer 2 is used to operationalize the affective component and not general psychological well-being. In this way a confounding of variables is prevented. Psychological well-being is thus conceptualized and

operationalized in this study in terms of the degree of sense of coherence and satisfaction with life.

1.6. SUMMARY AND PREVIEW

In the above paragraphs, a brief introduction to this study was presented by way of a statement of the research problem, aims, and hypotheses. A brief description of terminology used was also included at the end of this chapter. In Chapter 2 the affective component of psychological well-being as conceptualized from a salutogenic paradigm, shall be analyzed and inter-relationships existing among these concepts and psychological well-being shall be examined from empirical support found cited in the literature. Moderator variables shall also be examined. In Chapter 3 the empirical investigation will be described with reference to the empirical design, participants, measuring instruments, procedure and statistical analyses employed. In Chapter 4 the results of this empirical investigation will be presented and interpreted. Lastly Chapter 5 will present the conclusions of this study and recommendations for future reference.

CHAPTER 2

CONCEPTUALIZATION OF THE AFFECTIVE COMPONENT OF PSYCHOLOGICAL WELL-BEING AS VIEWED FROM A SALUTOGENIC PARADIGM

2.1. INTRODUCTION

In this chapter the affective component of psychological well-being (as conceptualized from a salutogenic paradigm) will be clarified - affect balance and emotional intelligence will be specifically focused on (as the main constructs comprising the affective component) and defined in order to clarify their meaning and use in this specific study.

The construct psychological well-being within the sub-discipline of psychofortology will first be investigated. Thereafter several holistic models of health which incorporate an affective component will be analyzed. In the following section the different conceptualizations comprising the affective component of psychological well-being (i.e. affect balance and emotional intelligence) will be addressed. Thereafter the operationalisation of each of the affective components will be analyzed and evaluated. In the following section findings taken from different empirical studies concerning the possible link between affect and psychological well-being will be explored.

2.2. THE SALUTOGENIC/FORTIGENIC PARADIGM AND PSYCHOFORTOLOGY AS A SUBDISCIPLINE

In the discipline of psychology there are prominent indications of the development of a new paradigm. In this paradigm the focus falls on the origins, nature, and enhancement of well-being and health and no longer on illness or disease (Wissing & Van Eeden, 1998).

In the past in psychology as a science, the construct mental health was primarily used to indicate aspects of psychopathology or rather the absence of psychopathology (Cowen, 1983; Brooks & McKinlay, 1992). Thus, mental health was essentially conceptualized from a pathogenic paradigm where the focus was on disease or pathology rather than on health or wellness. According to Cowen (1983), Heath (1983) and Strümpfer (1990) a

new paradigm has dramatically replaced this pathogenic paradigm and its focus falls on psychological well-being. According to Van Eeden (1996) the following authors were prominent masterminds in this field: Fromm (1955) with "The sane society", Bradburn (1969) with "The structure of psychological well-being", Perls (1971) with "In and out the garbage pail", Antonovsky (1979, 1987) with "Health, stress and coping", Walsh and Shapiro (1983) with "In search of a healthy person" and Strümpfer (1990, 1995) with "The origins of health and strength: From salutogenesis to fortigenesis". Van Eeden (1996) also refers to the development of new streams in psychology such as health psychology, preventive psychology and psychological well-being/wellness. These also served as important indicators of this transition from a disease/pathology paradigm to a health/wellness paradigm. Furthermore, the World Health Organization (WHO) has defined optimal health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 1999). This definition thus includes both the pathogenic and the salutogenic paradigms, and has added the concept of well-being to the definition of health. Wissing and Van Eeden (1998) also provide empirical verification for the establishment of this new paradigm within psychology, by verifying that psychological well-being and psychopathology are two different constructs, which proves that psychological well-being can be seen as a dimension of human functioning separate from the construct of psychopathology. High scores obtained on indicators of wellness may indicate well-being, but low scores do not necessarily indicate pathology. Wissing and Van Eeden (1998) entitle this new approach where the focus falls on health rather than on disease, the salutogenic, fortigenic perspective (with reference to Antonovsky's (1979) salutogenesis, which signifies the origin of health, and Strümpfer's (1995) fortigenesis, which signifies the origin of strengths) and argue that this name needs to be extended in order for the focus to include the nature, dynamics and enhancement of psychological well-being. Wissing and Van Eeden (1998) further suggest that the term mental health, which is associated with mental illness, dysfunction and vulnerabilities, should be replaced by the construct psychological well-being when aspects of psychological health/wellness need to be conceptualized from a salutogenic/fortigenic perspective. Wissing and Van Eeden (1998) report that there is as yet no specifically named domain of psychology to harbor the study of psychological strengths/well-being, although the construct has been investigated from different perspectives. They further conclude that the development of a new domain in

psychology is advancing in order to solve this problem and they name this new domain or sub-discipline "Psychofortology" (= the science of psychological strengths).

2.3. PSYCHOLOGICAL WELL-BEING

From an analysis of the relevant literature it emerged that conceptualizations of the nature and empirical measurement of psychological well-being are very diverse and no coherent descriptive framework for psychological well-being exists as of yet. In this next section an overview of the conceptualization of psychological well-being will be provided.

2.3.1. CONCEPTUALIZATION OF PSYCHOLOGICAL WELL-BEING

The first group of abstractions can be found in the description of the optimally functioning person as conceptualized in different personality theories. Jung (1933) with his formulation of the concept individuation, Allport (1961) with his description of the mature person, Rogers (1961) with his description of the fully functioning person and Maslow (1968) with his concept of self-actualization. According to Wissing and Van Eeden (1998) these specific theories focus primarily on intra-psychological aspects. The next group of abstractions can be extracted from the life span developmental perspective, for example Buhler's (1935) basic life tendencies; Erikson's (1959) psychosocial stages, and Neugarten's (1973) descriptions of personality changes during adulthood and old age. These theories focus on the different tasks with which a person is confronted during the different stages of his/her life cycle.

A further abstraction of psychological well-being can be found in Jahoda's (1958) description of positive criteria for psychological well-being, which was formulated to replace the definition of well-being as the absence of disease and to include some exposition of positive health. Wissing and Van Eeden (1998) confirm that as of yet no one has offered a complete, coherent theoretical framework regarding the nature and dynamics of optimal psychological well-being, despite the above mentioned formulations. Ryff and Singer (1996) attempted to generate a multi-dimensional model of well-being by converging these multiple frameworks of positive functioning into a theoretical foundation from personality and developmental psychology. In this multi-dimensional model they identified six dimensions of psychological well-being, namely:

self-acceptance, positive relations with others, autonomy, environmental mastery, personal growth and purpose in life.

Several holistic models of psychological well-being have been proposed, for example those of Ellsworth (1981); Baker & Intagliata (1982); Schwartz (1982); Eberst (1984); Seeman (1989); Crose et al., (1992); Witmer & Sweeney (1992) and Adams et al., (1997). In a following section some of these holistic models which incorporate affect as a dimension of psychological well-being, will be elaborated on. These models also take contextual factors into consideration which theories taken from a personology perspective fail to do. According to Wissing and Van Eeden (1998) some of these models are based implicitly or explicitly on principles of systems theory, while others have a more eclectic empirical base. Some of these models are highly abstract, whereas others are more pragmatic in focus.

In the literature several more specific or micro-level constructs are proposed to aid in the conceptualization of psychological well-being and the processes involved (Wissing & Van Eeden, 1998), for example self-actualization (Knapp, 1976); self-efficacy (Bandura, 1977); social support (Procidano & Heller, 1983); sense of coherence (Antonovsky, 1987); dispositional optimism (Scheier & Carver, 1987); reality orientation (Jackson & Jeffers, 1989); coping (Amirkhan, 1990); resourcefulness (Rosenbaum, 1990); constructive thinking (Epstein, 1992); resilience (Barnard, 1994) and emotional intelligence (Goleman, 1995). Although many of these constructs are operationalised, it has not been empirically determined to what degree these constructs refer to the same or different aspects of psychological well-being.

When the relevant literature is analyzed it emerges that the study of psychological well-being has been guided by two primary conceptions of positive functioning (Chamberlain & Zika, 1992; Ryff & Keyes, 1995). The first formulation can be found in the work of Bradburn (1969) where he distinguishes between positive and negative affect and defines happiness as the balance between the two. Frequency of positive and negative affect was later found to be the better indicator of psychological well-being rather than the intensity of affect (Diener & Larsen, 1993). The second primary conception emphasizes life satisfaction as the key indicator of well-being (Diener et al., 1985b). Life satisfaction can be viewed as a cognitive component and was seen to complement

happiness, the more affective dimension of positive functioning (Andrews & Withey, 1976; Campbell, Converse, & Rodgers, 1976; Andrews & McKennell, 1980; Bryant & Veroff, 1982). Affect-balance and life satisfaction can also be seen as micro-level constructs (as mentioned in the previous paragraph). Although these constructs seem to measure well-being effectively Schmutte and Ryff (1997) propose that the underlying structure of psychological well-being is far more complex than these constructs suggest.

Wissing and Van Eeden (1998) also report that although a general factor of psychological well-being does exist (as seen from theoretical and empirical evidence), psychological well-being seems to be multidimensional with regard to facets of self involved (e.g. affect, cognition, and behaviour), as well as with regard to the domains of life in which these facets manifest themselves (intra- and interpersonal, social and contextual, in love and work).

2.3.2. OPERATIONALISATION OF PSYCHOLOGICAL WELL-BEING

Very few conceptualizations of psychological well-being found in personology or developmental psychology have been operationalised. One exception however, is Shostrom's (1974) Personal Orientation Inventory. This scale measures values and behaviours typical of the self-actualizing, optimally functioning individual as conceptualized by Maslow, Rogers, Shostrom and Perls (Shostrom, 1974; Knapp, 1976). Ryff and Singer (1996) have developed a scale based on the six dimensions of psychological well-being which they abstracted from personology and developmental psychology

Adams et al., (1997) developed the Perceived Wellness Survey (PWS). This scale is based on a systems theory approach of psychological well-being, and measures different dimensions of psychological well-being (physical well-being, spiritual well-being, psychological well-being, social well-being, intellectual well-being and emotional well-being). The survey is thus focused on wellness-related perceptual constructs.

Most of the previously above mentioned micro-level constructs of psychological well-being have already been operationalised. To name a few, one may refer to the Affectometer 2 of Kammann and Flett (1983) which measures general happiness (affect-

balance) or sense of well-being, the Perceived Social Support Scale of Procidano and Heller (1983) which measures an individual's perception of his/her degree of social support, the Satisfaction with Life Scale of Diener et al., (1985a) which measures a person's assessment of his/her quality of life according to his/her own criteria, the Sense of Coherence Scale of Antonovsky (1987) which measures an individual's way of experiencing the world and his/her life in it (the person's sense of coherence), the Attitudes About Reality Scale of Jackson and Jeffers (1989) which measures a person's reality orientation, and the Coping Strategy Indicator of Amirkhan (1990) which measures a person's general coping strategies (based on three specific coping strategies). Wissing and Van Eeden (1998) established empirically that the Affectometer 2, Sense of Coherence Scale and the Satisfaction with Life Scale are seen to be good indicators of general psychological well-being.

2.4. HOLISTIC MODELS OF HEALTH INCORPORATING AN AFFECTIVE COMPONENT

In the literature different holistic models of health can be abstracted which incorporate an affective component as a dimension of psychological well-being. In the following section some specific models will be elaborated on, by referring to the authors thereof.

2.4.1. EBERST (1984)

This author proposes a "health cube" as a multidimensional model of health. He depicts health as an extremely complex quality of life composed of at least six overlapping dimensions that interact synergistically. Thus, by employing a "health cube" model, health can no longer be viewed as uni-dimensional. It must be seen as consisting of a myriad of components that continuously fluctuate, producing many combinations that can be "healthy" for the individual. Eberst (1984) abstracts the following six dimensions namely, the physical dimension, emotional and mental dimension, social dimension, and the spiritual dimension. Although these six dimensions function and interact with one another, each has its own nature and is further comprised of smaller sub-elements.

Eberst (1984) states that the emotional and mental dimensions historically have been seen either as one element or as two closely related elements. However, as more

research becomes available a definite difference is emerging. As early as 1980 Russell (Russell, 1980) had already identified this difference as the "expression of emotion" (emotional) and the "control of emotion" (mental). According to Eberst (1984) with this new data available, it is evident that the mental and emotional aspects of humanness should be viewed as two separate dimensions of human health.

According to Eberst (1984) the emotional dimension is comprised of the following sub-elements namely, ability to relate to personal values, self-knowledge, love of self and feelings of self-importance, self-perception, ability to express feelings appropriately, honesty, empathy, and sexuality.

A close view of this description leads to the questioning of Eberst's conceptualization of the emotional dimension. Aspects such as personal values, self-knowledge, self-perception, honesty and sexuality, can represent aspects clearly different from emotion (although they may be related to this dimension). It can thus be concluded that the emotional dimension of well-being is not well construed in this model and further research is imperative.

2.4.2. CROSE, NICHOLAS, GOBBLE, AND FRANK (1992)

The above authors formulated a multidimensional systems model for wellness. They propose that health is multidimensional, variable, and self-regulating within and across life dimensions. They differentiate six health domains or life dimensions, namely physical, emotional, intellectual, social, occupational, and spiritual health or wellness. Assessment of these six life dimensions is crucial in determining optimal health and wellness.

The affective component is highlighted as the second health domain or life dimension, that is emotional health and wellness. Crose et al., (1992) refer in this instance to the importance of emotional expression and disclosure.

The above mentioned holistic perspective of health provides broad global perspectives, but no specific operationalisations are offered and the nature of the emotional domain of life can be further explicated. Furthermore, the characteristics or measurement of

psychological well-being is also not highlighted. This could pose possible limitations in a study such as the present one.

2.4.3. WITMER AND SWEENEY (1992)

Witmer and Sweeney (1992) propose a model of holistic health which can be used as a framework for the enhancement of well-being. In this model different characteristics desirable for optimal health and functioning are identified. These characteristics are expressed through the five life tasks of spirituality, self-regulation, work, friendship, and love. These life tasks dynamically interact with the life forces of family, community, religion, education, government, media, and business/industry. Global events, both natural and human, have an impact on and are affected by the life forces and life tasks. Their model is an effort to demonstrate the interconnectedness of the characteristics of the healthy person, the life tasks, and the life forces. All of these components interact for the well-being or detriment of the person.

The core dimension of this model is spirituality (i.e. oneness, purposiveness, optimism, and values). Self-regulation is the second life task, which includes such characteristics as sense of worth; sense of control; realistic beliefs; spontaneous and emotional responsiveness; intellectual stimulation, problem solving, and creativity; sense of humor; and physical fitness and nutrition. Work, as the third life task not only affords economic sustenance but also serves psychological and social functions. The fourth life task of friendship enables us to connect with the human community. Wellness is enhanced by the fifth life task of love, in which health is nurtured in marriage or intimate relationships through trust, caring, and companionship.

The affective component is included in the second task of self-regulation namely spontaneous and emotional responsiveness. Maslow (1970 in Witmer and Sweeney 1992) described "self-actualizing" people as relatively spontaneous in behaviour and far more spontaneous than others in their inner life, thoughts, impulses, emotions, desires, and opinions. They experience and willingly share their emotions with others in a spontaneous way. According to this model negative emotions can become destructive to our well-being and in contrast positive emotional states can strengthen our immune

system. Furthermore, emotional responsiveness can measurably improve physical and mental health.

This model is very interesting, but offers few specific guidelines concerning the nature of psychological well-being, and measurement of the affective component thereof.

2.4.4. ADAMS, BEZNER, AND STEINHARDT (1997)

Adams et al., (1997) propose the Perceived Wellness Survey (PWS) which is a salutogenically orientated, multidimensional measure of perceived wellness perceptions in the physical, spiritual, psychological, social, emotional, and intellectual dimensions. This survey integrates empirically supportable dimensions of wellness into a wellness framework. This framework is based on a wellness model.

This cylindrical model represents wellness at the top of the model because it is expanded to the fullest possible extent, and illness is represented by the tightly constricted bottom area. In between are innumerable combinations of wellness in several dimensions and the various states of balance among them. Possible bi-directional movement can occur along each continuum. This movement in every dimension influences and is influenced by movement in all other dimensions.

The wellness model incorporates an emotional dimension namely emotional wellness. Emotional wellness is defined as possession of a secure self-identity and a positive sense of self-regard, both of which are facets of self esteem. According to Adams et al., (1997) self-esteem can be seen as a major component of emotional wellness and as one of the strongest predictors of general well-being. It can be questioned whether self-esteem and emotional wellness are one in the same dimension as conceptualized in this model or whether they should be viewed as separate aspects.

The Perceived Wellness Survey was found to be a uni-dimensional scale suggesting that perceptions of wellness in various dimensions are intertwined by their affective nature. Three common themes: (1) purpose in life, (2) optimism, and (3) self-esteem strongly suggest that this survey is an affective construct. It can be questioned whether

purpose in life and optimism are affective components as depicted in this model or are they rather intrapsychic in nature.

The Perceived Wellness Survey appears to be a reasonably valid and reliable perceptual measure of wellness, however, further research is needed to clarify its construct validity.

In the following section the affective component of psychological well-being will be discussed.

2.5. CONCEPTUALIZATION OF THE AFFECTIVE COMPONENT OF PSYCHOLOGICAL WELL-BEING

Affect, well-being, and personality are among the most frequently studied topics in contemporary psychology. These constructs emerge from somewhat distinct literatures, but researchers increasingly have begun to study links among them (e.g. Costa & McCrae, 1980, 1984; Schwarz & Clore, 1983; Emmons & Diener, 1985; Larsen & Ketelaar, 1991; Izard, Libero, Putnam & Haynes, 1993).

The literature on psychological well-being presents a diverse array of definitions. For more than twenty years, the study of psychological well-being has been guided by two primary conceptions. The first formulation emphasizes the affective aspect, including both positive affect, consisting of pleasant emotions or feelings such as joy and happiness, and negative affect, consisting of unpleasant emotions or feelings such as sadness and fear (Andrews & Withey, 1976; Shin & Johnson, 1978; Diener & Emmons, 1984; Diener et al., 1985b; Chamberlain, 1988; Diener, 1994; Ryff & Keyes, 1995). The second primary conception emphasizes a cognitive component described as life satisfaction, which refers to a global assessment of one's life as a whole, as the key indicator of well-being (Ryff & Keyes, 1995). Numerous scales have been developed to address the affective component of well-being (Bradburn, 1969; Kammann & Flett, 1983; Watson, Clark & Tellegen, 1988; BarOn, 1997a).

According to Diener and Diener (1996) well-being is referred to colloquially as "happiness" - a person's evaluation of his or her life. This evaluation is both cognitive

(e.g. life satisfaction judgements) and affective (pleasant and unpleasant emotional reactions). Schmutte and Ryff (1997) state that in its simplest form, well-being represents a generalized feeling of happiness. McKennell (1978) distinguishes between cognition and affect in perceptions of well-being. Emmons (1986; 1992) views the construct psychological well-being as consisting of the following components: positive affect, negative affect and life satisfaction. According to Wissing and Van Eeden (1998) psychological well-being is a combination of specific affective, cognitive, behavioural and interpersonal qualities. Furthermore they identified affect as a facet or characteristic of psychological well-being. They discern affect as positive feelings predominating over negative feelings.

Thus, it is clear that some authors equate psychological well-being with its affective component, but that others distinguish the affective component only as a part of psychological well-being nevertheless the construct of psychological well-being consists of a definite affective component. In the literature different conceptualizations of this affective component of psychological well-being can be found namely, affect balance (Bradburn, 1969) and emotional intelligence (Salovey & Mayer, 1990; Goleman, 1995; Bar-On, 1997a). It is thus important to clarify the affective component of psychological well-being in this section.

2.5.1. AFFECT BALANCE

2.5.1.1. CONCEPTUALIZATION OF AFFECT BALANCE

The first formulation of an affective component of psychological well-being is traceable to Bradburn's (1969) pioneering study of the structure of psychological well-being. Bradburn (1969) proposed that self-evaluations of overall happiness are determined by the balance of positive and negative affect. He describes his conceptual framework as follows: "this framework takes as its fundamental dependent variables avowed happiness or the feeling of psychological well-being. A person's position on the dimension of psychological well-being is seen as a resultant of the individual's position on two independent dimensions - one of positive affect and the other of negative affect. The model specifies that an individual will be high in psychological well-being in the degree to which he has an excess of positive over negative affect and will be low in well-

being in the degree to which negative affect predominates over the positive (Bradburn, 1969:9). Bradburn (1969) thus proposes a two-dimensional model of psychological well-being, distinguishing between positive affect and negative affect.

To substantiate his model he developed a scale to measure emotional well-being - the Affect Balance Scale (ABS). He found that positive and negative affect items were relatively independent of one another. Positive affect was assessed by five questions: feeling pleased about having accomplished something; feeling that things were going your way; feeling proud because someone complimented you on something you had done; feeling particularly excited or interested in something; and feeling on top of the world. Negative affect was also assessed by five questions: feeling so restless that you could not sit long in a chair; feeling bored; feeling depressed or very unhappy; feeling very lonely or remote from other people; and feeling upset because someone criticized you. Each item assessed whether the respondent had experienced the specific affect within the past few weeks.

Bradburn (1969) proposed that happiness is composed of two separable components - positive affect and negative affect. In support of this, it was found that although the positive and negative affect scales were virtually uncorrelated with each other, they each showed independent and incremental correlations with a global well-being item (Bradburn, 1969; Beiser, 1974; Moriwaki, 1974). Bradburn (1969) hypothesized that happiness is really a global judgement people make by comparing their negative affect with their positive affect. Thus, his affect balance score is derived by subtracting the sum of negative items from the sum of positive items. This lead him to view that the best indicator of an individuals' overall feelings of well-being would be provided by this difference between the two scores. This view gives rise to the notion of affect balance. Thus Bradburn (1969:65) argued that: "we would expect that someone who was high on positive feelings and low on negative feelings would be likely to be very happy, while someone who was low on positive feelings and high on negative feelings would be likely to be very unhappy". This provided the initial distinction between positive and negative affect and he formally defined happiness as a preponderance of positive affect over negative affect. In its simplest form happiness is defined as the balance between positive and negative affect which is defined as affect balance (Bradburn, 1969).

Similarly, Bradburn and Caplovitz (1965) concluded that the relative number of positive and negative feelings defines happiness

Accordingly Wessman and Ricks (1966) concluded that persons differed in terms of their day-to-day affective states along two basic dimensions that were independent of each other: (a) the amount of positive as opposed to negative affect a person experienced, which they called average hedonic level, and (b) the amount of variability a person exhibited in his or her affect. Bradburn (1969) however, made the most important contribution to this area when he collected data in several national samples and found that positive and negative affect, when measured separately, varied independently; that is the amount of positive affect a person felt did not substantially correlate with the amount of negative affect they experienced. Note that Bradburn (1969) was not referring to an inability of people to experience positive and negative affect simultaneously in time, rather, he was interested in investigating how people experienced both types of affect over time.

Until Bradburn's (1969) discovery, most researchers had conceptualized affect as a single hedonic dimension in which positive and negative affect were defined and measured as bipolar opposites. The advantages of allowing positive and negative affect to vary independently have been demonstrated by various researchers (Cherlin & Reeder, 1975; Warr, 1978; Harding, 1982; Warr, Barter, & Brownbridge, 1983). These investigations have shown that positive and negative affect, when measured separately, often correlate differently with other variables (e.g. personality measures).

Bradburn's (1969) conclusion that positive and negative affect are independent, supported the long-standing argument of the humanists that psychologists focus too exclusively on the negative. Humanistic psychologists such as Rogers and Maslow have maintained the concern that psychopathology ignores the positive aspects of life, and Bradburn's (1969) proposal supports the idea that the absence of negative affect is not the same as the presence of positive affect. Thus, according to Bradburn's (1969) findings, attempts to enhance life must both reduce negative affect and increase positive affect. Bradburn's (1969) conclusion is supported by the frequent finding that positive and negative affect correlate with different variables (Bradburn, 1969; Cherlin & Reeder, 1975; Warr, 1978; Costa & McCrae, 1980; Harding, 1982; Diener & Emmons, 1984).

The implications of Bradburn's (1969) work are important from a theoretical and methodological point of view. However, his statement that positive and negative affect are independent sparked a controversy in the field. His conclusion was challenged on a number of grounds, the chief criticism being directed at the scales he used to measure positive and negative affect (Brenner, 1975; Kozma & Stones, 1980). Critics contended that the relative independence of the two types of affect may have been due to a number of weaknesses in the Bradburn measure. Some of the weaknesses of Bradburn's (1969) scale are firstly, critics have argued that the positive affect items contain a confounding element of arousal not found in the negative items, secondly, there is much specific non-affective content in the items, thirdly, the simple occurrence of feeling is measured, not their intensity or frequency, and lastly, the scale may suffer from response bias as well as ceiling and floor effects. All of these potential problems could serve to lower the correlation between positive and negative affect. Thus, although Bradburn's (1969) findings have been replicated numerous times with varying populations in studies using his scale (Moriwaki, 1974; Warr, 1978; Perry & Warr, 1980; Harding, 1982), the conclusion remained suspect because of possible limitations in the basic measuring instrument. Russell and Carroll (1999) conclude that Bradburn's scales of positive affect (PA) and negative affect (NA) have been shown to have low reliability, thus his research should be cited for its pioneering contribution but no longer as credible evidence of the independence of positive affect and negative affect.

Although criticisms of Bradburn's (1969) work must be taken into account, the independence of positive and negative affect has been confirmed using other measures and methodologies. Zevon and Tellegen (1982) found a two-dimensional structure of positive and negative affect. They also concluded that these dimensions are unipolar, thus supporting Bradburn's (1969) findings. Bryant and Veroff (1982) offered evidence to support the dual nature of affective well-being. Furthermore, Watson et al., (1988) introduced a widely accepted model of positive and negative affect which was employed in the development of the Positive and Negative Affect Scale (PANAS). The PANAS model is a two-dimensional model of affect structure, including independent positive and negative affect dimensions. Positive affect refers to a dimension in which high levels are characterized by "high energy, full concentration, and pleasurable engagement, whereas low positive affect is characterized by sadness and lethargy" (Watson et al., 1988:1063).

In addition, Diener and Emmons (1984) replicated Bradburn's (1969) findings. They sampled affect, not at a single point in time, but over varying periods of time from moments to weeks. They measured the degree to which subjects felt particular positive and negative emotions (e.g. joy, anger, and depression), but did not restrict the emotions to particular situations as occurs in many of Bradburn's (1969) items. In addition, they compared correlations based on between-and within-subject data. Their major finding was that positive and negative affect are negatively correlated at particular moments in time, but that the correlation between the two decreases as the time interval increases. Thus, when one considers a period of weeks (or longer) in a person's life, the average levels of positive and negative affect one experiences are independent, even though experiencing the two simultaneously is unlikely. Average levels of affect refer to a combination of how frequently each emotion is felt in combination with how intensely it is usually felt. Thus, there is extensive evidence showing that average levels of positive and negative affect are independent, even when very different measuring instruments are used.

Although empirical evidence appears to indicate with increasing clarity that positive and negative affect vary relatively independently within persons, other contradictory considerations make this finding difficult to understand. Brenner (1975) reviewed a number of theoretical reasons why positive and negative affect should vary inversely. In addition, several researchers have constructed subjective well-being scales in which negative and positive affect show a strongly inverse relation (Kammann, Christie, Irwin, & Dixon, 1979). It seems that the more a person experiences pleasant emotions, the less time is available to experience negative ones. This straightforward intuitive reasoning is supported by the momentary emotion literature, in which the major dimension of overarching importance is invariably a bipolar pleasantness-unpleasantness dimension (Russell, 1980). Russell (1980) presents a good deal of evidence to demonstrate that positive and negative emotions correlate highly negatively. Diener and Emmons (1984) found that the two types of affects were unlikely to occur within the same person at the same time. Therefore, the more time a person feels positive emotions, the less time he or she should feel negative emotions. The structure of emotions felt at a particular point in time was not the same as the structure of affect within persons over time. However, Diener and Emmons (1984) still expect the two approaches to be compatible despite these differences. Most damaging of all to the

Bradburn (1969) hypothesis is that when his scale is reworded in terms of frequency of occurrence of the feelings, a strong inverse correlation emerges between positive and negative affect (Warr, Barter, & Brownbridge, 1983).

