

**THE INFLUENCE OF OPTIMISM AND PESSIMISM ON THE PSYCHO-
PHYSICAL WELLNESS OF LEARNERS IN GRADES
8 – 12.**

**RADEBE
*SITIMELA JOSEPH***

STD; HED; B. Ed.

**A dissertation submitted in fulfilment of the requirements of the
Magister Educationis in the School of Educational Sciences at the Vaal
Triangle Campus of the North-West University**

Study leader: Dr N.J.L. MAZIBUKO

**North-West University
2004**

**NORTH WEST UNIVERSITY
VAAL TRIANGLE CAMPUS**

ACKNOWLEDGMENTS

This study was made possible with the assistance of a number of individuals to whom I am very grateful. The researcher would like to thank the following people sincerely:

I wish to express my most sincere gratitude to:

- **Dr N.J.L. Mazibuko**, my most esteemed supervisor, for his constant guidance, inspiration, enduring support, formative criticism, commitment, unfailing and zealous assistance and excellent supervision. May God bless him richly!
- **Prof. L.M. Vermeulen**, for encouraging me through thick and thin to study hard.
- **Ms. A. Geldenhuys and library staff members**, for editing my bibliography and for their excellent help with necessary information.
- **Ms. D. Kocks**, for her excellent editing of this work. God bless her to see more, happy days of her life.
- **Virginia**, my wife and darling who inspired and stood by me, encouraged and supported me, through all the stress. I love you more than words can explain. I will love you till death do us part.
- **Busisiwe and Ntokozo** my children, for their understanding when I couldn't be there for them. Your inquisitiveness about my progress gave me courage.
- **My colleagues and all my friends in the Lord**, for sticking close through it all.
- Above all, **God the Almighty Father, My Heavenly Father**, the **Author** and the **Finisher** of our being. To **Him** all **Glory** and **Power**, for **His** love and the good life throughout the years during which I was busy with this research.

ABSTRACT

THE INFLUENCE OF OPTIMISM AND PESSIMISM ON THE PSYCHO-PHYSICAL WELLNESS OF LEARNERS IN GRADES 8 – 12

The aim of this study was to assess secondary school learners' optimistic and pessimistic orientations and the influence they have on their physical and psychological wellness.

In the empirical investigation, a survey was conducted on the influence of optimistic and pessimistic orientation on the psycho-physical wellness of learners in secondary schools in the Vaal Triangle in Gauteng Province. Optimism and pessimism were investigated, using the Life Orientation Test - Revised (LOT- R) of Scheier, Carver and Bridges (1994). Physical and psychological wellness were investigated, using the General Health Questionnaire (GHQ) of Goldberg and Hillier (1991).

Findings from the literature indicate that optimistic learners believe that the future holds positive opportunities with successful outcomes and this optimism is related to active, persistent, health-oriented coping, while pessimism is linked to more emotional distress, health concerns and negative coping. Pessimistic learners, on the other hand, are more stressed, depressed, anxious and lonely. They have more health concerns and poorer health during their teen years. In terms of coping strategies, pessimism has been related to the use of denial, substance abuse and disengagement. These types of coping behaviour seem to represent a giving-up response.

The results of the empirical research showed that, the majority of respondents were feeling perfectly well and in good health; did not need any good tonic; did not feel run down and out of sorts; were not feeling ill; they were not getting a feeling of tightness or pressure in their heads; did not have hot or cold spells; did not lose much sleep over worry; did not have difficulty in staying asleep; were not getting edgy and bad-tempered;

were not getting scared or panicky for no good reason; nothing was getting them down; and were not feeling nervous and strung-up all the time.

The majority of respondents also reported that they were managing to keep themselves busy and occupied; they were taking the same time as usual in doing things; they were satisfied with the good way they had carried out their tasks; they felt they were playing a useful part in things; they were capable of making decisions about things; they were able to enjoy their normal day-to-day activities more than usual; they were not thinking of themselves as worthless persons; they did not feel that life was entirely hopeless; they felt that life was worth living; and they did not have nerve problems; they still wanted to live.

Furthermore they usually expected the best in uncertain times; it was easy for them to relax; they were always optimistic about their future; they enjoyed their friends a lot; it was important for them to keep busy; they always expected things to go their way; they did not get upset too easily; they rarely counted on bad things happening to them; they expected more good things to happen to them than bad.

This study showed that most learners in the Vaal Triangle area are healthy and optimistic about their future and that there is a strong relationship between psycho-physical wellness and optimism.

OPSOMMING

DIE INVLOED VAN OPTIMISME EN PESSIMISME OP DIE PSIGOFISIESE WELSTAND VAN LEERDERS IN GRADE 8 – 12

Die doelwit van hierdie studie was om die optimistiese en pessimistiese oriëntasies van leerders aan hoërskole en die invloed daarvan op hul fisiese en psigologiese welstand te bepaal.

In die empiriese ondersoek is 'n opname gedoen van die invloed van optimistiese en pessimistiese oriëntasies op die psigofisiese welstand van hoërskool-leerders in die Vaaldriehoek in die Gauteng Provinsie. Optimisme en pessimisme is ondersoek met behulp van die Life Orientation Test – Revised (LOT – R) van Scheier, Caver en Bridges (1994). Fisiese en psigologiese welstand is ondersoek met behulp van die General Health Questionnaire (GHQ) van Goldberg en Hillier (1991).

Bevinding vanuit die literatuur dui daarop dat optimistiese leerders glo dat die toekoms positiewe geleenthede met suksesvolle uitkomst bied en hierdie optimisme word verbind met aktiewe, volhardende, gesondheids-georiënteerde coping, terwyl pessimisme verbind word met meer emosionele ang, gesondheids-bekommernis en negatiewe coping. Pessimistiese leerders is, daarenteen, meer gespanne, depressief, angstig en eensaam. Hulle het meer gesondheidsprobleme en swakker gesondheid in hul tienerjare. Ten opsigte van coping-strategieë, is pessimisme al in verband gebring met ontkenning, middele-misbruik en onttrekking. Hierdie tipes coping-gedrag verteenwoordig blykbaar die gewonne gee van die stryd.

Volgens die bevindinge van die empiriese navorsing verklaar die meerderheid repondente dat hulle heeltemal fiks en gesond voel; hulle benodig nie 'n goeie tonikum nie; hulle voel nie afgemat en omgekrap nie; hulle voel nie siek nie; hulle ervaar nie 'n styfheid of drukking in die kop nie; hulle slaap nie sleg weens kommer nie; hulle sukkel nie om aan die slaap te bly nie; hulle voel nie gedurig gespanne nie; hulle word nie prikkelbaar en humeurig nie; hulle word

nie sonder goeie rede bang of paniekerig nie; niks kry hulle onder nie; en hulle voel nie die heeltyd senuweeagtig en opgewerk nie.

Die meerderheid repondente verklaar ook dat hulle daarin slaag om besig te bly; hulle werk teen hul gewone spoed; hulle is tevrede met hul goeie werkverrigting; hulle voel dat hulle 'n bruikbare rol vervul; hulle is daartoe in staat om besluite te neem; hulle kan hul normale daaglikse aktiwiteite meer as gewoonlik geniet; hulle beskou hulle self nie as waardelose mense nie; hulle dink nie die lewe is heeltemal sonder hoop nie; hulle voel die lewe is die moeite werd; hulle het nie senuwee-probleme nie; hulle wil nog lewe.

Verder verwag hulle gewoonlik die beste in onsekere tye; dit is maklik vir hulle om te ontspan; hulle is altyd optimisties oor hul toekoms; hulle geniet hul vriende baie; dit is vir hulle belangrik om besig te bly; hulle verwag altyd dat sake vir hulle sal regloop; hulle raak nie te maklik ontsteld nie; hulle verwag selde dat iets slegs hulle sal tref; hulle verwag dat meer goeie as slegte goed hulle sal tref.

Hierdie studie het aangetoon dat die meeste leerders in die Vaaldriehoek-gebied optimisties is oor hul toekoms en dat daar 'n sterk verwantskap bestaan tussen psigofisiese welstand en optimisme.

TABLE OF CONTENTS

Acknowledgements	i
Abstract	ii
Opsomming	iv
List of tables	x
Appendices	97

CHAPTER 1

ORIENTATION

1.1	Introduction and statement of the problem	1
1.2	Aims of study	5
1.3	Methods of investigation	5
1.3.1	Literature study	5
1.3.2	Empirical research	5
1.4	Target population	6
1.5	Accessible population	6
1.6	Sample	6
1.7	Analysis of data	6
1.8	Chapter division	6

CHAPTER 2

THE INFLUENCE OF OPTIMISM AND PESSIMISM ON THE PSYCHO-PHYSICAL WELLNESS OF ADOLESCENTS

2.1.	Introduction	7
2.2	Theoretical framework	8
2.2.1	The social dimension	10
2.2.2	The occupational dimension	11
2.2.3	The spiritual dimension	11
2.2.4	The physical dimension	12

2.2.5	The intellectual dimension	13
2.2.6	The emotional dimension	14
2.3	Salutogenic paradigm	16
2.4	Fortigenic paradigm	16
2.5	Pathogenic paradigm	16
2.6	Definition of concepts	16
2.6.1	Optimism	17
2.6.2	Pessimism	19
2.6.3	Adolescence	19
2.6.4	Resilience	20
2.6.5	Hardiness	21
2.7	The nature of optimism and pessimism in adolescents	22
2.8	The relationship between optimism, pessimism, psychological and physical wellness of adolescents	34
2.9	Factors that promote wellness and psycho-physical wellness	42
2.9.1	Empowerment	42
2.9.2	Parents and educators should in partnership develop optimism, humour and faith in their children and learners	43
2.9.3	Cognitive training technique should be applied by schools	47
2.9.4	Developing a positive mental attitude through self-talk	47
2.9.5	Schools should create a motivating climate	49
2.9.6	Self-perceived aspect of health and mental health	50
2.9.7	Health needs	52
2.9.8	Mental health needs	52
2.9.9	Perceived welfare needs	53
2.10	Positive mental health	54
2.10.1	Affect, happiness and life satisfaction	54
2.10.2	Subjective wellness and psychological distress	55
2.11	Negative mental health	56
2.11.1	Mental ill-health, psychological distress and mental disorders	57
2.11.2	Models of mental disorders	58
2.11.3	The challenge set by mental ill-health	59
2.12	Sense of personal control	59
2.12.1	Definition of personal control	59

2.12.2 The locus of control	60
2.12.3 Measurement of personal control	61
2.12.4 Effects of sense of personal control	61
2.13 The relationship between optimism and positive psychology	62
2.14 The Influence of optimism on coping and perceived quality of life	65
2.15 Validity between optimism and pessimism	66
2.16 Conclusion	69

CHAPTER 3

EMPIRICAL DESIGN

3.1 Introduction	70
3.2 Aims of the research	70
3.3 Research methods and choice of the instrument	70
3.3.1 Questionnaires (Quantitative)	71
3.3.2 Interviews (Qualitative)	71
3.4 Description of the population	72
3.5 Method of random sampling	72
3.5.1 Random sampling size	72
3.6 Covering letter	73
3.7 Procedure	73
3.8 Measuring instruments	74
3.9 General Health Questionnaire (GHQ)	74
3.9.1 Rationale and development of the General Health Questionnaire	74
3.9.2 Description of the General Health Questionnaire	75
3.9.3 Nature, administration and interpretation of this questionnaire	75
3.9.4 Reliability and validity of this questionnaire	75
3.9.5 Motivation of use of this questionnaire	75
3.10. Life Orientation Test (LOT-R)	75
3.10.1 Rationale and development of the Life Orientation Test-Revised	75
3.10.2 Description of the Life Orientation Test-Revised	76
3.10.3 Nature, administration and interpretation of this questionnaire	77

3.10.4 Reliability and validity of this questionnaire	77
3.10.5 Motivation of use of this questionnaire	77
3.11 Conclusion	77

CHAPTER 4

RESULTS AND INTERPRETATIONS

4.1 Introduction	78
4.2 Quantative research	78
4.2.1 Descriptive statistics and reliability indices for all scales and sub-scales	78
4.2.2 Correlation matrix	79
4.2.2.1 Optimism, pessimism and physical wellness	79
4.2.2.2 Optimism, pessimism and physical wellness	80
4.3 Exploratory factor analysis	80
4.3.1 Analysis and interpretation	82
4.3.2 Analysis and interpretation	84
4.3.3 Analysis and interpretation	86
4.4 Qualitative research	86
4.4.1 Research results of GHQ	87
4.4.2 Research results (LOT-R)	89
4.5 Conclusion	93

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1.	Introduction	91
5.2	Summary of conclusions	91
5.2.1	Conclusion from the literature study	91
5.3	Conclusion from the empirical investigation	92
5.4	Limitations of the study	94
5.4.1	Measuring instrumentation	94
5.4.2	Available literature	94
5.4.3	Language medium	95
5.5	Recommendations	95

LIST OF TABLES

Table 1	Correlation coefficients	79
Table 2	Exploratory factor analysis	80
Table 3	Eigenvalues (LOT-R)	81
Table 4	Strong factors	82
Table 5	Eigenvalues (GHQ)	83
Table 6	Mean, Standard Deviation and Alpha	83
Table 7	Mean, Standard Deviation and Alpha	84
Table 8	Cronbach Alpha	84

APPENDICES

APPENDIX A	General Health Questionnaire	99
APPENDIX B	Life Orientation Test-Revised	104

BIBLIOGRAPHY	105
---------------------	-----

DEDICATION

This dissertation is dedicated to both my late parents, Mthimkhulu and Ntsoaki and my late brother David, I will not forget their advices and their efforts in making me what I am today.

Chapter 1

Orientation

1.1 Introduction and statement of the problem

Optimistic life orientation is fundamental to empowering learners to lead meaningful lives in a changing society that demands rapid transformation. It is an integral part of the holistic academic learning and healthy psychological and physical development of learners and in caring for their intellectual, physical, personal, social, spiritual and emotional growth, and for the way these facets work together (Williams & Reils, 2001:16).

The way learners pessimistically or optimistically look at life can determine:

- how they feel physically and psychologically ;
- how they perform academically; and
- how well they relate to others.

Optimistic learners view favourable events as permanent, pervasive and within their control while pessimistic learners see favourable events as temporary, specific and outside their control (De Vos, 2001: 41; Dougall, Hyman, Hayward, McFeeley & Baum, 2001:226).

Chang (2000:34) describes optimism and pessimism as psychological dimensions in which optimism represents a positive bias in perceptions and expectations in favour of positive features in life, while pessimism represents a negative bias. Optimistic learners have a set of epistemological beliefs such as that the world is good and that all human beings who inhabit it must work hard to achieve more in life. These learners believe that the future holds positive opportunities with successful outcomes for them (Diener, Suh, Lucas & Smith, 1999:277). This enables them to approach the world in a proactive and positive manner. On the other hand, pessimistic learners tend to look at the world and future experiences in a reactive and negative fashion. They view the world as a place of bad experiences and events (Burke, Joyner, Czech & Wilson, 2000:129).

Optimistic learners think of optimism in terms of positive thinking such as asserting that a glass is half full, rather than half empty (Christensen & Jacobson, 2000:382). Optimism also affects the way learners think about the causes of good and bad things that happen to them (Oishi, Wyer & Colcombe, 2000: 444). Optimistic learners bias their interpretations of events in a way that protects their egos and gives them hope to keep on trying. Pessimistic learners have a negative or a neutral bias (O'Nwuegbuzie & Daley, 1999:534) that leads to their feeling hopeless and powerless about the future.

When good things happen, optimistic learners tend to see them as important, for example: "Seeing that flower made my day". When bad things happen, optimistic learners tend to say that it was really not important anyway (Antoni, Lehman, Kilbourn, Boyers, Culver, Alferi, Yount, McGregor, Arena Harris, Price & Culver, 2000:23). Pessimistic learners, on the other hand, discount the importance of positive events in the way some people brush off a compliment about their clothes, with: "Oh, this old thing"... and exaggerate the importance of negative events with thoughts such as "but I know there is a spot on it," even if no-one else sees it (Brickey, 2001:55).

Cameron, Banko and Pierce (2001:36) found in their research that the most important terminal values for the optimistic learners are inner harmony, family security, freedom and true friendship, along with happiness, independence, honesty, courage and broad-mindedness. According to Carver and Scheier (2002:307) optimistic learners reported a comfortable life, an exciting life, a world of beauty, national security, self-control, cleanliness, ambition and obedience to be the least important terminal values. For pessimistic learners, Perczek, Carver, Prince and Pozo-Kaderman (2000:63) found that the most important terminal values were salvation, family security, happiness, self-respect, independence, honesty, forgiveness and courage. For pessimistic learners, intellect, imagination, obedience and ambition were the least important instrumental values. They, also, found significant differences between optimistic and pessimistic learners with regard to the terminal values of freedom and salvation, and with regard to the instrumental values of broad-

mindedness, courage, imagination and obedience (Dickow & Molter, 2002:178).

Carstensen, Mayrs and Pasupathi (2000:644) found that learners who hold an optimistic outlook on life demonstrate higher levels of motivation, persistence and performance. D'Amico and Cardaci (2003:746) found optimism to be positively associated with maladaptive coping strategies such as denial, behavioural disengagement and mental disengagement. Optimism and pessimism have also been shown to relate to different patterns of preferred defence mechanisms like ritual occupation, goal occupation, passive entertainment, anger, blame shifting, counter-attack and reflective attributions (Daaleman, Cobb & Frey, 2001:152). Various researchers indicate that a learner's positive orientation towards life (optimism) results in the ability to manage difficult academic situations with less subjective stress and with less negative impact on psychological and physical wellness (Orlicka, Lindenberg, Steverink & Verbrugge, 1999:81; Blanton, Axsom, McClive & Price, 2001:1628). Optimistic learners generally accept reality more readily and try to take proactive and constructive steps to solve their problems, whereas pessimistic learners are more likely to engage in avoidance behaviour, and tend to give up their efforts to achieve life goals easily (Dahme, Eichstaedt & Rudolph, 2003:66).

Day, Maltby and Macaskill (1999:971) and Cramer (2000:636) produced scientific evidence that links optimism to good psychological and physical wellness, and pessimism to poor psychological and physical wellness. They studied the adjustment of anxious and depressed learners and found that optimism was significantly related to subjective wellness before examinations. Similarly, Csikszentmihalyi (2003:166) reported a strong positive correlation between optimism and quality of life in distressed learners. The optimistic learners in Csikszentmihalyi's (2003:167) study were more likely than those who were less optimistic to exercise vigorously, work hard at school and engage normally in their social and sexual activities. In examining the relationship between dispositional optimism and frequency of physical symptoms during four weeks before final examinations in a group of school

learners, Scheier and Carver (1999:59) found that learners who were optimistic reported fewer physical wellness problems. Dayan, Doyle and Markiewicz (2001:767) found that optimistic learners reported less stress and fewer physical symptoms than did non-optimistic learners. Optimistic learners were by and large physically indisposed less often, made fewer visits to the doctor, had better stress resistance and stronger immune systems, and lived longer (Owens & Goodney, 2000:17).

Lawrence, Carver and Scheier (2002:789) attempted to influence optimism and pessimism scores by using a mood-inducing procedure. Learners were divided into hearing-heightening, depressing and neutral music before being assessed. Results of their study found that the type of music experienced had no effect on optimism or pessimism. These findings suggested that optimism and pessimism might be stable traits that are not affected by current mood states. De Vos (2001:44) suggests that an individual need not be exclusively optimistic or pessimistic to show the affective mood s/he is in. Depending on the situation, many learners are capable of switching from optimism to pessimism (Brissette, Scheier & Carver, 2002:108). An example may be found in a learner who is optimistic in so far as a personal relationship is concerned, but pessimistic with regard to career prospects. In the current economic climate, a learner may be optimistic in so far as matric results are concerned, but pessimistic as to employment prospects. Danziger, Carlso and Henly (2001:49) found that learners could show both optimistic and pessimistic life orientations.

The above findings are the results of research and surveys which were conducted in America and Europe and very little, if any, research has been conducted in South Africa to investigate the influence of optimistic and pessimistic orientations on the psycho-physical wellness of learners in the secondary schools. Such a research is necessary in a country that is still reconstructing from the injustices of the past apartheid regime where the majority of the adolescents were disadvantaged and devoid of opportunities to actualize their latent potentialities. Failure to actualize and unfold one's latent potential ties could blur one's optimistic orientations and subsequently lead to

pessimistic orientations and poor physical and psychological health (Chang, 2000:174).

Questions that now come to mind are the following:

- What influence do optimism and pessimism have on the psychological and physical wellness of learners at secondary schools?
- How can schools help these learners to instigate and sustain optimistic orientations systematically oriented towards the attainment of psychological and physical wellness?

1.2 Aims of Study

The aims of this study are to:

- assess secondary school learners' optimistic and pessimistic orientations and the influence they have on their physical and psychological wellness; and
- suggest guidelines which can assist educators and school governing bodies to activate and sustain learners' optimistic orientations systematically oriented towards the attainment of physical and psychological wellness.

1.3 Methods of Investigation

This research consists of a literature study and empirical research:

1.3.1 Literature study

International and national educational journal articles, papers presented at professional conferences, dissertations and theses written by graduate students and reports compiled by school researchers, university researchers and government agencies providing information on research in the relationship between optimism, pessimism and psychological and physical wellness among adolescents will serve as both primary and secondary sources.

1.3.2 Empirical research

In addition to the literature study, this research, also, used both quantitative and qualitative empirical investigations to collect data on the influence of optimism and pessimism on the psychological and physical wellness of the sample of learners involved in this research. The quantitative empirical data were collected using the Life Orientation Test-Revised questionnaire (LOT-R) of Scheier, Carver and Bridges (1994) and the General Health Questionnaire (GHQ) of Goldberg and Hillier (1979). The findings from the literature show that these scales are satisfactory, reliable and valid for both Western and South African population groups (Dudgeon, Mallard, Oxenham & Fielder, 2002:119). The follow-up qualitative empirical data were collected through the interviews.

1.4 Target population

The target population included all secondary school learners in rural, farm and urban areas in the Gauteng Province.

1.5 Accessible population

There are a large number of secondary schools serving communities in the Gauteng Province, which would have taken a long period to cover and would have unaffordable financial implications. The target population was, therefore, limited to the Vaal-Triangle's rural, farm, township and suburban secondary school learners.

1.6 Sample

A random sample of $n = 788$ learners from 30 secondary schools in the Vaal-Triangle area of Gauteng Province was drawn for quantitative survey and $n=40$ for qualitative survey.

1.7 Analysis of data

In order to determine the influence of optimism and pessimism on the psychological and physical wellness of learners at secondary schools, the data obtained from the target population through quantitative empirical research were analysed with the aid of the SPSS - X computer programme.

1.8 Chapter division

Chapter 1: Introduction and statement of the problem.

Chapter 2: The influence of optimism and pessimism on the psycho-physical wellness of adolescents.

Chapter 3: Empirical design.

Chapter 4: Data analysis and results.

Chapter 5: Summary, recommendations and conclusion.

The next chapter discusses, by means of a literature review, the influence of optimism and pessimism on the psychological and physical wellness of adolescents.

Chapter 2

The Influence of Optimism and Pessimism on the Psycho-physical Wellness of Adolescents

2.1 Introduction

Optimism has long been recognised as a positive attribute of both psychological and physical wellness. In their studies, Burke, Joyner, Czech and Wilson (2000:128) found that learners with an optimistic outlook on life enjoy better psychological and physical wellness, are more motivated, are less prone to stress, depression and anxiety and have higher levels of achievement at school. Optimistic learners view the causes of positive events as long-term due to their own efforts to being and generalisable across situations. These learners see negative events as being temporary due to external causes and limited to specific occasions (DeJonge, Chamrathirong & Tran, 2002:842). The reverse is true of pessimistic learners who interpret negative events as permanent, personal and pervasive, and positive events as transient, external and ephemeral (McCabe & Douglas, 2000:67). In the classroom, pessimistically oriented learners are more likely to be prone to stress, depression and anxiety, to discount their successes, and when confronted with failure, they are likely to give up more easily (Chang, 2000:176). In response to repeated failures, pessimistic learners display characteristically passive learned helplessness behaviours in the classroom by decreasing their efforts, ceasing to try or simply opting out altogether (Daskalopoulou, Dikeos, Papadimitriou, Souery, Blairy, Massat, Mendlewicz & Stefanis, 2002:268).

This chapter firstly explores the theoretical framework of wellness and health and defines optimism, pessimism, psychological and physical wellness and other related concepts which will be used in this research, secondly discusses the nature of optimism and pessimism in adolescents and thirdly investigates,

by means of a literature study, the influence of relationship between optimism and pessimism on the psychological and physical wellness of adolescents.

2.2 Theoretical framework

It is necessary to, in this research, distinguish health from wellness (cf.2.3.5 below) because in most cases health, as well as disease, illness, and wellness, are terms that are used without considering their precise definitions (Davies, Desouza & Frank, 2003:289). Various researchers postulate that health cannot be simply regarded as being the absence of a disease, nor as thinking of illness and disease as being interchangeable terms (Lando & Hatsukami, 1999:1797; McCaul & Wold, 2000:44). In fact, health and disease are not simply opposites, and disease and illness do not mean the same thing (DeJonge, Bosma, Peter & Siegrist, 2000:1319).

Dickens, Jackson, Tomenson, Hay and Creed (2003:211) define health, in a Western way, as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. This definition obviously reflects the hygienic notion that health is a positive state. This approach to the definition of health reflects the thinking of people of non-Western cultures such as those of the Hindu culture who believe that health is harmony, which is being at peace with the self, the community, God and the cosmos (Oppikofer, Albrech, Schelling & Wettstein, 2002:43). This idea combines both balance with the outside world and balance within the person as necessary for the achievement and maintenance of health (Orsmond, Seltzer, Krauss & Hong, 2003:259).

When there is a balance between the individual and his total physical and social environment, as well as a balance between the supernatural and man, the result is good health; and any form of upset in this equilibrium causes disease (Wrosch, Scheier, Caver & Schultz, 2003:17).

Health is characterized as the general condition of the body or mind with reference to soundness or vigour, but also as freedom from disease or ailment. A more functional definition is that proposed by Bosma, Van de Mheen and Mackenbach (1999:18), namely "the well-working of the organism

as a whole". Other definitions of health have stressed life functioning, for example seeing health as the state of optimum capacity for effective performance of valued tasks (Drigotas, Rusbult & Verette, 1999:389; Zhang & Postiglione, 2001:1333) or as personal fitness for survival and self-renewal, creative social adjustment and self-fulfilment (Zumbo & Michalos, 2000:125; Demause, 2003:331).

Dalbert, Lipkus, Sallay and Goch (2001:567) see health as a human condition with physical, social and psychological dimensions, each characterized on a continuum with positive and negative poles. They associate positive health with a capacity to enjoy life and to withstand challenges and not merely the absence of a disease. They further associate negative health with morbidity and, in the extreme, with premature mortality.

In this study, optimal health is defined as a balance of physical, emotional, social, spiritual and intellectual health. Health is regarded as a positive and balanced state characterized by the best achievable physical, psychological, emotional, social, spiritual and intellectual levels of functioning at a given time, the absence of disease or the optimal management of chronic disease, and the control of both internal and external risk factors for both diseases and negative health conditions.

Risk factors are some environmental elements and personal habits, or conditions of living that increase the likelihood of developing a particular disease or negative health condition at some time in the future (Diener, Lucas, Oishi & Suh, 2002:439).

Wellness is a way of life, a lifestyle a person designs to achieve his/her highest potential for wellness. Wellness is a process, a developing awareness that there is no end point, but that health and happiness are possible in each moment, here and now (Durkin & Paxton, 2002:997). Wellness is the positive acceptance of oneself. Wellness is the interaction of the body, mind, and spirit and the appreciation that everything people do, think, feel and believe has an impact on the state of health (Aspinwall & Staudinger, 2003:255).

Wellness is an active process of becoming aware of and making choices toward a more successful existence. The key words here are process, awareness, choices and success (Dzuka & Dalbert, 2000:68). Process means that individuals never arrive at a point where there is no possibility of improving. Awareness means that individuals are by their nature continuously seeking more information about how they can improve. Choices mean that individuals have considered a variety of options and select those that seem to be in their best interest. Success is determined by each individual to be their personal collection of accomplishments for their life (Lando, Thai, Murrat, Robinson, Jeffery & Sherwood, 1999:592).

Diener, Suh, Lucas and Smith (1999:277) state that wellness is multidimensional and encompasses the following six dimensions:

2.2.1 The social dimension

The social dimension encourages contributing to one's human and physical environment for the common welfare of one's community (Goodyer, Herbert & Tampling, 2000:143). It emphasizes the interdependence with others and with nature. It includes the pursuit of harmony in one's family (Klein, 2002:196).

As one travels a wellness path socially, one will become more aware of one's importance in society, as well as of the impact one has on nature and one's community. One will take an active part in improving one's world by encouraging a healthy living environment and initiating better communication with those around. One will actively seek ways to preserve the beauty and balance of nature along the pathway. As one proceeds on one's journey, one will discover many things – one will discover that one has the power to make decisive choices to enhance personal relationships, important friendships, the community, the environment and, ultimately, the world (Lawrence, Carver & Scheier, 2002:789).

As one travels the wellness path, one begins to believe that it is socially better to contribute to the common welfare of others, than to think only of oneself

and that it is better to live in harmony with others and the environment than to live in conflict with them (Oliff, 1999:12).

2.2.2 .The occupational dimensions

The occupational dimension is involved in preparing for work in which one will gain personal satisfaction and find enrichment in one's life through work. Occupational development is related to attitudes about work (Dzuka & Dalbert, 2000:733).

Travelling a path toward occupational wellness will contribute to one's unique gifts, skills and talents for work that is personally meaningful and rewarding. This will convey values through one's involvement in both paid and unpaid volunteer activities, which is that are gratifying. One person will know when one is on the correct path for career wellness, when one's work and hobbies become exciting (Radcliffe & Klein, 2002:838) On one's journey, one will begin to value the importance of not only one's own personal gratification, but also of the contribution to the well-being of the community at large. The choice of profession, job satisfaction, career ambitions and personal performance are all important components of a path's terrain (Oyserman, Coon & Kemmelmeir, 2002:54).

As one travels the wellness path, one will begin to believe that it is better occupationally to choose a career which is consistent with one's your personal values, interests, and beliefs than to select one that is unrewarding, and that it is better to develop functional, transferable skills through structured involvement opportunities than to remain inactive and uninvolved (Dayan, Doyle & Markiewicz, 2001:782).

2.2.3 The spiritual dimension

The spiritual dimension involves seeking meaning and purpose in human existence. It includes the development of a deep appreciation for the depth and expanse of life and natural forces that exist in the universe (Mattis, 2002:309).

Weinstein and Sandman (2002:510) found that as one begins to develop the spiritual dimension of one's life, taking the wellness path spiritually, one will start asking the question, "Who am I and what is meaningful in my life?" One will observe the scenery along the path, the world around one's with appreciation and wonderment. One will ask many questions about the scenery, the world, as well as everyday experiences, and learn to value that which cannot be completely understood. Mattis and Jagers (2001:522) found that growing spiritually, one will try to find peaceful harmony between internal personal feelings and emotions, and the rough and rugged stretches of one's path. While travelling the path, one may experience many feelings of doubt, despair, fear, disappointment and dislocation, as well as feelings of pleasure, joy, happiness and discovery - these are all important experiences and components of the terrain of one's value system. One will know one is becoming spiritually well when one's actions become more consistent with one's beliefs and values (Stuart, & Blanton, 2002:4). On this excursion, one will continually think about and integrate one's experiences and beliefs with the experiences and beliefs of those around one's. With this valuable information, one will be able to engage in the formulation of your worldview, and one's system of values and goals.

As one travels the wellness path, one will begin to believe that it is better, spiritually to ponder the meaning of life for oneself and to be tolerant of the beliefs of others, than to close one's mind and become intolerant, and that it is better to live each day in a way that is consistent with one's values and beliefs, than to do otherwise and feel untrue to oneself (Day, Maltby & Macaskill, 1999:97).

2.2.4 The physical dimension

Antony, Lehman, Kilbourn-Boyers, Culver, Alfrere, Yount, McGregor, Arena, Harris, Prince and Carver (2001:25) found that the physical dimension encourages cardiovascular flexibility and strength and also encourages regular, physical activity. Physical development encourages knowledge about food and nutrition and discourages the use of tobacco, drugs and excessive alcohol consumption. It encourages consumption and activities which

contribute to high-level wellness, including medical self-care and appropriate use of the medical system.

Dempster, Donnelly and Fitzsimons (2000:46) posit that, as one travels the wellness path, one will strive to spend more time each week building endurance, flexibility and physical strength. Sometimes the path may become narrow and treacherous - one will become more aware of the hazards around one and will begin to take safety precautions so that one may travel this path successfully. The physical dimension of wellness entails taking responsibility and caring for minor illnesses and also knowing when professional medical attention is needed. McCaul and Mullens (2000:208) found that by travelling the wellness path physically, one will be able to monitor one's own vital signs and understand his/her body's warning signs. One understands and appreciates the relationship between healthy nutrition and how one's body performs. The physical dimension provides almost immediate beneficial results - both physical and psychological. The physical benefits of looking good and feeling terrific most often lead to the psychological benefits of enhanced self-esteem, self-control, determination and a sense of direction (Lipkus, Klein & Rimer 2001:897).

As one travels the wellness path one will begin to believe that it is better, physically to consume foods and beverages that enhance good health, rather than those which impair it and that it is better to be physically fit than to be out of shape.

2.2.5 The intellectual dimension

The intellectual dimension encourages creative, stimulating mental activities. An intellectually well person uses the resources available to expand his/her knowledge to improve skills, along with expanding potential for sharing with others. An intellectually well person uses the intellectual and cultural activities in the classroom and beyond the classroom, combined with the human resources and learning resources available within the university community and the larger community (Aspinwall & Brunhart, 2000:198).

Travelling a wellness path intellectually, one will explore issues related to problem-solving, creativity and learning. One will spend more time appreciating and thinking about the scenery along the path - pursuing interests, reading books, magazines and newspapers. One will discover a natural interest in keeping abreast of current issues and ideas. As one develops one's intellectual curiosity, one will actively strive to expand and challenge one's mind with creative endeavours. On one's path, one will begin to see problems and challenges not as stumbling blocks, but as stepping-stones (Kenler, Karkowski & Prescott, 1999:837).

As one travels the wellness path, one will begin to believe that it is better, intellectually to stretch and challenge one's mind with intellectual and creative pursuits, than to become self-satisfied and unproductive, and that it is better to identify potential problems and choose appropriate courses of action based on available information, than to wait, worry and contend with major concerns later (McCaul, Johnson & Rothman, 2002:44).

2.2.6 The emotional dimension

The emotional dimension emphasizes an awareness and acceptance of one's feelings. Emotional wellness includes the degree to which one feels positive and enthusiastic about oneself and life. It includes the capacity to manage one's feelings and related behaviours, including the realistic assessment of one's limitations, development of autonomy and ability to cope effectively with stress. The emotionally well person maintains satisfying relationships with others (Zauszniewski & Rong, 1999:287).

Blanton, Axsom, McClive and Price (2001:1627) found that as an emotionally well person, one would be aware of and accept a wide range of feelings in oneself and others. One will be able to express feelings freely and manage feelings effectively. One will be able to arrive at personal choices and decisions based upon the synthesis of feelings, thoughts, philosophies and behaviour. On the wellness path, one will live and work independently while realizing the importance of seeking and appreciating the support and assistance of others. One will be able to form interdependent relationships

with others, based upon a foundation of mutual commitment, trust and respect. One will take on challenges, take risks and recognize conflict as being potentially healthy. Managing one's life in personally rewarding ways, and taking responsibility for one's actions, will help one to see life as an exciting, hopeful adventure (Oishi, Wyer & Colombe, 2000:436).

As one travels the wellness path, one will begin to believe that emotionally, it is better to be aware of and accept one's feelings, than to deny them and that it is better to be optimistic in one's approach to life than pessimistic (Dunn, 2002:218).

The constructs health and wellness, to a certain extent, have the same denotations and connotations, and can be used as synonyms (Demmer, 2001:487). However, for historical reasons, they also seem to differ.

Traditionally, in everyday use, because of the longstanding emphasis in human health on illness, and because science has thus far relegated health to the biological disciplines, the state of the art conceptualisation of health is that it is primarily concerned with the body (Ostir, Simonsick, Jasperm & Guralnik, 2000:355). Thus, health has become inevitably defined, negatively (using a medical model) as the absence of physical illness. In contrast, wellness is currently broadly construed (using the constructive eco-systemic model) as the upper-end of a continuum of holistic well-being in important life domains, including cognitive, emotional, spiritual, physical, social, occupational and ecological components (Dykstra, Buunk & Blanton, 2000:1741).

Indices of health in the Western world still focus on disease, illness, vulnerability, and risks (Caver & Scheier, 2002:306). This is an indication of the pervasiveness of the pathogenic paradigm, with a restricted focus on physical aspects. This peculiar state of affairs can be understood when one realises to what extent the pathogenic paradigm and perspective and a biological focus are entrenched in the Health Sciences, but one also realises that this is not the only possible perspective and paradigm.

2.3 Salutogenic paradigm

Delhey (2001:207) coined the construct salutogenesis (that is, the origins of health) and proposed the study of health instead of disease (referring primarily to physical health and disease). He sought to unravel the mystery of health and to learn how people manage stress and stay well (Mattis & Jagers, 2001:523).

2.4 Fortigenic paradigm

Oettingen and Mayer (2002:1198) proposed the more embracing construct fortigenesis, which means the origins of strength in individual, group and community levels in various contexts such as a sense of coherence, life satisfaction, positive self-esteem, humour, optimistic expectations, interpersonal skills, constructive coping skills, good quality parenting, positive role models, connection to value and faith systems, mentors in the world of work and education, and effective social policies. The focus from a fortigenic perspective is mainly on protective factors. It is also in line with calls from others in diverse fields of psychology and other disciplines for more attention on theoretical and empirical levels to strengths, resources and capacities of people (Seligman & Csikszentmihalyi, 2000:109).

2.5 Pathogenic paradigm

From pathogenic perspective, the focus is on health-related preventative research and practice, that is, mainly on risk factors, such as metabolic dysfunctions, infectious diseases, stress, negative affect (anxiety, depression, and hostility), behavioural problems, substance abuse, lack of social support, dysfunctional families, high crime neighbourhoods and poverty (Dubois & Tevendale, 1999:103). The pathogenic orientation is very explicit in the study of psychopathology and in clinical psychology as sub-disciplines in psychology.

2.6 Definition of Concepts

The following concepts are used in this research:

2.6.1 Optimism

The history of the concept of optimism as part of human nature can be found as far back as the early 17th century with the philosophical writings of Rene Descartes (Day & Maltby, 2003:99). However, it was not until the latter part of the 20th century that optimism was treated as a personality trait. The social learning theory of Deridder, Schreurs and Bensing (2000:145) social learning theory, and especially their generalized expectations (locus of control and trust), legitimized a link to personality in terms of individual behaviour and expectancies about the future. Olason and Roger (2001:756) argued that if a person perceives reinforcement as contingent upon his own behaviour, then the occurrence of either a positive or negative reinforcement would either strengthen or weaken the potential for that behaviour to recur. The internal-external locus of control scale (Rotter, 1966:2) was one of the first scales to measure individual generalized expectations.

Robinson and Worell (2002:198) viewed optimism as a person's explanatory style. Worell, Stilwell, Oakley and Robinson (1999:799) claimed that each person has a style of seeing causes and will usually apply it to their current situation. An optimistic person will explain bad events in a circumscribed way, with external, unstable and specific causes; whereas pessimistic persons will explain unfavourable events as internal, stable and global. This idea emerged from the theory of learned helplessness. Learned helplessness or extreme pessimism is a learned behaviour that leads a person to think that present actions will have no effect on future results. Optimism implies the opposite. While pessimism is associated with and leads to the incurring of negative outcomes, optimism is associated with and leads to the securing of positive outcomes (Williams & Riels, 2001:12).

Zhang and Norvilitis (2002:494) differentiate between big optimism, little optimism. Big optimism may be a biological tendency that produces a general state of vigour and resilience. On the other hand, little optimism may be the product of idiosyncratic learning that predisposes specific actions that are adaptive in concrete situations. The two types of optimism are no doubt correlated, but it is important to distinguish the difference between the two.

The reason being that the determinants of the two may be different and ways of encouraging them may therefore require different strategies (Dempsey, Dempster & Donnelly, 2000:47).

Zullig, Valois, Huebner, Oeltmann and Drane (2001:279) define optimism as:

- a doctrine or opinion that reality is essentially good, completely good or as good as it conceivably could be; and
- a doctrine that the goods of life overbalance the pain and evil of it and that life is preponderantly good.

It can also be defined as a life orientation in which a person takes a hopeful view of things (Mattis & Jagers, 2001:519). Olason and Roger (2001:758) define optimism in terms of the favourability of a person's generalized outcome expectancy. In other words, optimists expect things to go well and believe that future outcomes will be good rather than bad.

Optimistic learners, therefore, have a hopeful view or disposition, a tendency or inclination to expect a favourable outcome, a belief that the actual world is the best possible and a belief that good must ultimately prevail over evil. When confronted with misfortune, optimistic learners believe that failure is not their fault and that, with enough persistence and motivation, the circumstances will be overcome. Optimistic learners perform better at school and work, their psychological and physical wellness is better (often unusually good) and they may have greater concentration and longevity (Biernat & Vescio, 2002:68). Optimism, therefore, represents a bias in perceptions and expectations in favour of positive features in life.

Optimism is defined in this research as a set of beliefs that lead adolescents to approach the world in a proactive manner. Optimistic learners believe that the future holds positive opportunities with successful outcomes. Learners that hold an optimistic outlook in life have demonstrated a sound psychological and physical wellness and, as a result, showed higher levels of

academic motivation, persistence, and performance (Thompson, Anderson & Bakeman, 2000:198).

2.6.2 Pessimism

Pessimism is the tendency to take worst views or expect the worst outcome and the belief that the actual world is the worst possible one or that all things tend to be evil (Scheier, Carver & Bridges 2001:191). Pessimists give up more easily, think that bad events will last a long time and believe the worst about people around them. They are less likely to persevere, and they exhibit higher rates of stress, depression and anxiety (O’Gorman & Baxter, 2000:536).

Pessimism is defined in this research as a psychological dimension which represents a bias in perceptions and expectations in favour of negative features in life (Day, Kane & Roberts, 2003:461). Pessimistic learners tend to look at the world and future experiences in a negative fashion and view the world as a place of bad experiences and events (Cramer, 2000:638; Cowal, Shinn, Weitzman, Stojanovic & Labay, 2002:712).

2.6.3 Adolescents

Since this research deals with optimism, pessimism and psychological and physical wellness of adolescents (learners in grades 8 to 12), it is necessary to define the concept: adolescence.

Obrien (2003:13) defines adolescence as the growing-up period between childhood and maturity. It extends over a period of 10 years. It begins with the start of puberty (that is, the time at which the onset of sexual maturity occurs and the reproductive organs become functional). This is manifested in both sexes by the appearance of secondary sexual characteristics. For example, in boys they include the growth of facial and pubic hair and the breaking and deepening of the voice. In girls, it includes the growth of pubic hair, the start of menstruation and the development of the breasts. These changes are brought about by an increase in sex hormone activity due to stimulation of the ovaries

and testes by pituitary hormones. In girls, this stage of development usually begins at the age of about 12 and in boys at about 14 (Carels, Sherwood & Babyak, 1999:607).

Adolescence is the period of rapid physical and psycho-social changes, a period during which the youth become more aware of their bodies and become more introspective. It is also a period of optimal physical health as the youth have the lowest rates of disease and death in the western world. During this time, health appraisals are being shaped which may represent the youth's overall sense of psycho-social functioning more than their physical functioning (Kendler, Karkowski & Prescott, 1999:837).

In this research, this definition is adhered to, but the primary focus is on the early and middle stages of the period.

2.6.4 Resilience

Resilience is a term used to refer to resistance to psychiatric disorders in the face of adversities (Chen, Eaton & Gallo, 2000:575). Resilience is viewed as a process whereby people are able to rebound from adversity and carry on with their lives. Danner, Snowden and Friesen (2001:812) view resilience as a dynamic process greatly influenced by protective factors. Protective factors are specific competencies necessary for the resilience process to occur. Protective personal factors are not synonymous with pleasurable experiences. Protectiveness is determined by the effect of a factor rather than by its hedonic qualities. Protective factors may in fact be qualities of a person rather than of experiences. Moreover, protective factors may not be visible, except at a time of crisis or in the presence of a particular stressor (Orsmond, Seltzer, Krauss & Hong, 2003:263). Protective personal factors tend to influence a longitudinal chain of reaction through time. Infancy years are not determinative (Kendler, Karkowski & Perscott 1999:838). Resilient children have been shown by several studies to share important characteristics. They have good social skills, are friendly and are on good terms with peers and adults. Their temperament promotes positive relationships, they have strong self-esteem and they are often high achievers (Zakin, Solomon & Neria,

2003:819). Resilient children may often have compensating experiences and circumstances in their lives.