Thus, there are studies that replicate Bradburn's findings, and there are results that directly contradict his own. Therefore, the following dilemma was confronted: Bradburn (1969) and other researchers found that negative and positive affect vary independently across persons, yet the two poles of affect seem unlikely to occur at the same time. Therefore, it would seem as though the more frequently positive affect is experienced, the less frequently negative affect would be experienced. In an attempt to resolve this issue Diener et al., (1985b) proposed that only mean levels of affect over longer time spans, such as weeks or more, are statistically independent. These mean levels result from two separable components: the frequency of the type of affect and the intensity of affect. Therefore, affective well-being is composed of two dimensions: frequency and intensity. The two underlying dimensions were incorporated to understand how affect is experienced over time. This means the postulated independence of positive and negative affect was linked with the failure to distinguish between the intensity and frequency of affect.

The first dimension of frequency refers to the frequency of positive affect, or the amount of time in which positive affect predominates over negative affect. In terms of frequency, positive and negative affect are strongly inversely correlated. The more a person feels one affect, the less frequently the person feels the other affect. The second dimension of intensity refers to the strength with which one experiences affect. Since the two affects are inversely related in duration in people's lives, they must covary in terms of intensity in order for mean levels to be independent. This is exactly what Diener et al., (1985b) have found in a series of studies - that across persons the intensity of positive and negative affect correlates positively.

The theory of Diener et al., (1985b) makes clear the relationship of positive and negative affect that has become so controversial. Firstly, positive and negative affect are not independent at particular moments in time. Each type of affect clearly tends to suppress the other, although the mechanism by which this occurs is not yet clearly understood. Secondly, because of the suppressive mechanism, the two types of affect are not

independent in terms of their frequency of occurrence, that is, the more a person feels positive or negative affect, the less that person will feel the other. Finally, when one measures average levels of positive and negative affect over longer time periods, they show a low correlation with each other because mean levels are a result of both frequency and intensity. Thus, their positive relationship in terms of intensity across persons cancels their inverse relationship in terms of frequency. In support of this Diener et al., (1985b) found that when emotional intensity was partialled out of the relationship between average levels of positive and negative affect, the correlation between them became strongly negative. These conflicting relations were said to suppress the association between positive and negative affect, thereby creating an illusion that the components are independent (Diener et al., 1985b).

The distinction between frequency and intensity (as important dimensions of affective structure) clears up the contradictory and confusing results in this area, and virtually all results, both from emotion researchers and from those working in the well-being area, fall into place with this conceptualization. Frequency and intensity explain why some scales show that positive and negative affect are independent and some scales suggest that they are inversely related, depending on whether their wording taps mean levels or frequency. Findings suggest that the intensity dimension is at least partly responsible for the low correlation between average positive and negative affect (Diener et al., 1985b). Thus, of the two, frequency has been promoted as the better indicator of well-being because it can be better measured and is more strongly related to long-term emotional well-being than intensity is (Diener, Sandvik, & Pavot, 1991; Diener & Larsen, 1993).

2.5.1.2. OPERATIONALISATION OF AFFECT BALANCE

Numerous scales have been designed to measure the affective component of well-being in terms of measuring positive and negative affect and the separate components of frequency and intensity. Several of the most frequently used measures are single-item survey questions, however, multi-item scales can be found but they are specifically designed for older respondents.

The Affect Balance Scale (ABS) was developed by Bradburn (1969) to measure psychological well-being, which was defined as avowed happiness. The measure

consists of a 10-item single scale, with 5 items that measure positive affect and 5 that measure negative affect. The responses are summed separately for the positive affect and negative affect items. Bradburn (1969) showed that positive affect correlated with single-item indicators of happiness with corresponding values for negative affect on the negative continuum. Bradburn (1969) hypothesized that positive and negative affect were distinct dimensions. This was supported by small associations between the scales.

Campbell, Converse, & Rodgers (1976) developed a multi-item index to measure general affect - the Index of General Affect. This index allows subjects to rate their lives on eight semantic differential scales such as enjoyable - miserable. This scale was formally developed to address older respondents. Similarly, Kozma and Stones (1980) devised the Memorial University of Newfoundland Scale of Happiness (MUNSH): a multi-item geriatric scale to measure positive and negative affect and experience. This scale is also best assessed by subtracting negative from positive affective experiences. Larsen (1983) devised the Affect Intensity Measure. This is a single-item scale which measures the typical strength or intensity of a person's affective responses. Fordyce (1988) designed a single-item scale to measure happiness. Respondents were asked to estimate the percent of time they were happy, unhappy, and neutral. It also includes an 11-choice scale on which respondents rate overall happiness. Watson et al., (1988) devised the Positive and Negative Affect scale (PANAS). This scale is comprised of two ten-item self report scales designed to measure positive and negative affect.

Kammann and Flett (1983) devised the Affectometer 2. This scale measures general happiness or sense of well-being. It is a bottom line indication of quality of life as experienced on an affective or emotional level. This scale is patterned closely on Bradburn's (1969) Affect Balance Scale (ABS). Like the ABS the Affectometer 2 has separate items for measuring positive affect (PA) and negative affect (NA). The overall level of well-being is conceptualized as the extent to which good feelings predominate over bad feelings, and this is reflected in the balance formula for calculating the total score: PA-NA. The Affectometer 2 differs from the ABS in the content of the items. Whereas the 10 ABS items were selected solely by the investigators, Affectometer items have been empirically selected from a candidate pool of 435 adjectives and sentences (Kammann et al., 1979). Furthermore, while the ABS asks the subject to respond yes/no regarding the occurrence of each feeling, the Affectometer asks the subject how often

the feeling was present on a graded response scale. This scale therefore measures the frequency of positive and negative affect (Diener, 1984). Although the differences in design between the two scales might have proved to be inconsequential, this has not actually been the case. While positive affect and negative affect are consistently found to be independent dimensions in the ABS, they are inversely related in the Affectometer. According to Wissing and Van Eeden (1998) and Kammann and Flett (1983) this scale has proven to be a good indicator of psychological well-being as well as a suitable indicator of general happiness (affect balance) and is therefore used as the main scale to measure affect balance (and its correlation to psychological well-being) in this study.

2.5.1.3. THE CONNECTION BETWEEN AFFECT BALANCE AND PSYCHOLOGICAL WELL-BEING

As seen in the above discussion Bradburn's (1969) initial distinction between positive and negative affect brought him to the conclusion that happiness could be defined as the balance between positive and negative affect.

Accordingly a number of people in the field of mental health have emphasized the role and importance of happiness in psychological health. According to Schmutte & Ryff (1997) in its simplest form, well-being represents a generalized feeling of happiness. Diener (1984) identified positive emotion, or happiness as a hallmark of positive functioning or well-being. Alonso (1961) stresses that happiness is a most valuable ingredient for personal well-being. Related to this, Phillips (1967) sees mental health and mental illness on a continuum of happiness and unhappiness which he suggests could be a possible measure of general psychological well-being. This was earlier put forth by Scott (1958), who suggested that psychological health be evaluated by assessing the individual's general feeling of happiness. This idea was also taken up and explored by Bradburn (1969). As early as 1947 Menninger (Menninger, 1947) tapped the essence of the relationship of happiness to psychological well-being by conceptualizing psychological health as the adjustment of human beings to the world and to each other with a maximum of effectiveness and happiness. Noor (1996) suggests that well-being is more than just the absence of symptoms of distress but it is also the presence of positive affect.

According to Bradburn (1969) well-being is conceptualized as the balance between negative and positive affect, or defined in accordance with the difference existing between the amount of positive affects and the amount of negative affects. This definition of well-being thus stresses pleasant emotional experience. Furthermore, for him the balance of positive and negative affect and self-evaluations of overall happiness are simply alternative measures of the same concept i.e. psychological well-being. In addition, according to Reich and Zautra (1988) the balance between positive and negative affects is an indicator of the degree of psychological well-being. In addition Goleman (1995) suggests that emotional balance can help to protect our health and well-being. Diener and Larsen (1993) propose that the frequency of positive and negative affect indicates affective well-being. Furthermore the overall level of well-being is conceptualized as the extent to which these positive feelings predominate over the negative feelings. Lightsey (1996) proposes that positive emotionality and negative emotionality may augment or impair one's ability to develop healthy beliefs about self and world and may thus directly affect subjective well-being and health. Furthermore he depicts the balance between positive thoughts and negative thoughts as being more important in health and pathology than just positive thinking or negative thinking alone. According to Ryff (1989) research has demonstrated positive links between the six well-being dimensions and measures of affect balance.

Bradburn (1969) found that positive affect was related to social interest, sociability, and activity whereas negative affect was correlated with anxiety, worry, psychosomatic symptoms and neuroticism. The former (i.e. positive affects) thereby presenting as a more suitable predictor of psychological well-being. According to Kravetz, Drory and Florian (1993) negative affects have been found to be linked with physical and emotional illness. Positive thoughts have been found to have an inverse relationship to depression and anxiety (Watson, Clark, & Carey, 1988). Costa and McCrae (1980) and Warr, Barter and Brownbridge (1983) examined the personality well-being link. They concluded that extraversion was related to positive affect but not to negative affect and neuroticism was related to negative affect but not to positive affect. Consequently, Francis and Bolger (1994) found that high scores of balanced affect are associated with extraversion and with stability, while low scores of balanced affect are associated with introversion and neuroticism. These findings are consistent with Eysenck's (1983) view that happiness is

a thing called stable extraversion, and with Bradburn's (1969) own equation of high scores of balanced affect, with general happiness.

Witmer and Sweeney (1992) established a relationship between thoughts, feelings, and illness. They conclude that when negative emotions become chronic or are suppressed, they can become destructive to our well-being. In addition, chronic anger is so damaging to the body that it ranks with cigarette smoking - a powerful risk factor for early death. In contrast, positive emotional states seem to strengthen immune function and not only does a negative mood result in lower antibody response, but a positive mood is associated with a higher antibody response.

Thus, some authors evaluate positive negative affect balance as an integrated phenomenon of psychological well-being and others see positive negative affect balance as leading to psychological well-being. On the whole however from the literature the former depicts to be the case thus, positive negative affect balance is conceptualized as an integrated phenomenon of psychological well-being (e.g. Bradburn, 1969; Diener, 1984).

2.5.2. EMOTIONAL INTELLIGENCE

The initial model of affect balance proposed by Bradburn (1969), was recently challenged by a model in which effective emotional regulation was seen as the determining factor of affective well-being. Consequently Salovey and Mayer (1990); Goleman (1995) and Bar-On (1997a), suggested a framework for understanding such emotional regulation which they defined as emotional intelligence. The term emotional intelligence does not yet appear in dictionaries; as such, its definition is still an unsettled issue, as are the boundaries of research in this new domain. It is thus important to clarify the construct of emotional intelligence.

2.5.2.1. EMOTIONAL INTELLIGENCE AND ITS RELATIONSHIP TO OTHER INTELLIGENCES

Psychologists have been trying to define intelligence for many years. A fairly recent definition of cognitive intelligence is the capacity to understand, learn, recall, think

rationally, solve problems, and apply what one has learned (Kaplan & Sadock, 1991). For the past century this capacity has traditionally been measured by the "IQ" (Intelligence Quotient), which attempts to indicate one's cognitive capacity and functioning. According to Bar-On (1997b) the concept of emotional intelligence brings new depth to the understanding of intelligence; it increases the ability to evaluate one's general intelligence.

The genesis of the study of emotional intelligence has its roots in David Wechsler's idea of general intelligence. He proposes that general intelligence is composed primarily of cognitive intelligence and emotional intelligence. Thus, Wechsler's definition of general intelligence is probably one of the most useful and one that lends itself to consider other forms of intelligence in addition to cognitive intelligence. He viewed this concept as "the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his (or her) environment" (Wechsler, 1958:7). In essence, this concept includes the ability to adapt to new situations and to cope with life situations successfully (Wechsler, 1958).

Within this broad definition and wide conceptual framework, it is definitely possible to juxtapose the notion of emotional intelligence. In fact, Wechsler discussed non-cognitive factors (i.e., affective and conative abilities) in general intelligence as early as 1940 (Wechsler, 1940). Although he concentrated more on the intellective (or cognitive) aspects of intelligence, he did not deny the existence or the importance of the non-cognitive component of general intelligence - he states, "we cannot expect to measure total intelligence until our tests also include some measures of the non-intellective factors" (Wechsler, 1943:103). Wechsler (1943) suggested that his intelligence test was an attempt to measure cognitive as well as non-cognitive aspects of general intelligence. Edgar Doll's work was another attempt to measure noncognitive aspects of general intelligence (Doll, 1935, 1953). In addition, Leeper (1948) proposed that emotional thought is part of and contributes to logical thought and intelligence in general.

Similarly, as early as 1920 Thorndike (Thorndike, 1920) proposed the notion that there are different types of intelligence. He originally distinguished social intelligence from other forms of intelligence. He defined social intelligence as the ability to perceive one's own and others' internal states, motives, and behaviours, and to act toward them

optimally on the basis of that information. These social/intellectual skills might also be directed inward and so social intelligence might include, by extension, the ability to understand and manage oneself. The concept of social intelligence has a long history among intelligence researchers (Walker & Foley, 1973). Furthermore, Salovey and Mayer (1990) define emotional intelligence as a subset of social intelligence.

These early proposals were succeeded half a century later by the ideas of Howard Gardner. Gardner's influential book "Frames of Mind" (1983) was a manifesto refuting the IQ view; it proposed that there was not just one monolithic kind of intelligence that was crucial for life success, but rather a wide spectrum of intelligences. He suggests that intelligence encompasses multiple dimensions, combining a variety of cognitive aspects with elements of emotional intelligence (or personal intelligences, as he called it). The emotional (or personal) dimension of his concept of multiple intelligences includes two general components that he referred to as interpersonal and intrapersonal intelligence. Like social intelligence, the personal intelligences include knowledge about the self and about others. Interpersonal intelligence involves, among other things, the ability to monitor others' moods and temperaments and to enlist such knowledge into the service of predicting their future behaviour. Intrapersonal intelligence involves having access to one's own feelings and the ability to discriminate among them and draw upon them to guide behaviour. According to Gardner (1983) the aspect of the personal intelligences which relates to feelings, is quite close to the construct of emotional intelligence. Thus, as was the case with social intelligence, emotional intelligence is a subset of Gardner's personal intelligences.

Consequently, Gardner's theory of multiple intelligences, can be viewed as an expansion of Wechsler's concept of general intelligence. The aspect of multiple intelligences that Gardner refers to as personal intelligences is an expansion of Wechsler's non-intellective factors and Thorndike's (1920) social intelligence. Salovey and Mayer's (1990) and Bar-On's (1997a) approach to emotional intelligence is also related to these non-intellective components of intelligence.

2.5.2.2. CONCEPTUALIZATION OF EMOTIONAL INTELLIGENCE

As adapted from above, Gardner (1983:239) described what he called personal intelligence in part as " access to one's own feeling life - one's range of affects or emotions: the capacity instantly to effect discriminations among these feelings and, eventually, to label them, to enmesh them in symbolic codes, to draw upon them as a means of understanding and guiding one's behaviour".

Consequently, Salovey, Mayer, Goldman, Turvey and Palfai (1995) believe that individuals differ in the skill with which they can identify their feelings and the feelings of others, regulate these feelings, and use this information provided by their feelings to motivate adaptive social behaviour. These skills are likely to be related to the use of feelings to motivate, plan, and achieve in life. Salovey and Mayer (1990); Mayer and Salovey (1993) and Salovey, Hsee and Mayer (1993) have organized these competencies into a framework for understanding such emotional regulation which they call emotional intelligence. This framework is further concerned with a set of skills expected to contribute to the accurate appraisal and expression of emotion in oneself and in others, the effective regulation of emotion in self and others, and the use of feelings to motivate, plan, and achieve in one's life. The emotional intelligence framework organizes the existing individual differences literature on the capacity to process and adapt to affective information that must be processed: this processing may proceed differently to the processing of non-emotional information. Thus, emotional intelligence was proposed as a general framework which allows identification of specific skills needed to understand and experience emotions most adaptively. Several specific conceptualizations of emotional intelligence exist.

In the following section the different conceptualizations of emotional intelligence will be investigated, referring to the authors/researchers thereof.

2.5.2.2.1. SALOVEY AND MAYER (1990) AND SALOVEY, HSEE AND MAYER (1993)

Salovey and Mayer (1990), and Salovey, Hsee, and Mayer (1993) define emotional intelligence as the ability to monitor one's own and others' feelings and emotions, to

discriminate among them and to use this information to guide one's thinking and actions. A more recent definition proposed by Salovey and Sluyter (1997) is that emotional intelligence is the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional meanings, and to reflectively regulate emotions so as to promote both better emotion and thought.

They divide the construct of emotional intelligence into three primary domains, outlined in Figure 1: the accurate appraisal and expression of emotion (in self and in other people), the adaptive regulation of emotions (in self and in other people), and the utilization of emotions to plan, create, and motivate action. When looking at these three components of emotional intelligence, they expanded upon Gardener's (1983) approach. These components are very similar to what Bar-On (1997a) describes as emotional self-awareness, assertiveness, and empathy (these components shall be elaborated on in a later section).

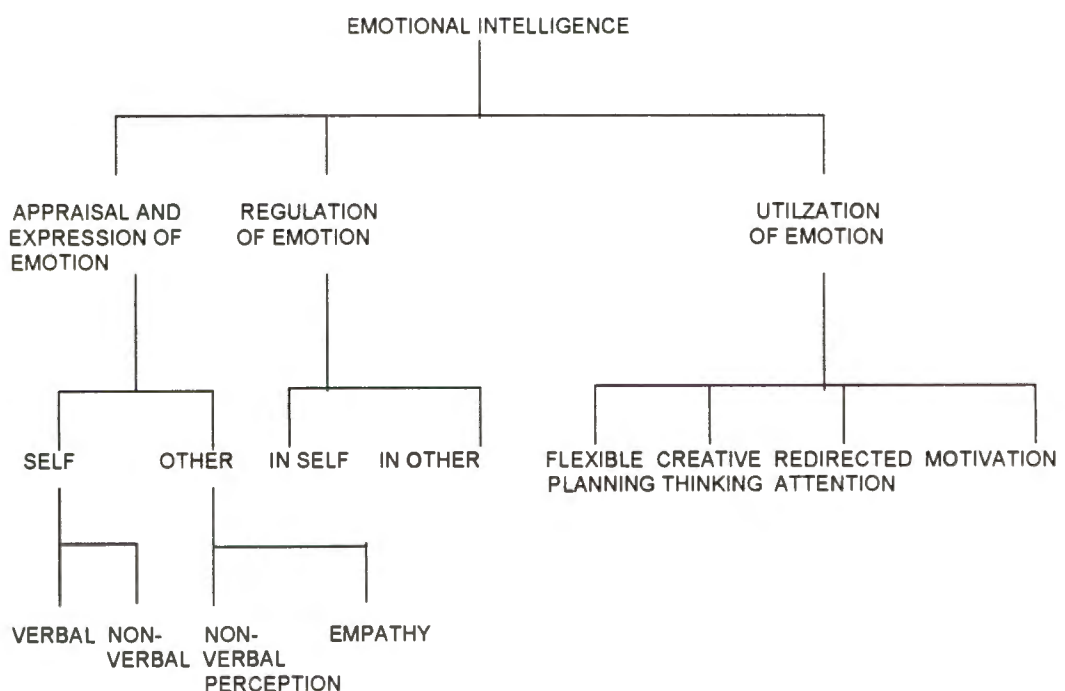


FIGURE 1. Domains of Emotional Intelligence (Adapted from Salovey & Mayer, 1990:190, & Salovey, Hsee, & Mayer, 1993:260).

The three primary domains of emotional intelligence (as outlined in Figure 1) will now be further explained.

- **APPRAISAL AND EXPRESSION OF EMOTION**

Emotion in the self

The processes underlying emotional intelligence are initiated when affect-laden information first enters the perceptual system. Emotional intelligence allows for the accurate appraisal and expression of feelings, and stable laws may govern them (Salovey & Mayer, 1990). These emotional appraisals, in turn, in part determine various expressions of emotion. This is the case because those who are more accurate can more quickly perceive and respond to their own emotions and better express those emotions to others. Such emotionally intelligent individuals can also respond more appropriately to their own feelings because of the accuracy with which they perceive them. These are emotionally intelligent skills because they require the processing of emotional information from within the organism, and because it is clear that some level of minimal competence in these skills is necessary for adequate social functioning (Salovey & Mayer, 1990).

Verbal - One medium through which emotions are appraised and expressed is language. Learning about emotions depends in part upon speaking clearly about them. This social learning interacts with the ability to introspect and form coherent propositions on the basis of that introspection (Salovey & Mayer, 1990). Perhaps then, most fundamental to the effective use of information provided by emotional experiences, is the ability to recognize and identify accurately what one is feeling and to be able to express these emotions.

Work with young children suggests that the ability to make faces that appropriately communicate an emotion to others increases linearly with age. Children as young as three years are able to pose voluntarily a facial expression suggested to them by an adult (Lewis, Sullivan, & Vasen, 1987). For some emotions, such as happiness and disgust, correct identification on nearly every presentation is seen in children as young as four years (Profyt & Whissell, 1991). Furthermore, children begin to learn emotion laden words at quite a young age (Bretherton, Fritz, Zahn-Waxler, & Ridgeway, 1986). Despite these skills demonstrated by children, there are adults who seem oblivious to their own feelings (Salovey & Mayer, 1990). At the extreme, there seems to be a group

of individuals who are simply unable to use words to describe feelings at all. Labeled alexithymics (literally, "no words for feelings"), these individuals are thought to be at risk for a variety of psychological disorders, especially psychosomatic illnesses, though the construct has been difficult to measure reliably (Sifneos, 1973; Apfel & Sifneos, 1979; Taylor, 1984; Krystal, Giller, & Cicchetti, 1986). In their recent work Mayer and Salovey (1993) identified individuals who varied with respect to how much attention they paid to and the clarity with which they perceived their moods. Such perceptions may be related to the tendency to ruminate after distressing experiences and the frequency with which physical symptoms are reported in stressful situations (Salovey et al., 1993).

Non-verbal - Appraisal and expression of emotion often takes place on a non-verbal level (Salovey & Mayer, 1990). Many investigators, however, have explored non-verbal appraisals and expressions of emotion (Ekman & Friesen, 1975), since Darwin's now classic study of facial expression (Darwin, 1955). Thus, it can be concluded that much emotional communication occurs through non-verbal channels. And, individual differences in the clarity of the perception of these signals is illustrated in its expression, sometimes termed non-verbal sending accuracy (Buck, 1984).

Emotion in others

Salovey and Mayer (1990) have included the skillful recognizance of other's emotional reactions and empathic responses to them as a component of emotional intelligence. These skills enable individuals to gauge accurately the affective responses in others and to choose socially adaptive behaviours in response. Such individuals should be perceived as genuine and warm by others, while individuals lacking these skills should appear oblivious and boorish.

Non-verbal perception of emotion - According to Salovey and Mayer (1990) from an evolutionary standpoint, it was important that people be able to perceive emotions not only in themselves, but also in those around them. Such perceptual abilities insure smoother interpersonal cooperation. There are several indications that individual differences exist in the interpretation of emotions through facial expressions.

Children begin to develop the ability to recognize facial expressions as early as the age of three (Profyt & Whissell, 1991). Despite the abilities observed early in the

development of young children, Salovey and Mayer (1990) report the existence of adults who seem insensitive to the feelings of others. For instance, some individuals have great difficulty identifying the feelings communicated to them through facial expressions of other people (Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979; Buck, 1984). In addition people vary in their ability to use their own facial expressions (and other non-verbal behaviours) to communicate what they are feeling (Buck, 1984). A number of researchers have found that women are generally better at recognizing emotions in facial expressions than are men (Boucher & Carlson, 1980; Wagner, MacDonald & Manstead, 1986).

Empathy - A particularly exciting communality among emotional appraisal and expression is that they appear related to empathy, the ability to comprehend another's feelings and to re-experience them oneself (Salovey & Mayer, 1990). Rogers (1951) believed an active striving to understand other people and to empathize with them is a priceless gift as well as a prerequisite for helping another to grow. According to Salovey and Mayer (1990) empathy may be a central characteristic of emotionally intelligent behaviour. As social support researchers have made clear in recent years, a person's relatives, friends, and neighbours are critical contributors to his or her well-being (Kessler, Price, & Wortman, 1985; Thoits, 1986). When people relate positively to one another, they experience greater life satisfaction, and lower stress. For example, the empathy of an advice giver is an important determinant of whether the advice is perceived as good. Empathy is also a motivator for altruistic behaviour (Salovey & Mayer, 1990). People who behave in an emotionally intelligent fashion should have sufficient social competence to weave a warm fabric of interpersonal relations. Clearly, the greater number of emotionally intelligent friends, relatives, and co-workers, the more empathic and supportive a social structure will surround a person (Salovey & Mayer, 1990). According to Batson, Fultz, and Schoenrade (1987) and Wispé (1986), empathy researchers have noted its dependence on subsidiary abilities similar to appraising and expressing emotion: to understand another person's point of view, to identify accurately another's emotions, to express the same or other appropriate emotion in response to them, and finally, to communicate and/or act on this internal experience. Lastly, Salovey and Mayer (1990:194) state that "developmental perspectives on empathy suggest that appraisal of one's own feelings and those of others are highly related, and that, in fact, one may not exist without the other".

- **REGULATION OF EMOTION**

Salovey and Mayer (1990) explain that they have included the regulation of emotion in the construct of emotional intelligence because it may lead to more adaptive and reinforcing mood states. They further explain that people experience mood on both a direct and a reflective level. In their reflective experience, individuals have access to knowledge regarding their own and other's moods. Accordingly, Mayer and Gaschke (1988) have found that most people regulate emotion in themselves and others. According to Salovey and Mayer (1990) emotionally intelligent individuals, however, should be especially adept at this process and do so to meet particular goals. On the positive side, they may enhance their own and others' moods and even manage emotions so as to motivate others charismatically toward a worthwhile end. On the negative side, those whose skills are channeled antisocially may create manipulative scenes or lead others sociopathically to nefarious ends. On the whole, this experience, in part, represents a willingness and ability to monitor, evaluate, and regulate emotions (Salovey & Mayer, 1990). Much of the research in this domain concerns moods rather than emotions. According to Salovey and Mayer (1990) moods, although less intense and generally longer lasting than emotions, should be just as effectively regulated and managed by individuals with emotionally intelligent skills.

Regulation of emotion in the self

According to Salovey, Hsee, and Mayer (1993) historically, the ways in which people seek to understand and then take control over their emotional experiences has largely been ignored by researchers. Perhaps this inattention was due to James's (1890) belief that the influences of emotion terminate in the subject's own body and do not affect external events. Yet people engage in all kinds of activities to regulate their moods. According to Mayer and Gaschke (1988) the variety of experiences that one has about one's moods; these meta-experiences of mood can be conceptualized as the result of a regulatory system that monitors, evaluates, and sometimes acts to change mood. Although many aspects of mood regulation occur automatically (it is, for instance, unnecessary to make a conscious decision to become sad in the presence of tragedy), some meta-experiences of mood are conscious and open to inquiry. Brown, Covell, and

Abramovitch (1991) show that the ability to regulate one's own feelings can be recognized by children as young as four years old.

According to Morris and Reilly (1987) individuals attempt to control their thoughts in various ways. For example, individuals attempt to regulate their moods by choosing associates. Associating with other people whose successes are not threatening to them generally results in positive affects like pride, although associating with people whose successes are in areas considered important to one's sense of self can lead to negative affective states like envy (Tesser, Millar, & Moore, 1988; Salovey & Rodin, 1984). Further, individuals try to maintain positive and avoid negative moods by seeking information that helps maintain a positive view of themselves. Tesser (1986) has termed this motive self-evaluation maintenance. Additionally, individuals may act helpfully to others as a way of terminating negative moods, the so-called negative state relief view of altruistic behaviour (Salovey & Rosenhan, 1989). And, it makes greater evolutionary sense that individuals of a species, rather than becoming happy by directly deciding to do so, do so instead by regulating behaviour, for example by engaging in altruistic acts (Mayer & Gaschke, 1988).

Another quite different way that meta-mood experience may affect mood change is by positively augmenting a person's overall internal experience. A negative mood that is evaluated as unacceptable and long-lasting is devastating; but were the evaluations reversed so as to view the mood as under control and soon-to-change, the overall feeling would be far less destructive of one's equanimity. Such countervailing evaluations may assist individuals to persevere in times of negative moods, and thereby enter new situations that have potential to improve their future moods (Mayer & Gaschke, 1988).