Demet, Martinet, Guillemin, Paysant and Andre (2003:481) identified academic education as a resilience factor of girls among immigrants to Israel. In their study, Delhey, Bohnke, Habich and Zapr (2002:164) found that resilient characteristics were related only to measures of social-behavioural functioning, not to wellness. According to the authors some apparently resilient learners may have good social-behavioural competency while still experiencing psychological pain. In their study on the impact of a disaster on the health of assistance workers, Zimmerman, Ramirez-Valles and Maton (1999:736) found a dose-response effect between exposure measured after the disaster and wellness, symptoms and illness at follow-up. Social supports modulated the effects of exposure on symptoms and wellness, whilst social supports and the personality style of resilience interacted to modulate the effects of exposure on illness

Competencies are the healthy skills and abilities that the individual can access and that may occur within the individual or the interpersonal or family environment. It is not an absolute concept, as resistance to stress is relative. The degree of resistance to stress varies across time, circumstances having both constitutional and environmental bases (Goodyear, Herbert & Tamplin, 2000:143). Resilience and perceived control are terms describing similar phenomena, all of which have something in common with the notion of personality trait (Orlick, 1999:345).

2.6.5 Hardiness

A broad array of personality features have been gathered under the term hardiness (a term close to or synonymous with resilience) to differentiate between people who get sick and those who do not get sick under stress (Frommberger, Stieglitz & Straub, 1999:178). Hardiness has the following three characteristics: Control, or beliefs about people's ability to influence events in their lives, Commitment, or one's involvement in activities, events and people in one's lives, and Challenge, or the tendency to view changes as

opportunities for growth, rather than as threats to security (Oroude & Capper, 2002:385).

2.7 The nature of optimism and pessimism in adolescents

Oosterwegel, Field, Hart and Anderson (2001:692) found that optimism is related to explanatory style. That is, the manner in which individuals explain how and why events unfold as they do. Crystallizing in adolescence, explanatory style can produce depressive symptoms in response to routine setbacks or resilience in the face of adversity. The pessimistic or optimistic explanatory styles developed in adolescence are crucial to interpretation of obstacles and achievements that will be encountered throughout life.

Deimling, Smeglia and Schaefer (2001:48) proposed that the genesis of pessimism or optimism can be related to three influences in adolescents' lives.

- Firstly, adolescents hear optimistic explanations for how events unfold, thus the adolescent will incorporate the explanations.
- Secondly, the form of criticism adolescents hear when they fail affects their development of optimism and pessimism.
- Thirdly, the occurrence of certain life events (early losses and traumas), especially the death of the mother of a young person who is in her early teens, may be related to the development of a pessimistic explanatory style. If the losses do not remit, the seeds of optimism may not take root (O'Kelly, 2002:36).

There is a growing body of knowledge regarding research into optimism and pessimism in adolescents (De Vos, 2001:43), which espouses differences between Asian-American and Caucasian learners in late adolescence on measures of optimism and depression. The Asian-American adolescents were less optimistic and reported more depressive symptoms than the Caucasians on the Beck Depression Inventory. The less optimistic Asian- Americans tended to use more problem avoidance and social withdrawal coping-

strategies than did the Caucasians. DeCremer and Oosterwegel (1999:331) correlated optimism measured by the Life Orientation Test (LOT) with coping measured by the sixty-itemed COPE scale. They found optimism to be correlated significantly with active coping, planning and positive re-interpretation.

DeRidder, Schreurs and Bensing (2000:135) demonstrated that anxiety reduced optimism in a sample of British adolescent learners. Learners who were in the midst of examinations were found to be more anxious and less optimistic than those who were no longer writing examinations. They concluded that negative affect in general and anxiety specifically may have a global effect on optimism and could even reduce optimism toward a broad range of judgments.

Orlicka, Lindenberg, Steverink and Verbruggle (1999:75) examined the relationship of age and optimism. Japanese learners (early adolescents, ages 10 to 15) had higher optimism after they had made the transition to junior high school (Dear, Henderson & Korten, 2002:506). Additionally, higher optimism correlated in a positive direction with the adolescents' general interest in school, peer relationships and academic studies at all grade levels. Degenhardt, Hall and Lynskey's study (2001:321) of 244 sixth graders, aged between 10 and 13, displayed more optimism with regard to perceived risk to health, lifestyle and environmental problems. These authors concluded that if life experience was an important determinant of optimism in early adolescents, then motivational processes have greater influence on adult judgements. Optimistic adolescents are more likely to achieve their goals at school, engage in less risky health behaviours, have more successful peer relationships, and experience less depression (Yowell, 2002:63).

According to Oppikofer, Albrecht, Schelling and Wettstein (2002:42), positive expectation for the future can be conceptualized as expectations of attaining specific objectives (for example, achieving in school, having close friends) in later developmental periods. Oyserman, Coon and Kemmelmeier (2002:39) postulated that positive expectations are important because they serve as the

focal point for adolescents' energies in striving for the future. To foster future success, adolescents might use planned and active problem-solving skills, engage their social support networks and become involved in competence-building activities.

Dispositional optimism refers to global expectancies of personal positive outcomes in the future. The Life Orientation Test was developed to assess dispositional optimism (Oliver & Brough 2002:3). Participants in this test indicate their agreement with self-descriptive statements such as, "I'm always optimistic about my future", and "In uncertain times, I usually expect the best." Global expectations of success have predicted effective coping with school transitions (O'Kelly, 2002:36). In addition, in a series of studies, Koizumi found out that negative global expectancies predicted likelihood of experiencing postpartum depression, and positive global expectancies predicted adjustment to coronary surgery and completion of an after-care programme by alcoholics.

Dahme, Eichstaedt and Rudolph (2003:66) demonstrated in their studies a connection between positive expectations and dispositional optimism. In this study, participants answered three identical series of questions to characterize the person they expected to be, hoped to be and feared becoming in the next year or two. These researchers found a relation between dispositional optimism and positive personal expectations, but not between optimism and hoped for or feared selves. Optimism and expectations were related, possibly because both reflect the adolescent's personal expectancies. Whereas optimism and pessimism were equally hopeful about the future, optimistic adolescents were more able to translate their hopes into expectancies. It is also important to note the distinction between abstract and personal expectancies. Durkin and Paxton (2002:997) found that adolescents from low-income and from African American families simultaneously held the abstract expectancy that education is a valued accomplishment and the personal expectation that academic achievement was unlikely to yield them economic advancement. Those results raise the

issue that opportunities to achieve positive outcomes, and thus positive expectations for the future, are diminished substantially in some contexts.

This highlights the importance of studying positive expectations in low-income, ethnically diverse youth. Rothman, Kelly, Hertel and Salovey (2002:26) adapted an optimism measure for fourth grade to sixth grade learners. That measure includes optimistic items (for example, "In the future, I expect that I will handle myself well in whatever situation I'm in and be noticed by others for doing a good job") and pessimistic items (for example, "I find that my plans don't work out too well"). Optimism was correlated moderately with self-esteem but was not related to peer-rated popularity, leading the researchers to suggest that optimism predicts global success, but not success in any specific domain, for example, in social success. Daugelli and Grossman (2001:1008) developed a measure of positive future expectations for children. Their measure includes items such as "How sure are you that you can handle your school work when you get older?" and "Do you think you'll always have friends and people that care about you?" Positive expectations were related directly to reading achievement and teacher-rated competencies, and were related inversely to anxiety/depression and teacher-rated behaviour problems.

Urban fourth-grade learners were divided into resilient and stress-affected groups. A positive expectation for the future was the most sensitive child-interview measure to discriminate resilient from stress-affected youth. De Groot (2002:277) also conducted a study of adjustment in urban 9 to 11-year olds (60% from minority groups) who experienced at least four stressors. Children with higher levels of positive expectations had higher levels of socio-emotional adjustment; while the children also attained higher reading achievement scores. Nearly half of the children were re-assessed 3 years later. Oliver and Brough (2002:5) found that after controlling for Time 1 socio-emotional adjustment, Time 1 future expectations also moderated the relation between stressors and perceived competence; high-stress participants with low expectations decreased in competence; whereas high-stress participants with high expectations increased in competence.

These researchers noted a need for prospective studies to identify variables that predict changes in future expectations in learners. Four classes of variables were hypothesized to predict changes in future expectations, namely, internal resources, supportive family and peer relations, avoidance of exposure to peer negative influences and current adjustment (Diener, Oishi & Lucas, 2003:410).

Internal resources like problem-solving efficacy and self-esteem have been found to be predictors of positive expectations for the future. Self-perception of problem-solving efficacy might be a precursor of future expectations. Learners were assigned to a success or failure condition by manipulation of a laboratory task outcome. Learners formulated realistic performance expectations on this task, based on success or failure. Positive expectations were a product of adolescents' perceptions of their problem-solving efficacy (Quinlan & McCaul, 2000:5). Self-esteem and perceptions of self-competence in specific domains (for example, academic or social) were also associated with positive expectations for the future in studies of these learners. Similarly, in studies of college students, researchers found a significant correlation between self-esteem and optimism (Davey, Eaker & Walters, 2003: 358).

Problem-solving efficacy and self-esteem arise, in part, from supportive family and peer relations' social interaction. According to the attachment theory, Cameron, Banko and Pierce (2001:36) maintain that infants who experience supportive attachments develop internal models of themselves as capable and worthy of love and support and commensurate expectations for the self. On-going social experiences lead to revision of representations of self and others and expectations as to outcomes. Deci, Ryan, Gagne, Leone, Usunov and Kornazhev (2001:934) found that the support of family members, as well as extra-familial support, contributed to the self-esteem of African American children. Paternal communication and engagement with adolescent sons predicted more ambitious professional aspirations and higher levels of educational attainment 5 years later. In this study, they hypothesized that family support predicts increases in positive expectations for the future. They

also hypothesized that peer support would be related to changes in positive expectations for the future. In cross-sectional studies, DeJong (2002:508) found that peer-positive relations in 5th grade to 9th grade learners were related to generalized expectancies of life success. Aspinwall and Leaf (2002:281) also found that 5th to 12th grade learners' school experiences, particularly peer interactions, predicted the learners' future expectations.

Although peer-positive support was hypothesized in this study to predict increases in positive expectations, peer-negative influences were hypothesized to have the opposite effect. Day and Macaskill (1999:972), in a sample of disadvantaged urban learners, found in a stress-exacerbating effect for peer support at high levels, that the relation between neighbourhood stressors and antisocial behaviour was strengthened. Learners residing in neighbourhoods plagued by chronic poverty are more likely to form friendships with delinquent peers as a function of available peer contracts. By virtue of those associations, the adolescents have more opportunities to engage in activities that elicit negative evaluations from authority figures, which contribute to diminished personal positive expectations.

In regard to the role of current adjustment in predicting future expectations, Delhey, Bohnke, Habich and Zapf (2002:173) suggested that adolescents make their own environments. That is, successes and failures, in part, are determined by the adolescent's own behaviour and interactions within the environment. As indicated previously, Brown, Clarke and Gervin (2000:718) found that educators' reports of current adjustments were related positively to future expectations. Learners who exhibit current behaviour problems were likely to evoke negative evaluations and consequences from authority figures, which might lead them to be less positive about their futures. Alternatively, learners who exhibit positive adjustment tend to have positive interactions with others and create opportunities for success experiences. Perhaps behaviour that reflects school involvement (for example, being in a club or on a sports team, helping an educator or learner after school) provides opportunities to participate successfully, garner admiration, engender perceptions of self-efficacy, and, hence, enhance expectations for future

success. Ounpuu, Krueger, Vermeulen and Chambers (2000:67) found that learners' perceptions of feeling comfortable in the school environment and fitting in were related moderately to positive expectations. In addition, he found that lower levels of involvement in school activities and perceived lower levels of support from school staff were related to higher levels of suicidal ideation among junior high and high school learners. Thus, in the present study, it was hypothesized that current adjustment of problem-avoiding behaviour and engaging in positive school experiences predict increases in positive expectations for the future (Arnett, 2000:267). Positive expectations are potentially important in promoting the psycho-social adjustment of youth from disadvantaged communities. The current study assessed positive expectations in inner-city 6th-grade to 8th-grade learners and focused on the following three research questions (Flynn, 2000:148):

- To what degree would learners hold positive expectations for the future?
- Which variables would be related to positive expectations?
- Which variables would predict changes over time in positive expectations for the future?

It was hypothesized that the following variables would correlate with and predict increases over time in positive expectations for the future, namely internal resources (problem-solving efficacy and self-esteem), supportive family and peer relationships, avoidance of exposure to peer negative influences and current behavioural adjustment (Onwuegbuzie & Daley, 1999:537).

The pessimism syndrome could work to destabilize knowledge-era societies in a number of ways. In the most general terms, an incessant pessimism syndrome produces substantial amounts of personal depression. Its resolutely negative portrayal of trends encourages adolescents to believe that the world is falling apart and is beyond their control (Carels, Sherwood & Babyak, 1999:608). The absence of positive social anchors with which people can

identify, could, in the long run, increase the instance of psychological illness by magnifying the alienation and rootlessness already produced by the fast, moving, virtual, telecommuting information age (Blanton, Stuart, & Vanderneijuden, 2001:849).

The pessimism syndrome could also stifle entrepreneurship and progress. In a world of broad-based pessimism, it is no surprise that confidence in problem-solving institutions like schools and churches declines. If the world is going wrong badly, as most Americans believe, then obviously those traditional institutions of power which influence social trends must be doing a bad job. This assumption, a natural by-product of the pessimism syndrome, manifests itself in the rock-bottom level of faith Americans have in their institutions today. In the Frank Luntz poll, just 83 percent of Americans had a lot of confidence in the ability of religious institutions to promote morals and values in society and the church was the big winner. Just 17 percent were very confident of schools' ability to teach children what they need to know (DeAnda, Baroni, Bosskin, Buchwald, Moran, Ow & Gold, 2000:441).

The pessimism syndrome may dampen momentum to policy reform and change. As William Rasberry puts it, it discourages those who might be tempted to try to make a difference. Klein (2002:146) states that adolescents who do not see benefits of past reforms will not support future ones. David Shaw argues that a pervasive climate of cynicism leads to a sense that a whole range of problems are beyond the control of mere politicians, beyond solution altogether. This breeds frustration, hopelessness and a lack of faith in non governmental institutions and in each other, as well (Wrosch, Scheier, Carver & Schultz, 2003:16).

Adolescents who are worried about their economic security and pessimistic about the future are more likely to look for scapegoats for these problems. Americans who believe the economy is performing badly, concluded the Washington Post, are angry about it, and many want to punish those they think are responsible – such as welfare recipients, nationals that receive U.S.

foreign aid and immigrants (Cone, 1999:412). The pessimism syndrome thus opens the door for demagogues of public sentiment against minority groups.

Characteristics associated with optimism are personality, temperament and character. The terms character, temperament and personality have often been used more or less interchangeably. However, whereas character has tended to refer to the distinct nature of a person, signifying those personality traits that are shaped by developmental processes and life experiences, temperament has referred more to the biological dispositions of the personality, including experiential components (DeNeve, 1999:147). Personality, for its part, has been defined variously as a set of learned behaviours, as a set of traits or as a structure that organizes and integrates experience. On a global level, most personality psychologists agree that personality refers to characteristics that are pervasive and enduring and form a central part of the person's identity (Heyi & Wahl, 2001:740). Some personality traits have been linked to psychological and physical wellness and some to ill-health. Personality trait models have been developed independently to the conventional nomenclature. These are operationalized in psychometrically sound assessment measures. Two well known dimensional personality trait models are the five-factor model (FFM) and Cloninger's seven-factor model (SFM) (Deacon & Piercy, 2001:357).

The FFM has been tested among various age groups and in different cultures and languages, and the data indicate that the model is essentially correct (Duberstein, Sorensen, Lyness, King, Conwell, Seiditz & Caine, 2003:448).

The five domains in the model are conceptualised as:

- neuroticism versus emotional stability;
- extraversion versus introversion;
- openness versus closeness to experience;
- agreeableness versus antagonism; and
- conscientiousness versus negligence.

The model was originally developed to provide a model of personality traits and dimensions in the non-clinical population. However, later research found

that the FFM also applies to various forms of psychopathology. The structure in FFM is hierarchical, with higher order domains and lower-order facets. The evidence suggests a heritable and biological basis for both higher-order and lower-order traits (Diener & Biswasdiener, 2002:42). Several scales have been empirically related to the FFM, the best known and most often used being the 60-item Revised NEO Personality Inventory (Bijl & Ravelli, 2000:658).

In prospective studies, learners who become depressed scored high on neuroticism before the first episode. This suggests that a high level of neuroticism may be an enduring feature of those prone to depression. Some have argued that psychiatric disorders represent extreme forms of personality traits. An especially high score on neuroticism has been mentioned as a predisposition to experience long-term levels of negative affects such as fear, anger, shame and sadness (Ostman & Hansson, 2001:161). Neuroticism can also be a risk factor for psychiatric disorders that are not trait-like, for example, major depression and somatic ill-health. A high level of neuroticism has furthermore been characterized as an overall proneness to experience psychological distress. A host of studies have linked the FFM constructs to personality disorders (Dickens, Jackson, Tomenson, Hay & Creed, 2003:212).

Dudgeon, Mallard, Oxenham and Fielder (2002:123) found that Cloninger's seven-factor model (SFM) of personality includes dimensions of temperament (heritable biases for information processing by perceptual memory system) and of character (individual differences in self-concepts). The four dimensions of temperament in this model reflect individual differences in the learning response to novelty (novelty seeking), danger or punishment (harm avoidance) and rewards (reward dependence), and also differences in individual perseverance (persistence). Three dimensions of character include the degree to which one sees oneself as an autonomous individual (self-directedness), as an integral part of humanity (co-operativeness) and as an important component of the universe (self-transcendence). Low self-directedness scores characterize all personality disorders, temperament score patterns mark different personality disorder clusters and unique SFM profiles

delineate specific personality disorder categories. Support for this model is mixed, but on the whole, studies have accepted the prediction of the presence of personality disorder and of the temperament and cluster relationship (Radcliffe & Klein, 2002:837).

Many studies have linked personality features, both desirable and undesirable, to mental and general health. Zunzunegui, Llacercentro and Bland (2002:358) reviewed the research conducted on the relationship between person variables and general health, and concluded that personality dispositions affect health more than do transient psychological stress. Their study of literature revealed four clusters of variables implicated in multiple disease outcomes:

- anger and hostility levels in coronary heart disease (CHD) and related mortality;
- emotional suppression in CHD and, also, breast cancer in women;
- depression in post myocardial infarction mortality and progression of AIDS in early stages; and
- pessimism and fatalism in the progression of AIDS in its early stages and in peril-operative infarction in cardiac surgery patients.

Zunzunegui *et al.* (2002:359) concluded that psychological variables seem to influence the early stages of the disease process. Likewise, a study by Dempster, Donnelly and Fitzsimons (2002:452) found links between undesirable personality traits (anxiety, stress reactivity, anger and alienation) and health complaints. The study indicated particularly that desirable features (most commonly, achievement strivings), rather than absence of undesirable ones, were linked to health-related attitudes and behaviours.

In a meta-analysis of 137 personality traits as correlates of subjective wellness, Duncanmyers & Huebener (2000:506) found that personality was equally predictive of life satisfaction, happiness and positive affect, but significantly less predictive of negative affect. When personality traits were grouped according to the FFM, a low level of neuroticism was the strongest

predictor of life satisfaction and happiness, and of a low level of negative affect. Extraversion and agreeableness predicted positive affect equally well. Weinstein and Sandman (2002:512) examined the relationships between scores on the FFM personality and four personality dimensions, including self-monitoring, locus of control, type-A behaviour and subjective wellness, and found that the scores for subjective wellness and locus of control were most strongly correlated with the positive pole of neuroticism (emotional stability), conscientiousness and extraversion (Dubeau, Kiely & Resinick, 1999:990).

The presence of certain personality features may, according to a number of researchers, increase the likelihood of developing depression (Goodyer, Herbert & Tamplin, 2000:178), especially in the face of particular types of adverse life events. The psychological vulnerability of an individual and the adverse event may match and, as a result, augment the development of a disorder. High dependence needs may contribute to depression if a person is faced by adverse social life events. Moreover, high performance standards may play a causal role in the development of depression if an event leads to a perceived lack of control. Reactions to these hypotheses have been mixed (Isometsa, 2000:143). Hoyer, Mortensen and Olesen (2000:77) found that interpersonal dependency and an autonomy factor of need for control were significantly related to the onset of major depression. Dysfunctional features of personality are, however, not resistant to therapeutic intervention (Doyle & Youn, 2000:195).

There are findings that negative affectivity, a pervasive mood disposition, correlates systematically with health complaints. Johnson, McCaul and Klein (2002:81) found that emotional responsivity, that is, a tendency to report large variations in tension levels, was associated with myocardial ischaemia. Further, proneness to repress emotions has been indicated as a health risk. D-type personality, that is, distressed personality, is characterized by a tendency to experience negative feelings (for example, anxiety and depressive affects) and social inhibition (inability or lack of desire to express these feelings in social interaction). In patients with CHD, D-type personality increases the risk of death four-fold. In the study conducted by King,

Rothman, and Jeffery (2002:32) among boys with CHD, the cancer rate was higher among those with a D-type personality. Distressed boys characterized by levels of type-A behaviour (excess of time urgency and hostile competitiveness), anger, hostility and life stress and inhibited individuals may be particularly prone to CHD (Da Costa, Rippen, Dritsa & Ring, 2003:112). In their study on coping with CHD, Alegria, Bijl and Lin (2000:384) found support for the importance of facing and working through the trauma of a cardiac event as a coping strategy. Although unfavourable in the short-term, the effects of the working-through attenuated long-term emotional distress.

2.8 The relationship between optimism, pessimism, psychological and physical wellness of adolescents

The optimistic or pessimistic manner in which adolescents account for the causes of events in their lives has an influence on their physical and psychological wellness. The link between optimism, pessimism and psychological and physical wellness is well documented, though it is still not clear why people's optimistic and pessimistic orientations should influence their wellness. Ostir, Markides, Black and Goodwin (2000:475) posit that the relationship between optimism, pessimism, and wellness in learners is mediated in part by the different social-support networks of these learners, with optimistic learners having adequate social-support networks and pessimistic learners lacking such protective social-support. Adolescents are likely to prefer interacting with non-depressed adolescents rather than with depressed adolescents (Zullig, Hemenover & Dienstbier, 2002:847).

Research also indicates that pessimistic adolescents experience increased feelings of hostility and anxiety after interacting with optimistic adolescents (Carver & Scheier, 2001:306). Hence, not only are pessimistic adolescents likely to be rejected by others, they may actually prefer the presence of adolescents with a life orientation similar to their own. Thus, whether due to social rejection or to a like-seeks-like selection bias, pessimistic adolescents end up with predominantly pessimistic friends. Therefore, the social-support network of pessimistic adolescents may be restricted largely to others who, like themselves, expect negative outcomes, distance themselves from

problems, and have coping strategies (Damiano, Patrick, Guzman, Gawel, Gelins, Natter & Ingalls, 1999:17). In a longitudinal study which was undertaken over four years, the relationship between home background, achievement motivation, optimism, psychological and physical wellness and self-rated health was investigated in 149 adolescents. The participants were assessed at school at the age of sixteen and then at two follow-up points, two years and four years later. The results of this longitudinal study show that the home background variables of socio-economic status, family size and parental employment predict psychological wellness, self-rated health, achievement motivation and optimism at subsequent stages. Achievement motivation and optimism play a mediating role between home background and the outcome measures of self-rated health and psychological well-being. Furthermore, achievement motivation appears to take on an important role only in terms of the development of self-identity. Researchers have also addressed the relationship between optimism and psychological health (Dercon, 2000:143; Rothman, 2000:65). These studies show a positive correlation between optimism, coping and health in the broad sense. More recently, optimism has been identified as an important factor in physical health, particularly for people experiencing stress (Lando, Haddock, Robinson, Klesges and Talcott, 2000:338).

It has been recognised that all changes are stressful because they involve adaptation and coping with new or increased demands, and nowhere in the life cycle are changes so obvious as in late childhood through to young adulthood, a period generally referred to as adolescence. It is the period when coping styles are developed in response to the increased external pressure to adapt and within the context of exposure to peer pressure to explore new and often dangerous behaviours. There is extensive evidence that home background and family relationships contribute to the development of both physical and psychological health in adolescence (Blanton, VandenEijnden, Buunk, Gibbons, Gerrard & Bakker, 2001:274).

Adolescents from lower socio-economic background have been shown to be more vulnerable to stress, an effect mediated through parental support and

academic and behavioural competence (Dannerbeck & Davenport, 2000:20). The concept of optimism has been investigated in adolescent samples in terms of unrealistic optimism regarding health risks to them. There is some evidence that contrary to popular opinion, adolescents actually have a more unrealistic view and are less optimistic than adults. In addition unrealistic optimism tends to be higher in adolescents with an internal health locus of control (Okech & Harrington, 2000: 218).

Literature on depression makes a clear, strong link between psychological physical health, optimism and pessimism among adolescents (Daniere, Takahashi & Naranong, 2002:808).

Researchers found that adolescents are likely to prefer interacting with non-depressed adolescents rather than with depressed adolescents. Such rejection is not just caused by the imaginary interactant's presumed negative mood, but is also elicited by a pessimistic outlook. In that study, participants read a transcript of a gender-neutral, fictitious interviewee, who either expressed different levels of positive, neutral or negative mood, or a different kind of optimistic, uncertain or pessimistic outlook. As expected, when mood was neutral and outlook was manipulated, a pessimistic outlook also elicited increased rejection by participants while an optimistic outlook decreased rejection. Male and female participants reacted in a similar way when mood was manipulated, but not when outlook was manipulated. In the latter case, males rejected the interviewee when either an uncertain or a pessimistic outlook was expressed. Females, on the other hand, rejected the interviewee only when a pessimistic outlook was expressed (Cruess, Antoni, McGregor, Kilbourn, Boyers, Alferi, Carver & Kumar, 2000:310).

As the Dunbar, Ford, Hunt and Der study (2000:20) indicates, pessimistic adolescents, like depressed adolescents, tend to get rejected by others. Specifically, these authors suggest that a pessimistic orientation unintentionally alienates pessimists from others and thereby limits their choice of possible friends. Consequently, pessimists may end up with friends who like themselves, have also been rejected, that is, other pessimists. Evidence

also indicated that depressed adolescents experience increased feeling of hostility and anxiety after interacting with non-depressed adolescents (Quinlan & McCaul, 2000:5). Optimism, on the other hand, may not limit adolescents to the friends they choose and are able to keep (Rothman & Kiviniemi (1999:47). It seems likely that optimistic adolescents will tend to reject pessimists and choose and/or get chosen by other optimists as friendship partners.

Carver, Harris, Leahman, Durel, Antoni, Spencer and Pozo-Kaderman (2000:142) have recently found that no relationship exists between close friends on the variable of locus-of-control. Therefore, while friends may indeed share similar optimistic and pessimistic orientations, it may also be the case that in these adolescents, social relationships differ in some other aspects, which in turn influences their receipt of social support.

Social relationships of optimistic and pessimistic adolescents may differ in friendship duration. Specifically because of their gloomy demeanour and general negativity, pessimistic adolescents may eventually turn away what friends they do make, resulting in their having friendships of relatively short duration (Orlicka, 1999:347). By the same token, one might expect the positive disposition of optimistic adolescents to enable them to maintain longer friendships. Data provided by Malmberg and Norrgard (1999:34) give initial support to the hypothesis that optimistic and pessimistic adolescents differ in friendship duration. They report optimistic adolescents as having more friends remaining from their childhood than do pessimistic adolescents.

Optimism is linked to adaptively flexible coping styles that include planning and proactive problem-focused coping (Quinlan & McCaul, 2000:4). Optimistic adolescents are able to diminish problems through positive re-framing or re-interpretation and by seeking emotional support. Optimism is an important disposition quality that could mediate psychological and physical wellness by influencing motivation and coping behaviour. With an optimistic viewpoint, outcomes are construed as attainable and persistence is maintained, even when the task is perceived as difficult (Brickkey, 2001:75). For example, O'Connor and Shimizu (2002:175) found that learners who scored high on

optimism at the start of their first semester demonstrated less psychological distress three months later. Learners who rated themselves high on optimism report less stress, depression, and loneliness and practise more health-enhancing behaviours (Dougall, Hyman, Hayward, McFeeley & Baum, 2001:223).

Pessimistic learners, on the other hand, were more stressed, depressed, and lonely. They had more health concerns and poorer health during their adolescence years. In terms of coping strategies, pessimism has been related to the use of denial, substance abuse and disengagement. These types of coping behaviour seem to represent a giving-up response. Optimism has been related to active, persistent, health-oriented coping, while pessimism has been linked to more emotional distress, health concerns, and negative coping (Ostir, Simonsick, Kasper & Guralnik, 2000:358).

Optimism proves to be an important trait-like quality for understanding differences in perceived quality of life and in coping. The highly optimistic learners' profiles portray a very effective style, rather than a defensive and response bias style (Carver, 1999:57). High optimistic adolescents endorsed the highest overall quality of life (Aspinwall & Clark, 2002:148). David and Kistner (2000:327) found similar results for highly optimistic adolescent patients dealing with heart conditions. They found that highly optimistic adolescents were more satisfied with their quality of life and psychological and physical wellness than were low pessimistic adolescents.

In terms of coping, high optimistic learners reported using action and reframing (re-interpretation) more than pessimistic learners did. Mattis (2002:312), in a study of optimistic learner cancer patients, has reported the use of religion and reframing. In summary, highly optimistic learners endorsed more adaptive coping styles than either mid-optimistic or pessimistic learners. Similar findings have been reported by Sanders-Thompson (2000:749). The high optimistic learners' coping would seem to contribute to the high quality of life and psychological and physical wellness reflected in this study.

While mid-level optimistic learners endorsed a high level of satisfaction with their quality of life and psycho-physical wellness, their overall rating was lower. In terms of coping, only one measure was distinct; they endorsed alcohol use more than the high group. These results suggest that an average level of optimism is much less effective than high optimism in terms of establishing effective quality of life resources or coping styles (Oettingen & Mayer, 2002:1207).

The low optimistic or pessimistic group reported a lower overall quality of life and psycho-physical wellness. Also, pessimistic learners were in the unfortunate position of placing a high value on the importance of their quality of life resources, but at the same time of feeling least satisfied. This high endorsement of importance may be similar to the tendency of pessimistic learners to subscribe to many high hopes, as reported by Cunningham (1999:579). This discrepancy is also reflective of the hopes-versus-experience definition of quality of life as defined by Ashman, Dror and Levy (2000:419). Pessimistic learners reported using more alcohol to cope with problems. They also used more disengagement than the other two groups. This type of coping has been described as the least effective and has been previously linked to pessimism (Daniels, 2000:275). In summary, the coping patterns used by pessimistic learners seem to ensure eventual disappointment in that they focus on avoidance, rather than on efforts to solve problems.

There are also gender differences in quality of life. Girls are significantly more satisfied with their quality of life. Contrary to the lack of differences in social endorsement, reported by Doraiswamy, Khan, Donahue and Richard (2001:423), girls provided considerably more social resources than boys did. Girls also endorsed more psychological traits than boys did. Girls seem to be more psychologically minded and also concerned with social relationships. In terms of coping styles, girls used more religion, venting, and emotion-focused measures. Many of these results are not surprising in that attention to feelings and religion is consistent with female gender roles (Robinson & Worell, 2002:198).

Boys place more importance on their quality of life resources, but are less satisfied and thus seem not to be meeting their own standards. While this is similar to the pessimistic learners' pattern, boys were not lower on optimism than girls. Unexpectedly, boys who were low on optimism endorsed more health resources than mid-optimism boys or high optimism girls. This domain includes exercise and health habits. This finding does not fit the pattern one would expect for optimism and is puzzling. In terms of coping, boys used more acceptance and humour. The acceptance factor is interesting as it is in contrast with boys' dissatisfaction with their quality of life. Perhaps the quality of life discrepancy represents a standard used by boys to measure performance expectations for their lives - acceptance and humour may be more useful in adapting to external pressures. The coping patterns for boys seem to be less intuitive and are therefore interesting (Daskalopoulou, Dikeos, Papadimitriou, Souery, Mendlewicz & Stefanis, 2002:265).

Defensive pessimism is an anticipatory strategy employed by high-achieving adolescents in situations like tests and final examinations, arousing both desire for success and fear of failure. Its activation entails two presumably contradictory processes aimed at overcoming anxiety and maintaining high performance level like setting one's expectations at an unrealistically low level and mobilising the self by prompting the person to think about and plan for the upcoming event (Dubois, Felner, Brand & George, 1999:904).

Defensive pessimism in adolescents is associated with greater production of negative and positive outcome scenarios (De Swaan, Manor, Oyen and Reis, 2000:45) and is pertinent to predictions regarding positive links between the structural and cognitive components of future orientation and defensive pessimism. The description of adolescents scoring high on optimism as focusing on the task, rather than reflecting on its consequences, suggests that adolescents scoring high on strategic optimism will score higher on the behavioural component of future orientation, namely on exploration and commitment (Orourde & Capper, 2002:387).

Academic defensive pessimism will be associated with the motivational and structural and cognitive components of prospective education. These links will be domain and strategy specific so that social defensive pessimism and academic optimism will not be associated with the motivational and structural components of prospective education. Academic optimism will be related to the behavioural component of prospective education, but academic and social defensive pessimism and social optimism will not be linked to the behavioural component of prospective education (De Witz & Walsh, 2002:317).

The relationship between optimism is stronger than the relationships between defensive pessimism and the motivational and behavioural components, respectively (Anett, 2000:269). Moreover, significant links have always indicated that defensive pessimism and the motivational component variables were inversely related (Carney, Freeland & Veith, 1999:461). Low, rather than high, predicted defensive pessimism is associated with high tendency to believe in the materialisation of one's goals and plans (expectance) and with high tendency to believe in the prospective domain (positive effect). Devinsky and Westbrook (1999:1718) corroborate positive links between optimism and the behavioural component of future orientation, corresponding with recent findings of Orsmond, Seltzer, Krauss and Hong (2003:259) that planning orientation is associated with psychological wellness, social adjustment and popularity. At a more general level, these findings suggest that social competence, subsuming optimism and qualities such as psychological well-being, are important facilitators of adolescent transitional tasks.

The other finding, shows that, contrary to prediction, the motivational component is also positively linked to optimism, has an important conceptual bearing. Generally, it suggests that, whereas both future orientation and defensive pessimism are prospectively directed, defensive pessimism serves mainly as protection against possible negative outcomes and future orientation serves as adolescents' development in general, and as their responses to social change (Duvdevany, Ben-zur & Ambar, 2002:382), and transition to adulthood takes place (Ebert, 2001:159).

2.9 Factors that promote wellness and psycho-physical wellness

The following factors that promote and psycho-physical wellness merit discussion:

2.9.1 Empowerment

Zhang, Vitaliano, Lutgendorf, Scanian and Savage (2001:35) have defined psychological empowerment as the connection between a sense of personal competence and a desire for and a willingness to take action in the public domain. Helgason (1999:49) describes empowerment as a process of gaining control over one's life and influencing the organizational and societal structure in which one lives. The term has been widely used, but only a few researchers have attempted to operationalise it. Baxter and Appleby (2000:322) developed a 28- item scale to measure the personal construct of empowerment as defined by users of mental health services. The scale which consists of five factors:

- self-efficacy – self-esteem;
- power-powerlessness;
- community activism;
- righteous anger; and
- optimism-control over the future.

This scale has been found both reliable and valid.

Empowerment correlated with quality of life and income but not with the demographic variables of age, sex, ethnicity, marital status, education level or employment status. Persons showing higher levels of empowerment seemed to make less use of traditional mental health services and to be more active in the community.

2.9.2 Parents and educators should in partnership develop optimism, humour and faith in their children and learners

Three of the greatest gifts educators and parents can give their learners and children are optimism, humour and having faith in their learners and children. Optimism motivates learners to never give up, which helps them turn failures

and setbacks into comebacks and successes. Optimistic learners succeed more often than more pessimistic learners, because they learn from their mistakes and failures and refuse to give up until they succeed, a self-fulfilling prophecy (Carney, Freeland & Veith, 1999:459). In one study of 500 learners at a secondary school, a test of optimism predicted their scholastic performance better than did either their SAT scores or high-school grades. Optimistic learners tend to stay motivated despite frustrations and failures. Pessimistic learners often give up and make their poor expectations come true, another self-fulfilling prophecy. Optimism or positive thinking also helps avoid depression, anxiety and anger and can give learners the confidence to reach out, develop conversation skills and improve their social life. Practising being optimistic contributes to happiness and mental health, and sets a good example for learners, who can then learn this skill and reap the benefits (Dean, Wayne, Mack & Thomas, 2000:821).

One great way through which to show and teach optimism is humour. Children love laughter and silliness, and humour creates fun in their life, relieves frustrations and brings peace to conflicts. Even ancient cultures recognized the importance of humour and expressed this by creating gods and goddesses of laughter and mischief, fools and court jesters (Dayan, Doyle & Markiewicz, 2001:779). This tradition continues today with clowns and comedians. Educators and parents should set aside time with their learners and children each day to practise seeing the humour in the day's events. This is a fun activity that helps learners take their frustrations less seriously (Bijl & Ravel, 2000:562).

Arnett (2000:269) found that learners should be helped to think of funny things they could have said; poke fun at themselves, other people and the situations they find themselves in. Their own flaws, mistakes and conflicts with other people make very good material. The learners should look for the absurdities in life, the labour in vain and the times of much ado about nothing; experiment with using either gross exaggeration or great understatement to find the humour in a situation; exaggerate or understate facts, feelings, situations, actions, numbers, size or comparisons; use the element of surprise; develop

unique associations connecting mismatched feelings, facts, situations or objects; experiment with plays on words such as puns and double meanings; memorize jokes, funny lines and amusing stories they hear and practise telling them. Sources of humour can include their own experiences, friends, humorous books, television, comedians, bumper stickers, T-shirts and buttons.

Collins, Skultely and Krauss (2001:109) reported that having faith in learners helps build a good self-concept and prevents problems. Unfortunately, it is all too easy to ignore good behaviour and to notice mostly the bad things the learner does. Educators and parents should try not to make the mistake of often or constantly scolding and insulting their learners and children with negative labels such as bad, brats, stupid, mean, shy and so on. Using these labels shows that educators and parents do not have faith in their learners and children. It frustrates them and can cause them to have low self-esteem, to feel unable to change, to believe the label fits and to act accordingly. During adolescence, despite an angry refusal to accept such labels, being bad (or stupid, mean, a brat, *etcetera*) can seem like a fact of life the learner cannot change without superhuman effort. In a self-fulfilling prophecy, these children may give up trying to improve themselves and may live up to the social role implied by the negative label (Cherkas, Hochber & MacGregor, 2000:18).

That is why it is so important for educators and parents to notice and praise good behaviour much more often than they scold or discipline their learners and children, especially in adolescents. Damico and Cardaci (2003:747) found that praise repeatedly teaches adolescents what behaviour they want and appreciate. One should notice and praise good behaviour in adolescents many, many times a day, at least five or ten times as often as educators and parents scold them. This only takes a few seconds each time, but it can do wonders. Praise or thank the learner for the simplest things, such as playing quietly, kindness toward the cat, using a book carefully, waiting patiently while the educator or parent talks on the phone, taking turns or sharing. As children grow older and develop a positive self-image, they won't need praise so often,

but educators and parents should never stop praising. Adolescents need regular thanks and praise for their talents, virtues, routine chores and helpful acts. Occasionally, educators and parents should praise their learners and children in front of other learners and educators or their spouse when the learners and children can hear them (Danner, Snowden & Friesen, 2001: 807).

They must be careful to avoid praising their learners and children for not doing something bad, however. For example, they should never say, "Good! You're not being mean!" or "I'm so glad you're not bothering the cat! That's wonderful!" Thanking learners and children for not doing something bad ruins the positive emphasis of praise, implying that the children's normal behaviour is much worse. By mentioning bad behaviour, it can also suggest the idea of misbehaving. Instead, say "Good! You're being so friendly!" or "You're treating the cat so carefully and nicely! That's wonderful!" Parents and educators should always describe praiseworthy actions in a positive way by describing the good behaviour, rather than the avoidance of bad behaviour (Daniere, Takahashi & Naranong, 2002:454).

Lando and Hatsukami (1999:1795) found that parents and educators should show confidence and faith in the abilities of their learners and children by noticing small improvements and pointing out developing skills. They should be realistic and not demand perfection. They must always praise progress, even if the child still needs to do much more; praise work and effort even after failure; and always try to give hope, but emphasize that many things come only with long, persistent effort.

Educators and parents should avoid constantly using words like no, don't, stop, quit and can't. They should not overgeneralize by using words like always, anything, nobody, everyone and never. Using these negative words builds poor self-esteem by emphasizing that something is wrong and the learner is at fault. Learners who hear these words too much tend to ignore them (Obrien, 2003:13).

Educators and parents should be patient. Scolding, yelling and hostility show a lack of faith, make teaching learners unpleasant and may provoke rebellion. They should show faith by making their reminders, requests and commands politely, using the word "please"; stating their reminders, requests and commands positively, rather than negatively; talking about what they want, rather than what they don't like or won't tolerate; using "Please pick up your clothes now, honey," rather than saying, "Stop leaving your clothes everywhere!" Instead of saying, "Quit fussing" to the child, they could say "There's no reason to become upset" (McCaul & Wold, 2002:183).

Once the learner understands things better, learns the skills, or knows the rules, is trained with friendly reminders or gentle questions about what should be done in this situation or how another person probably feels, then the effects of the child's behaviour on friendships or what would happen if everyone acted that way would be better understood. Parents and educators can often state a rule or even set consequences in an optimistic, positive way that shows faith in their children and learners. For example, instead of saying, "If you don't pick up all of your toys, you can't go to Billy's," they could say, "If you pick up all of your toys, you can go over to Billy's for the rest of the afternoon" (O'Connor & Shimizu, 2002:175).

Parents and learners should eliminate the need for scolding or consequences that build poor self-esteem in all these ways and by using clear commands or rules that tell the child and learner exactly what they expect in troublesome situations. For example, when entering a grocery store with a young child, they should calmly say, "Stay with me. And remember, if you beg or touch anything without asking, you can't have it" (Rothman & Kiviniemi, 1999:48).

Weinstein and Lyon (1999:293) found that losing faith in the child after a series of disappointments can help cause further problems. Family therapists see many parents who are overwhelmed by their children's problem behaviour. Very often, the educators and parents' negative and pessimistic attitude toward their learners and children helps to escalate the problems,

both by alienating and building poor self-esteem in the learners and children (Klein, 2002:146).

2.9.3 Cognitive training technique should be applied by schools

Schools must employ the assistance of psychotherapists to help pessimistic learners. These psychotherapists apply cognitive techniques such as thought restructuring to help pessimistic learners develop cognitive strategies. Through cognitive strategies, pessimistic learners are able to examine and recognize negative thinking patterns and negative automatic thoughts (Dickey, Brown & Streckfus, 2002:526). By identifying these thought distortions, pessimistic learners can learn how to modify them and, thus, alter their depressed and anxious mood. Pessimistic learners often keep a log of their thoughts and feelings that they use with their therapist to identify dysfunctional thinking patterns. Pessimistic learners practise their new cognitive strategies in real life, discuss the outcomes with their therapist and modify their approaches (Cone, 1999:413).

2.9.4 Developing a positive mental attitude through self-talk

Educators and parents should develop a positive mental attitude with their learners and children. This mental attitude should serve as a basis for self-talk. The development of optimistic thought patterns requires essentially the recognition of self-talk for what it is, dealing with negative messages and harnessing the positive for the greater good of individual persons. By using inner speech, learners can influence their health states, but potentially the benefits reach beyond that. To make self-talk positive, learners must change what goes into their subconscious mind. All this hinges on recognition of inner messages (Chen, Eaton & Gallo, 2000:98).

Klein (2002:148) expands on the idea of noticing thought patterns of learners. Regardless of the thought type (positive or negative), she suggests learners reflect upon the antecedents to and the feelings about the particular thought. When learners determine which thoughts improve their sense of well-being, they can make those thoughts occur more frequently.