In addition, mood may be modified directly. The earliest evidence of this stems from the impact of mood on memory encoding and recall, where this process was generally stronger for positive than negative mood states. Isen (1984) explains this symmetry by suggesting that individuals are generally motivated to maintain, even prolong, pleasant moods but attempt to attenuate the experience of unpleasant ones. This motivational view assumes that individuals attempt to maximize pleasurable experiences and terminate aversive ones.

Regulation of emotion in others

According to Salovey and Mayer (1990) emotional intelligence, however, includes more than just an ability to regulate feelings in oneself. It also pertains to the ability to regulate and alter the affective reactions of others. Some people seem to know how to create emotions in others that serve them in adaptive ways. For example, an emotionally intelligent orator can elicit strong reactions in an audience. As early as 1959 Goffman (Goffman, 1959) eloquently described the ways in which individuals present themselves and their activities to others in order to guide and control the impressions formed of them.

According to Wasielewski (1985), in the extreme, manipulating the feelings of another person for one's own gain may seem sociopathic or Machiavellian, but in the less extreme situations these individuals may simply be labeled as "charismatic" or, merely, charming. Moreover, some people simply feel good when they make others feel good, with no ulterior motive. The effective regulation of the feelings of other people has not been systematically investigated, although it does fall under the purview of impression management (Goffman, 1959). Often, a most advantageous strategy is to focus on reactions to some situation. For example, Hochschild (1983) has studied the ways in which certain professionals, such as airline flight attendants strongly regulate their displays of feelings and focus on and attempt to regulate the feelings of others. Such behaviour is thought to extract a personal psychological toll and may even be a health hazard (Pennebaker & Susman, 1988; Pennebaker, 1989). Emotional regulation may be accentuated among helping professionals, which account for their high incidence of burnout.

• **UTILIZING EMOTIONAL INTELLIGENCE**

Individuals also differ in their ability to harness their own emotions in order to solve problems. Moods and emotions subtly but systematically influence some of the components and strategies involved in problem solving (Salovey & Mayer, 1990). First, emotion swings may facilitate the generation of multiple future plans. Second, positive emotion may alter memory organization so that cognitive material is better integrated and diverse ideas are seen as more related (Isen, 1987). Third, emotion provides

interruptions for complex systems, "popping" them out of a given level of processing and focusing them on more pressing needs. Moods such as anxiety and depression, for example, may focus attention on the self (Pyszezynski & Greenberg, 1987). Finally, emotions and moods may be used to motivate and assist performance at complex intellectual tasks (Cantor, Norem, Niedenthal, Langston, & Brower, 1987).

Therefore, according to Salovey and Mayer (1990) when people approach life tasks with emotional intelligence, they should be at an advantage for solving problems adaptively. It is for this reason that such skills are included within the construct of emotional intelligence. The sorts of problems people identify and the way they frame them will probably be more related to internal emotional experience than will be the problems addressed by others. For example, such individuals are more likely to ask not how much they will earn in a career, but rather whether they will be happy in such a career. Having framed a problem, individuals with such skills may be more creative and flexible in arriving at possible alternatives to problems. They are also more apt to integrate emotional considerations when choosing among alternatives. Such an approach will often lead to behaviour that is considerate and respectful of the internal experience of themselves and others.

Flexible planning

One central aspect of personality is the mood swing wherein individuals differ in the frequency and amplitude of their shifts in predominant affect (Larsen, Diener, & Emmons, 1986). Those with the strongest mood swings will experience concomitant changes in their estimates of the likelihood of future events depending upon the valence of those events. People in good moods perceive positive events as more likely and negative events as less likely to occur and that the reverse holds true for people in unpleasant moods (Salovey & Birnbaum, 1989). Mood swings may assist such people in breaking set when thinking about the future and consider a wider variety of possible outcomes. As a consequence, they may be more likely to generate a larger number of future plans for themselves and thereby be better prepared to take advantage of future opportunities (Salovey & Mayer, 1990).

Creative thinking

Mood may also assist problem solving by virtue of its impact on the organization and use of information in memory. For example, individuals may find it easier to categorize features of problems as being related or unrelated while they experience positive moods (Isen & Daubman, 1984). This clarity in categorizing information may have a positive impact on creative problem solving. Moreover, happy individuals may be more likely to discover category organizing principles and use them to integrate and remember information (Salovey & Mayer, 1990).

Mood redirected attention

Attention is directed to new problems when powerful emotions occur. Thus, when people attend to their feelings, they may be directed away from an ongoing problem into a new one of greater immediate importance (Salovey & Mayer, 1990). In this fashion, individuals learn to capitalize on the capacity of emotional processes to refocus attention on the most important stimuli in their environment. Rather than merely disrupting ongoing cognitive activities, affect can help individuals to reprioritize the internal and external demands on their attention, and allocate attentional resources accordingly.

Motivating emotions

Moods may be used to motivate persistence at challenging tasks. For example, some individuals can channel the anxiety created by evaluative situations (such as tests and impending performances) to motivate them to prepare more thoroughly and attain more exacting standards (Salovey & Mayer, 1990). Others may imagine negative outcomes as a method of motivating performance. People may use good moods to increase their confidence in their capabilities and thus persist in the face of obstacles and aversive experiences (Salovey & Birnbaum, 1989; Bandura, 1986). Finally, individuals with positive attitudes toward life construct interpersonal experiences that lead to better outcomes and greater rewards for themselves and others (Epstein & Feist, 1988).

2.5.2.2.2. GOLEMAN (1995)

Daniel Goleman's book, "Emotional Intelligence" (1995), has served to popularize this relatively new area. He has presented his adaptation of a few existing models of emotional intelligence (e.g. Salovey & Mayer, 1990), and emphasized how it is altered

throughout life, the way basic emotional skills can augment one's ability to function better and to succeed in life, and the price paid for what he calls "emotional illiteracy".

Goleman (1995) proposes that emotional intelligence is not just a single component but instead, includes several components: managing one's emotions such as anger, frustration and empathy, handling relationships, self awareness and channeling these feelings in a positive manner. He further includes abilities such as: being able to motivate oneself and persist in the face of frustrations; to control impulse and delay gratification; to regulate one's moods and keep distress from swamping the ability to think; to empathize and hope. In more simple terms Goleman (1995) sees emotional intelligence as the ability to rein in emotional impulse; to read another's innermost feelings; to handle relationships smoothly - as Aristotle put it, the rare skill "to be angry with the right person, to the right degree, at the right time, for the right purpose, and in the right way" (Aristotle cited in Goleman, 1995:xiii).

Goleman (1995) further examines in his book how "toxic" (negative affect states such as: anger, fear, sadness, disgust and loneliness) emotions put our physical health at as much risk as does chain smoking, and that emotional balance can help protect our health and well-being. Consequently, he proposes that medicine enlarge its vision to embrace the impact of emotions. To do this the medical model should include: helping people better manage their upsetting feelings - anger, anxiety, depression, pessimism, and loneliness - as a form of disease prevention; and emphasize that patients could benefit measurably when their psychological needs are attended to along with their purely medical ones.

Goleman (1995) posed the question *Why do people of high IQ flounder and those of modest IQ do surprisingly well?* He concluded that the difference often lies in the abilities of emotional intelligence. He further highlights that research depicts that traditional IQ does not necessarily predict success in life. He maintains that IQ contributes about twenty percent to factors that determine life success, which leaves eighty percent to other forces of which emotional intelligence plays a predominant role.

Taken from Salovey and Mayer's (1990) research on emotional intelligence, Goleman (1995) explains in his book that emotional intelligence can be grouped into five domains:

- **Knowing one's emotions**

This expands on the concept of self-awareness - recognizing a feeling as it happens - the proposed keystone of emotional intelligence. The ability to monitor feelings from moment to moment is crucial to psychological insight and self-understanding. An inability to notice one's true feelings leaves individuals at their mercy. People with greater certainty about their feelings are better pilots of their lives, having a surer sense of how they really feel about personal decisions from whom to marry to what job to take.

- **Managing emotions**

Handling feelings so they are appropriate is an ability that builds on self-awareness. It is further seen as the capacity to soothe oneself, to shake off rampant anxiety, gloom, or irritability. Consequences of failure are seen regarding this basic emotional skill. People who are poor in this ability are constantly battling feelings of distress, while those who excel in it can bounce back far more quickly from life's setbacks and upsets.

- **Motivating oneself**

Marshalling emotions in the service of a goal is essential for paying attention, for self-motivation and mastery, and for creativity. Emotional self-control - delaying gratification and stifling impulsiveness - underlies accomplishment of every sort. And being able to get into the "flow" state enables outstanding performance of all kinds. People who have this skill tend to be more highly productive and effective in whatever they undertake.

- **Recognizing emotions in others**

Empathy, another ability that builds on emotional self-awareness, is the fundamental "people skill". People who are empathic and more attuned to the subtle social signals that indicate what others need or want. This makes them better at callings such as the caring professions, teaching, sales, and management.

- **Handling relationships**

The art of relationships is, largely, skills in managing emotions in others. This further involves skills such as social competence and/or incompetence, and the specific additional skills involved. These are the abilities that undergird popularity, leadership,

and interpersonal effectiveness. People who excel in these skills do well at anything that relies on interacting smoothly with others; they are social stars.

Goleman (1995) further suggests that people differ in their abilities in each of these domains; some individuals are quite adept at handling, say, their own anxiety, but relatively inept at soothing someone else's upsets. Individuals possessing such emotional skills are seen to be "emotionally literate" and individuals significantly lacking in such skills are at threat of "emotional illiteracy". In addition, he proposes that lapses in these emotional skills can be remedied: to a great extent each of these domains represents a habit and response that, with the right effort, can be improved on.

2.5.2.2.3. BAR-ON (1997)

According to Bar-On (1997b), broadly speaking, emotional intelligence addresses the emotional, personal, social, and survival dimensions of intelligence, which are often more important for daily functioning than the more traditional cognitive aspects of intelligence. Bar-On's model and measure (as operationalized in the Bar-On Emotional Quotient Inventory (EQ-i)) of emotional, personal, and social intelligence evolved out of his work as a clinical psychologist. His clinical experience emphasized the need to answer the question, *Why do some people have better psychological well-being than others?* This question then expanded into, *Why do some people succeed in possessing better emotional well-being than others?* What's more, *Why are some individuals more able to succeed in life than others?* These questions commanded a thorough review of factors (emotional, personal and social abilities and skills) thought to determine general success, as well as success in obtaining and maintaining positive psychological well-being and emotional well-being. It soon became clear that the key determinant in predicting success and well-being is not always or only cognitive intelligence (Bar-On, 1997a). Bar-On (1997d) thus, coined the term "EQ" (Emotional Quotient) to denote a measure or set of measures of a person's non-cognitive intelligence, much like IQ (Intelligence Quotient) is a measure of cognitive intelligence.

Emotional intelligence is concerned with understanding oneself and others, relating to people, and adapting to and coping with the immediate surroundings to be more successful in dealing with environmental demands. Bar-On (1997c) further proposes that

emotional intelligence is tactical (immediate functioning), while cognitive intelligence is strategic (long-term capacity). Additionally, emotional intelligence helps predict success, because it reflects how a person applies knowledge to the immediate situation. Lastly, Bar-On (1997b) suggests that in a way, to measure emotional intelligence is to measure one's "common sense" and ability to get along in the world.

Bar-On (1997b) formally defines emotional intelligence as an array of personal, emotional, and social competencies and skills that influence one's ability to succeed in coping with environmental demands and pressures. As such, he sees emotional intelligence as an important factor in determining one's ability to succeed in life and directly influencing one's general psychological well-being.

Bar-On (1997b) depicts that emotional intelligence combines with other important determinants (of one's ability to succeed in coping with environmental demands), such as biomedical predispositions and conditions, cognitive intellectual capacity, as well as the reality and limitations of the immediate and ever-changing environment. This approach is in agreement with the interaction position adopted by Bem and Allen (1974), which stresses that assessment must seriously attend to personal factors and environmental situations to predict behaviour. Epstein (1979) also emphasizes this position and stresses that the question of what is more important, the situation or the person, is a meaningless one, as behaviour is always a joint function of the person and the situation. Since behaviour never takes place in a vacuum, but always occurs in a situational context, it is meaningless to talk about characteristics of an individual's behaviour without specifying in which context the behaviour occurs.

Accordingly, Bar-On's (1997b) model is multi-factorial and relates to potential for performance, rather than performance itself (i.e. the potential to succeed rather than success itself); it is process orientated, rather than outcome orientated. This conceptual framework's comprehensive nature, based on the group of factorial components (emotional skills) described below, and the way in which they are defined, is such that it expands upon and is able to encompass other existing models of emotional intelligence with which this author is familiar (i.e. it is not just being aware of feelings and using that information to cope with life, but includes additional components that are no less important for determining one's success in dealing with environmental demands).

Bar-On uses the term emotional intelligence to denote this construct for several reasons. *Intelligence* describes the aggregate of abilities, competencies, and skills defined below in that they represent a *collection of knowledge used to cope with life effectively*. The adjective *emotional* is employed to emphasize that this specific type of intelligence differs from cognitive intelligence. Bar-On's use of the term intelligence is similar to Wechsler's aforementioned definition of the term.

Lastly, the term success, as employed in the author's definition of emotional intelligence, is defined as the end-product of that which one strives to achieve and accomplish; as such, it is very subjective and potentially socially influenced. For example, success in one's studies can be interpreted by some as getting into a "good" school, obtaining "high" grades, receiving scholastic awards and academic citations, completing a degree in a particular field, etc (Bar-On, 1997b).

- **THE FACTORIAL COMPONENTS OF BAR-ON'S CONCEPT OF EMOTIONAL INTELLIGENCE**

Listed below are the fifteen conceptual components of Bar-On's concept of emotional intelligence. According to Bar-On (1997a) emotional intelligence and these emotional skills (listed below) develop over time, change throughout life, and can be improved through training and remedial programs as well as therapeutic techniques.

- **Emotional Self-Awareness (ES)**

- Emotional self-awareness is the ability to recognize one's feelings. It is not only the ability to be aware of one's feelings and emotions, but also to differentiate between them, to know what one is feeling and why, and to know what caused the feelings. Serious deficiencies in this area are found in alexithymic (inability to express feelings verbally) conditions (Bar-On, 1997b).

- **Assertiveness (AS)**

- Assertiveness is the ability to express feelings, beliefs, and thoughts and defend one's rights in a nondestructive manner. Assertiveness is composed of three basic components: (1) the ability to express feelings (e.g., to accept and express anger,

warmth, and sexual feelings), (2) the ability to express beliefs and thoughts openly (i.e. being able to voice opinions, disagree, and to take a definite stand, even if it is emotionally difficult to do and even if one has something to lose by doing so), and (3) the ability to stand up for personal rights (i.e. not allowing others to bother you or take advantage of you). Assertive people are not over-controlled or shy - they are able to outwardly express their feelings (often directly), without being aggressive or abusive (Bar-On, 1997b).

Self-Regard (SR)

Self-regard is the ability to respect and accept oneself as basically good. Respecting oneself is essentially liking the way one is. Self-acceptance is the ability to accept one's perceived positive and negative aspects as well as one's limitations and possibilities. This conceptual component of emotional intelligence is associated with general feelings of security, inner strength, self-assuredness, self-confidence, and feelings of self-adequacy. Feeling sure of oneself is dependent upon self-respect and self-esteem, which are based on a fairly well-developed sense of identity. A person with good self-regard feels fulfilled and satisfied with himself/herself. At the opposite end of the continuum are feelings of personal inadequacy and inferiority (Bar-On, 1997b).

Self-Actualization (SA)

This pertains to the ability to realize one's potential capacities. This component of emotional intelligence is manifested by becoming involved in pursuits that lead to a meaningful, rich, and full life. Striving to actualize one's potential involves developing enjoyable and meaningful activities and can mean a lifelong effort and an enthusiastic commitment to long-term goals. Self-actualization is an ongoing, dynamic process of striving toward maximum development of one's abilities, capacities, and talents. This factor is associated with persistently trying to do one's best and trying to improve oneself in general. Excitement about one's interests energizes and motivates him/her to continue these interests. Self-actualization is affiliated with feelings of self-satisfaction (Bar-On, 1997b).

Independence (IN)

Independence is the ability to be self-directed and self-controlled in one's thinking and actions and to be free of emotional dependency. Independent people are self-reliant in

planning and making important decisions. Independence is essentially the ability to function autonomously versus needing protection and support - independent people avoid clinging to others in order to satisfy their emotional needs. The ability to be independent rests on one's degree of self-confidence, inner strength, and desire to meet expectations and obligations, without becoming a slave to them (Bar-On, 1997b).

Empathy (EM)

Empathy is the ability to be aware of, to understand, and to appreciate the feelings of others. It is "tuning in" (being sensitive) to what, how, and why people feel the way they do. Being empathic means being able to "emotionally read" other people. Empathetic people care about others and show interest in and concern for others (Bar-On, 1997b).

Interpersonal Relationship (IR)

Interpersonal relationship skill involves the ability to establish and maintain mutually satisfying relationships that are characterized by intimacy and by giving and receiving affection. Mutual satisfaction includes meaningful social interchanges that are potentially rewarding and enjoyable. Positive interpersonal relationship skill is characterized by the ability to give and receive warmth and affection and to convey intimacy to another human being. This component is not only associated with the desirability of cultivating friendly relations with others, but with the ability to feel at ease and comfortable in such relations and to possess positive expectations concerning social intercourse. This emotional skill generally requires sensitivity towards others, a desire to establish relations, and feeling satisfied with relationships (Bar-On, 1997b).

Social Responsibility (RE)

Social responsibility is the ability to demonstrate oneself as a cooperative, contributing, and constructive member of one's social group. This ability involves acting in a responsible manner, even though one may not benefit personally. Socially responsible people have social consciousness and a basic concern for others, accepting others, acting in accordance with one's conscience, and upholding social rules. These people possess interpersonal sensitivity and are able to accept others and use their talents for the good of the collective, not just the self. People who are deficient in this ability may entertain antisocial attitudes, act abusively towards others, and take advantage of others (Bar-On, 1997b).

Problem Solving (PS)

This is the ability to identify and define problems as well as to generate and implement potentially effective solutions. Problem solving is multiphasic in nature and includes the ability to go through a process of (1) sensing a problem and feeling confident and motivated to deal with it effectively, (2) defining and formulating the problem as clearly as possible (e.g., gathering relevant information), (3) generating as many solutions as possible (e.g., brainstorming), and (4) making a decision to implement one of the solutions (e.g., weighing the pros and cons of each possible solution and choosing the best course of action). Problem solving is associated with being conscientious, disciplined, methodical, and systematic in preserving and approaching problems. This skill is also linked to a desire to do one's best and to confront problems, rather than avoiding them (Bar-On, 1997b).

Reality Testing (RT)

Reality testing is the ability to assess the correspondence between what is experienced and what objectively exists. Testing the degree of correspondence between what one experiences and what actually exists involves a search for objective evidence to confirm, justify, and support feelings, perceptions, and thoughts. Reality testing involves "tuning in" to the immediate situation, attempting to keep things in the correct perspective, and experiencing things as they really are, without excessive fantasizing or daydreaming about them. The emphasis is on pragmatism, objectivity, the adequacy of one's perception, and authenticating one's ideas and thoughts. An important aspect of this factor is the degree of perceptual clarity evident when trying to assess and cope with situations; it involves the ability to concentrate and focus when examining ways of coping with situations that arise. Reality testing is associated with a lack of withdrawal from the outside world, a tuning into the immediate situation, and lucidity and clarity in perception and thought processes. In simple terms, reality testing is the ability to accurately "size up" the immediate situation (Bar-On, 1997b).

Flexibility (FL)

This is the ability to adjust one's emotions, thoughts, and behaviour to changing situations and conditions. This component of emotional intelligence refers to one's overall ability to adapt to unfamiliar, unpredictable, and dynamic circumstances. Flexible

people are able to change their minds when evidence suggests that they are mistaken. They are generally open to and tolerant of different ideas, orientations, ways, and practices (Bar-On, 1997b).

Stress Tolerance (ST)

Stress tolerance is the ability to withstand adverse events and stressful situations without "falling apart" by actively and positively coping with stress. It is the ability to weather difficult situations without getting too overwhelmed. This ability is based on (1) a capacity to choose courses of action for coping with stress, (2) an optimistic disposition toward new experiences and change in general and towards one's ability to successfully overcome the specific problem at hand, and (3) a feeling that one can control or influence the stressful situation. This component of emotional intelligence is very similar to what has been referred to as "ego strength" and "positive coping". Stress tolerance includes having a repertoire of suitable responses to stressful situations. Stress tolerance is associated with the capacity to be relaxed and composed and to calmly face difficulties, without getting carried away by stray emotions. People who have good stress tolerance tend to face crises and problems, rather than succumbing to feelings of helplessness and hopelessness. Anxiety often results when this component of emotional intelligence is not functioning adequately, which has an ill effect on general performance because of poor concentration, difficulty in making decisions, and somatic problems like sleep disturbances (Bar-On, 1997b).

Impulse Control (IC)

Impulse control is the ability to resist or delay an impulse, drive, or temptation to act. It entails a capacity for accepting one's aggressive impulses, being composed, and controlling aggression, hostility, and irresponsible behaviour. Problems in impulse control are manifested by low frustration tolerance, impulsiveness, anger control problems, abusiveness, loss of self-control, and explosive and unpredictable behaviour (Bar-On, 1997b).

Happiness (HA)

Happiness is the ability to feel satisfied with one's life, to enjoy oneself and others, and to have fun. Happiness combines self-satisfaction, general contentment, and the ability to enjoy life. This component of emotional intelligence involves the ability to enjoy

various aspects of one's life in general. Happy people often feel good and at ease in both work and leisure; they are able to "let their hair down", and enjoy the opportunities for having fun. Happiness is associated with a general feeling of cheerfulness and enthusiasm. Happiness is a by-product and/or barometric indicator of one's overall degree of emotional intelligence and emotional functioning. A person who demonstrates a low degree of this factor may possess symptoms typical of depression, such as a tendency to worry, uncertainty about the future, social withdrawal, lack of drive, depressive thoughts, feelings of guilt, dissatisfaction with one's life and, in extreme cases, suicidal thoughts and behaviour (Bar-On, 1997b).

Optimism (OP)

Optimism is the ability to look at the brighter side of life and to maintain a positive attitude, even in the face of adversity. Optimism assumes a measure of hope in one's approach to life. It is a positive approach to daily living. Optimism is the opposite of pessimism, which is a common symptom of depression (Bar-On, 1997b).

In accordance with the above factorial components of emotional intelligence, Bar-On (1997b) suggests that, it can be assumed that emotionally intelligent individuals, for most of the time and in most situations, are aware of and can express their feelings, have positive self-regard, can self-actualize, are empathetic to other's feelings, can establish and maintain mutually satisfying relationships, are able to act in a socially responsible way, and are capable of being independent. It is further presumed that emotionally intelligent individuals are able to solve problems, adequately test reality, be flexible, cope well with stress and maintain control, and be fairly happy and maintain a reasonably optimistic outlook on life. Moreover, more emotionally intelligent and healthy individuals are thought to possess a greater degree of each of these factors.

The structure of both Bar-On's conceptual model of emotional intelligence and emotional intelligence itself can be viewed from two different perspectives - one systematic and the other topographic, like in human anatomy. The systematic view is presented in Figure 2.

Intrapersonal Components	Adaptability Components
Emotional Self-Awareness (ES)	Problem Solving (PS)
Assertiveness (AS)	Reality Testing (RT)
Self-Regard (SR)	Flexibility (FL)
Self-Actualization (SA)	
Independence (IN)	
Interpersonal Components	Stress Management Components
Empathy (EM)	Stress Tolerance (ST)
Interpersonal Relationship (IR)	Impulse Control (IC)
Social Responsibility (RE)	
General Mood Components	
Happiness (HA)	
Optimism (OP)	

Figure 2. The 5 Major Conceptual Components of Emotional Intelligence comprising the 15 Factorial Components (Bar-On, 1997a:4).

The systematic view focuses on the arrangement of similar types of factors that logically and statistically fit together. Emotional Self-Awareness, Assertiveness, Self-Regard, Self-Actualization, and Independence are all part of a common group of components systematically related to intrapersonal skills and, hence, are labeled *Intrapersonal Components*. Similarly, Empathy, Interpersonal Relationships, and Social Responsibility are all part of a group of common components systematically related to interpersonal skills and, hence, are labeled *Interpersonal Components*. Further, Problem-Solving, Reality Testing, and Flexibility are all systematically related to the adaptability and, are labeled *Adaptability Components*. In addition, Stress Tolerance and Impulse Control are

systematically related to stress management and, are labeled *Stress Management Components*. And lastly, Happiness and Optimism are seen to be systematically related to general mood groups and, so are aptly labeled *General Mood Components*.

The topographic approach juxtaposes the factorial components of emotional intelligence according to ranked order ranging from "*Core*" (or *primary*) *Factors*" to "*Resultant* (or *higher-order*) *Factors*" that are connected by a group of "*Supporting* (or *secondary and auxiliary*) *Factors*". The topographic arrangement of the factors is presented in Figure 3.



Figure 3. A Topographic Arrangement of the Factorial Components of Emotional Intelligence (Bar-On, 1997a:5).

The three most important Core Factors of emotional intelligence are Emotional Self-Awareness, Assertiveness, and Empathy. Additional Core Factors that are no less essential to emotional intelligence are Reality Testing, and Impulse Control.

These Core Factors lead to Resultant Factors, like more efficient Problem-Solving, Interpersonal Relationships, and Self-Actualization, which creates Happiness.

Based on Bar-On's research, the Core and Resultant factors are dependent upon the Supporting factors. For example, Emotional Self-Awareness is dependent upon Self-Regard, and Assertiveness depends upon positive Self-Regard and Independence - it is extremely difficult for dependent and, especially non-assertive people to express their feelings to others. Furthermore, Interpersonal Relationship is dependent upon Self-Regard and Social Responsibility. Additional Supporting factors, like Optimism and Stress Tolerance, combine with Core Factors, like Reality Testing, and Impulse Control, to facilitate efficient problem solving. Lastly, Flexibility is another supporting factor that contributes to other factors like Problem Solving, Stress Tolerance, and Interpersonal Relationship (Bar-On, 1997a).

The conceptual framework of emotional intelligence described above is the foundation upon which Bar-On developed his Emotional Quotient Inventory (EQ-i), and the construct that this inventory measures. The fifteen conceptual components of emotional intelligence are measured by the BarOn EQ-i sub-scales. The operationalization of emotional intelligence by the BarOn EQ-i will be further discussed later.

2.5.2.3. OPERATIONALISATION OF EMOTIONAL INTELLIGENCE

According to Goleman (1995) there is no specific paper-and-pencil test that yields an emotional intelligence score. He further concludes that this specific lack of commercially available and comprehensive tests measuring emotional intelligence, indeed necessitates the creation of such an instrument.

The first instrument initially used to assess emotional intelligence was the Trait Meta-Mood Scale (TMMS) of Salovey et al., (1995). The TMMS is a thirty-item Likert-type scale that addresses three proposed key aspects of emotional intelligence: (1) Attention - to one's moods and emotions (assessed by 13 items, e.g., "I pay a lot of attention to how I feel"); (2) Emotional clarity - or one's tendency to discriminate among one's emotions and moods (assessed by 11 items, e.g., "I am usually very clear about my feelings"); and (3) Emotional repair- or one's tendency to regulate one's feelings (assessed by 6 items, e.g., "When I become upset I remind myself of all the pleasures in life"). However, it has been found that, while the TMMS addresses the central elements

of emotional intelligence (i.e. the clear awareness and management of one's own emotions), it does not deal with a second aspect of the phenomenon. The TMMS does not address the clear awareness and management of the emotions of others. Therefore, according to Martinez-Pons (1997) although the instrument's construct validity was established by Salovey et al., (1995) and corroborated in his study, definite further instrumental development is necessary, to include these additional components of emotional intelligence, before the total process of emotional intelligence can be tested in relation to other aspects of a person's life by the TMMS.

The recently proposed BarOn Emotional Quotient Inventory (EQ-i) of Bar-On (1997a) was originally constructed to empirically examine a theory designed to explain the determinants of positive psychological well-being. The ongoing development of both this theory and the inventory has continued to be linked over the years (Bar-On, 1988). According to Bar-On (1997a) what has been developing is a theoretically eclectic and multi-factorial approach to operationally describe and quantitatively assess the complexly interrelated concepts of emotional intelligence (i.e. non-cognitive competencies and skills that influence one's ability to succeed in coping with environmental demands) and psychological well-being (i.e. one's present emotional health).

Thus, the EQ-i is the first scientifically developed and most comprehensive self-report measure of non-cognitive intelligence (as conceptualized and defined by Bar-On, 1997a). The EQ-i is therefore, the first empirically constructed test of emotional intelligence commercially available (Bar-On, 1997c). The EQ-i attempts to satisfy the need for an empirically developed, multi-factorial, and theoretically eclectic test of emotional intelligence (Bar-On, 1988,1997a). In addition, the EQ-i's uniqueness lies in the way in which it successfully combines an eclectic assortment of existing observations, theories, methodological strategies, research findings, and a comprehensive, multi-factorial nature (Bar-On, 1997b).

The BarOn EQ-i measures the emotional, personal, and social aspects of general intelligence. EQ-i results distinguish between those who are able to successfully cope with environmental demands and pressures and those who have difficulty in coping. Non-cognitive intelligence, as measured by the EQ-i, is capable of predicting success in

various areas of life. Research results to date demonstrate that the EQ-i provides a comprehensive view of the respondent's overall ability and propensity for success (Bar-On, 1997d).

The EQ-i is the result of seventeen years of Dr. Bar-On's research on emotional intelligence. His research has crossed borders into eleven countries in an effort to develop a cross-cultural approach to describing and assessing emotional intelligence. The original version of the EQ-i, was piloted in 1983, it included 11 sub-scales, a composite scale comprising all of the sub-scales, and two validity scales. Based on the results of the post-pilot item analyses, the EQ-i was eventually reduced to its present 133 items. Thus, the final form of the EQ-i (as utilized presently) comprises 133 brief items and employs a five-point response set (ranging from "Not true of Me" to "True of Me"). It renders four validity scale scores, a total EQ (Emotional Quotient) score, five composite scale scores, and 15 EQ sub-scale scores (Bar-On, 1997a).

The vast number of research findings convincingly demonstrate that the EQ-i is valid and reliable. It is therefore, capable of doing what it was designed to do: measuring the emotional, personal, and social aspects of general intelligence and predicting efficient and successful functioning in various areas of life (Bar-On, 1997d).

In view of the above the BarOn EQ-i is used as the main instrument to measure emotional intelligence in this specific study.

2.5.2.4. THE CONNECTION BETWEEN EMOTIONAL INTELLIGENCE AND PSYCHOLOGICAL WELL-BEING

According to Bar-On (1997a) one's emotional intelligence is an important factor in determining one's ability to succeed in life and directly influences one's general psychological well-being (i.e. one's present mental condition or overall degree of emotional health).

Mayer and Salovey (1993) propose that different types of people will be more or less emotionally intelligent. Emotionally intelligent individuals may be more aware of their own feelings and those of others. They may be more open to positive and negative

aspects of internal experience, better able to label them, and when appropriate, communicate them. Such awareness will often lead to the effective regulation of affect within themselves and others, and so contribute to well-being. Thus, emotionally intelligent individuals accurately perceive their emotions and use integrated, sophisticated approaches to regulate them as they proceed toward important goals. In contrast, many problems in adjustment may arise from deficits in emotional intelligence. People who do not learn to regulate their own emotions may become slaves to them. For example sociopaths are impoverished in their own experience of emotion and seem to over-regulate moods in others for their own purposes (Rosenhan & Seligman, 1984). A far more common ailment may involve people who cannot recognize emotion in themselves and are therefore unable to plan lives that fulfill them emotionally. Such planning deficits may lead to lives of unrewarded experience lived by individuals who become depressed, even suicidal (Skinner, 1986). Furthermore, according to Mayer, DiPalo and Salovey (1990) one who possesses emotional intelligence is considered a well-adjusted, emotionally skilled individual and one who does not may well be impaired in emotional and social functioning.

✿ As early as 1952 Reik (Reik, 1952) already associated mental health with the ability to recognize one's emotions, and mental illness with the inability to recognize it. According to Salovey and Mayer (1990) the person with emotional intelligence can be thought of as having attained at least a limited form of positive mental health. In addition, Bar-On (1997b) suggests that the well-functioning, successful, and emotionally healthy individual is one who possesses a sufficient degree of emotional intelligence.

According to Salovey and Mayer (1990) the emotionally intelligent person has the ability to comprehend another's feelings and to re-experience them themselves. ✿ Thus, empathy is a central characteristic of the emotionally intelligent person. ✿ Furthermore, when people relate positively to one another, they experience greater life satisfaction and lower stress. In accordance with this Headey, Holmstrom, and Wearing (1985) found their positive dimension (which they termed well-being) to be predicted best from variables such as satisfaction with family, friends, and leisure, extraversion, and having supportive social networks. According to Salovey and Mayer (1990) people who are emotionally intelligent are equipped with sufficient social competence to weave strong and successful interpersonal relationships. In addition, Rook (1984) has postulated that the

availability of social support from others (an external influence) may reduce threats to well-being, whereas having companionship and intimacy (an internal influence) will prevent loneliness and provide a positive input to well-being.

According to Martinez-Pons (1997) emotional intelligence has important predictive power relative to other key aspects of personal functioning. He found that emotional intelligence showed a negative correlation with depression symptomology, and a positive correlation with task mastery, goal orientation, and life satisfaction. Therefore, he proposed that the higher a person's emotional intelligence, the more able an individual is to carry out adaptive task-orientated behaviours - and that high performance in these two areas tends to enhance the person's level of life satisfaction and to decrease the likelihood of the occurrence of depression symptomology.

2.5.3. MODERATOR VARIABLES

In this investigation the construct moderator variables are used in accordance with Baron and Kenny's (1986) and Folkman and Lazarus's (1988) conceptualizations thereof. Gender, age, and culture have been identified from the literature as moderator variables which could influence emotion, emotional responsiveness, affective states and affective well-being of individuals (e.g. Bradburn, 1969; Diener, 1984 & 1994; Crose et al., 1992). Consequently the role of gender, age and culture are investigated in this study as possible influential variables.

2.5.3.1. GENDER DIFFERENCES

Studies on the absence of well-being, measured as psychological distress, have found persistent gender differences (Kessler & McLeod, 1984; Thoits, 1987; Conger, Elder, Simons, & Ge Xiaojia, 1993). Others have suggested that men and women simply express distress differently (Newmann, 1986; Pearlin, 1989). According to Bradburn (1969) and Briscoe (1982) differences occur in the way men and women utilize and perceive affect. Salovey et al., (1995) report that individuals differ in their understanding of and ability to articulate their affective states (and those of others as well). And they vary in their ability to regulate such feelings and use them adaptively.

In addition, in a study (based on a North American sample) conducted by Bar-On (1997b) he reports that no significant differences appeared between male and females regarding overall emotional intelligence. However, significant gender differences do exist for many factorial components of emotional intelligence (as assessed by the EQ-i), but the effects were small. Based on his study, females seemed to have stronger interpersonal skills than males, but the latter had a higher intrapersonal capacity, were more adaptable, and better at stress management. Women were more aware of their emotions, showed more empathy, related better interpersonally, and acted more socially responsible than men; men appeared to have better self-regard, were more independent, solved problems better, were more flexible, coped better with stress, and were more optimistic than women. He emphasizes however, that the differences between men and women were small in magnitude for the most part. The largest effects noticed were in the interpersonal skills area - women scored higher than men. Although, the differences were small, they were consistent. In addition, Bar-On (1997b) reports that similar significant differences related to interpersonal relationship, social responsibility, and stress tolerance between males and females have been observed in almost every other EQ-i population sample that has been examined around the world to date. Bar-On (1997b) proposes that significantly lower stress tolerance amongst women may possibly explain why they suffer more from Affective-related disturbances than men.

Nolen-Hoeksema (1993) reports that it is often said that one of women's strengths is their ability to express their emotions and "get in touch with their feelings". This links with Salovey and Mayer's (1990) concept of emotional self-awareness - a key component of emotional intelligence. Broverman, Vogel, Broverman, Clarkson, and Rosenkrantz (1972) and Ruble (1983) propose that typically women are described as emotionally expressive, concerned with their own and others' feeling states, and emotionally labile. In contrast, men are viewed as likely to suppress or repress their emotions. Suppression or repression of emotions is maladaptive and may lead to poor physical, psychological, and emotional health (Nolen-Hoeksema, 1993). Thus it can be assumed that women are inclined to displaying a higher level of emotional intelligence and overall emotional health. According to Ryff (1989) women depict stronger strengths on the interpersonal dimension, which has been stressed as being central to emotional intelligence and emotional well-being (Salovey & Mayer, 1990). These findings suggest that women make use of more social support systems than men do. Consequently, Hobfoll,

Dunahoo, Ben-Porath, and Monnier (1994) has found that women make use of pro-social coping methods, but are not as active as men in their coping methods, whereas, men tend to make use of more antisocial and aggressive coping strategies, but are less assertive than women in their methods. Furthermore, active coping has been correlated with lower levels of emotional distress for men than for women, while both pro-social and antisocial coping methods in men correlated with more emotional distress.

However, Ryff (1989) reports that women display higher levels of negative affects (e.g. depression). Women are about twice as likely as men to report significant depression on self-report questionnaires, and about one and one-half times as likely to be diagnosed with an affective disorder (Nolen-Hoeksema, 1987; Turner & Avison, 1989). Moreover, women appear more likely than men to get caught in a ruminative, emotion-focused response to their negative moods (for example they focus their attention on their depressive symptoms and worry about the possible implications of these symptoms), and so then tend to experience longer and more severe periods of negative affects. Women tend to endorse these ruminative passive styles of responding to depression and negative affect states more than do men (Nolen-Hoeksema, 1987; Nolen-Hoeksema, 1993). Consequently more women than men choose the emotion-focused task. Men may "fight off" negative affect states through engaging in recreational and social activities that are inherently distracting (e.g. using alcohol to cope), thereby attenuating the effects on their emotional states, whereas women are less likely to fight their emotional states. Women's recreational activities may be more socio-emotional in nature, less active, and less likely to distract them from their moods (e.g. talking with friends or gardening). Women who are full-time homemakers may have more opportunity to ruminate because of their isolation from other adults during the day (Parrott & Sabini, 1990).

According to Averill (1983) sex differences also stem from shared beliefs about the likely and expected behaviour of men and women, termed gender roles, which derive from the association between sex and social roles in larger society. Additionally, studies done by Fisher and Cooper (1990) argue that gender roles possibly have a direct influence on mood state. The roles typically filled by men and women in our society differ importantly in terms of emotional experiences. According to Diener et al., (1999) enactment of caretaker roles, which are typically filled by women in the home (e.g. mother, wife) and

in paid employment settings (e.g. teacher, nurse), is likely to involve sensitivity to the needs of others and emotional responsiveness. Men's roles are less likely to emphasize emotional experience. Prior role enactment and socialization for particular roles thus plausibly will instill beliefs and skills that lead women to be more sensitive to their own and others' emotions than men. In addition, parents appear to have particularly strong beliefs about what types of emotional expression are appropriate for their male and female children (Block, 1973, 1978; Maccoby & Jacklin, 1974). Specifically, boys are encouraged to "be strong" and "act like a little man", rather than to display negative emotions. Girls may not be explicitly encouraged to focus inward on their emotions or to display them (Maccoby & Jacklin, 1974). Rather, they may simply not be encouraged toward mastery-orientated responses when they are upset as often as boys are. Sanctions against males displaying depression-like behaviour, and the social permission for females to display such behaviour, appear to continue into adulthood (Broverman, Broverman, Clarkson, & Rosenkrantz, 1972). This suggests that depressive symptoms in males are even more likely to lead to their rejection by others than other types of psychological symptoms. In addition, gender-specific modeling could account to some extent for the sex differences in mood response styles. Girls may model their mothers' styles of handling negative moods and boys may model their fathers' styles.

Lastly, biological differences between the sexes could contribute to the sex differences in responses to negative affects. Women may be more likely than men to experience dysregulation of the neurotransmitters implicated in for example depression. In turn, the more frequently a woman has depression, the more likely she may be to focus on her emotions and so question why she suffers so (Nolen-Hoeksema, 1990). Evidence that women experience negative affects more often than men due to biological dysregulation is extremely weak. Accordingly, Briscoe (1982), Antonovsky (1991) and Crose et al., (1992) claims that no genuine bio-genetic factors could be found to explain such differences but that socio-psychological differences were evident throughout different research studies.

However, findings of Diener (1984) suggest that women are generally found to be happier than men. In addition, they propose that although women report more negative affects, they also seem to experience greater joys, so that little difference in global happiness or satisfaction is usually found between sexes. Nevertheless, two studies

reported a modest interaction with age. It appears that younger women are happier than younger men, and older women are less happy than older men (Spreitzer & Snyder, 1974; Medley, 1980). Consequently several lines of research have obtained sex differences in a general tendency to indicate extreme emotional responses. Bradburn (1969) describes that women report more extreme positive and more extreme negative feelings on his ABS (Affect Balance Scale), as well as on other measures of affect. Women have also been found to report more extreme levels of fear, sadness, and joy than men (Allen & Hamsher, 1974; Balwick & Avertt, 1977; Goves et al., 1983). Warr (1971) also suggests that women use more extreme positive and negative evaluative terms than do men. In contrast, according to Forest (1996) women tend to express lower life satisfaction, while men seemed to resonate with greater unhappiness. He further relates men's persistent lower level of happiness to a possible stable antisocial personality characteristic.

Different authors specify various differences concerning gender and affective styles. Furthermore, contradictory evidence is reflected within the literature. It is therefore, a difficult task to summarize the findings concerning gender differences and affective styles or affective well-being. It is thus, a specific aim of this research to further highlight and investigate these differences.

2.5.3.2. DIFFERENCES IN AGE

Early studies found that young people were happier than old (Bradburn & Caplovitz, 1965; Bradburn, 1969). In addition a number of researchers have found virtually no age effects (Spreitzer & Snyder, 1974; Cameron, 1975; Andrews & Withey, 1976; Sauer, 1977), and several more have found a positive correlation between age and satisfaction (Bradburn, 1969; Bortner & Hultsch, 1970; Clemente & Sauer, 1976; Medley, 1980). Bradburn (1969) found that younger respondents reported stronger levels of both positive and negative affect, but that older individuals reported greater levels of overall happiness. In a study conducted by Campbell et al., (1976) it was found that satisfaction and the Index of General Well-Being correlated positively with age, whereas reports of being very happy decreased with age. Campbell et al., (1976) further found that older respondents reported greater satisfaction in every domain except health. Diener et al., (1985b) found that positive and negative affect are experienced more intensely by

younger subjects. Thus, younger persons appear to experience higher levels of joy, but older persons tend to experience their lives generally in more positive ways.

According to Watson and Pennebaker (1989) positive and negative affect have been differentially related to particular coping styles and life experiences. In addition, research conducted by Folkman and Lazarus (1988) indicate that there are notable differences in the effects of coping on emotion between different age groups. For example, positive reappraisal was associated with a decrease in distress (in disgust/anger) and an increase in positive feeling (in pleasure/happiness) in younger age groups and with a worsened emotional state (more worry/fear) in older age groups. Seeking social support was associated with increased positive emotions in older age groups, but showed no association in the younger age groups. The possibility that older people are more skilled than younger people in interpersonal coping could also explain why social support seeking was helpful for these older respondents but had no effect for the younger age group. These age-group differences in the associations between coping and emotion could also be explained by differences in the types of stressful life experiences the different groups reported. For example, the younger age group reported more encounters having to do with their jobs than did the older age group, who were mostly retired, and the older age group reported more encounters having to do with health than did the younger age group. According to Folkman and Lazarus (1988) age differences in the associations between coping and emotion are due to developmental factors.

Accordingly investigators have begun to focus not so much on age per se but more on life cycle patterns when focusing age differences (Harry, 1976; Medley, 1980). This reflects that psychological well-being factors can be seen to be related to the development patterns of the individual as proposed by Antonovsky (1979), Bradburn (1969) and Miller (1990).

In a study conducted by Bar-On (1997b) he reports that results show numerous significant differences among different age groups although, once again, these differences were small. The results depicted however, showed that age effects suggest that emotional intelligence increases with age and, thus, changes throughout life.

Age differences therefore depict to be an influential moderator variable when looking at their effects on affective well-being. However, further research is required in this regard and it is therefore a proposed aim of this study to further evaluate and examine the impact of this variable.

2.5.3.3. CULTURAL DIFFERENCES

When discussing cultural differences it is important to bear in mind that the American and South African literature will differ according to the unique cultural situation inherent to each of the specific countries.

The relationship between culture and psychological well-being is a central and integral issue in epidemiological research. Findings concerning this relationship, have however been inconsistent (Ulbrich, Warheit & Zimmerman, 1989). The disadvantaged history of Black people in South Africa highlights imperative questions regarding their state of mental health and affective well-being.

As depicted from early literature black people have usually been found to experience less positive affects than white people (Bradburn, 1969; Andrews & Withey, 1976). According to Campbell et al., (1976) it appears that, aside from factors such as urbanicity and lower socio-economic status, being a Black person does carry additional factors that lowers affective well-being and contributes to overall greater psychological distress. Andrews and Withey (1976) indicate that minority groups in the United States of America experience a lower level of subjective well-being when compared to white groups, and that this is possibly related to their lower socio-economic class and social status.

In a national survey conducted in South Africa in late 1982 and in 1983, Møller (1988) focused on various indexes of psychological well-being, including self-appraisals of one's happiness, emotional state, life circumstances, and quality of life. She concluded that the black people scored considerably lower than white, Indian, and Coloured people. A likely contributing factor to these findings could have been the abominable circumstances in which black people lived in South Africa during the apartheid dispensation. Møller (1996) concludes that being Black in South Africa ranks among the ten most important

predictors of overall well-being and has a negative influence on psychological well-being. Forest (1996) further concludes that non-white racial status is significantly related to lower overall life satisfaction and happiness. Diener, Diener and Diener (1995) propose that citizens of nations characterized by high income, individualism, human rights and social equality experience higher levels of well-being.

According to Ulbrich et al., (1989) Black people's chronic exposure to a low socio-economic status may contribute to their greater psychological distress. Neighbours (1990) suggests that black people are exposed to more stresses than white people because of their regular and relentless exposure to discrimination, racism and prejudice and so are more vulnerable to lower levels of overall well-being. However, he further concludes that black people appear to be able to maintain a better perspective that manages to keep some of this stress external and does not allow it to pervade their sense of self and that they use different coping strategies depending on the severity of the problem. Similarly, according to Aldwin (1994) different cultures use different coping mechanisms, depending on the severity of the stressor. He emphasizes that the cultural context will determine the type of stressors confronting the individual, the culture will influence how the individual estimates the specific severity of the stressful experience, and the culture will influence the choice of coping mechanism used. According to Mokgathe and Schoeman (1998) previous exposure to and mastery of hardships experienced as a result of poverty, racism, segregation and other life stressors, could lead to an adaptive process of reframing of these difficult life experiences, and a determination to survive.

According to Edwards (1989) White and Black people arise from different sociocultural contexts. Edwards (1989:13) states that "the components of psychological health may be the same across race however, the specific interpretations and manifestations of these components may differ". Triandis (1996) highlights different "cultural syndromes" such as the individualistic nature of Western cultures and the collectivistic nature of the Eastern, African and Latin-American cultures. In Western cultures emphasis is placed on the individual and individual processes - the importance of individual attitudes, beliefs, needs, personal and idiosyncratic values and self-definition. In non-Western cultures emphasis is placed on social norms, collective needs, collective self-definitions and values. In a collective culture the self is defined as an entity of the group thus a collective

identity is present. Furthermore, interdependency is emphasized which decreases self-definition and self-actualization (Bond & Smith, 1996). In addition, in a collective culture personal goals are chosen in accordance with goals set by the group (Triandis, 1996). Bond and Smith (1996) further explain that non-Western cultures display a greater degree of social embeddedness of emotions whereas individualistic cultures display personal orientated emotions. According to Myers and Diener (1995) in general, collectivist cultures report lower subjective well-being than do individualistic cultures, where norms more strongly support experiencing and expressing positive emotions. Furthermore, in collectivist cultures the group is given priority over the self whereas individualistic societies offer personal control, harmony between the inner and outer person and opportunities to express one's independent feelings and talents. Collectivistic cultures are characterised by pressure to sacrifice individual autonomy in favour of uncompromising group interests (Mokgatle & Schoeman, 1998). When people are deprived of control over their own lives they tend to suffer lower morale and are less happy. Thus, the strong link between self-esteem and subjective well-being so often found in individualistic Western cultures is, however, weaker in collectivist cultures. In addition, Campbell (1995) implies a relationship between social identity and psychological well-being.

Wissing and Van Eeden (1998) conclude that it is important that the socio-political history of black people in South Africa, with their background of suppression and discrimination, should be taken into account in the interpretation of their lower scores on measures of psychological well-being. According to Campbell (1995) gender and race is of contextual relevance in contemporary South Africa, since the social hierarchy associated with these two social identities are undergoing rapid transition.

The literature therefore, presents contradictory evidence. Furthermore, literature regarding emotional intelligence and specific ethnic groups within the South African context could not be found. It is possible that ethnic/cultural factors could influence emotional skills and affective well-being but, the specific influence of this influential relationship concerning a South African group is still to be determined and is therefore a proposed aim of this study.

2.6. SUMMARY

In this chapter the affective component of psychological well-being (as conceptualized from within the salutogenic paradigm) was clarified. Accordingly the construct of psychological well-being within the sub-discipline of psycho-fortology was explored. In addition several holistic models of health (which incorporate an affective component of well-being) were analyzed. The main constructs relating to the proposed affective component of psychological well-being namely, affect-balance and emotional intelligence, were examined theoretically and in regard to their empirical measurement. Furthermore, the specific link between the proposed affective components of psychological well-being and general psychological well-being were investigated. The role of gender, age, and culture as moderator variables in regard to the affective component of psychological well-being were also analyzed. From this literature analysis it is clear that an affective component of psychological well-being does very well exist as highlighted by the constructs of affect-balance and emotional intelligence. In addition, this affective component of well-being could have an influence on one's general psychological well-being. Furthermore, the precise dynamics of this affective component in different genders, age groups, and cultural groups is still a relatively undefined terrain.

In the following chapter the methodology of the empirical investigation undertaken in this study will be described.

CHAPTER 3

EMPIRICAL INVESTIGATION

3.1. INTRODUCTION

In this chapter the aims of this empirical investigation will be briefly stated once again. Thereafter, the method of the empirical investigation will be described. Specific attention will be given to the design of the study, the participants used, the measuring instruments used, the procedure followed and the specific statistical analyses done.

3.2. AIMS OF THE EMPIRICAL INVESTIGATION

The specific aims of this empirical investigation were:

1. To analyze the nature of the affective component of psychological well-being from the literature;
2. To determine the reliability of all the measuring instruments used and the level of overall psychological well-being in the present research group;
3. To determine the construct validity of the Bar-On Emotional Quotient Inventory (EQ-i) for this specific group of South African subjects;
4. To determine whether there any significant differences in the manifestation of this affective component among different gender, age groups or ethnic/cultural groups;
5. To determine to what degree scores on the scale that measures affect balance (happiness) correlate with scores on the scale that measures emotional intelligence;
6. To determine to what degree these affective component scales scores, correlate with scores on scales that measure general psychological well-being;
7. To determine to what degree the affective component predicts general psychological well-being;
8. To determine to what degree the affective component overlaps with general psychological well-being.

3.3. METHOD OF EMPIRICAL INVESTIGATION

3.3.1. DESIGN

In this study the investigation takes the form of a single cross-sectional survey design.

3.3.2. PARTICIPANTS

Participants were selected on the basis of availability. Participants consisted of pre- and post-graduate students of the PU for CHE and also adults selected using the snowball method by masters degree students involved in the FORT research project (Wissing, 1998). Participants were recruited in Gauteng, North West Province and the Free State Province. Three hundred and eighty two (382) participants took part in this study. Four different age groups were involved. The first comprised of participants aged 18-25 years, the second comprised of participants aged 26-40 years, the third group aged 41-50 years and the fourth group comprised participants aged 51-65 years. Males and females as well as different ethnic/cultural groups were included in this sample. Regarding gender, the sample group was comprised of ninety two (92) males and two hundred and eighty eight (288) females. Four (4) participants did not indicate their gender. Regarding age groups, two hundred and fifty seven (257) participants were between the ages of eighteen and twenty five (18-25), sixty nine (69) participants were between the ages of twenty six and forty (26-40), thirty (30) participants were between the ages of forty one and fifty (41-50), and twenty three (23) participants were between the ages of fifty one and sixty five (51-65). Five (5) participants did not indicate their age. Regarding marital status seventy two (72) of the participants were married, two hundred and seventy five (275) of the participants were single, fourteen (14) of the participants were cohabiting at the present time, eleven (11) of the participants were divorced, and six (6) of the participants were widowed. Six (6) of the participants failed to indicate their marital status. Regarding ethnic/cultural group, fifty six (56) of the participants were black, three hundred and thirteen (313) of the participants were white, four (4) of the participants were coloured, and eight (8) of the participants were Indian. Three (3) participants failed to indicate their ethnic/cultural group.

Due to the fact that there was such a limited number of Indian (8) and Coloured (4) people it was not practical to include them as separate ethnic/cultural groups in the results of this specific study. Thus, only the White and Black Group of participants are compared in the results of this study as separate ethnic/cultural groups. According to the APA (1994) it is a prerequisite that ethnicity is specified in the description of the participant group. The term "ethnic/cultural group" is used in this study to indicate a group of people who share the same historical background, cultural experiences, group identity and social norms (Phinney, 1996; Plug et al., 1991). Thus, the terms "white" and "black" are used in this study to indicate a group with shared ethnic/cultural experiences or identities.

3.3.3. MEASURING INSTRUMENTS

3.3.3.1. Biographical Questionnaire

This was constructed by the researcher to facilitate the description of the participants. It required the participants to answer a few biographical questions concerning their gender, age, marital status, ethnic/cultural group and religious orientation (see Appendix B).

3.3.3.2. The short form Affectometer 2 (AFM) (Kammann & Flett, 1983)

3.3.3.2.1. *Rationale*

The AFM is an inventory designed to measure general happiness or a general sense of well-being based on measuring the balance of positive and negative feelings experienced recently. Psychological well-being is measured on an affective or emotional level. The overall level of well-being is conceptualized as the extent to which positive feelings predominate over negative feelings (Kammann & Flett, 1983).

3.3.3.2.2. *Nature, administration and interpretation*

Two equivalent editions of the AFM exist: the 20-sentence item scale and the 20-adjective item scale edition (Kammann & Flett, 1983). In this investigation the 20-

sentence item scale edition will be used. The AFM can be utilized on individuals or on groups. The instructions are easily understood and the scale takes approximately five minutes to complete. The scale is composed of sentences to which the respondent must indicate on a five point scale how often he/she has experienced the indicated experience over the past few weeks (not at all, occasionally, some of the time, often, all the time). This time frame reflects a compromise between measuring the sense of well-being in its most global meaning and the choice of a time period amenable to reasonably accurate recall (Kammann & Flett, 1983). Ten items measure positive affect (PA) and ten items measure negative affect (NA). To score the scale, the total scores are computed for the sub-scales (PA & NA) as well as the score for the positive-negative affect balance (PA-NA=PNB). A high total score indicates positive affective well-being and a low total or negative total score indicates a predominate negative affective well-being.

3.3.3.2.3. *Validity and Reliability*

Kammann & Flett (1983) report high reliability and validity indices for the AFM. According to these researchers a Cronbach alpha index of 0.95 is obtained. In an investigation done on a South African population, Wissing and Van Eeden (1994) report the following Cronbach alpha indices for the different sub-scales PA: 0.86, NA: 0.90, and PNB: 0.92. In this investigation the reliability indices are PA: 0.83 and NA: 0.84 for the entire group (refer to chapter 4 for further information).

3.3.3.2.4. *Motivation for the selection of the AFM*

Affect balance is one of the main constructs in the conceptualization of the affective component of psychological well-being. It was selected because it measures affect balance reliably and validly. Bradburn (1969) has claimed over many decades that positive and negative feelings are important indicators of a person's general life orientation and psychological well-being. This is substantiated in research done by Emmons & Diener (1985) and Schlosser (1990) and is conceptualized in the models of Seeman (1989) and Witmer and Sweeney (1992) which have been previously referred to.