Again, this does not imply that learners who practise positive self-talk will be a group of happy campers. Negative inner speech can and does play a constructive role in helping people create better realities for themselves. Negative thoughts can trigger warning signals in high-risk situations. The object is to deal with the underlying message, and then move to correct the situation. Negative self-talk, like its label implies, has a downside as well. Lipkus, Klein and Rimer (2001:895) categorize harmful negativity as being awfulistic ("everything is catastrophic"), absolutistic (using "must, always, never"), or should-have self-talk ("I 'should have' done this"). These are also found in what King, Rothman and Jeffery (2002:13) list as cognitive traps. Other elements include: all-or-nothing thinking; discounting the positive; emotional reasoning; and personalization and blame. Aspinwall, Hill and Leaf (2002:267) suggest examining seed-thoughts, sometimes mindlessly-used cliches, for negative elements, either emotion / health related. For example, thinking "I'm a nervous wreck." "I'm eaten up with anger." "That disease runs in my family," and "Only the good die young." can undermine any positive thinking which people try to achieve. Therefore individuals must replace these thoughts with something more constructive.

In a society where learners, especially girls, are taught to downplay their good points, developing positive self-talk might be difficult at first. It necessitates a reality-check. Most of the time, learners are a lot better, performance/ health-wise, than they previously concluded. The development of positive personal speech requires that learners take active roles in shaping events in their lives, not to let life just happen to them. Keeping a journal, using his/her name as s/he talks to him/herself and releasing pent-up feelings are some of the ways Sellers and Shelton (2003:1085) recommend for becoming aware of and constructively using thoughts.

According to Thompson, Anderson and Bakeman (2000:197), relaxation is also conducive to positive thinking. The flipside of that is to reduce stress. Stress cannot be eliminated, but it can be managed. Learners should be taught to share their feelings with significant others such as their friends, peers, parents and educators, and confront any conflict early on, before the

situation gets out of hand. Relaxation and less stress clarify and change inner dialogues for the better, which can effect changes in health states.

Self-talk has been shown, in research by medical and communication professionals, to have psycho-physical underpinnings. Thought patterns generated by self-talk affect health-states. What studies have shown, has been supported by doctors and patients alike. Learners can begin to harness the power in their minds by taking an active role in deciding what to think, enhancing the positive messages they send themselves. It also involves being realistic, identifying the causes for any negativity, realizing it is a signal to act. By doing so, learners can face challenges, health-related or otherwise, with the knowledge that they can succeed if they literally put their minds to it (Cunningham, 1999:576).

2.9.5 Schools should create a motivating climate

According to Deanda, Baroni, Boskin, Buchwald, Morgan, Gold and Weiss (2000:445), motivating school climates are crucial in creating positive minds among learners. Healthy school environments promote psychological and physical resilience. Such psychological and physical resilience help learners to have a positive mind about life. Healthy school environments are supportive and exist when all learners in the school experience a sense of worth and of being recognized. Supportiveness in a healthy school environment is communicated by the following (DeJong, Chamrathirong & Tran, 2002:843):

- Reactions that focus on problems to be solved, rather than on what can and cannot be done
- Reactions that communicate positive interest and a willingness to help
- Expressions and behaviour that indicate educators understanding and empathy with learners
- Comments and reactions that suggest attitudes of equality and willingness to participate in a shared relationship, rather than in a superior/demanding subordinate/complying one and
- Attitudes that allow for potential error and for expressing new ideas (creativity)

2.9.6 Self-perceived aspect of health and mental health

Clearly, no review of approaches to the measurement of mental health would be complete without assessments that reflect health as the subjective experience of an individual (Rothman, Kelly, Hertel & Salovey, 2002:32). Such information can only be collected as part of a health or wellness survey focused on a representative sample of the general population or a specific group. Examples of such indicators are assessments of self-perceived health and mental health problems, and quality of life.

Self-perceived general health has been widely studied, especially as a predictor of future health or mortality (Brown & Hughes 1999:68). Self-perceived health can be evaluated by asking subjects about how their health is in general. Measuring self-rated health has been found to be a reliable and valid way of assessing health (Sellers & Shelton, 2003:1079). Estimates of health by more extensive scales such as the Sickness Impact Profile and various sub-scales of the SF-36 correlate strongly with ratings of self-perceived health, as do use of health services.

McCaul, Johnson and Rothman (2002:45) have suggested that self-perceived health is, in fact, composite assessment of physical and mental health. They found a strong correlation between ratings of self-perceived health and mental health. Nevertheless, Carstensen and Lang (2002:126) found that after adjusting self-perceived health by anomie, neither depression nor happiness removed the effect of poor self-perceived health on mortality. Self-rated health has been found to be an independent predictor of mortality and to show a dose-response even after controlling for a number of related factors (socio-demographic characteristics, health behaviour and physical health) (Drigotas, 2002:60). There were no significant differences between predictions of early mortality or late mortality, indicating that knowledge of the prognosis of one's health condition did not explain the results. Self-perceived health seems to predict the mortality of boys better than that of girls.

Orsmond, Seltzer, Krauss & Hong (2003:271) found that very good self-assessed health was strongly associated with the same factors (for example,

education, employment, urbanization, exercise, housing, life events, weight, alcohol intake and smoking) as was ill-health. They appeared, however, in a mirrored pattern, indicating that processes generating excellent health have much in common with those generating ill-health. According to a study by Lipkus, Klein and Rimer (2001:897), unemployment predicted poor self-rated physical and psychological health, and extensive use of health services.

Rothman, Martino, Bedell, Detweiler and Salovey (1999:1358) found that poor self-perceived health at index contact predicted the likelihood of becoming a chronic case of depression in primary care. Salovey, Rothman, Detweiler and Steward (2000:113) studied self-rated emotional health as a risk factor for major depression in a community sample (the ECA study sample) and found an age and sex-adjusted relationship between subjective emotional health and depression. The more positive the rating of emotional health, the lower was the risk for depression in the next year. This correlation remained after adjusting for other depression-associated factors. Asking the subjects whether they considered their current emotional health to be excellent, good, fair or poor, assessed the state of emotional health.

Dunn and Rosenberg (2000:475) found that personality factors played an important role in explaining perceived stress and health status among seafarers, as measured by self-inventories developed for Finnish epidemiological studies. The most important factors were pessimism-optimism and ego strength. The quality of interpersonal relations at work did not predict stress or health status. Demmer (2002:225) found clear differences between the perceived health of unemployed and re-employed men, and note that unemployment seemed to lead to equally poor health both among middle class and working class men.

2.9.7 Health needs

Perceptions of health needs include value judgments and are not objective (Dempsey, Dempster & Donnelly, 2000:46). Health knowledge, previous experience of health care, risk-taking propensity, the balance of short-term and long-term views of benefits and disadvantages, the importance of

autonomy, and various other personal and cultural factors affect the perceptions. Personal and professional assessments tend to differ from one another (Zebrack & Chester, 2002:133).

Kasi, Levy and Slade (2002:119) assert that the need for health or social care exists when a learner will benefit from a medical or social care intervention. Needs are often defined in terms of the “ability to benefit from health care” (Zhang, 2001:101). The perceived need for care can be defined as a situation in which the existence of the need for care is perceived by learners themselves or by their immediate social environment and in which they furthermore consider some form of health care may possibly be beneficial. The demand for care exists when a learner experiences the need and also expresses it (Zelina & Zelinova, 2001:199). Utilisation occurs when a learner actually receives health care. Need is not necessarily expressed as demand, and demand is not necessarily followed by utilization, while on the other hand, there can be demand and utilization without real underlying need for the particular service used (Bosworth, Siegler & Brummertt, 1999:1231).

2.9.8 Mental health needs

Mental ill-health is associated with multiple needs, physical, social and psychological (Castensen, Mayr & Pasupathi, 2000:645). If care or promotion of mental health is to be based on needs, agreement must be reached as to what constitutes a need, how it should be assessed, and how and when it should be addressed. According to Duggan, Milton, Egan, McCarthy, Palmer and Lee (2003:21), three levels can be differentiated in the needs of learners with mental ill-health:

- primary needs associated with psychopathology or impairment;
- secondary needs due to disabilities involving restrictions on personal activities that may be directly caused by the impairments; and
- needs concerning social consequences of the illnesses or handicaps affecting interactions with the environment of and individual (Devinsky & Westbrook, 1999:1718).

Demovsek, Rupel, Rebolj and Tavcar (2001:474) have defined the need for mental health care in terms of problems for which state-of-the-art solutions exist. It is, however, important not to define need by the care, agent or setting already in place, thus, perpetuating the status quo (Zic & Igric, 2001:210). Needs are primary and methods of treatment secondary. Dejong, Chamratrithirong and Tran (2002:839) point out that need is not a fixed concept that can be measured objectively. Needs are dynamic by nature and influenced by contextual factors. Therefore the assessment of needs should include the perceptions of both staff and service users.

2.9.9 Perceived welfare and needs

Needs refer mostly to the need for treatment, and they are thus somewhat restricted in character. The promotion of mental health, including the prevention of mental ill-health, is conditioned by needs of a specific group or the general population. Perceived welfare can also be defined in relation to needs and resources. From the social sciences perspective, the needs of an individual are classified as material needs, social needs and needs related to self-fulfilment (Debeljak, 2003:152).

Experiences of welfare arise when needs are being met and, in terms of resources, out of the feeling of the ability of individuals to control their central resources. Welfare is explained as a composite term for life satisfaction and happiness (Salovey, Rothman, Detweiler & Steward 2000:112).

2.10 Positive mental health

The principal components of positive mental health are life satisfaction, morale and happiness. Keldler, Myers and Neale (2000:506) who conducted a twin study of mental health in learners defined "mental health wellness" using the following six dimensions:

- perceived physical health;
- non-conflictual interpersonal relationships;
- anxious-depressive symptoms;

- substance use;
- social support; and
- self-esteem.

Dean, Wyne, Mack and Thomas (2000:823) note that the constructs of wellness and resilience differ from each other. Wellness is purely descriptive, and assesses the level of healthy functioning without regard to constitutional vulnerability to mental illness or exposure to risk factors. Resilience refers to the achievement of health levels of functioning despite the presence of risk factors. Zhou, Xue and Zhou (2002:501) state, furthermore, that by definition, all resilient people are mentally healthy, whereas some, but not all, mentally healthy people are also resilient.

2.10.1 Affect, happiness and life satisfaction

If the construct of subjective wellness includes measures of global or long-term satisfaction with life, individuals can report a high level of wellness while currently experiencing great situational distress (Weinstein & Lyon, 1999:291). De la Durantaye (1999:514) has referred to happiness as a short-term, transient feeling in response to daily events, and thus the current affective state does not provide a very reliable assessment of satisfaction with life. Cherkas, Hochberg and MacGregor (2000:18) contend that subjective wellness is influenced by transient events although it shows stability over time. Some personality characteristics and life conditions are more stable than others are. Self-reported distress seems to be more clearly delimited than wellness.

Happiness has been studied with the aid of definitions and components similar to those found crucial in studies of positive mental health. Cognitive components are global judgments that people make when they consider their life as a whole. Happiness also has affective, hedonic components (Cooper, Arber & Fee, 1999:120). Daugelli and Grossman (2001:1010) view happiness as the result of an individual's position on two hypothetically independent dimensions termed the positive and the negative affect. There is an on-going

debate as to whether happiness should be regarded as a fixed trait of individuals, rooted in their temperamental disposition, in cognitive inclination or whether it is as acquired disposition (Stuart, & Blanton, 2002:4). However, if defined as global satisfaction with life and, thus, influenced by living conditions, happiness does not seem to be an immutable feature (Demir & Tarhan, 2001:113).

According to Dhondt, Beekman, Deeg and Vantilburg (2002:395), mental health wellness is a complex phenotype that is influenced by diverse environmental and genetic factors. Genetic factors appeared to be of moderate aetiological significance for all dimensions of mental health. A shared family environment has an important and significant influence only on interpersonal relations, social support and substance use. The structure of non-shared environmental influences was also quite complex.

2.10.2 Subjective wellness and psychological distress

The relationship between psychological distress and wellness has been debated. These components of mental health have been determined either as independent (Lando, Haddock, Robinson, Klesges, Talcott & Jensen, 1999:435) or as two aspects of a single factor (Diener, 2000:34). A study of the general population conducted by Fournier, Lemoine and Chevalier (1999:266) found evidence for a concept of mental health that includes two different, though correlated, dimensions of distress and wellness.

Positive mental health is not merely an absence of negative symptoms or reaction such as depression or anxiety (Collins, Skultely & Krauss Whitbourne, 2001:106). A low level of distress does not automatically mean a high level of subjective wellness, as neither self-control nor mental balance for instance, has a direct counterpart in distress manifestations. The model of psychological wellness created by Diener and Seligman (2002:82) included aspects of control of self and events, happiness, social involvement, self-esteem, mental balance and sociability. Although their conception of wellness includes happiness and life satisfaction, subjective wellness cannot be restricted to these dimensions. The epidemiological assessment of mental

health needs to include measures of both negative and positive aspects if it is to portray the mental health of a population fairly. Positive affects, for instance, can be used to differentiate between anxiety and depression and, moreover, to distinguish between individuals scoring minimum or perfect scores on scales or psychological distress (Diener & Lucas, 2000:53).

2.11 Negative mental health

A growing body of literature indicates that the somatic and mental health domains are closely intertwined (Davies, DeSouza & Frank, 2003:286). Health is regarded as a complete state of physical, mental and social wellness and not merely the absence of a disease (Zekovic & Renwick, 2003:23). The European Network on Mental Health Policy has defined health as a state of equilibrium between the individual and the environment. Mental health is an essential element of general health, as there is no health without mental health (Bijl & Ravelli, 2000:569).

The concept of mental health has both the positive and the negative dimensions. Positive mental health is a value in itself. Learners with positive mental health usually demonstrate positive affect and positive personality traits, which are considered as resources. They have high levels of self-esteem, sense of mastery, sense of coherence (life experienced as meaningful and manageable) and self-efficacy (Diener, Gohm, Suh & Oishi, 2000:420). Mental health is conceptualized as a learner's ability to cope with adversity and avoid breakdown or diverse health problems when confronted with adverse experiences.

Negative mental health is concerned with mental disorders, symptoms and problems. Symptoms of mental disorder and mental health problems also exist without the criteria for clinical disorders being fulfilled. These sub-clinical conditions as well as general psychological distress are often a consequence of persistent or temporary adversities. They can be a heavy burden and often lead to consultations with primary health care or other professionals.

Mental health, as an indivisible part of general health, reflects the equilibrium between the individual and the environment. It is influenced by:

- individual psychological and biological factors;
- social interactions;
- societal structures and resources; and
- cultural values.

In this context, mental health is a central part of a process that comprises predisposing, actual precipitating and supporting factors as well as various consequences and outcomes.

2.11.1 Mental ill-health, psychological distress and mental disorders

Mental ill-health encompasses a continuum extending from the most severe mental disorders to a range of symptoms of different intensity and duration that result in a variety of consequences. Much mental ill-health is experienced as part of normal life. Such everyday mental problems are correlates of personal distress (Duberstein, Conner, Conwell & Cox, 2001:380). Psychological distress is a non-specific syndrome that covers constructs such as anxiety, depression, cognitive problems, irritability, anger and obsession-compulsion. Depression and anxiety are usually recognized as core distress syndromes with psychological and somatic components (Zank & Leipold, 2001:195). According to Zinnbauer, Pargament and Scott (1999:889), measures of psychological distress have been used as a strategy to evaluate psychological wellness, although the best state they may distinguish is the absence of distress. Carver, Sutton & Scherer (2000:743) have suggested that scales measuring psychological distress indicate, on a general level, that something is wrong, comparable to elevated body temperature, but not what is wrong.

The DSM-IV defines mental disorder as a clinically significant behavioural or psychological syndrome or pattern that occurs in an individual and is associated with present distress or disability or with significantly increased risk of suffering death, pain, disability or an important loss of freedom. Browne, Clarke and Gervin (2000:18) define disorder, likewise, as a clinically

recognizable with personal functions (Zigler & Bennett-Gates, 2002:184). Both classification systems emphasize that social deviance or conflict should not be considered a mental disorder. Sub-threshold conditions of mental ill-health, that is, those not meeting the full diagnostic criteria of DSM or ICD, are prevalent and also associated with significant costs and disability (D'Augelli, Grossman, Hersherger & Oconnell, 2001:150).

2.11.2 Models of mental disorders

Various models of mental disorders have been proposed. These models emphasize different aspects of clinical findings, give different interpretations to the findings and propose different causal explanations. Dorling and Ward (2003:954) have grouped these as:

1. disease model;
2. psychodynamic model;
3. behavioural model;
4. cognitive model; and
5. social model.

Daaleman (1999:221) posits that conceptual pluralism is a current trademark of psychiatry and each prevailing model falls short of explaining some critical details of disordered behaviour. Due to this conceptual pluralism, we lack accepted methods to test hypotheses. The existence of numerous models for interpreting clinical and research findings may contribute to difficulties in outlining the factors predisposing to and precipitating mental disorders.

It is likely that the aetiology of most mental disorders will involve a complex pattern of interaction between several or many genes and environmental influences (De Vaus, 2002:29). The aetiology may be analysed at group, individual and gene levels. The environmental generation of risk is dispersed at macro group (societal) and small group (social psychological, behavioural) level. Unequal distribution of the rewards of society influences the degree to which individuals control their environment. The process of interaction and co-ordination among social groups affects the learner's attachment to others. Beliefs, norms and values influence the risk at both small and large group

level. Learning, stress, health care and exposure are expressed at the individual level and in the immediate environment of the individual (Farmer, Harris & Redman, 2000:152).

2.11.3 The challenge set by mental-ill-health

Epidemiological studies have shown that up to one fifth or a quarter of the general population suffer from some sort of mental disorder at a given time and that up to half of the population may be at risk of having a mental disorder at some point during their lifetime (Glover, Leese & McCrone, 1999: 544).

One of the barriers to progress in the field of mental health is the lack of a common system of ideas, concepts, definitions and indicators for monitoring the state of mental health and related needs at population or group level.

2.12 Sense of personal control

2.12.1 Definitions of personal control

Personal control refers to a sense of control over the events in one's life. Perceived control has an influence on whether a learner will engage in some form of health-related behaviour or not (Daniels, 2000:129). People differ in the actions (such as behavioural or cognitive) which they prefer taking to achieve their goals. Some people are perceived to have more control over events than others; furthermore, people have different beliefs about the degree to which they have control over their lives (Zani, Cicognani & Albanesi, 2001:478).

2.12.2 The locus of control

Doraiswamy, Khan, Donahue and Richard (2002:134) state that learners who believe that they themselves can influence events in their environment (internal locus of control) cope better with challenging life events than those who explain events by such concepts as luck or chance or who attribute events to other people (external locus of control). Another relevant aspect of personal control is Bandura's concept of self-efficacy, which refers to the belief that one can succeed in what one desires to do. Decisions to attempt something are based on expectations that proper behaviour can lead to a

good outcome and that one can perform the behaviour properly. Learners with a strong sense of self-efficacy show less psychological and physical strain in stressful situations. Lack of a sense of control magnifies feelings of helplessness, hopelessness and powerlessness. Learners may stop striving and end up believing they cannot exert control in situations where success is possible, a condition termed learned helplessness and described as a feature of depression. An additional concept of personal control is sense of mastery. DuncanMyers and Huebner (2000:207) found that low sense of mastery was related to depression in girls, but not in boys.

2.12.3 Measurement of personal control

Rotter (1966:1) developed the Internal-External Scale (I-E Scale) to assess individuals on a presumed continuum of internality and externality of control. This unidimensionality has not stood up to further scrutiny Weinstein, Lyon (1999:291) later developed the Multidimensional Health Locus of Control (MHLC) Scale, which incorporates separate measures of internality (IHLC), powerful others (PHLC) and chance (CHLC) externality. The MHLC consists of 18 statements with ratings from strongly agree to strongly disagree. The subscales of MHLC are linked to various indices of health behaviours. Dunning (1999:9) and Dreher (2003:193) evaluated the validity and reliability of the MHLC, finding that the internal control of health and powerful others' control of health sub-scales were moderately homogeneous and reliable over time, although the latter was affected by age, lowered social status and acute illness, but the chance control of health subscale showed little stability over time. According to Aspinwall, Hill and Leaf (2002:268), self-efficacy is a more potent predictor of health behaviours than locus of control. Wallston's modification of the locus of control theory considers health as a moderator variable, that is, internality and self-efficacy interact to predict health behaviour (DrachZahavy & Somech, 2000:106).

2.12.4 Effects of sense of personal control

In a study by Zullig, Valois, Huebner, Oeltmann and Drane (2001:180) life was associated with a good state of health, a high level of social integration, educational attainment, abundant leisure activities and lower levels of

perceived distress at school. Diener, Oishi and Lucas (2003:403) found that social support provided protection against the development of depression in the face of adverse life events, but only for those with external locus of control. Drummond (2000:237) found that internal locus of control was a childhood personality disposition associated with adolescents positive mental health.

2.13 The relationship between optimism and positive psychology

Researchers in psychofortology seek a detailed understanding of positive human experience at both individual and social levels. They are interested in individual attributes like the ability to engage in satisfying and joyful activities, maintain an optimistic outlook and live in accord with positive values. They are also concerned about the qualities that make for good citizenship, which Seligman describes as responsibility, nurturance, altruism, civility, moderation, tolerance and work ethic. After the 11 September 2001 terror attack in the United States of America, journalists described such qualities emerging in that society, at least in the short run (Aspinwall, Hill & Leaf, 2002:268).

Optimism does not suffice in a crisis, especially if it is defined as the inclination to put the most favourable construction upon things or anticipate the best possible outcome. That might imply blindness to painful realities, hardly a useful attitude. Seligman's list shows that psychofortology involves more than optimism. It requires an ability to grapple with real problems. Realism can strike either a negative or a positive note. Aldous Huxley, the British novelist and essayist, wrote that cynical realism is the intelligent man's best excuse for doing nothing in an intolerable situation. The French author and filmmaker, Jean Cocteau, put a different spin on the subject. He said true realism consists in revealing the surprising things which habit keeps covered and prevents us from seeing (McCabe & Douglas, 2000:67). Given the conflicting sentiments, it is reasonable to ask when realism is advantageous and when it is not. On the most basic evolutionary level, success depends in large part, on a realistic appraisal of risks. Does this mean there is some advantage to being depressed? Perhaps temporarily, in some circumstances, but not if the depression continues and causes persistent passivity and

helplessness. Fortunately, whether or not depression promotes realism, there is no evidence that the converse is true; it cannot be said that realism causes depression or pessimism. This should be reassuring at a time when the reality of the world's dangers is so clear (Rothman, Kelly, Hertel, & Salovey (2002:31).