3.3.3.3. BarOn Emotional Quotient Inventory (EQ-i) (Bar-On, 1997a)

(Take note: formal permission was received by MHS (Multi-Health Systems) to operationalize the BarOn EQ-i in the present format and also to report the results in the manner depicted in Chapter 4 and 5).

3.3.3.3.1. Rationale

This is a self-report scale designed to measure the comprehensive concept of emotional intelligence.

3.3.3.3.2. Nature, administration and interpretation

The BarOn EQ-i comprises 133 brief items and employs a five-point response set (ranging from "Not true of me " to "True of me"). There are no imposed time limits and it takes approximately 30 to 40 minutes to complete. The EQ-i can be utilized on individuals (16 years and older) or in group settings. Instructions are easily understood and appear on the questionnaire. The EQ-i comprises 15 sub-scales each measuring a conceptual component of emotional intelligence. A composite scale is incorporated by adding all of the sub-scale items to give an overall measure of emotional intelligence (the total EQ). Furthermore, an additional 5 composite scales are included, systematically grouping/relating similar types of sub-scales.

The 15 sub-scales are: (1) Emotional Self-Awareness (ES) - the ability to recognize one's feelings; (2) Assertiveness (AS) - the ability to express feelings, beliefs and thoughts and defend one's rights in a nondestructive manner; (3) Self-Regard (SR) - the ability to respect and accept oneself as basically good; (4) Self-Actualization (SA) - the ability to realize one's potential capacities; (5) Independence (IN) - the ability to be self-directed and self-controlled in one's thinking and actions and to be free of emotional dependency; (6) Empathy (EM) - the ability to be aware of, to understand, and to appreciate the feelings of others; (7) Interpersonal Relationship (IR) - the ability to establish and maintain mutually satisfying relationships that are characterized by intimacy and by giving and receiving affection; (8) Social Responsibility (RE) - the ability

to demonstrate oneself as a cooperative, contributing, and constructive member of one's social group; (9) Problem Solving (PS) - the ability to identify and define problems as well as to generate and implement potentially effective solutions; (10) Reality Testing (RT) - the ability to assess the correspondence between what is experienced and what objectively exists; (11) Flexibility (FL) - the ability to adjust one's emotions, thoughts, and behavior to changing situations and conditions; (12) Stress Tolerance (ST) - the ability to withstand adverse events and stressful situations without "falling apart" by actively and positively coping with stress; (13) Impulse Control (IC) - the ability to resist or delay an impulse, drive, or temptation to act; (14) Happiness (HA) - the ability to feel satisfied with one's life, to enjoy oneself, and others, and to have fun; and (15) Optimism (OP) - the ability to look at the brighter side of life and to maintain a positive attitude, even in the face of adversity (Bar-On, 1997b). The 5 composite scales are: (1) Intrapersonal Components (RA) systematically relating: Emotional Self-Awareness (ES), Assertiveness (AS), Self-Regard (SR), Self-Actualization (SA), and Independence (IN); (2) Interpersonal Components (ER) systematically relating: Empathy (EM), Interpersonal Relationship (IR), and Social Responsibility (RE); (3) Adaptability Components (AD) systematically relating: Problem Solving (PS), Reality Testing (RT), and Flexibility (FL); (4) Stress Management Components (SM) systematically relating: Stress Tolerance (ST) and Impulse Control (IC); and (5) General Mood Components (GM) systematically relating: Happiness (HA) and Optimism (OP) (Bar-On, 1997b).

According to Bar-On (1997a) the well-functioning, successful, and emotionally healthy individual is one who possesses a sufficient degree of emotional intelligence and an average or above average EQ score. The higher the EQ score, the more positive the prediction for general success in meeting environmental demands and pressures. Generally, high EQ-i scale scores indicate that the emotional skills being measured are strong, well developed, and functioning efficiently; low scores suggest a deficiency and a need to improve particular competencies and skills in meeting environmental demands (Bar-On, 1997a). According to Bar-On (1997a) emotionally intelligent people are people who are able to recognize and express their emotions, who possess positive self-regard, and are able to actualize their potential capacities and lead fairly happy lives. They are able to understand the way others feel and are capable of making and maintaining mutually satisfying and responsible interpersonal relationships, without becoming

dependent on others. These people are generally optimistic, flexible, realistic, and successful in solving problems and coping with stress, without losing control.

3.3.3.3.3. *Validity and Reliability*

Numerous statistical analyses were conducted to yield good reliability and validity indices. The average Cronbach alpha coefficients (based on seven population samples) are high for all the sub-scales. They are 0.79 (ES); 0.76 (AS); 0.86 (SR); 0.76 (SA); 0.72 (IN); 0.74 (EM); 0.76 (IR); 0.69 (RE); 0.77 (PS); 0.73 (RT); 0.70 (FL); 0.80 (ST); 0.80 (IC); 0.79 (HA); and 0.79 (OP), with an overall average internal consistency coefficient of 0.76. In an investigation done on a South African sample the Cronbach alpha coefficients for the sub-scales are as follows: 0.76 (ES); 0.78 (AS); 0.89 (SR); 0.75 (SA); 0.65 (IN); 0.69 (EM); 0.74 (IR); 0.62 (RE); 0.74 (PS); 0.69 (RT); 0.69 (FL); 0.77 (ST); 0.77 (IC); 0.75 (HA); and 0.72 (OP). The average test-retest reliability coefficient after one month is 0.85 and after four months is 0.75. By examining the above results it can be concluded that the EQ-i has demonstrated more than adequate reliability. The results of factor analysis firmly support the 1-5-15 structure of the EQ-i (i.e., the Total EQ Scale, 5 EQ Composite Scales, and 15 EQ Sub-scales), which is important because it confirms the strong theoretical basis of the inventory (Bar-On, 1997d). Bar-On (1997a) further reports good content, face, factor, construct, convergent, divergent, criterion-group, discriminant, and predictive validity studies. In this investigation the reliability indices obtained are: 0.75 (ES); 0.69 (AS); 0.89 (SR); 0.76 (SA); 0.72 (IN); 0.72 (EM); 0.80 (IR); 0.73 (RE); 0.74 (PS); 0.78 (RT); 0.72 (FL); 0.79 (ST); 0.79 (IC); 0.75 (HA); 0.75 (OP) and 0.94 for the total EQ score (refer to Chapter 4 for further information).

3.3.3.3.4. *Motivation for the selection of the EQ-i*

Emotional intelligence is one of the main constructs chosen to conceptualize the affective component of psychological well-being. The EQ-i was designed as a psychometric model and empirical indicant of a comprehensive concept of emotional intelligence. The statistical analyses to date indicate that the factorial components of this concept are powerful determinants of one's ability to cope with life and one's overall emotional well-being (Bar-On, 1997a). Furthermore, the EQ-i has proven its ability to assess emotional intelligence as conceptualized and defined in Chapter 2. Thus, the

EQ-i was selected since it is a valid and reliable instrument to measure emotional intelligence.

3.3.3.4. Sense of Coherence Scale (SOC) (Antonovsky, 1987,1993)

3.3.3.4.1 Rationale

Antonovsky (1987) devised this scale to operationalise his sense of coherence construct. The Sense of Coherence Scale (SOC) measures an individual's way of experiencing the world and his/her life in it. Sense of coherence is seen as an important determinant in the psychological well-being of a person. The SOC displays a positive correlation with psychological and physiological well-being and a negative correlation with stress symptomology (Antonovsky, 1987,1993; Wissing, De Waal & De Beer, 1992; Wissing & Du Toit, 1994). The three core components of the sense of coherence are comprehensibility, manageability and meaningfulness. According to Antonovsky (1987) comprehensibility refers to the degree to which one perceives that both internally and externally sourced stimuli are explicable, orderable and predictable. Manageability refers to the degree to which the individual perceives that resources are available to deal sufficiently with the demands posed by the stimuli confronted. Lastly, meaningfulness refers to the degree to which an individual feels that the challenges faced are worth the effort expended on them and that life is full of meaning.

3.3.3.4.2. Nature, administration and interpretation

The SOC scale is a self-report questionnaire consisting of twenty-nine (29) items. A 13-item version of this scale does exist; however, for the purpose of this study we will be using the 29-item version. Respondents are required to respond to statements about their lives on a bipolar continuum, with the numbers one (1) and seven (7) being answers at each end of the continuum. 11 questions assess comprehensibility, 10 questions assess manageability and 8 questions assess meaningfulness. 13 items are of a negative nature and these scores must be reversed in the scoring procedure. The administration of the scale is straightforward. The instructions appear on the questionnaire and are understandable. No time limit exists and the questionnaire takes approximately twenty minutes to complete. The scale is scored by first reversing those

scores needed to be reversed and then by adding the totals of the indicated choices. The score is the total SOC score, with a minimum SOC score of 29 and a maximum SOC score of 203 (Antonovsky, 1987).

Antonovsky (1993) reports average scores of between 117 and 152. The mean score in 27 South African studies is 137 (Strümpfer & Wissing, 1998).

The higher the SOC score the stronger the person's sense of coherence. In addition, according to Antonovsky (1993) the person with a strong sense of coherence will select the particular coping strategy that seems most appropriate to deal with stressor being confronted.

3.3.3.4.3. *Validity and Reliability*

Antonovsky (1993) has reported very good validity and reliability indices in two different investigations with different population groups, with Cronbach alpha scores ranging from 0.82 to 0.95. Similarly in a South African investigation good Cronbach alpha values were also obtained ranging from 0.85 to 0.91 (Wissing & Van Eeden, 1994; Wissing & Du Toit, 1994). In a South African study a test-retest reliability index of 0.97 was obtained (Wissing, De Beer & De Waal, 1992). In a study done in Israel a test-retest reliability index of 0.52 and 0.56 was obtained after one year and an index of 0.54 and 0.55 after two years (Antonovsky, 1993). According to Antonovsky (1993) this scale also depicts very good content, face, consensual, construct and criterion validity indices. In this investigation a reliability index of 0.88 was obtained for the entire group (refer to Chapter 4 for further information).

3.3.3.4.4. *Motivation for the selection of the SOC*

According to Antonovsky (1993) the SOC is a universal instrument valid for different genders, social classes, religions and cultures. It does not refer to a specific type of coping strategy, but to factors, which, in all cultures, always are the basis for successful coping with stressors. This scale has been implemented in this study due to previously mentioned aspects as well as for the fact that previous research shows that sense of coherence is a good predictor of psychological well-being (Antonovsky, 1987, 1993;

Wissing & van Eeden, 1994). Lastly the good Cronbach Alpha-values obtained in previous investigations support the validity of this scale in a South African situation (Wissing & van Eeden, 1994; Wissing & Du Toit, 1994).

3.3.3.5. Satisfaction with Life scale (SWLS) (Diener et al., 1985a; Pavot & Diener, 1993)

3.3.3.5.1. *Rationale*

The SWLS is a questionnaire which assesses global life satisfaction. The respondent makes use of his/her own subjective criteria and evaluates his/her life quality on a cognitive level. The person therefore evaluates his/her life quality in terms of his/her own standards and according to their present life situation. The person's degree of life satisfaction is therefore measured on a cognitive-judgmental level.

3.3.3.5.2. *Nature, administration and interpretation*

The SWLS is a five-item self-report scale in which respondents indicate their agreement or disagreement with the statements made on seven point scales, where one indicates strong disagreement, four neutrality, and seven strong agreement. The administration of the scale is done in a very simplistic manner. All the instructions appear on the questionnaire and are understandable. The questionnaire is very cost effective and takes approximately one minute to complete. The SWLS score is obtained by totaling the responses, high scores indicate high satisfaction with life.

3.3.3.5.3. *Validity and Reliability*

This scale has been found to be both reliable and valid in a number of studies over a period of time (Diener et al., 1985a; Pavot, & Diener, 1993). Cronbach alpha indices of internal consistency were obtained between 0.82 (Diener et al., 1985a) and 0.80 to 0.89 (Pavot & Diener, 1993). Pavot & Diener (1993) report test-retest indices of 0.84 to 0.54 for a month to four year interval. In an investigation done with a South African group Wissing and Du Toit (1994) report a Cronbach alpha index of 0.85. In this investigation a reliability index of 0.85 was obtained (refer to Chapter 4 for further information).

3.3.3.5.4. *Motivation for the selection of the SWLS*

The SWLS is a very good indicator of the person's subjective experience of his/her life satisfaction on a cognitive level (Diener et al., 1985a). The Affectometer scale measures subjective well-being on an affective level (to be further discussed later) and this scale, measures subjective well-being on both an affective and cognitive level and therefore is very suited for this empirical investigation. This specific instrument can also be related to various other aspects of psychological well-being (Diener et al., 1985a; Wissing & Du Toit, 1994; Pavot & Diener, 1993), and is also applicable to a wide array of cultural groups (Pavot & Diener, 1993). In spite of its brevity the SWLS has been found to have high levels of reliability and validity in a number of studies (Diener et al., 1985a; Pavot & Diener, 1993).

3.3.3.6. General Health Questionnaire (GHQ) (Goldberg & Hillier, 1979)

3.3.3.6.1. *Rationale*

The GHQ is devised to focus on the "hinterland between psychological sickness and health" (Goldberg & Hillier, 1979:139). The GHQ is aimed at detecting common symptoms which are encountered in the various syndromes of mental disorders and will thus differentiate individuals with psychopathology as a general class from those who are considered to be normal. The questionnaire therefore gives an indication of the person's present mental condition and does not measure personality characteristics or their susceptibility to psychological illness.

3.3.3.6.2. *Nature, administration and interpretation*

The original version of the questionnaire consisted of 140 items. A shortened version of the GHQ was later devised composed of only 28 items, this version will be utilized in this investigation. The shortened version of the GHQ consists of four sub-scales of seven items each. These sub-scales are: (a) somatic symptoms (SS), (b) symptoms of anxiety and sleeplessness (AS), (c) social dysfunction (SD) (questions asked reflect the persons social functioning) and (d) symptoms of depression (DS). The questionnaire can

be utilized on individuals or in group settings. The instructions appear on the questionnaire and are easily understandable. The questionnaire takes approximately 10 - 15 minutes to complete. The items are answered according to a four (4) point scale and the scale changes for each item, for example: item 1's scale is constructed as follows: better than usual; same as usual; worse than usual; much worse than usual. Item 2 has the following scale: not at all; no more than usual; rather more than usual; much more than usual. Each item response is then scored in the same order: zero (0), zero (0), one (1) and one (1). The authors call this the "GHQ scoring method" (0-0-1-1) and have found that it yields more successful results than the Likert-method (Goldberg & Hillier, 1979:142). The scaled scores for each sub-scale are then added and then the four sub-scale totals are added which brings you to a total out of 28. A low score (0 to 4) is indicative of positive mental health, while higher scores (5 to 28) indicates a more negative state of mental health.

3.3.3.6.3. *Validity and Reliability*

Goldberg & Hillier (1979) validated the GHQ by correlating it with the Clinical Interview Schedule. The obtained correlation's were: 0.32 for scale A (somatic symptoms); 0.70 for scale B (anxiety and sleeplessness); 0.56 for scale C (social dysfunction); 0.56 for scale D (symptoms of depression) and 0.76 for the total score. The investigators allege that the low correlation obtained on scale A (somatic symptoms) is due to the many different operational definitions existing for somatic symptoms. The correlations between the sub-scale scores and the total score (scale A = 0.79; scale B = 0.90; scale C = 0.75; scale D = 0.69) demonstrates a reasonable level of internal consistency. In a South African study conducted by Van Eeden (1996) the Cronbach alpha coefficients obtained were: 0.78 for scale A (somatic symptoms - SS); 0.84 for scale B (anxiety and sleeplessness - AS); 0.79 for scale C (social dysfunction - SD); 0.36 for scale D (depressive symptoms - DS) and 0.90 for the total score. It can therefore be said that the GHQ reflects good levels of reliability and validity. The reliability indices obtained in this study are: 0.78 for scale A (SS); 0.82 for scale B (AS); 0.77 for scale C (SD); 0.85 for scale D (DS) and 0.82 for the total score (refer to Chapter 4 for further information).

3.3.3.6.4. *Motivation for the selection of the GHQ*

From a theoretical point of view Antonovsky (1987) states that indices of psychological well-being (more specifically the SOC scale) will correlate negatively with symptoms of pathology. The GHQ is therefore incorporated in this study to substantiate the above statement.

3.3.4. PROCEDURE

After selection and ensuring that each participant understood the test procedure and instructions, and had signed a letter of informed consent indicating their willingness to participate in this study (see Appendix A), an item booklet of questionnaires was administered to each participant. Students were rewarded R20 for their services and the individual adult participants were offered optional feedback interviews. Each item booklet took approximately two to three hours to complete.

Questionnaires were controlled by the research group. The questionnaires were scored with the assistance of computer programmes written specifically for the purpose of this research investigation.

3.3.5. METHOD OF STATISTICAL ANALYSES

The following statistical analyses were conducted: descriptive statistics (Howell, 1995) for all scales (mean, standard deviation, and the range) were calculated. Cronbach-alpha (Howell, 1995) reliability indices were also computed for all scales and sub-scales. Correlations (Howell, 1995) were obtained to determine the inter-correlations of the scores. The t-test and ANOVA analyses (Howell, 1995) were used to yield any significant differences between the different groups. Lastly, factor analyses (Howell, 1995) were computed to empirically clarify the different constructs used.

3.4. SUMMARY

In this chapter the aims of the empirical investigation were briefly described. Thereafter, the method of empirical investigation was described where specific attention was given to the research design, the participants, the measuring instruments, the procedure followed and the method of statistical analyses utilized.

In the following chapter the results of this investigation will be described and interpreted.

CHAPTER 4

RESULTS AND INTERPRETATIONS

4.1. INTRODUCTION

In this chapter the results of the empirical investigation will be presented and interpreted. Firstly, descriptive statistics and reliability indices for all the measuring instruments for the entire group will be presented. First and second order confirmatory factor analyses will then be presented and interpreted in order to determine the construct validity of the BarOn EQ-i. Significant differences between the different groups (gender, age, and culture) with regard to emotional/affective aspects will also be reported. Correlations between the different variables for the entire group will also then be explored. With the aid of a regression analysis it will then be determined whether the affective component could predict psychological well-being. Lastly, the results of exploratory factor analyses will be presented and interpreted in order to determine to what degree the affective component overlaps with general psychological well-being. The results of the above analyses will be interpreted and discussed in relation to previous research as reported in Chapter 2.

4.2. DESCRIPTIVE STATISTICS AND RELIABILITY INDICES FOR ALL MEASURING INSTRUMENTS FOR THE TOTAL GROUP

Descriptive statistics (means, standard deviations and range of scores) as well as Cronbach alpha reliability indices, as obtained for the entire group for all the measuring instruments used, are reported in Table 1.

Table 1: Descriptive statistics and reliability indices for all measuring instruments
(N = 382)

Variable	Mean	SD	Range		Cronbach alpha (α)
			Min	Max	
EQ ES	28.67	5.37	14.00	40.00	0.75
EQ AS	24.80	4.64	12.00	35.00	0.69
EQ SR	33.28	7.35	9.00	45.00	0.89
EQ SA	36.43	5.23	20.00	45.00	0.76
EQ IN	25.29	4.78	9.00	35.00	0.72
EQ EM	33.06	4.36	17.00	40.00	0.72
EQ IR	43.28	6.39	24.00	55.00	0.80
EQ RE	42.20	5.12	21.00	50.00	0.73
EQ PS	30.36	4.43	16.00	40.00	0.74
EQ RT	36.10	6.34	15.00	49.00	0.78
EQ FL	27.69	4.95	12.00	39.00	0.72
EQ ST	31.82	5.68	14.00	45.00	0.79
EQ IC	32.22	6.48	13.00	45.00	0.79
EQ HA	35.69	5.40	19.00	45.00	0.75
EQ OP	30.99	4.55	16.00	40.00	0.75
RA EQ	148.47	21.29	87.00	198.00	0.83
ER EQ	118.54	13.62	70.00	143.00	0.83
AD EQ	94.15	12.33	55.00	124.00	0.68
SM EQ	64.04	10.14	30.00	88.00	0.85
GM EQ	66.68	8.89	37.00	84.00	0.84
EQ T	475.68	47.74	339.00	595.00	0.94
AFM PA	37.59	5.73	18.00	50.00	0.83
AFM NA	20.76	6.71	10.00	48.00	0.84
AFM PNB	16.83	11.01	-23.00	40.00	-
SOC T	137.52	22.06	54.00	195.00	0.88
SWLS	24.85	5.89	5.00	35.00	0.85
GHQ SS	1.52	1.86	0.00	0.00	0.78
GHQ AS	1.62	2.02	0.00	0.00	0.82
GHQ SD	1.12	1.65	0.00	0.00	0.77
GHQ DS	0.84	1.65	0.00	0.00	0.85
GHQ T	5.09	5.80	0.00	0.00	0.82

Note: (-) - Cronbach Alpha cannot be calculated because this value consists of the sum of NA and PA. SD - Standard Deviation, EQ - Emotional Quotient Inventory, ES - Emotional Self-Awareness, AS - Assertiveness, SR - Self-Regard, SA - Self-Actualization, IN - Independence, EM - Empathy, IR - Interpersonal Relationship, RE - Social Responsibility, PS - Problem Solving, RT - Reality Testing, FL - Flexibility, ST - Stress Tolerance, IC - Impulse Control, HA - Happiness, OP - Optimism, RA - Intrapersonal Components, ER - Interpersonal Components, AD - Adaptability Components, SM - Stress Management Components, GM - General Mood Components, T - Total, AFM - Affectometer 2, PA - Positive Affect, NA - Negative Affect, PNB - Positive Negative Affect Balance, SOC - Sense of Coherence Scale, SWLS - Satisfaction with Life Scale, GHQ - General Health Questionnaire, SS - Somatic Symptoms, AS - Anxiety and Sleeplessness, SD - Social Dysfunction and DS - Symptoms of Depression.

(Take note: From EQ ES - EQ T means and standard deviations are computed using raw scores thus IQ scores cannot be interpreted).

4.2.1. EVALUATION OF THE RELIABILITY INDICES

As depicted in Table 1 Cronbach alpha's were used to determine the reliability indices of the instruments applied in this study.

It can be seen from Table 1 that in this study the short version of the Affectometer 2 (AFM) depicts relatively good reliability indices of 0.83 (PA) and 0.84 (NA) respectively. These reliability indices of the AFM sub-scales (i.e. PA and NA) are comparable to those reported by Kammann and Flett (1983) and Wissing (1996). In this study a Cronbach Alpha reliability index of 0.88 was obtained for the Sense of Coherence scale (SOC). This finding is similar to reliability indices reported in other studies. Antonovsky (1993) reported reliability indices of 0.83 - 0.93, Wissing and Van Eeden (1998) reported an index of 0.85. For the Satisfaction with Life scale (SWLS) a highly acceptable reliability index of 0.85 was obtained. This index is comparable to those reported by Diener et al., (1985a), Pavot and Diener (1993) and Wissing and Van Eeden (1998). A relatively good reliability index of 0.82 was obtained for the General Health Questionnaire (GHQ). This result is comparable to those obtained by Goldberg et al., (1997) who report reliability indices from 0.82 - 0.86 and 0.77 - 0.84 for the sub-scales and 0.91 for the Total score. With regard to the Emotional Quotient Inventory (EQ-i) a very good reliability index of 0.94 was obtained for the Total Score. This index is higher than that reported by Bar-On (1997b) who obtained Total Score indices ranging from 0.62 - 0.89 for a South African sample.

In light of the above it can be concluded that all the measuring instruments display acceptable reliability indices (Cronbach alpha's ranging from 0.68 to 0.94). According to Aron and Aron (1994) 0.70 represents a good reliability index for a measuring instrument and Smit (1991) proposes 0.50 to be an acceptable reliability index for measuring instruments. The results and conclusions obtained in this study thus have a reliable basis and all scales proved to be reliable for use in this group.

4.2.2. EVALUATION OF THE MEAN SCORES

An analysis of the available literature on the measuring instruments used in this study depict comparable results.

With regard to the short version of the AFM 2 the sample group obtains a mean score of 16.83 (PNB), which is higher than the mean score obtained by Wissing (1996) in a South African sample group of youths (14.22). The score obtained in this study is also higher than scores obtained by Wissing et al., (1999) in a Setswana sample group (8.62) and Nienaber et al., (1999) in a sample group of women (12.07). In light of the above it can be said that the mean score obtained in this investigation is higher than the scores reported in the recent literature. In addition, standard deviations are comparable to those reported in the literature.

With regard to the SOC the Total Group's mean score of 137.52 is higher than the score reported in Antonovsky's (1993) study in a Jewish sample group (136.50). However, it is in the midrange of means as reported by Antonovsky (1993) (i.e. of between 117 - 152.6) for 26 studies. In addition, this score is comparable with the mean score obtained in an investigation conducted by Wissing and Van Eeden (1998) in a sample group of young, middle aged and older adult participants (136.52). Furthermore, in a recent South African investigation conducted by Strümpfer and Wissing (1998) a mean score of 137 was obtained for 27 studies on a total of 3 979 people. The presently obtained mean is in line with this. Standard deviations of the present group and the groups mentioned in the literature are comparable.

With regard to the SWLS the Total Group's mean score of 24.85 is in agreement with scores reported by Pavot and Diener (1993) obtained in a student sample group (for example, 23.5 and 23.0) and an elderly sample group (for example, 23.6). Wissing and Du Toit (1994) reported a mean score of 24.90 in a study conducted on a group of post-graduate students. Wissing and Van Eeden (1998) report a mean score of 23.45 obtained in a group of South African participants. In a study conducted in a group of Setswana speaking participants Wissing et al., (1999) report a mean score of 22.27. The score obtained in the present study is therefore comparable to the scores reported in the literature. The standard deviations of the present group and the above-mentioned groups reported in the literature are also comparable.

With the regard to the GHQ the mean score of the Total Group is 5.09 which is higher than scores reported by Goldberg and Hillier (1979) (for example, 3.42, 3.65 and 4.08).

The standard deviations however, are very much the same. The score obtained in the present study is also comparable to the score of 5.25 obtained by Wissing and Van Eeden (1998) in a South African sample group.

Thus, the overall psychological well-being of the present South African group compares very well to other population groups in the literature.

The official published version of the EQ-i has not been formally operationalized in a South African sample thus far, therefore no published mean scores or standard deviations are available. In the present study a Total Mean score of 475.68 was obtained for the Total Group. However, it is important to take note of the fact that in this study means and standard deviations were computed using raw scores and not standardized scores, therefore it is impossible to compare the mean score obtained in this study with studies conducted by Bar-On (1997a) or to interpret these scores as IQ scores. However, the results are comparable to a study conducted by (Bar-On, 1997b) in a North American sample where he reports the descriptive statistics in raw scores. Bar-On (1997b) obtains a Total mean score of 465.31 where in this study 475.68 was obtained. Scores for the 15 sub-scales range from 25.82 - 44.23 in Bar-On's (1997b) study and 24.80 - 43.28 in the present study. Bar-On (1997b) obtains between 156.70 - 68.27 for his five composite scales and in this present study between 148.47 - 64.04 is obtained. Thus, results from this present study are comparable to Bar-On's (1997b) raw score results. Standard deviations are also comparable. Further research is however imperative on the EQ-i specifically for the South African context.

It therefore appears that the mean scores reported in Table 1 for the affective component indices and the general psychological well-being indices compare adequately with scores reported in the literature. Standard deviations are also comparable to those reported in the literature. Thus, it can be concluded that all the measuring instruments are reliable for this present research group and that they depict a level of psychological well-being comparable to other population groups in the literature.

4.3. FACTOR ANALYSES

First order confirmatory factor analysis and second order confirmatory factor analysis was computed in order to determine the construct validity of the BarOn Emotional Quotient Inventory (EQ-i) of Bar-On (1997a) for this specific group of South African subjects. The construct validity of the AFM, SOC, SWLS and GHQ has already proven to be valid for South African subjects (Wissing & Van Eeden, 1994) and imparticularly for a Black Group of South African's (Wissing et al., 1999). The results and interpretations of the factor analyses are reported below.

4.3.1. FIRST ORDER CONFIRMATORY FACTOR ANALYSIS

First order confirmatory principle factor analysis (with maximum likelihood method of factor extraction) was conducted on the sub-scale scores of the EQ-i to determine the construct validity of the EQ-i - namely, whether the hypothesized 15 sub-scales/factors as proposed by Bar-On (1997a) could be identified in this present study.

Table 2: Factors extracted in a first order confirmatory principle factor analysis with maximum likelihood method of factor extraction on the sub-scale scores of the EQ-i

Factor Identified	Eigenvalue	% Var. Explained
1. Independence	20.65	17.81
2. Empathy and Social Responsibility	7.05	6.08
3. Reality Testing	4.09	3.53
4. Problem Solving	3.71	3.20
5. Cheerful Positive Self-Regard	3.19	2.75
6. Emotional Self-Awareness	2.86	2.46
7. Flexibility	2.47	2.13
8. Impulse Control	2.31	1.99
9. Interpersonal Relationship	2.09	1.81
10. Stress Tolerance	2.00	1.73
11. Assertiveness	1.72	1.48
12. Self-Actualization	1.69	1.45

Note: % Var. Explained - Percentage of the Variance Explained.

As is indicated in Table 2 twelve independent factors (defined according to the criteria of Zwick and Velicer (1986) i.e. eigenvalues greater than 1.0 and at least 3 significant loadings - > 3.0 from the apriori hypothesized items) were extracted accounting for 50.52% of the total variance. Two of these twelve factors are mixed factors.

Factor 1 – Independence

The first factor has an eigenvalue of 20.65 and explains 17.81% of the total variance. It seems to be an independence factor since six of the seven independence items load on this factor. This factor is characterized by self-reliance, self-directedness and autonomy.

Factor 2 – Empathy and Social Responsibility

The second factor has an eigenvalue of 7.05 and explains 6.08% of the total variance. This factor is not a pure factor (criteria c.f. Zwick & Velicer, 1986) but instead is comprised of two components namely, empathy which loads the strongest (all five items load) and social responsibility (six of the eight items load). Bar-On (1997b) groups these two sub-scales under what he calls his interpersonal composite component. Thus, it can be hypothesized that this is an interpersonal component. However, the third item making up Bar-On's (1997a) interpersonal component (i.e. interpersonal relationship) loads on

Factor 9 independently. This factor is characteristic of individuals who understand, interact and relate well with others.

Factor 3 — Reality Testing

The third factor has an eigenvalue of 4.09 and explains 3.53% of the total variance. This factor is characterized by pragmatism, objectivity and the ability to authenticate one's feelings, ideas and thoughts. Thus, this factor is named reality testing. Six of the ten items load on this factor and the remaining items load on problem-solving (Factor 4).

Factor 4 — Problem Solving

The fourth factor has an eigenvalue of 3.71 and explains 3.20% of the total variance. This factor is characterized by conscientiousness and discipline in persevering and approaching problems. Six of the eight items load on this factor and the remaining items load on flexibility (Factor 7).

Factor 5 — Cheerful Positive Self-Regard

The fifth factor has an eigenvalue of 3.19 and explains 2.75% of the total variance. This factor is characterized by feeling fulfilled and satisfied with oneself, a well-developed sense of identity, general feelings of security, inner strength, self-assuredness, self-confidence and feelings of self-adequacy. Furthermore, individuals who attain positive self-regard are usually cheerful, positive, hopeful and optimistic individuals who know how to enjoy life. This is not a pure factor (criteria c.f. Zwick & Velicer, 1986) but instead is comprised of three components namely, self-regard which loads the strongest (all five items load), happiness (five of the nine items load) and optimism (six of the eight items load). We can hypothesize that the individual who attains great self-assurance is cheerful and optimistic, he/she functions successfully in interpersonal relationships and experiences little stress in day to day living. The above fits the profile of a psychologically well individual. Bar-On (1997b) groups happiness and optimism under what he names his general mood composite component. In Bar-On's (1997b) initial validation studies in his first order confirmatory factor analysis, he also extracted a factor identical to this one.

Factor 6 — Emotional Self-Awareness

The sixth factor has an eigenvalue of 2.86 and explains 2.46% of the total variance. This factor is characteristic of an individual who is in touch with his/her feelings and emotions. This individual knows exactly what he/she is feeling and can understand why he/she feels this way. Six of the eight items load on this factor.

Factor 7 — Flexibility

The seventh factor has an eigenvalue of 2.47 and explains 2.13% of the total variance. This factor highlights being able to adjust one's emotions, feelings, thoughts and behaviours to changing situations and conditions. Furthermore, this individual has the ability to adapt to unfamiliar, unpredictable and dynamic circumstances and to being open to different ideas. All of the eight items load on this factor.

Factor 8 — Impulse Control

The eighth factor has an eigenvalue of 2.31 and explains 1.99% of the total variance. This factor highlights the capacity for accepting one's aggressive impulses, for being composed, controlling aggression, hostility and irresponsible behaviour. Furthermore, it includes the ability to resist or delay impulses and defer drives and temptations. Four of the nine items load on this factor and the remaining items load on Reality Testing (Factor 3).

Factor 9 — Interpersonal Relationship

The ninth factor has an eigenvalue of 2.09 and explains 1.81% of the total variance. This factor is characterized by sensitivity towards others, a desire to establish relationships and feeling satisfied with current relationships. Nine of the eleven items load on this factor and the remaining items load on assertiveness (Factor 11).

Factor 10 — Stress Tolerance

The tenth factor has an eigenvalue of 2.00 and explains 1.73% of the total variance. This factor highlights the ability to cope with stress actively and positively, the ability to weather difficult situations without getting overwhelmed and possessing a repertoire of suitable responses to deal with stressful situations. Six of the ten items load on this factor and the remaining items load on flexibility (Factor 7) and problem solving (Factor 4). According to Bar-On (1997b) the latter two factors are both part of the adaptability

composite component. Thus, we can hypothesize that a possible link exists between stress management and adaptability.

Factor 11 — Assertiveness

The eleventh factor has an eigenvalue of 1.72 and explains 1.48% of the total variance. This factor indicates the ability to express feelings, thoughts and beliefs openly, the ability to defend one's rights non-destructively and the ability to voice opinions non-aggressively. Three of the seven items load on this factor and the remaining items load on emotional self-awareness (Factor 6). It can thus be seen that this factor marginally fits the criteria as established by Bar-On (1997b).

Factor 12 — Self-Actualization

The last factor has an eigenvalue of 1.69 and explains 1.45% of the total variance. Five of the nine items load on this factor. The remaining items load on self-regard (Factor 5) and interpersonal relationship (Factor 9). This factor is characteristic of people who strive towards maximum development of their abilities and talents and who realize their potential, and by doing so become involved in pursuits that lead to rich, meaningful and full lives.

Thus it can be concluded that 12 independent factors were extracted. Two of these factors were however not pure factors (criteria c.f. Zwick & Velicer, 1986) i.e. Empathy and Social Responsibility (Factor 2) and Cheerful Positive Self-Regard (Factor 5 - comprising optimism, happiness and self-regard). It can thus be concluded that the hypothesized factor structure of the EQ-i as proposed by Bar-On (1997a) is replicated in the present study to a great extent (12 of the 15 factors) but also with two mixed factors.

4.3.2. SECOND ORDER CONFIRMATORY FACTOR ANALYSIS

A principal components confirmatory second order factor analysis (with maximum likelihood method of factor extraction) was conducted on sub-scale scores of the EQ-i to further determine the construct validity of the EQ-i. Five factors were requested to determine whether the hypothesized five composite sub-scales as proposed by Bar-On (1997a) could be identified in this present study. Results are recorded in Table 3.

Table 3: Second order confirmatory factor analysis with maximum likelihood method of factor extraction on the sub-scale scores of the EQ-i

Variable	Factor 1	Factor 2	Comm
EQ ES	0.58		0.54
EQ AS	0.63		0.50
EQ SR	0.83		0.68
EQ SA	0.68		0.63
EQ IN	0.62		0.47
EQ EM		0.91	0.66
EQ IR		0.57	0.67
EQ RE		0.83	0.67
EQ PS	0.53		0.39
EQ RT	0.68		0.62
EQ FL	0.58		0.37
EQ ST	0.73		0.61
EQ IC	0.44		0.40
EQ HA	0.63		0.68
EQ OP	0.71		0.66
Eigenvalue	6.25	1.56	-
% Var. Exp.	41.63%	10.38%	-

Note: Comm - Communalities, % Var. Exp. - Percentage of the Variance Explained, EQ - Emotional Quotient, ES - Emotional Self-Awareness, AS - Assertiveness, SR - Self-Regard, SA - Self-Actualization, IN - Independence, EM - Empathy, IR - Interpersonal Relationship, RE - Social Responsibility, PS - Problem Solving, RT - Reality Testing, FL - Flexibility, ST - Stress Tolerance, IC - Impulse Control, HA - Happiness, OP - Optimism.

Only factor loadings = > 0.30 are presented.

As depicted in Table 6 only two factors were extracted with eigenvalues greater than 1.0 and accounting for 66.07% of the total variance.

Factor 1 - Intrapersonal Factor

This factor accounts for 41.63% of the total variance. The scales loading highest are self-regard, stress-tolerance, optimism and reality testing. This factor is characterized by an individual who is in touch with his/her feelings, feels good about him/herself, feels positive about his/her life, is able to express his/her feelings independently and confidently, can deal with everyday difficulties, can withstand stress without losing control, is a cheerful, positive, hopeful and optimistic individual who knows how to enjoy life. It can be hypothesized that the above profile fits that of a psychologically well individual. This factor is a multi-faceted factor of intrapersonal, adaptability, stress-management and general mood composite components as proposed by Bar-On (1997b).

Factor 2 - Interpersonal Factor

This factor explains 10.38% of the total variance. It is characterized by responsible and dependable individuals who have good social skills and can understand, interact and relate well with others. In addition, this factor highlights well developed interpersonal skills. This factor reflects Bar-On's (1997b) Interpersonal Composite Component which comprises the sub-scales of Empathy, Interpersonal Relationship and Social Responsibility.

Thus, Bar-On (1997b) reports five composite sub-scales, and in the present study only two were extracted: an Interpersonal Factor and an Intrapersonal Factor. However, the two factors presented here compliment the theory of Bar-On (1997b), in that, the Interpersonal Factor is identical to the one presented by Bar-On (1997b) and the second factor incorporates his remaining four composite sub-scales. Thus it can be hypothesized from this study that the Interpersonal Factor remains the same but that Bar-On's (1997b) Intrapersonal, Adaptability, Stress-Management and General Mood Components can be grouped together in one factor - An Intrapersonal Factor. Thus, this is a multi-faceted factor of intrapersonal skills, adaptability skills, stress-management skills and mood related skills.

Thus, it can be concluded that the construct validity of the EQ-i indicated in this study is very much the same as for the original standardizing group used by Bar-On (1997b).

4.4. COMPARISON OF SUB-GROUPS ON AFFECTIVE INDICES

The scores obtained in the present study on the affective component indices (i.e. the EQ-i and AFM) will be compared for Men and Women, Black and White groups and different age groups.

4.4.1. DIFFERENCES BETWEEN MEN AND WOMEN

Table 4 indicates the means, standard deviations, Cronbach alpha reliability coefficients and significance of differences between the scores for Men and Women on the EQ-i and AFM.

Table 4: Significance of differences between Men and Women obtained on the EQ-i and AFM

Variable	Men (N = 92)			Women (N = 288)			P
	M	SD	α	M	SD	α	
EQ ES	28.52	4.95	0.72	28.71	5.51	0.76	00.76
EQ AS	24.86	4.26	0.64	24.78	4.71	0.70	0.88
EQ SR	35.05	6.44	0.86	32.68	7.54	0.90	0.003**
EQ SA	36.34	4.52	0.66	36.49	5.44	0.79	0.81
EQ IN	26.40	4.23	0.65	24.90	4.88	0.73	0.004**
EQ EM	31.50	4.69	0.74	33.58	4.14	0.69	0.0002***
EQ IR	42.04	6.37	0.79	43.65	6.37	0.81	0.03*
EQ RE	40.04	4.96	0.69	42.85	4.99	0.73	0.0001***
EQ PS	30.74	4.16	0.73	30.24	4.50	0.75	0.32
EQ RT	36.39	5.34	0.71	36.00	6.64	0.79	0.57
EQ FL	28.61	4.01	0.57	27.39	5.12	0.75	0.01*
EQ ST	33.41	4.45	0.63	31.27	5.91	0.81	0.0003***
EQ IC	32.53	5.10	0.66	32.07	6.86	0.81	0.49
EQ HA	35.17	5.36	0.77	35.87	5.41	0.75	0.28
EQ OP	31.62	4.24	0.72	30.79	4.65	0.76	0.11
RA EQ	151.18	19.14	0.84	147.84	21.84	0.83	0.13
ER EQ	113.59	13.57	0.81	120.09	13.32	0.83	0.0001***
AD EQ	95.74	10.41	0.65	93.63	12.79	0.68	0.11
SM EQ	65.95	7.72	0.77	63.35	10.68	0.87	0.01*
GM EQ	66.79	8.63	0.84	66.66	8.98	0.84	0.90
EQ T	478.09	43.74	0.94	474.78	48.93	0.95	0.54
AFM PA	38.41	5.11	0.78	37.33	5.88	0.84	0.09
AFM NA	20.77	7.38	0.88	20.75	6.48	0.83	0.98
AFM PNB	17.64	11.17	-	16.58	11.04	-	0.43

Note: (-) - Cronbach Alpha cannot be calculated because this value consists of the sum of NA and PA. M - Mean, SD - Standard Deviation, α - Cronbach Alpha, EQ - Emotional Quotient Inventory, ES - Emotional Self-Awareness, AS - Assertiveness, SR - Self-Regard, SA - Self-Actualization, IN - Independence, EM - Empathy, IR - Interpersonal Relationship, RE - Social Responsibility, PS - Problem Solving, RT - Reality Testing, FL - Flexibility, ST - Stress Tolerance, IC - Impulse Control, HA - Happiness, OP - Optimism, RA - Intrapersonal Components, ER - Interpersonal Components, AD - Adaptability Components, SM - Stress Management Components, GM - General Mood Components and T - Total, Affectometer 2, PA - Positive Affect, NA - Negative Affect, PNB - Positive Negative Affect Balance.

(Take note: From EQ ES - EQ T means and standard deviations are computed using raw scores thus IQ scores cannot be interpreted).

* $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$

The statistically significant results displayed above are also practically significant.

4.4.1.1. EVALUATION OF THE RELIABILITY INDICES

It can be seen from Table 4 that the AFM and EQ-i display acceptable reliability indices for men and women. Where Cronbach alpha's range from 0.57 to 0.94 for men and from 0.68 to 0.95 for women. According to Smit (1991) 0.50 represents an acceptable reliability index for measuring instruments when comparing groups and Aron and Aron (1994) depict 0.70 to be a good reliability index for a measuring instrument. Thus we can proceed to compare the scores as obtained for men and women.

4.4.1.2. EVALUATION OF SIGNIFICANCE OF DIFFERENCES

As depicted in Table 4 no significant differences were obtained on the AFM for the different gender groups. Significant differences were however evident between men and women on the EQ-i sub-scales.

As is reported in Table 4 significant differences appear on approximately half of the sub-scales. Men obtained significantly higher scores on Self-Regard than women. Men further obtained significantly higher scores on Independence than women. However, women obtained significantly higher scores than their male counterparts on sub-scales comprising the Interpersonal Component, that is, Empathy, Interpersonal Relationship and Social Responsibility. In addition, men further obtained significantly higher scores on Flexibility, Stress Tolerance and on the Stress Management Composite Components sub-scale.

These results are in line with the results of Bar-On (1997a) who found that women tended to be stronger on the Interpersonal Component, and men on the Intrapersonal Component, Adaptability and the Stress Management Component. Women appear to be more aware of their emotions and better able to express their emotions. Women also display a lower stress tolerance which could possibly account for the fact that they suffer from more affective-related disturbances than do their male counterparts. Gender differences can possibly be attributed to gender/socialization roles, gender-specific modeling, coping methods and biological differences. These results are in line with findings of Ryff (1989), Nolen-Hoeksema (1993) and Diener et al., (1999).

4.4.2. DIFFERENCES AMONG AGE GROUPS

Table 5 reflects the means, standard deviations, and Cronbach alpha reliability coefficients for the different age groups. Significance of differences among age groups were determined by ANOVA analyses and post hoc Tukey Tests for each sub-scale of the EQ-i and AFM (also displayed in Table 5).

An ANOVA was performed on each individual sub-scale of the EQ-i and AFM. The F-values are indicated in Table 5. The $df = 375$ (degrees of freedom) for each sub-scale.

Table 5: Significance of differences obtained on the EQ-i and AFM among the different age groups

Variable (EQ-i)	Age Group 1 18 - 26 yrs (N = 257)			Age Group 2 26 - 40 yrs (N = 69)			Age Group 3 41 - 50 yrs (N = 30)			Age Group 4 51 - 66 yrs (N = 23)			F - value	Age Group 1 vs Age Group 2	Age Group 1 vs Age Group 4	Tukey Test d - value
	M	SD	α	M	SD	α	M	SD	α	M	SD	α		P	P	
EQ ES	28.53	5.51	0.78	28.87	5.40	0.73	29.67	5.22	0.64	28.00	4.15	0.47	0.55			
EQ AS	24.84	4.75	0.74	25.32	4.37	0.63	24.73	4.70	0.63	23.09	3.99	0.47	1.34			
EQ SR	32.74	7.52	0.91	34.23	6.88	0.84	35.03	7.17	0.88	33.39	6.91	0.87	1.41			
EQ SA	36.98	5.13	0.79	35.42	5.26	0.69	35.43	5.73	0.76	34.39	4.98	0.65	3.39			
EQ IN	24.95	4.82	0.75	26.29	4.34	0.64	25.80	5.64	0.73	25.61	4.09	0.50	1.59			
EQ EM	33.57	4.22	0.73	31.93	4.26	0.62	32.20	4.94	0.77	32.22	4.71	0.73	3.47	0.02*		1.64
EQ IR	43.84	5.92	0.80	42.30	6.89	0.79	42.63	6.95	0.79	40.13	8.34	0.85	3.20		0.02*	3.71
EQ RE	42.76	5.09	0.78	40.80	4.82	0.58	41.10	5.65	0.71	41.61	5.12	0.70	3.35			1.96
EQ PS	30.11	4.36	0.77	30.84	4.31	0.66	31.43	5.51	0.80	30.35	3.95	0.63	1.13			
EQ RT	35.46	6.57	0.80	36.99	5.74	0.72	37.57	5.67	0.69	38.57	5.42	0.67	3.06			
EQ FL	27.63	4.93	0.75	28.36	3.72	0.50	28.63	5.56	0.70	25.57	6.40	0.81	2.27			
EQ ST	31.48	5.83	0.83	32.52	5.19	0.71	32.83	5.43	0.63	32.39	5.75	0.73	1.05			
EQ IC	31.83	6.33	0.78	33.23	6.01	0.75	32.27	8.89	0.90	33.35	6.18	0.75	1.10			
EQ HA	36.35	5.29	0.76	34.26	5.05	0.62	34.77	5.37	0.73	33.65	6.45	0.81	4.39	0.004**		2.09
EQ OP	31.06	4.56	0.79	30.90	4.42	0.66	31.33	4.56	0.64	29.96	5.28	0.80	0.48			
RA EQ	148.05	21.39	0.82	150.13	21.18	0.86	150.66	23.80	0.89	144.48	18.60	0.82	0.54			
ER EQ	120.18	13.06	0.83	115.03	13.53	0.81	115.93	14.72	0.80	113.96	16.41	0.88	4.07	0.007**		5.15
AD EQ	93.20	12.34	0.66	96.19	11.14	0.72	97.63	13.94	0.78	94.48	12.46	0.68	1.96			
SM EQ	63.31	10.03	0.86	65.75	9.51	0.84	65.10	12.59	0.87	65.74	9.90	0.83	1.42			
GM EQ	67.41	8.77	0.85	65.16	8.24	0.76	66.10	9.26	0.82	63.61	11.13	0.89	2.22			
EQ T	480.18	47.95	0.95	483.17	46.14	0.94	484.17	54.68	0.74	470.65	47.28	0.92	0.47			
AFM PA	37.69	5.75	0.86	37.19	5.67	0.78	37.20	6.01	0.81	37.30	5.29	0.70	0.20			
AFM NA	20.61	6.42	0.85	21.19	6.63	0.80	21.33	8.52	0.89	21.00	7.92	0.90	0.22			
AFM PNB	17.09	11.13	-	16.00	9.60	-	15.87	13.68	-	16.30	11.49	-	0.26			

Note: (-) - Cronbach Alpha cannot be calculated because this value consists of the sum of NA and PA. SD - Standard Deviation, α - Cronbach Alpha, F - value - Effect Size; EQ - Emotional Quotient, ES - Emotional Self-Awareness, AS - Assertiveness, SR - Self-Regard, SA - Self-Actualization, IN - Independence, EM - Empathy, IR - Interpersonal Relationship, RE - Social Responsibility, PS - ProblemSolving, RT - Reality Testing, FL - Flexibility, ST - Stress Tolerance, IC - Impulse Control, HA - Happiness, OP - Optimism, RA - Intrapersonal Components, ER - Interpersonal Components, AD - Adaptability Components, SM - Stress Management Components, GM - General Mood Components, EQ T - Emotional QuotientTotal, AFM - Affectometer, PA - Positive Affect, NA - Negative Affect, PNB - Positive Negative Balance.

(*Take note:* From EQ ES - EQ T means and standard deviations are computed using raw scores thus IQ scores cannot be interpreted).

* P < 0.05 ** P < 0.01 *** P < 0.001

d = 0.2 - Small practical significance d = 0.5 - Medium practical significance d = 0.8 - Large practical significance

4.4.2.1. EVALUATION OF THE RELIABILITY INDICES

According to Smit (1991) 0.50 represents an acceptable reliability index for measuring instruments when comparing groups. It can be seen from Table 5 that the EQ-i and AFM display fairly acceptable reliability indices for the different age groups. Where Cronbach alpha's range from 0.66 to 0.95 for age group 1 (18–25 years), 0.45 to 0.94 for age group 2 (26–40 years), 0.63 to 0.90 for age group 3 (41–50 years), and 0.47 to 0.92 for age group 4 (51–65 years). Age group four (51-65 years) does however attain lower than 0.50 on two of the fifteen sub-scales of the EQ-i (Emotional Self-Awareness and Assertiveness). These indices could possibly be attributed to the fact that during this time health issues and retirement are often problems encountered and so these individuals would be centered around such issues and so less emotionally aware and assertive. Thus, these scores could be related to developmental patterns of individuals in this age group. This age group however obtained a very good reliability coefficient on the Total Score of the EQ-i (EQ T) namely 0.92. Thus, it can be concluded that the EQ-i is globally reliable for this age group. The AFM and EQ-i scales are thus reliable for the different age groups, with the exception of two sub-scales of the EQ-i for individuals above fifty years of age. Thus we can proceed to compare the scores as obtained among the different age groups but should exercise caution when comparing the Emotional Self-Awareness and Assertiveness sub-scales of the EQ-i for participants above fifty years of age.

4.4.2.2. EVALUATION OF SIGNIFICANCE OF DIFFERENCES

As depicted in Table 5 no significant differences were obtained on the AFM for the different age groups. Significant differences were only obtained on five sub-scales of the EQ-i.

Significant differences between the scores of the EQ-i were only evident in three of the four age groups. Differences are seen between group 1 (18-25 years), group 2 (26-40 years) and group 4 (51-65 years). No significant differences were obtained between age group 3 (41-50 years) and the other age groups. Significant differences are obtained between age group 1 and 2. The results indicate that individuals ranging from 18-25 years obtained significantly higher scores on sub-scales measuring Empathy, Social

Responsibility, Happiness and Interpersonal Components when compared to individuals in the age group 26-40 years. These findings are also in line with studies conducted by Bradburn and Caplovitz (1965) and Bradburn (1969) where younger participants were found to be happier than their older counterparts. In addition, Diener et al., (1985b) found that positive and negative affect were experienced more intensely by younger subjects.

In addition a significant difference is indicated on one sub-scale (Interpersonal Relationship) when comparing age group 1 and 4. The younger age group (18-25 years) obtained significantly higher scores on the Interpersonal Relationship sub-scale than their older counterparts (51-65 years). This result is not in line with findings in the literature. On the contrary Folkman and Lazarus (1988) found that older participants were more skilled on an interpersonal level.

Despite these contradictory findings the study indicates that there are far more similarities in the degree of affective well-being among these different age groups as that there are differences. It can therefore be concluded that there are many aspects of affective well-being where age would not make a difference, but that the areas where age differences do appear shows that the manifestation of affective well-being may be stronger in the younger age group (18-25 years).

4.4.3. DIFFERENCES BETWEEN BLACK AND WHITE GROUPS

Table 6 reflects the means, standard deviations, Cronbach alpha reliability coefficients and significance of differences between Black and White groups on the EQ-i and AFM.

Table 6: Significance of differences obtained between the White and Black groups on the EQ-i and AFM

Variable	White Group (N = 313)			Black Group (N = 56)			P
	Mean	SD	α	Mean	SD	α	
EQ ES	28.76	5.36	0.77	28.43	5.32	0.62	0.69
EQ AS	24.71	4.72	0.74	25.39	4.11	0.33	0.81
EQ SR	32.84	7.53	0.92	35.23	5.90	0.69	0.17
EQ SA	36.95	4.99	0.79	34.00	5.49	0.58	0.001*
EQ IN	25.22	4.92	0.76	25.21	3.55	0.20	0.22
EQ EM	33.78	3.88	0.70	29.13	4.56	0.52	0.0001***
EQ IR	43.83	5.92	0.81	39.96	7.59	0.75	0.001**
EQ RE	43.04	4.47	0.72	37.96	5.54	0.55	0.0001***
EQ PS	30.41	4.43	0.79	30.39	4.45	0.51	0.42
EQ RT	36.26	6.48	0.81	35.00	5.19	0.48	0.40
EQ FL	27.61	5.02	0.76	28.16	4.45	0.45	0.63
EQ ST	31.78	5.77	0.82	31.93	5.36	0.62	0.99
EQ IC	31.85	6.52	0.80	34.64	5.31	0.64	0.02*
EQ HA	36.30	5.18	0.78	32.29	5.13	0.48	0.0001***
EQ OP	31.12	4.43	0.78	30.23	4.95	0.64	0.19
RA EQ	148.48	21.64	0.84	148.27	18.52	0.79	0.85
ER EQ	120.65	12.07	0.81	107.05	14.52	0.76	0.0001***
AD EQ	94.28	12.55	0.68	93.55	10.57	0.61	0.64
SM EQ	63.64	10.24	0.87	66.57	8.90	0.73	0.30
GM EQ	67.42	8.66	0.85	62.52	8.62	0.69	0.002**
EQ T	481.98	47.71	0.95	472.63	44.49	0.91	0.61
AFM PA	37.41	5.77	0.86	38.16	5.72	0.74	0.57
AFM NA	20.33	6.55	0.86	23.23	7.00	0.75	0.04*
AFM PNB	17.07	11.24	-	14.93	10.04	-	0.47

Note: (-) - Cronbach Alpha cannot be calculated because this value consists of the sum of NA and PA. M - Mean, SD - Standard Deviation, α - Cronbach Alpha, EQ - Emotional Quotient Inventory, ES - Emotional Self-Awareness, AS - Assertiveness, SR - Self-Regard, SA - Self-Actualization, IN - Independence, EM - Empathy, IR - Interpersonal Relationship, RE - Social Responsibility, PS - Problem Solving, RT - Reality Testing, FL - Flexibility, ST - Stress Tolerance, IC - Impulse Control, HA - Happiness, OP - Optimism, RA - Intrapersonal Components, ER - Interpersonal Components, AD - Adaptability Components, SM - Stress Management Components, GM - General Mood Components, T - Total, Affectometer 2, PA - Positive Affect, NA - Negative Affect, PNB - Positive Negative Affect Balance.

(*Take note:* From EQ ES - EQ T means and standard deviations are computed using raw scores thus IQ scores cannot be interpreted)

* $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$

The statistically significant results displayed above are also practically significant.