Johnson, McCaul and Klein (2002:69) studied the impact of optimism on health and wellness. Some of their work demonstrated what seems intuitively obvious, namely that adolescents with a positive outlook tend to have better morale and greater adaptive capacity. Because they are more resilient in the face of stress, adversity, or loss, they actually suffer less, even in the worst circumstances. They respond to challenges more flexibly and creatively. They are likely to be ready for trouble when it comes, and they have learned how to confront and overcome pathology rather than avoid it. Their outlook allows them to work effectively through difficulty rather than think impulsively. They succeed because they persevere. Their personal relationships are satisfying, and they are confident of receiving help from friends, family members, co-workers, and the community when they need it (Stuart & Blanton, 2002:3).

Although it is slightly less obvious, a positive disposition also seems to be good for physical health. In several studies, optimistic adolescents have been found to live longer, while pessimistic adolescents suffer what some researchers call, excess mortality, not a good thing by anyone's standard. The evidence suggests that avoiding pessimism is more important than boosting optimism. Pessimistic, anxious and depressed adolescents are more likely to develop high blood pressure. Their immune systems are not as effective, and they recover from surgery more slowly and less completely. For example, a study of 650 adolescent patients in psychiatric hospitals found that a positive attitude was correlated with vitality, freedom from pain and a feeling of being healthier in general. In a study of 300 adolescent heart patients, researchers found that optimistic adolescents were less likely than pessimistic adolescents to need re-hospitalization after coronary bypass surgery (Blanton, Axsom, McClive & Price 2001:1631).

Further evidence comes from a long-term study of 800 adolescent men and women who had answered a well-known psychological questionnaire, the Minnesota Multi-phasic Personality Inventory (MMPI). Investigators used the MMPI results, along with the concept of explanatory style, derived from Seligman's research, to investigate the relationship between health and explanatory style. Explanatory style refers to those adolescents with a tendency to anticipate catastrophe and blame themselves when things go wrong. Thirty years on, their physical health was worse than average, their death rate was higher than average, and they made more use of both medical and mental health services (Weinstein, & Lyon, 1999:291).

The authors suggest that pessimistic adolescents may have been following an unproductive approach to medical care, perhaps doing a poor job of seeking or using their doctors' advice. Or the disadvantage may have been biological; for example, their immune systems may have been weaker. Another study found that adolescents with a pessimistic explanatory style did have lower concentrations of immunoglobulin A (IgA), one of the chemicals that are vital for an effective immune response (Dinan, 1999:826).

But unrealistic optimism may also be a danger to health. In a recent Australian study, investigators asked 364 adolescent women and men about their attitude towards HIV and AIDS. The majority of both adolescent men and women thought they were less likely than average to contract this disease, although, of course, only half of them could be right. Such attitudes may cause people to neglect necessary precautionary protective measures during sexual contact. The results of a study conducted in Hong Kong concluded that high optimism scores were correlated with less concern about taking action to prevent illness (Dykstra, Buunk & Blanton, 2000:1739). The following questions follow this conclusion:

Are adolescents who engage in risky behaviour over-optimistic? Do they under-estimate the likelihood of a bad outcome? In another study, 74 learners who took more risks did not judge the probability of trouble to be lower. They

had just decided that certain risks were worth taking. This evidence is not conclusive, partly because many different human factors must be considered, but it is worth noting. The correlation between a positive attitude and good physical health seems to be real. There is also good reason to believe the connection is causal and constructive, and that realistically optimistic attitudes toward life's painful events are physically as well as emotionally healthful – although it is not yet clear exactly how the relationship works out in psychological and biological terms (Diener, Wirtz & Oishi, 2000:126).

These data offer further encouragement to the study of wellness. A resurgence of positive human values in America may have been one by-product of the tragic events of September 2001, but we can hope to arrive at the same place by other, happier routes. We have ample reason to be interested in all potential ways of promoting resilience, the ability to engage in satisfying pursuits and a sensible balance of optimism and realism (Rothman, Martino, Bedell, Detweiler, & Salovey, 1999:1356).

2.14 The influence of optimism on coping and perceived quality of life

High adolescent optimists have the highest overall quality of life (satisfaction) and use the most action and reframing coping style. Mid-level adolescent optimists report quality of life satisfaction, but use more alcohol as a coping style than high optimists. Low optimists are dissatisfied with their overall quality of life and use more alcohol and disengagement for coping. Female adolescent learners report greater quality of life and coping skills using emotion, venting and religion. Interestingly, male adolescent learners use more acceptance and humour (Oener, 2000:311).

Optimism is a clearly definable construct that seems to represent a robust, trait-like psychological factor (Olsen, Marshall, Chipman, Bingham, Buchanan & Mandleco, 1999:314). Optimism among adolescents is linked to adaptively flexible coping styles that include planning and active problem-focused coping. Optimistic adolescents are able to diminish problems through positive reframing or re-interpretation and by seeking emotional support.

Adolescents with a strong quality of life plans are able to create a sense of meaning in their lives. The constructs chosen to define meaning are uniquely and personally relevant to each adolescent. For example, intelligence, stamina and good health are constructs that contribute to the realization of life plans for many adolescents, but the precise meaning of these terms will be particular for each adolescent. This quality of life defines the difference, at a particular time, between an adolescent's hopes or expectations versus his/her experience. Various aspects of an adolescent's life can be judged by their effect on his/her life plan. Thus it is a multi-dimensional concept used to define his/her life satisfaction (Chang, 2000:11).

2.15 Validity between optimism and pessimism

Optimism and pessimism are psychological dimensions in which optimism represents a bias in perceptions and expectations in favour of the positive in life and pessimism represents a negative bias. Optimism is a set of beliefs that leads adolescents to approach the world in an active manner. Optimistic adolescents believe that the future holds positive opportunities with successful outcomes. Adolescents who hold an optimistic outlook on life have demonstrated higher levels of motivation, persistence and performance. On the other hand, pessimistic individuals tend to look at the world and future experiences in a negative fashion. Pessimistic adolescents view the world as a place of bad experiences and events (Klein, 2001:146).

Lando, Valanis, Lichtenstein, Curry, McBride and Pirie-Grothaus (2001:691) found that optimism and pessimism are associated with several points of interest within clinical and health psychology. They found optimism to be positively associated with adaptive coping skills, and pessimism to be associated with maladaptive coping strategies. Optimism and pessimism have also been shown to relate to different patterns of preferred defence mechanisms.

However, adolescents may not be only optimistic or only pessimistic. Depending on the situation, many adolescents possess characteristics of being optimist and pessimist (Carver, Stutton & Scheier, 2000:742). An

example to illustrate this belief can be found in an adolescent who may be optimistic toward his/her social relationship, but pessimistic toward his/her studies. Currently two views exist concerning the measurement of optimism and pessimism. The bipolar view looks at optimism and pessimism lying on separate poles of a single bipolar continuum. The separate dimensional view states that optimism and pessimism can both exist within an adolescent.

The bipolar dimensional view has two measures: the Life Orientation Test (Scheier & Carver, 1985) and the Attributional Style Questionnaire (Seligman *et al.*, 1975).

The LOT is the most commonly used instrument to measure dispositional optimism. Dispositional optimism is a generalised belief that good things will happen (Christensen & Jacobson, 2000:425).

The Optimism and Pessimism Scale (OPS) (Owens & Goodney, 2000:14) was created to analyse the individual differences in conformity to the Pollyanna Principle, which is the ability to accentuate the positive. The scale has been found to be reliable, with alpha coefficients of 0.84 and 0.86 for optimism and pessimism. The test-retest reliability over a two week period was $r=0.75$ for optimism and $r=0.84$ for pessimism. Researchers believe that adolescents conforming to the Pollyanna principle score high on a test of optimism. However, as test construction continued, optimism and pessimism showed signs that they may not be bipolar. From the initial evaluation of the psychometric constructs of the scale, two scales were found to be working at the same time (Carver & Scheier, 2001:308). When the two scales were correlated, results indicated that the scales were correlated at a lower value ($r=0.52$) than the value of internal consistency. This partial independence of optimism and pessimism has been shown in other studies.

Scheier, Carver and Bridges (2001:196) assessed the dimensionality of three instruments designed to measure optimism and pessimism: the Life Orientation Test (LOT), the Hopelessness Scale (HS), and the Optimism and Pessimism Scale (OPS). The subjects were 389 undergraduates who were

asked to complete each of the three instruments. Results showed that the LOT was bi-dimensional, while the HS was uni-dimensional, and the OPS was multi-dimensional. These results provide evidence that adolescents can be both optimistic and pessimistic.

Terezis's study, as cited in Demyttenaere and DeFruyt (2003:63), attempted to influence optimism and pessimism scores by using a mood-inducing procedure. Subjects were placed into three groups, hearing either heightening, depressing or neutral music before completing the OPS. Results of the study found that neither versions of music had any effect on optimism or pessimism. These findings showed that optimism and pessimism may be stable traits that are not affected by current mood states.

DiPaula and Campbell (2002:716) conducted a similar study to analyse the effects of a mood-inducing procedure and its relationship to scores on the OPS. Subjects were placed into conditions of elating music and depressing music, elating and depressing video conditions, and elating and depressing Velten conditions. This study found a substantial amount of influence on optimism and pessimism in relation to music tapes. Those adolescents listening to the elating music tapes were found to score higher on the OPS, thus showing the possibility of optimism and pessimism being influenced by temporary mood states.

The reason for the partial independence of optimism and pessimism may be the result of adolescent biases, namely defensive pessimism and the Pollyanna Principle. Defensive pessimism is believed to be an adolescent's defence mechanism in which the adolescent states low expectations for a challenging situation, in order to prepare him/herself for a negative outcome (Aspinwall & Leaf, 2002:279). Ostman and Hansson's study (2001:159) examined the possible relationship between optimism and pessimism and the Pollyanna response. Subjects ranged from normal to mildly depressed adolescents. Results found that subjects repeatedly over-estimated their ability to attain success. Malmberg and Norrgard (1999:34) found that mildly depressed adolescents may, at times, answer some of the optimism items in

much the same manner as more optimistic adolescents. This may be a cause of the low correlation between the optimism and pessimism sub-scales.

Cruss, Antoni, McGregor, Kilbourn, Boyers, Aleri, Carver and Kumarm (2000:307) examined the possibility that the OPS may be susceptible to the response biases of defensive pessimists. The results of the study did not produce evidence that these biases exist. By proving that this scale is valuable to response sets, it may be concluded that optimism and pessimism are not polar opposites, but partially independent outlooks. Results from this study support the belief that optimism and pessimism can coexist within the same adolescent.

2.16 Conclusion

This chapter investigated by means of literature study both the theoretical and conceptual frameworks of optimism, pessimism, adolescence, resilience, hardiness, psychological and physical wellness and other related concepts which are used in this research; the nature of optimism and pessimism in adolescents; and influence of optimism and pessimism on the psychological and physical wellness of adolescents.

In the next chapter, the aims, hypotheses and the empirical research methods which were used in the investigation of this research are discussed.

Chapter 3.

Empirical Design.

3.1 Introduction.

This chapter discusses the aims, hypotheses and the empirical research methods which were used in this study.

- Data were collected by means of both quantitative (questionnaires) and qualitative (semi-structured interviews) research methods. For quantitative research, the standardized Life Orientation Test-Revised (LOT-R) of Scheier, Carver and Bridges (1994) and the General Health Questionnaire of Goldberg and Hillier (1979) were used, and semi-structured interviews were used for qualitative research.

3.2 Aims of the research

The research was undertaken:

- To investigate the secondary school learners' optimistic and pessimistic orientations and the influence they have on their psychological and physical wellness; and
- To suggest guidelines which can assist schools to instigate and sustain learners' optimistic orientations systematically oriented towards the attainment of their psychological and physical wellness. These guidelines will be based on the findings of both the literature study and the empirical research.

3.3 Research methods and choice of the instruments

Data for this study were collected from quantitative sources (Questionnaires) and qualitative sources (Semi-structured Interviews).

The most practical research methods which satisfies both the validity and the reliability demands of this study and with which the desired data could be obtained were implemented by the use of Life Orientation Test-Revised (LOT-

R) and the General Health Questionnaire (GHQ). The researcher used both qualitative and quantitative methods to solicit information from the respondents on their perceptions on how optimistic and pessimistic orientations (as tested in LOT-R) affect their psychological and physical wellness (as tested in GHQ). The researcher conducted quantitative research first. The results of this quantitative research lead the researcher to the assumption that respondents either lacked a clear understanding of the questionnaires or had negative attitude towards the questionnaires. It was, therefore, necessary to follow-up this research with qualitative research of semi-structured interviews.

3.3.1 Questionnaires (quantitative research)

As the schools forming the sample of this research are within the researcher's working area and thus could be accessible and that the personal presence of the researcher could eliminate unnecessary problems with regard to completing the LOT-R and GHQ, it was decided to visit the selected secondary schools personally, during which the Life Orientation Test- Revised and the General Health Questionnaire were filled in by the investigation group under the guidance of the researcher.

3.3.2 Interviews (qualitative research)

The semi-structured interviews were conducted, as a follow up investigation, by the researcher at four (4) schools. Interviewees were volunteers who had already completed a questionnaire and indicated their willingness to be interviewed. Respondents were asked to answer questions on the questionnaire. The researcher personally conducted interviews with the sole aim of translating to the language of the respondents in cases where they did not understand a particular question in English. This was necessary because the first quantitative research results revealed that the respondents either did not understand the questions well or had not shown any interest at all in the questionnaire. A total of 40 interviews were carried out, two (2) learners from each grade, that is, Grade 8 to 12 and ten (10) learners per school. The interviews lasted between 30 minutes and one hour, were conducted at schools and were tape recorded.

3.4 Description of the population

All the learners in the secondary schools, which fall under the jurisdiction and control of the Gauteng Department of Education, were considered the study population.

The Gauteng Department of Education has 558 178 school going children in secondary schools. As the study could take years and would have particular financial implications if all schools in Gauteng were visited, it was not regarded as practically and financially feasible to investigate the entire field. After consultation with the study supervisor, it was decided to limit the study sample population to the Vaal Triangle area of Gauteng Province, which comprises of Boipatong, Bophelong, Orange Farm, Sebokeng, Sharpeville, Vanderbijlpark and Vereeniging secondary schools.

3.5 Method of random sampling

Samples like the unrestricted, stratified, systematical, cluster, quota and multi-phased random sampling were considered for use in this investigation. After careful consideration of the advantages and disadvantages of each of these methods, it was decided on cluster random sampling. A cluster random sampling is done when members of the universum are grouped together in schools or classes and all the members of the group must be included in the random sample (De Wet, 1981:94). This method is convenient, quick and economical to use with the selected respondents.

3.5.1 Random sample size

The size of the random sample for quantitative research ($n=788$) was as follows:

Grades	Boys	Girls	TOTAL
08	94	94	188
09	57	71	128
10	102	80	182
11	75	95	170

12	51	69	120
TOTALS	379	409	788

The size of the qualitative research sample (n=40) was as follows:

Grades	Boys	Girls	Total
08	4	4	8
09	4	4	8
10	4	4	8
11	4	4	8
12	4	4	8
Total	20	20	40

3.6 Covering letter

In a covering letter to the principals of the 30 secondary schools selected for this study, the purpose of the research was described and they were informed them that the researcher had the permission of the Gauteng Department of Education to administer the LOT-R and GHQ at their schools.

The respondents were assured of confidentiality and were appealed to, to respond openly.

3.7 Procedure

With the permission of school principals who agreed and were known by their learners not to have access to completed questionnaires, copies of the instrument were personally distributed by the researcher to a group of selected learners which comprised learners from Grades 8 – 12. Written guidelines and open personal briefings were provided to learners to ensure, as far as possible, standardized administration, and to guarantee of confidentiality certify to learners. Learners were asked to return completed questionnaires within 45 minutes (which is the time allotted to break periods)

to the researcher who was present in the classroom where the investigation took place.

3.8 Measuring Instruments

The following measuring instruments were used in collecting empirical data from the respondents:

3.9 General Health Questionnaire (GHQ)

3.9.1 Rationale and development of the General Health Questionnaire

This questionnaire was originally developed by Goldberg and Hillier (1979:139). It is made of 28 items, which measure the individual's inability to apply healthy behaviour. Furthermore the current level of psychological and physical wellness is measured and not the possibility that the individual might become psychologically and/or physically unwell in the future. The questionnaire focuses on the differences between psychological wellness and psychological distress and it distinguishes between psychiatric patients and individuals that see themselves as psychologically well.

3.9.2 Description of the General Health Questionnaire

The questionnaire contains 28 items that, through factor analysis, have been divided into four sub-scales (Goldber & Hillier 1979:139):

- items A1 - A7 measure somatic symptoms;
- items B8 - B14 measure anxiety and insomnia;
- items C15 - C21 measure social dysfunction; and
- items D22 - D28 measure severe depression (cf. Appendix A).

3.9.3 Nature, administration and interpretation of this questionnaire

The questionnaire can be administered in groups or individually. The questions are relatively simple to understand and respondents need to respond to questions according to recent or current physical and psychological complaints. The responses may vary for example from not at all, no more than usual, rather more than usual, and to much more than usual.

The GHQ has a self-scoring system, which according to Goldberg gives better results than the likert-type scoring. For the purposes of this study responses will be given on a 4-point likert scale ranging from 1 to 4. The maximum score is 112 and the minimum is 28. A high value on the GHQ represents a high level of both psychological and physical distress, whilst a low value represents a high level of psychological and physical wellness.

3.9.4 Reliability and validity of this questionnaire

The reliability of this scale as measured by Cronbach alpha co-efficient is 0,86 (Isaksson & Johansson, 2000). Oosthuizen (2001) reports a Cronbach alpha co-efficient of 0,89 for the total scale and 0,76 for somatic symptoms, 0,83 for anxiety and insomnia, 0,78 for social dysfunction and 0,73 for depression.

3.9.5 Motivation for use of this questionnaire

The General Health Questionnaire was found to be reliable and valid when measuring the psychological well-being of pilots and De Witte (1990), also, found it to be a useful measurement of psychological well-being in relation to job insecurity. It was, therefore, necessary to administer this questionnaire to a selected group of secondary school learners.

3.10 Life Orientation Test (LOT-R)

3.10.1 Rationale and development of the Life Orientation Test-Revised

The validity of the Life Orientation Test-Revised (LOT) developed by Scheier and Carver (1985) to measure optimism and pessimism has been studied in depth by various researchers and they have criticized it as follows:

- They found it to show that the positively and the negatively worded items of the scale split into two factors in a number of studies (Radcliffe & Klein, 2002:837; Blanton, VandenEijnden, Buunk, Gibbons, Gerrard & Bakker, 2001:278). The scale may measure two constructs of optimism versus pessimism instead of a single bipolar dimension of optimism and pessimism as claimed by Scheier and Carver (1985, 1987). Results from studies using confirmatory factor analyses tend to support the bidimensional view (Schneider, Salovey, Apanovitch, Pizarro, McCarthy, Zullo & Rothman, 2001:257). They found it to

overlapp substantially with tests that measure constructs such as neuroticism and self-mastery. The relations between optimism and health-related variables become nonsignificant after the effect of neuroticism or negative affectivity has been statistically removed (Lando, Haddock, Robinson, Klesges & Talcott, 2000:339). Nevertheless, this effect has not been replicated successfully by Scheier, Carver and Bridges (1994). Controlling the effects of neuroticism and other possible constructs such as self-mastery or self-esteem only affects the relation between optimism and reports in physical symptoms, but not that between optimism and coping or depressive symptomatology.

The LOT-R is a revised, refined, but shorter version of LOT, which was later developed with the omission of items that could confuse optimism as a personality feature with coping mechanisms. The revised test (LOT-R) has been shown to be a reliable and valid measure of dispositional optimism (Scheier, Carver & Bridges, 1994). In addition, items of the LOT-R load on a single factor. This finding has been replicated in two recent studies (Aspinwall & Staudinger, 2003:146). Nevertheless, the question of whether the revised scale overlaps with tests measuring other constructs such as neuroticism and self-mastery or not has not been addressed in these studies.

3.10.2 Description of the LOT-R

The Life Orientation Test-Revised (LOT-R) (Scheier, Carver & Brooks, 1994) was utilized to measure optimism and pessimism. The LOT-R consists of 10 coded items, three statements described in a positive manner, three statements described in a negative manner, and four non-scored items. Subjects responded to the statements by indicating the extent of their agreement along a five-point likert scale, ranging from "strongly agree" to "strongly disagree."

3.10.3 Nature, Administration and Interpretation of this Questionnaire

Factor analyses indicate that the LOT-R can be construed as unidimensional, with one score representing whether a person is an optimist or a pessimist (Scheier & Carver, 1994). Scheier, Carver and Bridges (1994) originally developed the LOT-R to be unidimensional. To date however, factor analytic research of scores on the LOT-R reveal that optimism and pessimism may not be bipolar, but independent of one another Johnson, McCaul and Klein (2002:79) states in the review of the optimism and pessimism literature that the LOT-R should analyse an overall scale score and two subscale scores. This was especially advisable in the light of the same evidence in outcomes.

3.10.4 Reliability and validity of this questionnaire

Scheier & Carver's own original factor analysis incorporated two factors, which corresponded to the positive and negative items on the Life Orientation Test. The internal reliability (Cronbach alpha=0,78); and (test-retest reliability $r=0,68$ over a four-week interval, $r=0,60$ over 12 months, $r=0,56$ over 24 months, and $r=0,79$ over 28 months) for the unidimensional use of the LOT-R has been shown to be adequate.

3.10.5 Motivation for use of this questionnaire

Evidence of convergent validity is demonstrated by the significant correlations in the expected directions with other constructs, for example, depression, hopelessness, self-esteem, perceived stress, and locus of control (Scheier, Carver & Bridges, 1994). Further construct validity comes from studies showing that the scores are strongly correlated with physical and psychological wellness and relatively unrelated to measures of social desirability (Scheier & Carver, 1992).

3.11 Conclusion

This chapter discussed the method of research, which is used in this study. The next chapter analyses and interprets the results of the empirical research.