4.4.3.1. EVALUATION OF THE RELIABILITY INDICES

As depicted in Table 6 the White and Black Group of participants obtained good reliability coefficients for the AFM. The reliability coefficients for the EQ-i are higher for the White Group than for the Black Group of participants. Cronbach alpha's range from 0.68 to 0.95 for the White group of participants and from 0.20 to 0.91 for the Black group of participants. According to Smit (1991) 0.50 represents an acceptable reliability index for measuring instruments when comparing groups. Thus the White Group of participants display very good reliability coefficients for all sub-scales of the EQ-i. The Black Group however obtained lower than 0.50 on five of the fifteen sub-scales (i.e. Assertiveness, Independence, Reality Testing, Flexibility and Happiness). The low reliability indices obtained on the Assertiveness, Independence and Flexibility sub-scales of the EQ-i might be attributed to the fact that these constructs are based on individualistic values which are possibly less applicable in an Afrocentric context where a collectivistic culture is emphasized (as suggested by Triandis, 1996). Furthermore, according to Bond and Smith (1996) interdependency and obedience is emphasized in a collectivistic culture. The low reliability index obtained on the Happiness sub-scale of the EQ-i could possibly be attributed to their background of suppression and discrimination. The Black Group however obtained a very good reliability coefficient on the Total Score of the EQ-i (EQ T) namely 0.91. Thus, it can be concluded from the EQ T (0.91) that the EQ-i is globally reliable for this ethnic group. Thus we can proceed to compare the scores as obtained among the different ethnic/cultural groups but should exercise caution when comparing the sub-scales of the EQ-i for the Black Group of participants.

4.4.3.2. EVALUATION OF SIGNIFICANCE OF DIFFERENCES

As depicted in Table 6 significant differences were obtained on only one sub-scale of the AFM and on nine sub-scales of the EQ-i.

Significant differences between the scores of the EQ-i and AFM are evident between White and Black ethnic groups. The White group of participants obtained significantly higher scores on the Self-Actualization, Empathy, Interpersonal Relationship, Social Responsibility, Happiness, Interpersonal Component and General Mood Component sub-scales and composite scales of the EQ-i. The White Group thus attains a higher

degree of affective well-being and emotional intelligence. In line with this the Black Group obtained a higher score than the White Group on the Negative Affect sub-scale of the AFM.

These results are in line with findings in early research by Bradburn (1969) and Andrews and Withey (1976) who found that Black people experienced less positive affect than White people. Forest (1996) concludes that non-white racial status is significantly related to lower overall life satisfaction and happiness. It is also important to consider the history of this group of people which was marked by pain and suffering. Many of these people may have experienced severe traumas which they have not completely worked through which may now manifest as negative emotions and a generally depressed mood. According to Campbell et al., (1976) this group of people carry additional factors such as a history of prejudice and discrimination and a lower socio-economic status which lowers their affective well-being and contributes to overall greater psychological distress. According to Myers and Diener (1995) in general, collectivist cultures report lower subjective well-being than do individualistic cultures. The low score obtained on the sub-scale of Self-Actualization might be attributed to the fact that this construct is based on individualistic values which might be a less applicable construct in an Afrocentric context where a collectivistic value system (as suggested by Triandis, 1996) plays an important role. According to Bond and Smith (1996) in a collectivistic culture interdependency is emphasized, which decreases self-definition and self-actualization. The low scores obtained by the Black group on the Interpersonal Component of the EQ-i (comprised of the Empathy, Interpersonal Relationship and Social Responsibility sub-scales) could also possibly be attributed to their collectivist culture.

The Black Group of participants however, obtained a slightly higher scores on the sub-scale of Impulse Control on the EQ-i. This result is very difficult to explain as other research studies depict a higher degree of impulse action in Black South African population groups (e.g. Putter, 1996; Wissing, 1996). In view of these contradictory findings further exploration is imperative. A possible explanation for this result in this study could however be the fact that a large part of the Black Group was comprised of government and corporate officials with strong political affiliations and so they may have been on guard or faking good while answering the questionnaire.

According to Wissing and Van Eeden (1998) ethnic differences could be ascribed to different socio-cultural backgrounds, idiosyncratic factors and life circumstances. Thus, it is important to take these factors into consideration when interpreting the lower scores of the Black group. Furthermore, according to Levine and Perkins (1997) socio-cultural factors can influence psychological well-being. Further research on the exploration of such possibilities explaining their lower scores is imperative.

4.5. CORRELATIONS AMONG SCALE SCORES

4.5.1. CORRELATION BETWEEN EQ-i AND AFM (SUB-) SCALE SCORES

In Table 7 the correlations between the AFM and EQ-i (sub-) scale scores are reported for the Total Group.



Table 7: Correlation between (sub-) scale scores of the AFM and EQ-i for the Total Group (N = 382)

Variable	AFM PA	AFM NA	AFM PNB
EQ ES	0.42***	-0.48***	0.50***
EQ AS	0.38***	-0.43***	0.45***
EQ SR	0.64***	-0.58***	0.68***
EQ SA	0.51***	-0.55***	0.59***
EQ IN	0.30***	-0.39***	0.39***
EQ EM	0.17**	-0.29***	0.26***
EQ IR	0.43***	-0.45***	0.49***
EQ RE	0.16**	-0.34***	0.29***
EQ PS	0.32***	-0.36***	0.39***
EQ RT	0.42***	-0.63***	0.60***
EQ FL	0.38***	-0.37***	0.42***
EQ ST	0.45***	-0.49***	0.53***
EQ IC	0.29***	-0.43***	0.41***
EQ HA	0.57***	-0.63***	0.68***
EQ OP	0.52***	-0.48***	0.56***
EQ T	0.60***	-0.68***	0.73***

Note: EQ - Emotional Quotient Inventory, ES - Emotional Self-Awareness, AS - Assertiveness, SR - Self-Regard, SA - Self-Actualization, IN - Independence, EM - Empathy, IR - Interpersonal Relationship, RE - Social Responsibility, PS - Problem Solving, RT - Reality Testing, FL - Flexibility, ST - Stress Tolerance, IC - Impulse Control, HA - Happiness, OP - Optimism, T - Total, Affectometer 2, PA - Positive Affect, NA - Negative Affect, PNB - Positive Negative Affect Balance.

* $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$

$r > 0.3$ = Practically significant.

In Table 7 the EQ-i scale and all sub-scales display significant positive correlations (as hypothesized) with Positive Affect and Positive-Negative Affect Balance of the Affectometer 2 (AFM). In addition, there are significant negative correlations displayed with regard to Negative Affect of the AFM and the EQ-i scale and all sub-scales. Thus it can be concluded that scores obtained on the scale that measures emotional intelligence (EQ-i) correlates with scores obtained on the scale that measures affect balance (AFM) as hypothesized. Furthermore, a very high correlation (0.73) is obtained between affect balance (PNB) and emotional intelligence (EQ-i T), which indicates that these scales measure highly related phenomena, or practically the same thing. Implications of this finding may be that a short scale such as the AFM 2 may indicate affective well-being just as well as a long (133 item) scale such as the EQ-i. It also means that although affective processes are conceptualized quite differently in the AFM

and EQ-i, they very much measure the same thing on an empirical level. The strong relationship between PNB and EQ-i T also supports the idea of a more or less homogeneous or separate affective component of human functioning/psychological well-being.

These results are in line with findings in the literature of Bar-On (1997b) who found that the EQ-i scale correlated well with other indicators of emotional functioning for the South African sample and demonstrated high negative correlations with anxiety and depression scales. The latter scales are indicators of pathology, which is often manifested by a serious breakdown in normal emotional functioning and in general coping ability (Bar-On, 1997b). In addition, these results correlate with findings of Diener and Larsen (1993) who proposed that the frequency of positive and negative affect indicates affective well-being and Martinez-Pons (1997) who found a negative correlation between negative affect and emotional intelligence and Kravetz et al., (1993) who found that negative affects were linked to emotional illness.

4.5.2. CORRELATION BETWEEN AFFECTIVE COMPONENT (EQ-i AND AFM) SCALE SCORES AND SCORES OBTAINED ON THE SOC, SWLS AND GHQ

In Table 8 the correlations between the affective component (AFM and EQ-i) (sub-) scale scores and scores obtained on the indices measuring psychological well-being (SOC, SWLS and GHQ) are reported for the Total Group.

Table 8: Correlation between affective component scale scores (AFM and EQ-i) and scores obtained on the SOC, SWLS and GHQ

Variable	GHQ - SS	GHQ AS	GHQ SD	GHQ DS	GHQ T	SOC T	SWLS
EQ ES	-0.22*	-0.31*	-0.24*	-0.31*	-0.34*	0.44*	0.39*
EQ AS	-0.15*	-0.29*	-0.22*	-0.23*	-0.27*	0.39*	0.34*
EQ SR	-0.37*	-0.45*	-0.43*	-0.47*	-0.53*	0.64*	0.56*
EQ SA	-0.19*	-0.28*	-0.32*	-0.37*	-0.35*	0.54*	0.53*
EQ IN	-0.14*	-0.20*	-0.16*	-0.20*	-0.22*	0.45*	0.28*
EQ EM	0.01	0.02	-0.05	-0.12*	-0.04	0.21*	0.19*
EQ IR	-0.18*	-0.23	-0.19*	-0.25*	-0.26*	0.42*	0.38*
EQ RE	-0.05	-0.04	-0.09	-0.18*	-0.11*	0.30*	0.20*
EQ PS	-0.19*	-0.20*	-0.22*	-0.23*	-0.26*	0.38*	0.24*
EQ RT	-0.39*	-0.45*	-0.32*	-0.48*	-0.51*	0.64*	0.43*
EQ FL	-0.27*	-0.32*	-0.24*	-0.17*	-0.31*	0.34*	0.28*
EQ ST	-0.35*	-0.46*	-0.31*	-0.36*	-0.46*	0.56*	0.39*
EQ IC	-0.23*	-0.32*	-0.21*	-0.32*	-0.33*	0.45*	0.28*
EQ HA	-0.32*	-0.44*	-0.36*	-0.47*	-0.49*	0.58*	0.58*
EQ OP	-0.22*	-0.28*	-0.30*	-0.31*	-0.34*	0.55*	0.46*
EQ T	-0.33*	-0.44*	-0.37*	-0.44*	-0.49*	0.70*	0.55*
AFM PA	-0.31*	-0.42*	-0.35*	-0.42*	-0.47*	0.63*	0.70*
AFM NA	0.40*	0.50*	0.40*	0.53*	0.56*	-0.69*	-0.62*
AFM PNB	-0.40*	-0.51*	-0.42*	-0.54*	-0.58*	0.74*	0.73*

Note: EQ - Emotional Quotient Inventory, ES - Emotional Self-Awareness, AS - Assertiveness, SR - Self-Regard, SA - Self-Actualization, IN - Independence, EM - Empathy, IR - Interpersonal Relationship, RE - Social Responsibility, PS - Problem Solving, RT - Reality Testing, FL - Flexibility, ST - Stress Tolerance, IC - Impulse Control, HA - Happiness, OP - Optimism, T - Total, AFM - Affectometer 2, PA - Positive Affect, NA - Negative Affect, PNB - Positive Negative Affect Balance, SOC - Sense of Coherence Scale, SWLS - Satisfaction with Life Scale, GHQ - General Health Questionnaire, SS - Somatic Symptoms, AS - Anxiety and Sleeplessness, SD - Social Dysfunction and DS - Symptoms of Depression.

* $P < 0.05$

$r > 0.3$ = Practically significant.

As depicted in Table 8 the EQ-i scale and sub-scales display significant positive correlations with indices of psychological well-being like sense of coherence (SOC) and satisfaction with life (SWLS). These results are in line with findings in the literature of Bar-On (1997a) who proposed that emotional intelligence is an important factor in determining one's general psychological well-being (i.e. one's present mental condition or overall degree of emotional health). In addition, Bar-On (1997b) found a strong correlation between the EQ-i and other indicators of emotional functioning. Furthermore, Reik (1952) also associated mental health with the ability to recognize emotions.

In addition, the EQ-i scale and sub-scales further indicate significant negative correlations with indices measuring symptomatology and pathology as hypothesized. This includes physical symptoms (GHQ) and symptoms of psychopathology (GHQ). These findings agree with similar results reported by Bar-On (1997b) on the strong negative correlations with anxiety, depression and borderline features. Martinez-Pons (1997) also reported negative correlations between emotional intelligence and depression symptomatology.

Significant correlations were not obtained between some sub-scales of the EQ-i and GHQ. The Social Responsibility (EQRE) sub-scale of the EQ-i showed no correlation with the sub-scales of Somatic Symptoms (SS), Anxiety and Sleeplessness (AS) and Social Dysfunction (SD) of the GHQ. The Empathy (EQEM) sub-scale of the EQ-i showed no correlation with the Total Score (and all sub-scales) of the GHQ. Thus, it can be hypothesized that no correlation exists between symptoms of pathology and interpersonal skills. The above results are in line with the opinion of Bar-On (1997b) who proposes that pathology is often manifested by a serious breakdown in normal emotional functioning. Furthermore, Salovey and Mayer (1990) depict interpersonal competence and empathy as a central characteristic of the emotionally intelligent person, thus an individual who displays serious symptoms of pathology will not render interpersonal competence nor empathy. According to Bar-On (1997b) the lack of empathy appears to be an important component in aggressive antisocial behaviour.

Significant correlations were obtained between the PA and PNB sub-scales of the AFM and indices of psychological well-being (SOC and SWLS). The NA sub-scale of the AFM displayed significant positive correlations with the index measuring symptomatology and psychopathology (GHQ). These results are in line with findings in the literature of Bradburn (1969) and Reich and Zautra (1988).

In addition, the PA and PNB sub-scales of the AFM displayed significant negative correlations with the index measuring symptomatology and psychopathology (GHQ). The NA sub-scale of the AFM indicated significant negative correlations with indices measuring psychological well-being (SOC and SWLS). These results are in line with findings in the literature of Bradburn (1969), Watson et al., (1988) and Kravetz et al., (1993).

Thus it can be concluded that scores obtained on the EQ-i and PA and PNB sub-scales of the AFM correlate with scores obtained on the scales that measure general psychological well-being (SOC and SWLS). Furthermore the EQ-i and PA and PNB sub-scales of the AFM correlate negatively with the index measuring symptomatology and psychopathology (GHQ). The NA sub-scale of the AFM correlates positively with indices of symptomatology and psychopathology and negatively with indices of psychological well-being. Thus, the affective component scales correlate with scales measuring general psychological well-being as hypothesized. Furthermore, a very high correlation of 0.74 and 0.73 was obtained between affect balance (PNB) and the well-being measures: sense of coherence (SOC) and satisfaction with life (SWLS), which indicates that these scales measure highly related phenomena. Emotional intelligence (EQ-T) also showed a high correlation of 0.70 with sense of coherence (SOC). Implications of these findings may be that the AFM and EQ-i do not only measure isolated affective phenomena of affect balance and emotional intelligence but instead also measure psychological well-being on an empirical level. The strong relationship between PNB and EQ-T and general measures of well-being (SOC and SWLS) also supports the idea of the affective component being a strong part of psychological well-being.

4.6. PREDICTION OF PSYCHOLOGICAL WELL-BEING BY THE AFFECTIVE COMPONENT

A linear regression analysis was conducted on the current data to determine to what degree the affective component predicts general psychological well-being.

Psychological well-being as measured by the standard mean score of the SOC and SWLS, is the dependent variable. The affective component as measured by the EQ-i and AFM, formed the independent variables or the predictors. The model applied was statistically significant for the empirical data of the Total Group ($F = 696.56$, $p < 0.0001$) and a regression coefficient (R^2) of 0.647 was obtained. Thus, it can be said that the affective component explains 64.7% of the variance of the degree of psychological well-being for the Total Group in this specific investigation. The regression coefficient also indicates practical significance ($R^2 > 0.25$) (Cohen, 1977). The fact that the affective component explains 64.7% of the variance in the degree of psychological well-being as

operationalized in this study indicates that the affective component forms a very important aspect of psychological well-being.

A second linear regression was computed to determine whether the affective component will (inversely) predict symptomatology (as indicated by the GHQ). The GHQ is the dependent variable and the affective component as measured by the EQ-i and AFM, formed the independent variables or the predictors. The model applied was once again statistically significant for the empirical data of the Total Group ($F = 173.83$, $p < 0.0001$) and a regression coefficient (R^2) of 0.314 is obtained. Thus, it can be said that the affective component explains 31.4% of the variance in symptoms of pathology for the Total Group in this specific investigation. The regression coefficient was also practically significant ($R^2 > 0.25$) (Cohen, 1977).

Affect balance and emotional intelligence as measured here, are thus far stronger predictors of the degree of psychological well-being than of the degree of psychopathology. Once again this finding raises the question (debated in the literature e.g. Antonovsky, 1979; Strümpfer, 1995; Wissing & Van Eeden, 1998) whether psychological well-being and pathology are end points on one continuum of wellness, or whether they form two separate, although related, dimensions. From the present findings the latter seems to be the case.

Thus it can be concluded from the above that the affective component is an important predictor of general psychological well-being, as is also depicted in the literature by Bradburn (1969) who conceptualizes well-being as the balance between positive and negative affect; Diener (1984) who identified positive emotions or happiness as a hallmark of well-being; Salovey and Mayer (1990) who depict the person with emotional intelligence as having attained at least a limited form of positive mental health and Bar-On (1997a) who sees one's emotional intelligence as an important predictor in determining one's general psychological well-being.

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4.7. EXPLORATORY SECOND ORDER FACTOR ANALYSIS

A second order exploratory factor analysis with the principal factors (maximum likelihood method of factor extraction) with raw varimax rotation was conducted on all scales and sub-scales of indices measuring psychological well-being and the affective component to determine to what degree the affective component overlaps with general psychological well-being. Results are recorded in Table 9.

Table 9: Second order exploratory factor analysis with the principal factors maximum likelihood method of factor extraction on all scales

Variable	Factor 1	Factor 2	Factor 3	Comm
EQ ES			0.51	0.54
EQ AS			0.65	0.51
EQ SR			0.72	0.71
EQ SA			0.65	0.64
EQ IN			0.64	0.50
EQ EM		0.88		0.65
EQ IR		0.56		0.67
EQ RE		0.83		0.65
EQ PS			0.54	0.39
EQ RT			0.53	0.67
EQ FL			0.52	0.40
EQ ST			0.64	0.64
EQ IC	0.35		0.32	0.42
EQ HA	0.47		0.50	0.73
EQ OP			0.70	0.66
GHQ SS	-0.68			0.49
GHQ AS	-0.78			0.64
GHQ SD	-0.62			0.44
GHQ DS	-0.68			0.49
SOC T	0.56		0.54	0.67
AFM PA	0.47		0.54	0.64
AFM NA	-0.59		-0.48	0.65
SWLS	0.51		0.44	0.60
Eigenvalue	9.31	1.84	1.10	-
% Var. Exp.	40.47	8.03	4.82	-

Note: Comm - Communalities, % Var. Exp. - Percentage of the Variance Explained, EQ - Emotional Quotient, ES - Emotional Self-Awareness, AS - Assertiveness, SR - Self-Regard, SA - Self-Actualization, IN - Independence, EM - Empathy, IR - Interpersonal Relationship, RE - Social Responsibility, PS - Problem Solving, RT - Reality Testing, FL - Flexibility, ST - Stress Tolerance, IC - Impulse Control, HA - Happiness, OP - Optimism, GHQ - General Health Questionnaire, SS - Somatic Symptoms, AS - Anxiety and Sleeplessness, SD - Social Dysfunction, DS - Symptoms of Depression, SOC T - Sense of Coherence Total Score, AFM - Affectometer 2, PA - Positive Affect, NA - Negative Affect, SWLS - Satisfaction with Life Scale.

Only factor loadings = > 0.30 are presented.

As depicted in Table 9 three factors were extracted with eigenvalues greater than 1.0 and accounting for 53.32% of the total variance.

Factor 1 - Absence of General Symptoms of Psychopathology

This factor accounts for 40.47% of the total variance. It is characterized by the absence of general symptoms of psychopathology, for example anxiety, depression, physical

symptoms, social dysfunction and to a lesser degree negative affect. Also loading on this factor to a lesser degree is sense of coherence and satisfaction with life and the EQ-i sub-scale of Impulse Control. This factor is thus characterized by an absence of general symptoms of psychopathology since the sub-scales which load highest on this factor are sub-scales of the GHQ measuring psychopathology. Interpreted salutogenically it will mean that in psychological well-being there will be an absence of general symptoms of psychopathology.

Factor 2 - Interpersonal Factor

This factor explains 8.03% of the total variance. Empathy, social responsibility and interpersonal relationship load on this factor in this respective order. It highlights good interpersonal skills, and is characteristic of individuals who can understand, interact and relate well with others. This factor reflects Bar-On's (1997b) interpersonal composite component which comprises the sub-scales of Empathy, Interpersonal Relationship and Social Responsibility. This factor is supported theoretically by Salovey and Mayer (1990) who see emotionally intelligent individuals equipped with sufficient social competence to weave strong and successful interpersonal relationships.

Factor 3 - Intrapersonal Factor

This factor comprises 4.82% of the total variance. The sub-scales loading highest here are Self-Regard, Happiness, Self-Actualization, Assertiveness, Independence, Reality Testing and Optimism. Also loading on this factor to a lesser extent is positive affect. This factor is thus characterized by an individual who is in touch with his/her feelings, feels good about him/herself, feels positive about his/her life, is able to express his/her feelings independently and confidently, can deal with everyday difficulties, can withstand stress without losing control, is a cheerful, positive, hopeful and optimistic individual who knows how to enjoy life and strives toward maximum development of his/her abilities. It can be hypothesized that the above profile fits that of a psychologically well individual. Thus, the Intrapersonal, Adaptability, Stress-Management and General Mood Components as proposed by Bar-On (1997a) are grouped together in one factor - an Intrapersonal Factor. The essence of this component has to do with the self. This is in line with the model of Adams et al., (1997) where the emotional and self (intrapersonal) components are conceptualized as one component.

From the second order exploratory factor analysis on the data of all scales for the Total Group it can thus be seen that the AFM loads together with the general health indices of psychological well-being and the intrapersonal indices of the EQ-i on both factor 1 and factor 3. In view of having extracted two seemingly overlapping factors in this regard a further forced second order exploratory factor analysis (with principle factors maximum likelihood method of factor extraction) was computed requesting only two factors. The aim of this exploration was to see if affective versus general psychological well-being components/factors would emerge, or whether intra- versus interpersonal factors would emerge.

Table 10 depicts the results of this forced second order exploratory factor analysis (with maximum likelihood method of factor extraction) requesting only two factors.

Table 10: Forced second order exploratory factor analysis with the principal factors maximum likelihood method of factor extraction on all scales requesting only two factors

Variable	Factor 1	Factor 2	Comm
EQ ES	0.54		0.54
EQ AS	0.53		0.51
EQ SR	0.81		0.71
EQ SA	0.62		0.64
EQ IN	0.51		0.50
EQ EM		0.87	0.65
EQ IR		0.60	0.67
EQ RE		0.81	0.65
EQ PS	0.45		0.39
EQ RT	0.70		0.67
EQ FL	0.51		0.40
EQ ST	0.68		0.64
EQ IC	0.47		0.42
EQ HA	0.67		0.73
EQ OP	0.63		0.66
GHQ SS	-0.54		0.49
GHQ AS	-0.67		0.64
GHQ SD	-0.55		0.44
GHQ DS	-0.61		0.50
SOC T	0.78		0.67
AFM PA	0.72		0.64
AFM NA	-0.75		0.65
SWLS	0.68		0.60
Eigenvalue	9.27	1.78	-
% Var. Exp.	40.28	7.73	-

Note: Comm - Communalities, % Var. Exp. - Percentage of the Variance Explained, EQ - Emotional Quotient, ES - Emotional Self-Awareness, AS - Assertiveness, SR - Self-Regard, SA - Self-Actualization, IN - Independence, EM - Empathy, IR - Interpersonal Relationship, RE - Social Responsibility, PS - Problem Solving, RT - Reality Testing, FL - Flexibility, ST - Stress Tolerance, IC - Impulse Control, HA - Happiness, OP - Optimism, GHQ - General Health Questionnaire, SS - Somatic Symptoms, AS - Anxiety and Sleeplessness, SD - Social Dysfunction, DS - Symptoms of Depression, SOC T - Sense of Coherence Total Score, AFM - Affectometer 2, PA - Positive Affect, NA - Negative Affect, SWLS - Satisfaction with Life Scale.

Only factor loadings = > 0.30 are presented.

Factor 1 - Intrapersonal Factor

This factor comprises 40.28% of the total variance. Loading on this factor are the general well-being indices (SOC & SWLS), the index measuring symptomatology and pathology (GHQ) and positive affect and negative affect (AFM) and the intrapsychic aspects of the EQ-i (consisting of the Intrapersonal, Adaptability, Stress-Management and General Mood Composite Components grouped together in one intrapsychic component). The (sub-) scales loading highest here are Sense of Coherence (SOC),

Negative Affect (AFM NA), Positive Affect (AFM PA), Satisfaction with Life (SWLS), Happiness (EQ HA), Self-Regard (EQ SR), Reality Testing (EQ RT) and Stress Tolerance (EQ ST). This factor is thus characterized by a combination of specific affective, cognitive and intrapersonal abilities and by the absence of symptomatology and pathology. This factor highlights a general feeling of cheerfulness and enthusiasm, a view that life is comprehensible and meaningful, a general belief and expectation that demands will be met and coped with, and a global feeling of life satisfaction. This individual is in touch with his/her feelings, feels good about him/herself, feels positive about his/her life, is able to express his/her feelings independently and confidently, can deal with everyday difficulties, can withstand stress without losing control, is a cheerful, positive, hopeful and optimistic individual who knows how to enjoy life and strives toward maximum development of his/her abilities. Thus, it can be seen that this factor comprises an emotional component, an intrapsychic component and a well-being component.

Factor 2 - Interpersonal Factor

This factor explains 7.73% of the total variance. Empathy, social responsibility and interpersonal relationship load on this factor in this respective order. It highlights good interpersonal skills, and is characteristic of individuals who can understand, interact and relate well with others. This factor reflects Bar-On's (1997b) interpersonal composite component which comprises the sub-scales of Empathy, Interpersonal Relationship and Social Responsibility. This factor is supported theoretically by Salovey and Mayer (1990) who see emotionally intelligent individuals equipped with sufficient social competence to weave strong and successful interpersonal relationships.

It can thus be concluded that an Intrapersonal Factor and an Interpersonal Factor were extracted. On factor 1 the AFM measures general psychological well-being to the same degree as the SOC and SWLS. Furthermore, certain sub-scales of the EQ-i (e.g. Happiness, Optimism, Stress-Tolerance, Reality Testing, Self-Actualization and Self-Regard) also load on this factor (with the SOC and SWLS). Thus, the AFM, SOC and SWLS correspond closely to particular sub-scales of the EQ-i. Thus, it can be hypothesized that the EQ-i is not a homogeneous scale but instead comprises an intrapersonal and an interpersonal component. Only the Interpersonal Factor (Factor 2) presents as a separate factor. Thus, there is an overlap with psychological well-being

and the intrapsychic component of the EQ-i. It can thus be concluded that there is a strong overlap between the affective component scales, namely the AFM and some of the sub-scales of the EQ-i and the general psychological well-being scales. This conclusion supports the idea that the affective aspect is an important component of general psychological well-being. It also emerged that it is in particular the facet of positive and negative affect as measured by the AFM and the more intrapersonal facets measured by the EQ-i which overlap with psychological well-being. The more intrapersonal aspects measured by the EQ-i (reflected in Factor 1) are possibly more part of the self components of psychological well-being as distinguished in some theories on psychological well-being (e.g. Adams et al., 1997; Ryff & Keyes, 1995). The nature of the affective component of psychological well-being is thus mainly characterized by the degree of positive-negative affect balance and an intrapsychic component of emotional intelligence. It would be interesting to further investigate the relationship between the affective component and aspects of the self component (for example as measured by the Tennessee Self-Concept Scale).

4.8. SUMMARY

In this chapter the results of the empirical investigation were presented and interpreted. Firstly, the descriptive statistics and reliability indices for all the scales/sub-scales for the Total Group were presented. First and second order confirmatory factor analyses were then presented and interpreted in order to determine the construct validity of the BarOn EQ-i. Significant differences between the different groups (gender, age, and culture) with regard to emotional/affective aspects were also then reported. Correlations between the different variables for the entire group were then explored. With the aid of a regression analysis it was determined whether the affective component could perhaps predict psychological well-being. Lastly, the results of exploratory factor analyses were presented and interpreted. The results of the above analyses were also interpreted and discussed in relation to previous research as was reported in Chapter 2.

In the next Chapter the conclusions of this study will be presented as well as recommendations for further research and the practical implementation of findings.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1. INTRODUCTION

In this chapter a summary of findings and important conclusions are provided. Recommendations for further research and practical implementation are made.