Chapter 4

Results and Interpretations

4.1 Introduction

In this chapter the results of the empirical research are outlined and interpreted. The findings of the research quantitative research are discussed first followed by the findings of qualitative research. In quantitative research:

- The descriptive statistics for all scales and sub-scales for the total group are outlined and interpreted.
- The factor structure of each scale and subscale is outlined and interpreted, using confirmatory factor analysis, exploratory factor analysis and second order factor analysis techniques. These are done in order to determine the reliability and validity of each scale.
- Correlations among all variables are determined and a second order factor analysis on all scales is reported.

The qualitative research was a follow-up investigation through semi-structured interviews.

4.2 Quantitative research

4.2.1 Descriptive statistics and reliability indices for all scales and sub-scales

The item responses were inter-correlated and factor-analysed, using principal components with squared multiple correlations, as the commonality estimate and factors with eigenvalues values > or equal to 1 rotated to a varimax solution.

4.2.2 Correlation matrix

Table 1: Correlation coefficients obtained between physical and psychological wellness on the one hand and optimism and pessimism on the other hand (N = 788)

Variable	Somatic	Anxiety	Social Dysf.	Depression	LOTP	LOTN	TOTT
Somatic	1.00	0.48	0.32	0.41	0.17	-0.11	0.03
Anxiety	0.48	1.00	0.39	0.50	0.17	-0.11	0.03
Social	0.32	0.39	1.00	0.38	0.19	-0.06	0.08
Depression	0.41	0.50	0.38	1.00	0.18	-0.04	0.09
LOTP	0.17	0.17	0.19	0.08	1.00	-0.12	0.59
LOTN	-0.11	-0.11	-0.06	-0.04	-0.12	1.00	0.73
LOTT	0.03	0.03	0.08	0.09	0.59	0.73	1.00

4.2.2.1 Optimism, pessimism and physical wellness

Individual LOT-R's optimism and pessimism scores were correlated with individual ratings of the General Health Questionnaire's physical (somatic) wellness variables (cf. A1 to A7 of Appendix A). As Table1 shows, optimism correlated with physical wellness, as measured by somatic variables of the GHQ instrument (cf. A1 to A7 of Appendix A), at $r = 0,17$, $p < 0,05$. This confirms part of hypothesis (cf. paragraph 1.3 and 3.3) that there is a positive correlation between optimism and physical wellness. A significant correlation of $r = 0,03$, $p < 0,05$ was found between physical wellness and overall Life Orientation ratings. The predicted positive correlation between optimism and physical wellness was confirmed. This was also confirmed in the literature study where it was highlighted that optimistic learners have a high level of satisfaction with their quality of life and psycho-physical wellness (cf. paragraph 2.8). Pessimism shows a significant negative correlation of $r = -0,11$, $p < 0,05$ with the indices of physical wellness. This is an indication of a negative correlation between pessimism and physical wellness. This confirms the findings in the literature which highlighted that low optimistic or pessimistic learners report a lower overall quality of life and psycho-physical wellness (cf. paragraph 2.8).

4.2.2.2 Optimism, pessimism and psychological wellness

It is interesting to note that optimism, as indicated in Table 1, positively correlates with the psychological indices of anxiety, social dysfunction and depression, while pessimism correlates negatively with all these indices. It is this result that prompted the researcher assuming that respondents either lacked a clear understanding of the questionnaires or negative attitude towards the questionnaires, to conduct a follow-up qualitative research in the form of interviews in order to verify if this result was not because of misunderstanding the questionnaire (cf.4.4 below).

In statistically comparing the correlations of the six variables with overall satisfaction, only that of social ($r=0,08$, $p<0,05$) and depression ($r=0,09$, $p<0,05$) really differ at the 0,05 significance level.

4.3 Exploratory factor analysis

An exploratory factor analysis with a principal factor (maximum likelihood) method of factor extraction with varimax rotation was conducted. As indicated in Table 3, only 3 strong factors emerged with eigenvalues greater than 1, and explaining in total 41.80 % of variance (cf. Table 3).

Table 2: Exploratory factor analysis with principal factor analysis (maximum likelihood) and varimax rotation LOT-R (n=788)

LOT-R Variables	Factor 1	Factor 2	Factor 3
R01	0.58	0.17	-0.03
R02	0.10	0.20	0.71
R03	0.30	-0.62	0.02
R04	0.53	0.03	0.25
R05	0.01	-0.09	0.80
R06	0.58	0.11	-0.10

R07	-0.17	-0.70	0.13
R08	0.15	0.50	0.12
R09	-0.23	-0.44	-0.23
R10	0.70	-0.01	0.14
Expl.Var	1.62	1.31	1.24
Prp.Totl	0.16	0.13	0.12

Exploratory factor analyses on the items of the LOT-R revealed a less stable pattern of factors: an exploratory factor analysis with the maximum likelihood method of factor extraction and varimax rotation produced three factors (cf. Table 2).

Items R01, R04, R06 and R10 of the original LOT-R loaded significantly on the first factor. Items R02, R05 and R08 did not cluster significantly on the first factor. Items R07 and R09 loaded negatively on the first factor.

Only R08 loaded significantly on the second factor. Items R01, R02, R04, did not load significantly on the second factor, while items R03, R05, R07, R09 and R10 loaded negatively on the second factor.

Item R02 and R05 loaded strongly significant on the third factor. Items R03, R04, R07, R08 and R10 did not load significantly on the third factor. Items R01 and R06, and R09 clustered negatively on the third factor.

Table 3

Value	Eigenvalue	% Total variance	Cumulative Eigenvalue	Cumulative %
1	1.92	19.30	1.92	19.30
2	1.20	11.71	3.10	30.93
3	1.10	10.84	4.21	41.80

4.3.1 Analysis and interpretation

When we use the criteria of Zwick and Velicer (1986), which suggests that at least 3 loadings higher than 0.3 must be found for a major factor, only LOT-R variables (R1, R4, R6) emerged with significant loading.

Table 4: Explanatory analysis (maximum likelihood): GHQ-(n=788)

Variable	Factor 1	Factor 2	Factor 3	Factor 4
A1	-0.04	0.13	0.40	0.20
A2	0.07	0.70	0.02	0.04
A3	0.14	0.33	0.30	0.30
A4	0.14	0.61	0.10	0.13
A5	0.13	0.66	0.05	0.10
A6	0.13	0.56	0.10	0.21
A7	0.03	0.41	0.13	0.34
B1	0.07	0.12	0.20	0.63
B2	0.07	0.03	0.01	0.70
B3	0.08	0.20	0.22	0.50
B4	0.10	0.13	0.07	0.54
B5	0.22	0.05	0.51	0.48
B6	0.16	0.15	0.10	0.51
B7	0.22	0.12	0.23	0.41
C1	-0.05	0.03	0.48	-0.01
C2	0.20	0.05	0.50	0.06
C3	0.07	0.05	0.50	0.14
C4	0.20	-0.10	0.60	0.22
C5	0.10	0.80	0.50	0.00
C6	0.32	0.13	0.40	-0.60
C7	0.12	0.02	0.50	0.80
D1	0.51	0.10	0.25	0.16
D2	0.61	-0.01	0.10	0.30
D3	0.70	0.06	-0.02	0.24
D4	0.50	0.13	0.10	-0.10
D5	0.40	0.21	0.20	0.30

D6	0.70	0.10	0.03	0.30
D7	0.60	0.20	0.14	0.06
Expl. Var.	2.70	02.11	2.12	2.80
Prp. Total	0.09	0.10	0.10	0.10

Table 5: Second order factor analysis: GHQ-28 (n=788)

Value	Eigenvalue	% Total Variance	Cumulative Eigenvalue	Cumulative %
1	5.44	19.41	5.44	19.42
2	1.51	5.40	7.00	24.82
3	1.44	5.14	8.40	30.00
4	1.30	4.64	9.700	34.60

Table 5 indicates that only 4 strong factors emerged with eigenvalues greater than 1, and explaining in total 34.60% of variance.

The LOT-R scale that measured pessimistic life orientations among learners who participated in this study reveal the following mean values and standard deviations.

Table 6: Descriptive statistics (Mean, SD and Cronbach Alpha) indices as obtained in the total group for LOT-R are given in Tables 6 and 7

Variable	Mean	StDv.	Alpha
R03	7.61	2.00	0.02
R07	6.90	2.01	0.12
R09	6.69	2.00	0.18

4.3.2 Analysis and interpretation

The majority of the respondents reveal that if something can go wrong for them, it will ($M=7.61$, $SD=2.00$); they hardly ever expect things to go their way ($M=6.90$, $SD=2.01$) and rarely count on good things happening to them ($M=6.69$, $SD=2.00$).

Table 7

Variable	Mean (M)	Standard deviation (StDv)	Alpha
R01	3.20	1.80	0.41
R04	3.30	1.91	0.40
R10	3.20	1.65	0.32

The majority of the respondents reveal that they are always optimistic about their future ($M=3.30$, $SD=1.91$), in uncertain times they usually expect the best ($M=3.20$, $SD=1.80$); and overall, they expect more good things to happen to them than bad ones.

Table 8. Mean values and standard deviations of the variables in the General Health Questionnaire

Variable	Mean	StDv.	Alpha
A1	12.00	3.80	0.64
A2	12.00	3.50	0.60
A3	12.00	3.53	0.60
A4	11.80	3.43	0.60
A5	11.53	3.41	0.60
A6	11.70	3.44	0.60
A7	12.04	3.53	0.60
B1	11.74	3.72	0.63
B2	11.90	3.83	0.65
B3	11.92	3.90	0.66

B4	11.74	3.87	0.66
B5	11.86	3.88	0.66
B6	11.78	3.88	0.66
B7	11.77	3.90	0.66
C1	11.79	3.07	0.56
C2	11.71	3.01	0.51
C3	12.00	3.01	0.51
C4	11.93	2.94	0.49
C5	11.65	2.98	0.51
C6	11.83	3.00	0.51
C7	11.83	2.94	0.50
D1	11.45	3.94	0.70
D2	11.25	3.86	0.70
D3	11.34	3.83	0.70
D4	11.00	4.10	0.74
D5	11.25	4.00	0.72
D6	11.40	3.82	0.70
D7	11.00	3.90	0.70

As indicated in Tables 2 to 4, the Cronbach alphas of the different sub-scales of the GHQ range between 0.49 and 0.72, whereas Goldberg *et al.* (1997) report the Cronbach alpha reliability indices varying from 0.82 to 0.86, while Wissing and Van Eeden (1997) report reliability indices varying from 0.77 to 0.84 for the sub-scales and 0.91 for the total scale score in a South African sample (Wissing & Van Eeden, 1997).

In a study by Wissing and Van Eeden (1994), a mean score of 5.25, S.D. of 5.99, and the range scores between 0 and 26 were obtained while Wissing and Van Eeden (1997) report a mean score of 5.25, a standard deviation of 6.00 and the range of scores between 0 and 26.

The range of scores obtained in this study (cf. above paragraph) are lower than those obtained in the studies of the afore-mentioned studies, but the mean GHQ score is clearly much higher. The latter can be explained by the historical circumstances of the participants.

4.3.3 Analysis and interpretation

The physical wellness scale of the GHQ suggests that the majority of the participants in this study are having difficulty in staying asleep ($M=12.04$, $SD=3.50$), are feeling a need for a good tonic ($M=12.00$, $SD=3.80$), are feeling run down and out of sorts ($M=12.00$, $SD=3.53$). It is interesting to note that in spite of their feeling these physical pathologies, they are still feeling perfectly well and in good health.

The anxiety (Table 2), social (Table 3) and depression (Table 4) scales of the GHQ measured the psychological wellness of the respondents.

4.3.4 Analysis and interpretation

The anxiety scale reveals that the majority of the participants in this study feel constantly under strain ($M=11.92$, $SD=3.90$) and have difficulty in staying asleep ($M=11.90$, $SD=3.83$). This is an indication that they are experiencing anxiety.

The social scale reveals that the participants on the whole feel that they are doing things well ($M=12.00$, $SD=3.01$) and are satisfied with the way they have carried out their tasks ($M=11.93$, $SD=2.94$).

This scale reveals that the majority of the respondents feel that life is not worth living ($M=11.45$, $SD=3.94$) and find themselves wishing that they were dead and away from it all (Mean= 11.40 , $SD=3.82$).

4.4 Qualitative research results

The analysis of the results of the interviews that were conducted with learners in grades 8 to 12 in secondary schools in the Vaal Triangle, using both the GHQ and LOT-R questionnaires revealed the following:

4.4.1 Research results of GHQ

- 90% of respondents reported that they were feeling perfectly well and in good health, whereas 10% of them reported that they were feeling worse than usual.
- 75% of the respondents reported that they did not need any good tonic, while 25% reported that they needed a good tonic.
- 12,5% of learners responded by saying that they were feeling run down and out of sorts, and 87,5% reported that they did not feel run down and out of sorts.
- 77,5% of respondents reported that they were not feeling ill, 22,5% reported that they were feeling ill.
- 65% of learners reported that they were been getting pains in their heads only 35% reported that they were getting pains in their heads.
- 65% of respondents reported that they were not getting a feeling of tightness or pressure in their heads, only 35% of them reported that they were getting a feeling of tightness or pressure in their heads.
- 72,5% of respondents reported that they were having hot or cold spells and 27,5% reported that they were not having hot or cold spells.
- When asked as to whether they lost much sleep over worry, 65% of respondents reported that it did not happen to them, 35% reported that it happened.
- When asked whether they had difficulty in staying asleep, 82,5% said not at all, only 17,5% reported that they had some difficulty in staying asleep.
- When asked whether they felt constantly under strain, 85% said not at all, but 14,5% reported that they were constantly under strain.
- 77,5% of learners reported that they have not been getting edgy and bad-tempered, only 22,5% reported that they were getting edgy and bad-tempered.
- 72,5% of respondents reported that they were not getting scared or panicky for no good reason, 27,5% reported that they did.
- 65% of respondents reported that nothing was getting on top of them, but 35% reported that everything was getting on top of them.

- 72.5% of respondents reported that they were not feeling nervous and strung-up all the time, whereas only 27,5 learners reported that they were feeling nervous and strung-up all the time.
- When participants were asked whether they were managing to keep themselves busy and occupied, 82,5% responded that they were the same as usual, while 17,5% responded that they were not the same as usual.
- When asked whether they were taking longer over the things they did, 90% said that they doing were things the same as usual, while 10% reported that they did not do things the same as usual.
- 82,5% of learners reported that they felt the same as usual, when asked whether on the whole they were doing things well, while 17,5% reported that they were not doing things well.
- When asked whether they were satisfied with the way they have carried out their tasks, 77,5% said that they were more satisfied, while 22,5% reported that they were not more satisfied.
- When asked whether they felt they were playing a useful part in things, 75% reported that they felt more so than usual, while 25% reported that they did not feel more so than usual.
- When asked whether they were capable of making decisions about things, 87,5% of learners said that they felt more so than usual, while 12,5% reported that they did not feel more so than usual.
- 75% of respondents reported that they were able to enjoy their normal day-to-day activities more than usual, only 25% of respondents reported that they were not able to enjoy their normal day-to-day activities more than usual.
- 85% of learners reported that they were not thinking of themselves as worthless persons, only 15% of learners reported that they were thinking of themselves as worthless persons.
- 75% of respondents reported that they did not feel that life was entirely hopeless at all, but 25% of them reported that they felt that life was entirely hopeless.

- 15% of learners reported that they felt that life was not worth living, but 85% of them reported that life was worth living.
- 67,5% of participants reported that they definitely did not think of the possibility that they might dispose of themselves, only 32,5% had the thought of the possibility that they might make away with themselves.
- 17,5% of learners said that at times they found that they could not do anything because their nerves were too bad, although 82,5% reported that they did not have nerve problems.
- 20% of participants reported that they found themselves wishing they were dead and away from it all and 80% of them felt that they still needed to live.
- 27,5% of respondents found that the idea of taking their own lives kept coming into their heads, but 72,5 reported that this did not definitely happen to them.

The majority of respondents reported that they were having hot or cold spells (cf. paragraph 4.4.1) which literally indicates that they are neither healthy nor unhealthy. It can be assumed that most of the respondents are not sure of their physical disposition.

4.4.1 Research results (LOT-R)

- 94,5% of learners usually expect the best in uncertain times, only 5,5% of learners do not expect the best in uncertain times.
- 76,5% of learners said it was easy for them to relax, but 23,5% reported that it was not easy for them to relax.
- 50% of learners reported that if something could go wrong for them, it would, whereas the other 50% reported that if something can go wrong for them it would not.
- 98% of learners reported that they were always optimistic about their future, only 2% reported to be pessimistic about their future.
- 72,5% of learners reported that they enjoyed their friends a lot and 27,5% of learners reported that they did not enjoy their friends a lot.
- 87% of learners said that it was important for them to keep busy, but 13% reported that it was not important for them to keep busy.

- 30% of learners reported that they hardly ever expected things to go their way, but 70% of them reported that they always expected things to go their way.
- 64,5% of learners agreed that they did not get upset too easily, although 35,5% felt that they became upset too easily.
- 60% of learners reported that they rarely counted on good things happening to them, but 40% said that good things were happening to them all the time.
- 95% said that overall, they expected more good things to happen to them than bad, only 5% reported that they expected more bad things to happen to them.

It can be assumed from this paragraph that the majority of the respondents are optimistic. This assumption correlates well with the assumptions made in paragraph 4.4.1 that the majority of the respondents are healthy. Burke et al. (2000:128) found in their studies that learners with an optimistic outlook on life enjoy better psychological and physical wellness, are more motivated, are less prone to stress, depression and anxiety and have higher levels of achievement at school (cf. paragraph 2.1).

For items where the majority of respondents reported that if something could go wrong for them, it would and that they rarely counted on good things happening to them (cf. paragraph 4.4.1) an assumption of pessimism can be made. This could be an indication of the experience of learned-helplessness for some of the events that the respondents encounter in life (cf. paragraph 2.12.2).

4.5 Conclusion

This study shows that most learners in the Vaal Triangle are healthy and optimistic about their future and only a few are unhealthy and pessimistic (cf. paragraph 4.4.1).

In the next chapter, the conclusion and recommendations will be discussed.

Chapter 5

Conclusion and Recommendations

5.1 Introduction

In this chapter a summary of the findings from the literature as well as from the empirical investigation and important conclusions are provided. Recommendations for further research are also included.

5.2 Summary and conclusions

5.2.1 Conclusions from the literature study

The aim of this study was to assess the influence of optimistic and pessimistic orientations on the physical and psychological wellness of learners at secondary schools and to suggest guidelines which can assist schools to instigate and sustain learners' optimistic orientations systematically, oriented towards the attainment of their psychological and physical wellness.

From the literature study it emerged that optimistic learners have a set of beliefs that lead them to approach the world in an active manner and cause them to believe that reality is essentially good (cf. paragraph 1.1, page 1), completely good, or as good as it could conceivably be (cf. paragraph 2.6.1, page 18) the good in life is outweighing the pain and evil of it and that life is preponderantly good. They take a hopeful view of things, that is, optimistic learners expect things to go well and believe that future outcomes will be good, rather than bad (cf. paragraph 2.6.1, page 18).

On the other hand, the literature revealed that pessimistic learners have the tendency to take the worst view of things or expect the worst outcomes, and believe that the actual world is the worst possible one or that all things tend to be evil (cf. paragraph 2.6.1, page 18). Pessimistic learners give up more easily (cf. paragraph 2.6.2, page 20), think that bad events will last a long time and believe the worst about people around them (cf. paragraph 2.6.2, page

20). They are less likely to persevere and persist in a competitive academic setting (cf. paragraph 2.6.2, page 20), and they exhibit higher rates of depression, anxiety, and feelings of hostility after interacting with optimistic learners (cf. paragraph 2.6.2, page 20). Pessimistic learners prefer the presence of learners with a life orientation similar to their own (cf. paragraph 2.8, page 35). Thus, whether due to social rejection or to a like-seeks-like selection bias, pessimistic learners end up with predominantly pessimistic friends (cf. paragraph 2.8, page 35). Therefore, the social support network of pessimists may be restricted largely to others who, like themselves, expect negative outcomes, distance themselves from problems, and have coping strategy problems (cf. paragraph 2.8, page 35). They end up with more health concerns and poorer health during their teen years (cf. paragraph 2.8 page 36). They have weak coping strategies and resort to the use of denial, substance abuse and disengagement coping behaviour (cf. paragraph 2.8, page 39). These types of coping behaviour seem to represent a giving-up response (cf. paragraph 2.8, page 39), while optimistic learners have been associated with active, persistent, health-oriented coping strategies.

5.3 Conclusions from the empirical investigation

The predicted positive correlation between optimism and physical wellness of adolescents was confirmed. LOT-R variables of optimism significantly correlated with physical wellness variables as measured by somatic variables of the GHQ instrument (cf. paragraph 4.2.2.1). A significant correlation was also found between physical wellness and overall Life Orientation ratings (cf. Table 1). Pessimism had a significant negative correlation with the indices of physical wellness (cf. paragraph 4.2.2.1). The predicted negative correlation between pessimism and physical wellness was confirmed (cf. paragraph 4.2.2.1).

It is interesting to note that optimism, as reflected in Table 1, correlates positively with the psychological indices of anxiety, social dysfunction and depression, while pessimism negatively correlates with all these indices (cf. paragraph 4.2.2.2). The analysis of the results of the qualitative research

(cf.4.4 above) indicate that the majority of the learners who participated in this study:

- are feeling perfectly well and in good health;
- do not need any good tonic;
- do not feel run down and out of sorts;
- are not feeling ill, are not getting pains in their heads;
- are not getting a feeling of tightness or pressure in their heads;
- have not lost much sleep over worry;
- have not at all had difficulty in staying asleep;
- have not at all felt constantly under strain;
- are not getting edgy and bad-tempered;,
- are not getting scared or panicky for no good reason;
- are not feeling nervous and strung-up all the time;
- are managing to keep themselves busy and occupied as usual;
- are doing things the same as usual;
- are satisfied with the way they carry out their tasks;
- are feeling that they are playing a useful part in things as they usually have been;
- are capable of making decisions about their normal day to day activities;
- are not thinking of themselves as worthless persons;
- are not feeling that life is entirely hopeless at all;
- are reporting that life is worth living;
- are not thinking of the possibility that they may dispose of themselves;
- do not have nerve problems;
- do not wish to be dead and away from it all; and
- are not thinking of taking their own lives.

It is interesting to note that the majority of respondents reported that they were having hot or cold spells (cf. paragraph 4.4.1) which literally indicates that they are neither healthy nor unhealthy.