5.2. SUMMARY AND CONCLUSIONS

5.2.1. CONCLUSIONS FROM THE LITERATURE STUDY

- *The first specific aim of the present empirical investigation was to analyze the nature of the affective component of psychological well-being from the literature.*

From the literature study it appears that a new paradigm is developing within the field of psychology. This new paradigm focuses on the origins, nature and enhancement of well-being. A shift has thus occurred from a pathogenic approach where the focus is on illness to a salutogenic/fortigenic approach which focuses on strengths. In accordance with this theme a number of holistic models of health are emerging. It appears from the recent literature that inherent in these holistic models of health lies an important dimension - the affective component.

In the literature various authors depict psychological well-being as multi-dimensional (Emmons, 1986; 1992; Haworth et al., 1997; Wissing & Van Eeden, 1998). More specifically psychological well-being is defined in many literature sources as comprising two components - an emotional component (in the form of affect) and a cognitive component (in the form of life satisfaction) (Emmons, 1986 & 1992; Pavot & Diener, 1993; Ryff & Keyes, 1995; Haworth, et al., 1997).

From the literature study it emerged that different conceptualizations of the affective component exist. It was initially explained by Bradburn's (1969) two-dimensional model of psychological well-being. In this model he distinguishes between positive and

negative affect as distinct dimensions of well-being and depicts avowed happiness (or the feeling of psychological well-being) as the balance between the two which he defines as affect balance.

Later, much controversy emerged in the literature regarding Bradburn's (1969) affect balance model. The distinction between frequency and intensity (as important dimensions of affective structure) cleared up the contradictory and confusing results in this area (Diener et al., 1985b). Of the two, frequency of affect was promoted as the better indicator of emotional well-being (Diener et al., 1991; Diener & Larsen, 1993).

Recently, this initial model of affect balance was further challenged by a model in which effective emotional regulation is seen as the crux of the affective component. This newly emerging framework is defined as emotional intelligence. In the literature several conceptualizations are provided. Salovey and Mayer (1990) and Salovey et al., (1993) outline three primary domains of emotional intelligence. Goleman (1995) popularizes this framework by presenting his adaptation of existing models of emotional intelligence. Much of the literature highlighted the specific lack of commercially available and comprehensive tests to measure emotional intelligence. Bar-On (1988;1997a) developed a theoretically eclectic and multi-factorial approach to operationally describe and quantitatively assess the interrelated concepts of emotional intelligence by introducing the first scientifically developed and comprehensive measure of this construct - the BarOn Emotional Quotient Inventory (EQ-i). From the literature there is clear consensus that individual differences do exist in people's abilities to exert effective control and balance over their emotional lives.

Based on the literature a definite connection is hypothesized between the affective component (affect balance and emotional intelligence) and general psychological well-being. The balance between positive and negative affect and emotional intelligence are seen as influential predictors of psychological well-being (Bradburn, 1969; Reich & Zautra, 1988; Diener & Larsen, 1993; Salovey & Mayer, 1990; Bar-On, 1997a). Much of the literature focused on the new salutogenic/fortigenic paradigm where well-being was not only seen as the absence of symptoms of distress or negative affect but more importantly as the presence of positive affect and the recognition of one's emotions (Reik, 1952; Diener, 1984; Noor, 1996). Furthermore, it emerged strongly from the

recent research that negative emotions or the suppression of emotions can be detrimental to emotional and psychological well-being (Skinner, 1986; Witmer & Sweeney, 1992; Kravetz et al., 1993; Nolen-Hoeksema, 1993; Lightsey, 1996; Martinez-Pons, 1997). In addition, a strong relationship was depicted in the literature between emotional intelligence and interpersonal skills (Rook, 1984; Salovey & Mayer, 1990).

From the literature it is clear that manifestations of the affective component may differ for different gender, age and ethnic groups. In addition it seems that, gender, age and ethnic group function as important moderator variables in the affective component. Regarding the different genders Bar-On (1997b) found that women displayed stronger interpersonal skills than their male counterparts and men displayed stronger intrapersonal, adaptability and stress management skills than women. However, women were also more susceptible to affective disorders than men (Ryff, 1989). Concerning the different age groups younger people were depicted to be happier than older persons and to experience more intense levels of both positive and negative affect (Bradburn & Caplovitz, 1965; Bradburn, 1969). Contradictory evidence was also apparent in that many authors proposed that the affective component may be related to developmental factors and so may increase with age (Medley, 1980; Folkman & Lazarus, 1988; Bar-On, 1997b). Regarding the different ethnic/cultural groups, in an American sample Black people experienced less positive affect than White people and displayed a lower level of subjective or affective well-being (Bradburn, 1969; Andrews & Withey, 1976; Campbell et al., 1976). This was ascribed in most cases to their prejudiced past, socio-economic class and social status. Some literature sources highlighted "cultural syndromes" (where Western cultures are individualist cultures and Non-Western cultures are collective cultures) and the influence of this on the manifestation of well-being (Edwards, 1989; Triandis, 1996). Furthermore, it seemed as if the construct validity of certain scales could present a problem when used on a collectivistic orientated group. Also, collectivist cultures displayed a lower degree of subjective well-being (Myers & Diener, 1995). Research conducted on the emotional intelligence of a Black sample group was not specified in any literature sources thus, it was imperative to include ethnic/cultural group as a moderator variable in this study and it appears that further research is imperative in this area.

5.2.2. CONCLUSIONS FROM THE EMPIRICAL INVESTIGATION

- *The second specific aim of the present empirical investigation was to determine the reliability of all the measuring instruments used and the level of overall psychological well-being in the present research group.*

The results depicted acceptable reliability indices on all measuring instruments for the Total Group. An analysis of the available literature on the measuring instruments used in this study depicted comparable results. With regard to scales measuring psychological well-being (SOC, SWLS and GHQ) means and standard deviations were comparable to other South African samples. Thus, the overall psychological well-being of the present research group compared very well to other population groups in the literature.

Concerning scales measuring the affective component (EQ-i and AFM), the AFM depicted mean scores and standard deviations higher than scores reported in the recent literature for a South African sample group. The mean scores and standard deviations of the EQ-i were computed using raw scores not standardized scores, therefore it was impossible to compare these scores with scores obtained in studies conducted by Bar-On (1997b). However, the scores obtained were comparable to raw score results obtained by Bar-On (1997b) in a North American sample. The EQ-i of Bar-On (1997a) showed some apparent discrepancies for age group four (51-65 years) and the Black Group of participants. Age group four (51 - 65 years) attained lower than 0.50 on two of the fifteen sub-scales of the EQ-i (Emotional Self-Awareness and Assertiveness). These indices could possibly be attributed to developmental patterns of individuals in this age group. This age group however scored a very good reliability coefficient on the Total Score of the EQ-i (EQ T) and thus, it could be concluded that the EQ-i was generally reliable for this age group with the exception of two sub-scales (Emotional Self-Awareness and Assertiveness) of the EQ-i for individuals above fifty years of age. The Black Group obtained lower than 0.50 on five of the fifteen sub-scales (i.e. Assertiveness, Independence, Reality Testing, Flexibility and Happiness). The low reliability indices obtained on the different sub-scales of the EQ-i could possibly be ascribed to a probable underlying emic factor structure for this scale related to an Afrocentric collectivistic life approach. This should however be explored in further research with the EQ-i in a South African context. The Black Group however manifested

a very good reliability coefficient on the Total Score of the EQ-i (EQ T) and thus, it could be concluded that the EQ-i was reliable for this ethnic group, as long as the Total Scale Score was used.

From the above it can be concluded that the results obtained in this study have a reliable basis and all the scales prove to be reliable for use in this group however, the EQ-i should however be interpreted with caution when working with a Black Group of participants.

- *The **third specific aim** of the present empirical investigation was to determine the construct validity of the Bar-On Emotional Quotient Inventory (EQ-i) for this specific group of South African subjects.*

In order to determine the construct validity of the EQ-i a first order confirmatory factor analysis was computed to determine whether the hypothesized 15 factorial components of the EQ-i could be identified in this present investigation. Similarly, a second order confirmatory factor analysis was also computed to determine whether the hypothesized five composite components could be extracted.

From the first order confirmatory factor analysis 12 independent factors emerged. The factors were Independence, Empathy/Social Responsibility, Reality Testing, Problem Solving, Positive Self-Regard, Emotional Self-Awareness, Flexibility, Impulse Control, Interpersonal Relationship, Stress Tolerance, Assertiveness, and Self-Actualization. Two of these factors presented as mixed factors (Factor 2 and Factor 5). It could thus be concluded that the factor structure of the EQ-i as proposed by Bar-On (1997a) was replicated in this study to a large extent (12 of the 15 factors presented) but also with two mixed factors.

From the second order confirmatory factor analysis two factors emerged. The factors were an Interpersonal Factor and an Intrapersonal Factor. Bar-On (1997b) depicts five composite scales however, the two factors presented here complemented the theory of Bar-On (1997b), in that, the Interpersonal Factor was identical to the one presented by Bar-On (1997b) and the Intrapersonal Factor incorporated his remaining four composite sub-scales. Thus it could be hypothesized from this study that the Interpersonal Factor

remains the same but that Bar-On's (1997b) Intrapersonal, Adaptability, Stress-Management and General Mood Components could be grouped together in one factor (which functions coherently for all these separate components) - the Intrapersonal Factor. Thus, this is a multi-faceted factor of intrapersonal skills, adaptability skills, stress-management skills and mood related skills.

It is thus concluded that the construct validity of the EQ-i was found to be very much the same as in the original standardizing group seen in the research of Bar-On (1997b) and so the EQ-i presents suitable construct validity for this specific South African group.

- *The fourth specific aim of the present empirical investigation was to determine whether there are any significant differences in the manifestation of the affective component among different gender, age groups and/or ethnic/cultural groups.*

The findings supported the basic hypothesis (hypothesis 4) as stated in Chapter 1. There were some apparent significant differences in the manifestation of the affective component among different gender, age groups and ethnic/cultural groups.

Women obtained significantly higher scores on the interpersonal component than their male counterparts. Men obtained significantly higher scores on the intrapersonal, adaptability and stress management components than their female counterparts. Women appeared to be more aware of their emotions and better able to express their emotions. Women also displayed a lower stress tolerance which could possibly account for the fact that they suffered from more affective-related disturbances than did their male counterparts. Gender differences could be attributed to gender/socialization roles, gender-specific modeling, coping methods and biological differences. These results were in line with the findings of Nolen-Hoeksema (1993), Ryff (1989), Bar-On (1997b) and Diener et al., (1999).

Significant differences were evident between three of the four age groups. Differences were seen between group 1 (18-25 years), group 2 (26-40 years) and group 4 (51-65 years). No significant differences were obtained between age group 3 (41-50 years) and the other age groups (1,2 and 4). The results indicated that individuals ranging from 18 -

25 years obtained significantly higher scores on the Happiness sub-scale and the Interpersonal dimension when compared to individuals in the age group 26 - 40 years. These findings were in line with studies conducted by Bradburn and Caplovitz (1965), Bradburn (1969) and Diener et al., (1985b). In addition the younger age group (18-25 years) obtained significantly higher scores on the interpersonal relationship sub-scale than did their older counterparts (51-65 years). This finding is not in line with other findings in the literature. It could therefore be concluded that there are far more similarities in the degree of affective well-being between these different age groups than there were differences, but that the areas where age differences did appear showed that the manifestation of affective well-being may be stronger in the younger age group (18 - 25 years).

Significant differences were evident between White and Black ethnic/cultural groups. The White Group of participants obtained significantly higher scores on Self-Actualization, Empathy, Interpersonal Relationships, Social Responsibility, Happiness, Interpersonal Components and General Mood Components. The White Group thus attained a higher degree of affective well-being and emotional intelligence. The Black group further obtained a higher score than the White Group on Negative Affect. These results were in line with those reported by Bradburn (1969), Andrews and Withey (1976), Campbell et al., (1976), Forest (1996) and Møller (1998). In addition, the Black Group of participants obtained a slightly higher score on the sub-scale of Impulse Control on the EQ-i. Regarding this result contradictory findings were cited in the literature (e.g. Putter, 1996; Wissing, 1996) and so it was difficult to clarify this result and so further exploration is needed in this regard. Ethnic differences could be ascribed to different socio-cultural backgrounds, idiosyncratic factors and life circumstances. Thus, it is important to take these factors into consideration when interpreting the lower scores of the Black group (Wissing & Van Eeden, 1998). The Black Group of participants also obtained low reliability indices on five of the fifteen sub-scales of the EQ-i (Assertiveness, Independence, Reality Testing, Flexibility and Happiness). It could be hypothesized that perhaps some of the EQ-i sub-scales are not valid for this Black Group of participants and this could possibly be attributing to their lower scores. Thus, the sub-scales of the EQ-i should be interpreted with caution for a Black population group.

These results indicate that variables such as gender, age and ethnic/cultural context may influence the manifestation of the affective component of psychological well-being. This is in line with the opinions of other researchers such as Diener (1984 & 1994), Salovey and Mayer (1990), Bar-On (1997b). The dynamics and measurement of these differences need further exploration.

- *The fifth specific aim of the present empirical investigation was to determine to what degree scores on the scale that measured affect balance (happiness), correlated with scores on scales that measured emotional intelligence.*

The findings supported the basic hypothesis (hypothesis 5) as stated in Chapter 1. There are significant correlations between the scores on the scale/sub-scales that measured affect balance (AFM) and the scores on the scale/sub-scales that measured emotional intelligence (EQ-i).

The EQ-i scale and all sub-scales displayed significant positive correlations with Positive Affect (PA) and Positive Negative Affect Balance (PNB) of the Affectometer 2 (AFM). These results were in line with the findings of Diener and Larsen (1993) and Bar-On (1997b). In addition, there were significant negative correlations displayed between Negative Affect (NA) of the AFM and the EQ-i scale and all sub-scales. These results were in line with the opinions of Kravetz et al., (1993), Martinez-Pons (1997) and Bar-On (1997b).

Thus it could be concluded that scores obtained on the scale that measured emotional intelligence (EQ-i) correlated with scores obtained on the scale that measured affect balance (AFM) as was hypothesized. Furthermore, a very high correlation was obtained between affect balance (PNB) and emotional intelligence (EQ-i T), which indicated that these scales measured highly related phenomena, or practically the same thing. Thus it could further be concluded that this short AFM 2 scale may indicate affective well-being just as well as the long (133 item) EQ-i scale. Thus, although affective processes were conceptualized quite differently in the AFM and EQ-i, they possibly measure the same thing on an empirical level. The strong relationship between PNB and EQ-i T also

supported the idea of a more or less homogeneous or separate affective component of human functioning/psychological well-being.

- *The sixth specific aim of the present empirical investigation was to determine to what degree these affective component scales scores, correlated with scores on scales that measured general psychological well-being.*

The findings supported the basic hypothesis (hypothesis 6) as stated in Chapter 1.

There were significant correlations between the scores on the scales that measured the affective component and the scores on scales that measured general psychological well-being.

The EQ-i scale and all sub-scales displayed significant positive correlations with sense of coherence (SOC) and satisfaction with life (SWLS) both indices of psychological well-being. These results were in line with the findings of Reik (1952) and Bar-On (1997a; 1997b). Furthermore, the EQ-i scale and most sub-scales indicated significant negative correlations with the index measuring symptomatology and pathology (GHQ). This finding was in line with the findings of different authors in the literature, like Martinez-Pons (1997) and Bar-On (1997b).

In this study no correlation was depicted between symptoms of pathology and interpersonal skills. This was in line with findings of Bar-On (1997b) who found that an individual who displayed symptoms of psychopathology had usually experienced a complete emotional breakdown and was thus not able to make contact with his/her social environment.

Significant correlations were obtained between the PA and PNB sub-scales of the AFM and indices of psychological well-being (SOC and SWLS). The NA sub-scale of the AFM displayed significant positive correlations with indices measuring symptomatology and psychopathology (GHQ). These results were in line with findings in the literature of Bradburn (1969) and Reich and Zautra (1988). In addition, the PA and PNB sub-scales of the AFM displayed significant negative correlations with the indices measuring symptomatology and psychopathology (GHQ). The NA sub-scale of the AFM indicated

significant negative correlations with indices measuring psychological well-being (SOC and SWLS). These results were in line with findings in the literature of Bradburn (1969), Watson et al., (1988) and Kravetz et al., (1993).

Thus it could be concluded that scores obtained on the EQ-i and PA and PNB sub-scales of the AFM correlated with scores obtained on the scales that measured general psychological well-being (SOC and SWLS). Furthermore the EQ-i and PA and PNB sub-scales of the AFM correlated negatively with the index measuring symptomatology and psychopathology (GHQ). The NA sub-scale of the AFM correlated positively with indices of symptomatology and psychopathology and negatively with indices of psychological well-being. Thus, the affective component scales correlated with scales measuring general psychological well-being as hypothesized. Furthermore, a very high correlation was obtained between affect balance (PNB) and the well-being measures: sense of coherence (SOC) and satisfaction with life (SWLS), which indicated that these scales measured highly related phenomena. Emotional intelligence (EQ-T) also showed a high correlation with sense of coherence (SOC). Implications of these findings may be that the AFM and EQ-i do not only measure isolated affective phenomena of affect balance and emotional intelligence but instead also possibly measure general psychological well-being on an empirical level. The strong relationship between PNB and EQ-T and general measures of well-being (SOC and SWLS) also supported the idea of the affective component being a strong constituent of general psychological well-being. From the above results it can be assumed that the affective component plays an important role in the psychological well-being of individual's and that symptomatology or pathology will influence our emotional well-being negatively as is reported in the literature.

- *The seventh specific aim of the present empirical investigation was to determine to what degree the affective component predicts general psychological well-being.*

The results of this investigation supported the basic hypothesis (hypothesis 7) as stated in Chapter 1 namely that this affective component could predict general psychological well-being.

A linear regression was conducted on the current data to determine whether the affective component could predict general psychological well-being and significant results were obtained. Thus, it could be said that the affective component is an important predictor of general psychological well-being. In this investigation the affective component explained 64.7% of the variance of psychological well-being (as measured by the SOC and SWLS) for the Total Group. Furthermore, the affective component depicted an inverse relationship to symptoms of pathology and explained 31.4% of the variance of symptoms of pathology (GHQ). Thus, pathology may be detrimental to one's emotional well-being. These results were in line with the findings of Bradburn (1969), Diener (1984), Salovey and Mayer (1990) and Bar-On (1997a).

It could thus be concluded from the above regression analysis that affect balance and emotional intelligence are far stronger predictors of the degree of psychological well-being than of the degree of psychopathology. Once again this finding raises the question, debated in the literature, whether psychological well-being and pathology are end points on one continuum of wellness, or whether they form two separate, although related, dimensions. From the present findings the latter seems to be the case. In light of the above findings it can be concluded that the affective component is an important predictor of psychological well-being in the present research group. It can further be concluded that the affective component should be included as a vital component when trying to determine an individual's overall level of psychological well-being.

- *The eighth specific aim of the present empirical investigation was to determine to what degree the affective component overlaps with general psychological well-being.*

The findings supported the basic hypothesis (hypothesis 8) as stated in Chapter 1. An exploratory second order factor analysis was computed to determine to what degree this affective component overlapped with general psychological well-being. Three factors were extracted. The factors were Absence of General Symptoms of Psychopathology, Interpersonal and Intrapersonal Factor. From the second order exploratory factor analysis on the data of all scales for the Total Group it could be concluded that the AFM loaded together with the general health indices of psychological well-being and the intrapersonal indices of the EQ-i on both factor 1 and factor 3. In view of having

extracted two seemingly overlapping factors a further forced second order exploratory factor analysis (with the principle factors maximum likelihood method of factor extraction) was computed where only two factors were requested. The aim of this exploration was to see if affective versus general psychological well-being components/factors would emerge, or whether intra- versus interpersonal factors would emerge.

After requesting two factors an Intrapersonal Factor and an Interpersonal Factor was extracted. On factor 1 (Intrapersonal Factor) the AFM measured general psychological well-being to the same degree as the SOC and SWLS. Furthermore, certain sub-scales of the EQ-i (e.g. Happiness, Optimism, Stress-Tolerance, Reality Testing, Self-Actualization and Self-Regard) also loaded on this factor with the SOC and SWLS. Thus, the AFM, SOC and SWLS corresponded closely to particular intrapsychic sub-scales of the EQ-i. Thus, it could be hypothesized that the EQ-i was not a homogeneous scale measuring only emotional intelligence but instead comprised of an intrapersonal and an interpersonal component. Only the Interpersonal Factor (Factor 2) presented as a separate factor thus, there was an overlap with psychological well-being and the intrapsychic component of the EQ-i. It could thus be concluded that there was a strong overlap between the affective component scales of the AFM and some of the EQ-i sub-scales and the general psychological well-being scales. This conclusion supported the idea that the affective aspect is an important component of general psychological well-being. It also emerged that it is in particular the facet of positive and negative affect as measured by the AFM and the more intrapsychic/intrapersonal facets measured by the EQ-i which overlapped with psychological well-being. These more intrapersonal aspects (measured by the EQ-i) are possibly more a part of the self components of psychological well-being as distinguished in some theories on psychological well-being (e.g. Adams et al., 1997; Ryff & Keyes, 1995). The nature of the affective component of psychological well-being is thus mainly characterized by the degree of positive-negative affect balance and an intrapsychic component of emotional intelligence. It would be interesting to further investigate this relationship between the affective component and aspects of the self component (for example as measured by the Tennessee Self-Concept Scale).

5.2.3. CONCLUSION

The **general aim** of the present study was to clarify the affective component of psychological well-being.

From the literature it was clear that an affective component of psychological well-being may be distinguished. Theoretically it emerges that there were two main models to conceptualize this affective component namely the affect balance model, in which the balance of positive and negative affect was viewed as the essence of emotional well-being, and secondly the emotional intelligence model in which effective regulation of emotion in the self and others were viewed as the essence of emotional well-being. This affective component overlapped with, and formed a strong component of general psychological well-being. The nature of this affective component was thus conceptualized by the balance of positive and negative affect as measured by the AFM and leaned more towards the intrapsychic aspects (than to the interpersonal aspects) of emotional intelligence as measured by the EQ-i. It could be depicted from the empirical investigation that both models of the affective component (i.e. affect balance and emotional intelligence) conceptualized important aspects of affective well-being but that the affect balance model received more support in this study as the better and more parsimonious conceptualizer of the core components of affective well-being.

5.3. RECOMMENDATIONS

In light of the above findings of the present study the following recommendations are made for further research purposes and for practical implementation.

5.3.1. RECOMMENDATIONS FOR FURTHER RESEARCH

- 1) In light of the lower scores for the Black Group of participants the construct validity of the EQ-i should be investigated further, specifically for a Black South African Group.
- 2) The present finding that women are stronger interpersonally and that men are stronger in regard to intrapersonal, adaptability and stress-management skills, should be investigated further in order to gain a better understanding of this phenomena.

- 3) The present findings that the younger age group (18 - 25 years) depicts a higher degree of happiness and interpersonal skills should be further investigated since this is not depicted in much of the literature.
- 4) The present finding that White Group depict a higher degree of affective well-being and emotional intelligence than the Black Group of participants should be further investigated. The present group was an availability sample which was not balanced in proportions and thus the present results could be based on generalizations.
- 5) From this investigation it can be seen that the EQ-i is not a homogeneous scale only measuring emotional intelligence but instead depicts to tap other important areas of functioning or possibly general psychological well-being. It would be interesting to investigate this further.
- 6) From this investigation the affective component depicts to overlap with an intrapsychic component. It would be interesting to investigate how this relates to the model of Adams et al., (1997) where the affective and intrapsychic models are incorporated as one component.
- 7) The affective component of psychological well-being (affect balance and emotional intelligence) of people could benefit from a longitudinal study, to determine whether these phenomena could change over time. This is especially important in the South African context with the implementation of the new political dispensation.
- 8) Further research is needed to determine what patterns or dynamics enable an individual to attain optimal affective well-being and how this should be implemented into practice for mental health professionals.

5.3.2. RECOMMENDATIONS FOR PRACTICAL IMPLEMENTATION OF FINDINGS

- 1) The AFM depicts to measure the crux of affective well-being. This is a short and cost effective measure of affective well-being which can be utilized in a therapeutic setting,

educational settings and/or corporate settings to gain insight into a person's affective/emotional functioning.

2) The BarOn EQ-i can be applied in a therapeutic setting to gain a more comprehensive idea of a person's affective/emotional functioning. It can be utilized to map out areas that need further exploration in the assessment process as well as to determine the present need for treatment. In addition to remedy the client's regulation of emotion in such a way that it enhances living. According to Edwards (1998) helping a client fully experience their emotional meanings can facilitate constructive adaptation.

3) According to Goleman (1995) and Bar-On (1997a) emotional skills can be remedied. Thus, the BarOn EQ-i can be employed in training or remedial programs helping to train or educate individuals to be more aware of their emotions and those of others, to be successful reality testers and problem solvers, to cope better with stress, to be more positive about themselves and to enjoy their lives. Such "emotional and social training" could be integrated into the existing curricula of schools or corporate companies. This would prepare individuals to better cope with environmental demands and increase their ability to function and succeed in life.

4) The BarOn EQ-i can be used in educational settings such as schools, colleges and universities to help psychologists and counselors to identify students who are unable to adequately cope with scholastic demands which could lead to dropping out of school or university and the possible development of an emotional problem.

5) The BarOn EQ-i can be used in corporate settings as a screening device designed to select emotionally intelligent, psychological healthy and potentially successful personnel.

6) The AFM could also be used as a quick screening device to identify emotional/affective problems. Once this is done the BarOn EQ-i could be used to gain a more comprehensive view of the person's emotional functioning. In doing this it could then identify where the possible areas are lying and then a remedial programme could be devised accordingly.

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APPENDIX A



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March 1, 1999

RESEARCH PROJECT: CLARIFICATION AND ADVANCEMENT OF PSYCHO-SOCIAL WELL-BEING

Dear Participant

We are conducting research on psychological well-being and the enhancement thereof. The purpose of this investigation is to gain insight into these processes, with a view to the eventual development of prevention and development programmes to empower and strengthen the psychological resources of people, and enhance their quality of life.

To this end we need your assistance. We require approximately 2-3 hours of your time. There is no risk associated with your participation, and we even hope that you may find responding to these questionnaires a stimulating experience. Responses from approximately 500 people are needed. Participation is voluntary.

If you are willing to participate please complete the following questionnaires as they pertain to you. Your responses will be treated with complete confidentiality. You will remain anonymous, and all conclusions will be based on the group's responses. We, however, need every individual's honest and reliable response.

We offer to inform you as a group or sub-groups on psychological well-being and related factors and processes and on the results of this investigation (once completed) if so wished. In the case of any further questions about this research project you are welcome to contact any of the researchers (telephone numbers below).

We kindly request you to fill in and tear off the slip at the end of this letter so as to be handed in separately. In doing so you confirm that you understood the explanations above, and that you grant permission for your anonymous responses to be used for research purposes.

Thank you very much for your participation and contribution.

Project supervisors

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Lynette Nel	0822004237
Anton du Preez	016-284667

I _____ hereby declare that I understand the content of this letter, and that I grant permission that information obtained from my anonymous questionnaires may be used for research.

Signature:

Date

APPENDIX B

For office use only

Card Number

0

1

Questionnaire Number

(1-2)

(3-5)

BIOGRAPHICAL QUESTIONNAIRE (BQ)

Please answer the following questions. Indicate your answer by marking the appropriate space

1. Gender

Male

☐

1

Female

☐

2

2. Age

18-25

☐

1

26-40

☐

2

41-50

☐

3

51-65

☐

4

3. Marital status

Married

☐

1

Single

☐

2

Cohabiting

☐

3

Divorced

☐

4

Widowed

☐

5

4. Ethnic / Social group

Black

☐

1

White

☐

2

Coloured

☐

3

Indian

☐

4

Other

☐

5

5. Are you religiously orientated?

Yes

☐

1

No

☐

2

(6)

(7)

(8)

(9)

(10)

For office use only

6. With which of the following religious groups do you identify?

- | | | |
|----------------|--------------------------|---|
| Non | ☐ | 1 |
| Christian | ☐ | 2 |
| Roman Catholic | ☐ | 3 |
| Islam | ☐ | 4 |
| Muslim | ☐ | 5 |
| Jewish | ☐ | 6 |
| Hindu | ☐ | 7 |
| Other | ☐ | 8 |

(11)