The qualitative results of LOT-R indicate that the majority of the respondents:

- are usually expecting the best in uncertain times;
- are finding it easy for them to relax;
- are always optimistic about their future;
- are enjoying their friends a lot;
- find it important for them to keep busy;
- are always expecting things to go their way;
- do not get upset too easily;
- find that good things are happening to them all the time; and
- expect more good things to happen to them than bad.

It is interesting to note that the majority of respondents reported that if something could go wrong for them, it would (cf. paragraph 4.4.1) which is an indication of pessimism; and that they rarely counted on good things happening to them (cf. par. 4.4.1) which, again, is an indication of pessimism.

5.4 Limitations of the study

The study may have suffered because of the following limitations:

5.4.1 Measuring instrumentation

With relation to measuring instrumentation, questionnaires such as Life Orientation Test-Revised (LOT-R) and General Health Questionnaire (GHQ) are standardized for the United States of America and European adult populations. Questionnaires contextually developed and standardized for South African adolescent population were not available, therefore there was no choice, but to use those mentioned.

5.4.2 Available literature

As not much, if any, research has been done about the influence of optimistic and pessimistic orientations on the psycho-physical wellness of adolescents in South Africa, the researcher had to use literature and the results based on the Western world, that is United States of America and Europe, generalised

from this research and literature and applied it to the South African situation and context.

5.4.3 Language medium

The respondents were Sesotho and Isizulu speakers, while the questionnaires were in English. The assumption can be made that learners did not understand the questionnaires, hence they failed to answer some items correctly.

5.5 Recommendations

In the light of both literature and empirical research, the following recommendations are made:

5.5.1 Optimism, which is the source of both the psychological and physical wellness of learners, should always be inculcated by educators, parents and communities where adolescent learners grow up. All learning areas should be infused with, among other things, life-skills such as assertiveness; self-regulated learning strategies; need for persistence in all life endeavours in order to succeed in life; psychological and physical health promotion; surviving in stressful, depressive and anxiety-triggering school environments; proactive living styles such as planning and programming of their intra and extra-curricular; activities inculcating optimism and infusing life-skills in all learning areas; educating learners that optimism and effective life-skills are necessary in living and in leading a productive and successful health life. Optimism and effective life skills are sources of psychological and physical strengths, fortitude and hardiness. They broaden one's vision and enable one to solve all one's problems in life strategically.

5.5.2 Schools should be toxic-free, that is they must strive to be non-stressful; irrepressive; democratic; accommodate all personal and cultural identities of adolescent learners, such as race, language, values, norms, convictions, beliefs, philosophy of life, way of life, religion and so on. Stress, repression, autocracy and impersonal school settings are a source of pessimism and, consequently, affect both the psychological and physical wellness of

adolescent learners. All schools should be advised to promote healthy organisational climates by including health promotion in their schools intra and extra-curricular programmes.

5.5.3 School and educational psychologists are a necessity at every school if South Africa is to succeed in infusing life skills in schools' intra and extra-curricular activities. These psychologists can help adolescent learners individually and /or in groups to deal effectively with stressful events in their lives by providing psychotherapeutic assistance. They are even skilled to deal with psychopathologies which could be the source of pessimism among adolescents. The Department of Education should, therefore, employ sufficient school and educational psychologists to help learners cope with stressful life events in South African ever changing landscape of schools.

5.6 Concluding remarks

In this research, the influence of optimistic and pessimistic orientations on the psycho-physical wellness of learners in grades 8 to 12 were investigated. It is hoped that the results and conclusions will help to solve those problems which blur learners optimism and affect their psychological and physical wellness. This can be solved by the parents taking better care of their children, the schools infusing life skills mentioned in 5.4.1 above, learners themselves taking the responsibility for their own pessimism and psycho-physical indisposition and finally the Department of Education providing sufficient school and educational psychologist for schools.

APPENDICES

APPENDIX: A

GENERAL HEALTH QUESTIONNAIRE (GHQ) (Goldberg & Hiller, 1979)

GENERAL HEALTH QUESTIONNAIRE (GHQ)
(Goldberg & Hiller, 1979)

Instructions

We would like to know if you have had any medical complaints, and how your health has been in general over the past few weeks. Please answer ALL the questions simply by underlining or marking the answer which you think most nearly applies to you. Remember that we want to know about present and recent complaints, not those that you had in the past: it is important that you try to answer ALL the questions. Thank you very much for your cooperation.

		1	2	3	4
A1	Been feeling perfectly well and in good health?	Better than usual	Same as usual	Worse than usual	Much worse than usual
A2	Been feeling in need of a good tonic?	Not at all	No more than usual	Rather more than usual	Much more than usual
A3	Been feeling run down and out of sorts?	Not at all	No more than usual	Rather more than usual	Much more than usual
A4	Felt that you are ill?	Not at all	No more than usual	Rather more than usual	Much more than usual

			usual	usual	usual
B5	Been getting scared or panicky for no good reason?	Not at all	No more than usual	Rather more than usual	Much more than usual
B6	Found everything getting on	Not at all	No	Rather	Much

	top of you?		more than usual	more than usual	more than usual
B7	Been feeling nervous and strung-up all the time?	Not at all	No more than usual	Rather more than usual	Much less than usual
C1	Been managing to keep yourself busy and occupied?	More so than usual	Same as usual	Rather less than usual	Much less than usual
C2	Been taking longer over the things you do?	Quicker than usual	Same as usual	Longer than usual	Much more than usual
C3	Felt on the whole you were doing things well?	Better than usual	About the same	Less so than usual	Much less than usual
C4	Been satisfied with the way you've carried out your task?	More satisfied	About same as usual	Less so than usual	Much less than usual
C5	Felt that you are playing a useful part in things?	More so than usual	Same as usual	Less so than usual	Much less than usual
C6	Felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less than usual
C7	Been able to enjoy your normal day-to-day activities?	More so than usual	Same as usual	Less so than usual	Much less than usual
D1	Been thinking of yourself as a worthless person?	Not at all	No more	Rather more	Much more

				mind	
--	--	--	--	------	--

APPENDIX: B

LIFE ORIENTATION TEST-REVISED (LOT-R) (Scheier, Carver and Bridges, 1994)

LIFE ORIENTATION TEST-REVISED (LOT-R)
(Scheier, Carver and Bridges, 1994)

Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no “correct” or “incorrect” answers. Answer according to your own feelings, rather than how you think “most people” would answer.

	I agree a lot	I agree a little	I neither agree nor disagree	I disagree a little	I disagree a lot
1. In uncertain times, I usually expect the best.	A	B	C	D	E
2. It's easy for me to relax.	A	B	C	D	E
3. If something can go wrong for me, it will.	A	B	C	D	E
4. I'm always optimistic about my future.	A	B	C	D	E
5. I enjoy my friend a lot.	A	B	C	D	E
6. It's important for me to keep busy.	A	B	C	D	E
7. I hardly ever expect things to go my way.	A	B	C	D	E
8. I don't get upset too easily.	A	B	C	D	E
9. I rarely count on good things happening to me.	A	B	C	D	E
10. Overall, I expect more good things to happen to me than bad.	A	B	C	D	E

BOSWORTH, H.B., SIEGLER, I.C., & BRUMMETT, B.H. 1999. The association between self-rated health and mortality. *Medical care*, 37: 1226-1236.

BRICKKEY, A. 2001. Evaluations of self and others: Self-enhancement biases in social judgments. *Social cognition*, 4, 53-78.

BRISSETTE, I., SCHEIER, M.F., & CARVER, C.S. 2002. The role of optimism and social network development, coping, and psychological adjustment during a life transition. *Journal of personality and social psychology*, 82: 102-111.

BROWNE, S., CLARKE, M., & GERVIN, M. 2000. Determinants of quality of life at first presentation with schizophrenia. *British journal of psychiatry*, 151: 716-721.

BROWN, J.W., & HUGHES, G.B. 1999. The new face of teaching in the 21st century: are we ready for the challenge?. *The journal of Negro education*, 68(3):

BURKE, K.L., JOYNER, A.B., CZECH, D.R., & WILSON, M.J. 2000. An investigation of concurrent validity between two optimism and pessimism questionnaires: The Life Orientation Test - Revised and the Optimism/pessimism Scale. *Current psychology*, 19: 127-147.

CAMERON, J., BANKO, K.M., & PIERCE, W. D., 2001. Pervasive negative effects of rewards on intrinsic motivation: The myth continues. *The behaviour analyst*, 24: 1-44.

CAMERON, J., & PIERCE, W.D. 2002. Rewards and intrinsic motivation: *Resolving the controversy*, 23:125-226.

CARELS, R.S., SHERWOOD, A., & BABYAK, M. 1999. Emotional responsively and transient myocardial schema. *Clinical psychology*, 67: 605-610.

CARNEY, R.M., FREELAND, K.E., & VEITH, R.C., 1999. Major depression, heart rate, and plasma nor epinephrine in patients with coronary heart disease. *Biological psychology*, 45: 458-463.

CARDUCCI, B.J. 2000. Shyness: The new solution. *Psychology today*, ()38-78.

CASTENSEN, L., MAYR, U., & PASUPATHI, M. 2000. Emotional experience in everyday life across the adult life span. *Journal of personality & social psychology*, 79(4): 644-420.

CASTENSEN, L., & LANG, F.R. 2000. Time counts: Future time perspective, goals, and social relationships. *Psychology & aging*, 17(1), 125-139.

CARVER, C.S. 1999. Optimism, coping and health: Assessment and implications of generalised outcome Expectancies. *Health psychology*, 4: 56-67.

CARVER, C.S. 2003. Pleasure as a sign you can attend to something else: Optimism. Placing positive feelings within a general model of affect. *Cognition and Emotion*, 17: 241-261.

CARVER, C.S., & SCHEIER, M.F. 2001. Optimism, pessimism, and self-regulation. In Chang, E.C, ed. *Optimism and pessimism: implications for theory, research, and practice*: 301-351.

CARVER, C.S., & SCHEIER, M.F. 2002. Control processes and self-organization as complementary principles underlying behaviour. *Personality and Social psychology review*, 6: 304-315.

CARVER, C.S., HARRIS, S.D., LEHMAN, J.M., DUREL, L.A., ANTONI, M.H., POZO-KADERMAN, C. 1999. How important is the perception of personal control? Studies of early stage breast cancer patients. *Personality and social Psychology bulletin*, 26: 139-150.

CARVER, C.S., SUTTON, S.K., & SCHEMER, M.F. 2000. Action, emotion, and personality: Emerging conceptual integration. *Personality and social psychology bulletin*, 26: 741-751.

CHANG, E. (Ed.). 2000. Optimism and pessimism: *Implications for theory, research, and practice*, 2: 172-205.

CHEN, L.S., EATON, W.W., & GALLO, J.J. 2000. Empirical examination of current depression categories in a population-based study. Symptoms, cause and risk factor. *American journal of psychiatry*, 157: 80-87.

CHERKAS, L., HOCHBER, F., & MACGREGOR, A.J., 2000. Happy families. A twin study of humour. *Twin research* 3, 17-22.

COOPER, H., ARBER, S., & FEE, L. 1999. The influence of social support and social capital on health. A review and analysis of British data. *Health education authority*. 4, 102-124.

CHRISTENSEN, A. & JOCOBSON, N.S. 2000. Reconcilable differences. New York : Guilford Press. 375-456.

COLLINS, K.J., SKULTELY, K.M., & KRAUSS-WHITBOURNE, S. 2001. Formative reflections on service-learning in a course on the psychology of aging. *Gerontology Special Issue: Service learning in gerontology education*, 27(1):105-115.

CONE, J.D. 1999. Introduction to the special section on self-monitoring: A major assessment method in clinical psychology. *Psychological assessment*, 11: 411-414.

COWAL, K., SHINN, M., WEITZMAN, B.C., STOJANOVIC, D., & LABAY, L. 2002. Mother child separations among homeless and housed families receiving public assistance in New York City. *American journal of community psychology*, 30(5): 711-730.

CRAMER, P. 2000. Defense mechanisms in psychology today. *American psychologist*, 55: 637-646.

CRUESS, D.G., ANTONI, M.H., MCGREGOR, B.A., KILBOURN, K.M., BOYERS, A.E., ALFERI, S.N., CARVER, C.S., & KUMAR, M. 2000. Cognitive behaviour stress management reduces serum cortisol by enhancing benefit finding among women being treated for early-stage breast cancer. *Psychosomatic medicine*, 62: 304-308.

CUNNINGHAM, M. 1999. African American adolescent males' perceptions of their community resources and constraints: a longitudinal analysis. *Journal of Community psychology*, 27: 569-588.

CSIKSZENTMIHALYI, M. 2003. Good business: Leadership, flow and the making of meaning. Viking Press, 166-256.

DA COSTA, D., RIPPEN, N., DRITSA, M., & RING, A. 2003. Self-supported leisure-time physical activities and relationship to psychological well-being. *Journal of Psychosomatic and obstetrics*, 24 (2): 111-120.

DAALEMAN, T.P. 1999. Belief and subjective well-being in outpatients. *Journal of religion and health*, 38: 219-229.

DAALEMAN, T.P., COBB, A.K., & FREY, B.B. 2001. Spirituality and well-being: An exploratory study of the patient perspective. *Social science & medicine*, 53 (11): 153-152.

DAGNAN, D., & SANDHU, S. 1999 Social comparison, self-esteem and depression in people with intellectual disability. *Journal of intellectual disability research*, 43(5): 372-380.

DAHME, G., EICHSTAEDT, J., & RUDOLPH, U. 2003. Experiments important to Carver and Scheier's self-regulation theory are not replicable. *Swiss journal of psychology*, 62 (1): 53-66.

DALBERT, C. 1999. The world is more just for me than generally: About the Personal Belief in a Just World scale's validity. *Social justice research*, 12: 79-98.

DALBERT, C., LIPKUS, I.M., SALLAY, H., & GOCH, I. 2001. A just and an unjust world: Structure and validity of different world beliefs. *Personality and individual differences*, 30: 561-579.

DAMIANO, A.M., PATRICK, D.L., GUZMAN, G.I., GAWEL, M.J., GELINAS, D.F., NATTER, H.M., & INGALLS, K.K. 1999. Measurement of health-related quality of life in patients with amyotrophic lateral sclerosis in clinical trials of new therapies. *Medical care*, 37(1): 15-26.

DAMICO, A., & CARDACI, M. 2003. Relations among perceived self-efficacy, self-esteem, and school achievement. *Psychological reports*, 92 (3): 745-754.

DANIELS, K. 2000. A note on the modification to Warr's measures of affective well-being at work. *Journal of occupational and organizational psychology*, 70: 129-138.

DANIELS, K. 2000. Measures of five aspects of affective well-being at work. *Human relations*, 53: 275.

DANIERE, A., TAKAHASHI, L.M., & NARANONG, A. 2002. Social capital, networks, and community environments in Bangkok, Thailand. *Growth and change*, 33 (4): 453-484.

DANNER, D.D., SNOWDEN, D.A., & FRIESEN, W.V. 2001. Positive emotions in early life and longevity. *Journal of personality and social psychology*, 80: 804-814.

DANZIGER, S.K., CARLSON, M.J., & HENLY, J.R. 2001. Post-welfare employment and psychological well-being. *Women and health*, 32: 47-79.

DASKALOPOULOU, E.G., DIKEOS, D.G., PAPADIMITRIOU, G.N., SOUERY, D., BLAIRY, S., MASSAT, I., MENDLEWICZ, J., & STEFANIS, C.N. 2002. Self-esteem, social adjustment and suicidal in affective disorders. *European psychiatry*, 17 (5): 265-271.

D'AUGELLI, A.R., & GROSSMAN, A.H. 2001. Disclosure of sexual orientation, victimization, and mental health among lesbian, gay, and bisexual older adults. *Journal of interpersonal violence*, 16 (10): 1008-1027.

DAUGELLI, A.R., GROSSMAN, A.H., HERSHBERGER, S.L., & O'CONNELL, T.S. 2001. Aspects of mental health among older lesbian, gay and bisexual adults. *Aging and mental health*, 5: 149-159.

DAVEY, M., EAKER, D.G., & WALTERS, L.H. 2003. Resilience processes in adolescents: Personality profiles, self-worth, and coping. *Journal of adolescent research*, 18 (4): 347-362.

DAVID, C.F., & KISTNER, J.A. 2000. Do positive self-perceptions have a 'dark side'? Examination of the link between perceptual bias and aggression. *Journal of abnormal child psychology*, 28: 327-339.

DAVIES, A., DESOUZA, L.H., & FRANK, A.O. 2003. Changes in the quality of life in severely disabled people following provision of powered indoor/outdoor chairs. *Disability and rehabilitation*, 25 (6): 286-295.

DAY, C., KANE, R.T., & ROBERTS, C. 2003. The prevention of depressive symptoms in rural Australian women. *Journal of community & applied social psychology*, 13 (1): 451-514.

DAY, L., & MALTBY, J. 2003. Belief in good luck and psychological well-being: The mediating role of optimism and irrational beliefs. *Journal of psychology*, 137 (1): 99.

DAY, L., MALTBY, J., & MACASKILL, A. 1999. Relationship between belief in good luck and general health. *Psychological reports*, 85: 971-973.

DAYAN, J., DOYLE, A.B., & MARKIEWICZ, D. 2001. Social support networks and self-esteem of andocentric and all centric children and adolescents. *Journal of Social and personal relationships*, 18 (6): 767-784.

DEACON, S.A., & PIERCY, F.P. 2001. Qualitative methods in family evaluation: Creative assessment techniques. *American journal of family therapy*, 29 (5): 355-374.

DEAN, K., WAYNE, J. H., MACK, D., & THOMAS, K. 2000. An examination of happiness, racism, and demographics on judgments of guilt. *Journal of Applied social psychology*, 30: 816-833.

DEANDA, D., BARONI, S., BOSKIN, L., BUCHWALD, L., MORGAN, J., OW, J., GOLD, J.S., & WEISS, R. 2000. Stress, stressors and coping among high school students. *Children and youth services review*, 22: 441-465.

DEAR, K., HENDERSON, S., & KORTEN, A. 2002. Well-being in Australia- Findings from the National Survey of Mental Health and Well-being. *Social psychiatry and psychiatric epidemiology*, 37 (11): 503-509.

DEBELJAK, A. 2003. European forms of belonging. *East European politics and societies*, 17 (2): 151-165.

DECI, E.L., RYAN, R.M., GAGNE, M., LEONE, D.R., USUNOV, J., & KORNAZHEVA, B.P. 2001. Need satisfaction, motivation, and well-being in the work organizations of a former eastern bloc country: A cross-cultural study of self-determination. *Personality and social psychology bulletin*, 27: 930-943.

DECREMER, D., & OOSTERWEGEL, A. 1999. Collective self-esteem, personal self-esteem, and collective efficacy in-group and out-group evaluations. *Current psychology*, 18: 326-340.

DEGENHARDT, L., HALL, W., & LYNSEY, M. 2001. The relationship between cannabis use, depression and anxiety among Australian adults: Findings from the National Survey of Mental Health and Well-Being. *Social psychiatry and psychiatric epidemiology*, 36 (4): 319-327.

DEGROOT, J.M. 2002. The complexity of the role of social support in relation to the psychological distress associated with cancer. *Journal of psychosomatic research*, 52 (5): 277-278.

DEIMLING, G.T., SMERGLIA, V.L., & SCHAEFER, M.L. 2001. The impact of family environment and decision-making satisfaction on caregiver depression: A path analytic model. *Journal of aging and health*, 13: 47-72.

DEJONG, G.F., CHAMRATRITHIRONG, A., & TRAN, Q.G. 2002. For better, for worse: Life satisfaction consequences of migration. *International migration review*, 36 (3): 838-863.

DEJONG, P.J. 2002. Implicit self-esteem and social anxiety: Differential self-favouring effects in high and low anxious individuals. *Behaviour research and therapy*, 40 (5): 501-508.

DEJONGE, J., BOSMA, H., PETER, R., & SIEGRIST, J. 2000. Job strain, effort-reward imbalance and employee well-being: a large-scale cross-sectional study. *Social science and medicine*, 50: 1317-1329.

DE LA DURANTAYE, M. 1999. Public policy in urban time and quality of life. *Loisir and societal society and leisure*, 22: 513-533.

DELHEY, J. 2001. The prospects of catching up for new members. Lessons for the accession countries to the European union from previous enlargements. *Social indicators research*, 56: 205-231.

DELHEY, J., BOHNKE, P., HABICH, R., & ZAPF, W. 2001. *The Euro module_A new instrument for comparative welfare research*. Berlin: Social Science Research Centre.

DELHEY, J., BOHNKE, P., HABICH, R., & ZAPF, W. 2002. Quality of life in a European perspective: The EUROMODULE as a new instrument for comparative welfare research. *Social indicators research*, 58 (1-3): 163-176.

DEMAUSE, L. 2003. Are you a hero or a wimp? *The journal of psychohistory*, 30 (4): 330-336.

DEMET, K., MARTINET, N., GUILLEMIN, F., PAYSANT, J., & ANDRE, J.M. 2003. Health related quality of life and related factors in 539 persons with amputation of upper and lower limb. *Disability and rehabilitation*, 25 (9): 480-486.

DEMIR, A., & TARHAN, N. 2001. Loneliness and social dissatisfaction in Turkish adolescents. *Journal of psychology*, 135: 113-125.

DEMMER, C. 2001. Quality of life and risk perception among predominantly heterosexual, minority individuals with HIV/AIDS. *Aids patient care and STDs*, 15 (9): 481-490.

DEMMER, C. 2002. Stress and satisfaction among employees in AIDS service organisations in New York. *Evaluation and the health professions*, 25 (2): 225-238.

DEMOVSEK, M.Z., RUPEL, V.P., REBOLJ, M., & TAVCAR, R. 2001. Quality of life and treatment costs in schizophrenic outpatients, treated with depot narcoleptics. *European psychiatry*, 16 (8): 474-482.

DEMPSEY, K., DEMPSTER, M., & DONNELLY, M. 2000. Selecting a measure of health-related quality of life. *Social work in health care*, 32: 45-57.

DEMPSTER, M., DONNELLY, M., & FITZSIMONS, D. 2002. Generic, disease-specific and individualised approaches to measuring health-related quality of life among people with heart disease. *Psychology & health*, 17 (4): 447-458.

DEMYTTENAERE, K., & DEFRUYT, J. 2003. Getting what you ask for: On the selectivity of depression rating scales. *Psychotherapy and psychosomatics*, 72 (2): 61-70.

DENEVE, K.M. 1999. Happy as an extraverted clam? The role of personality for subjective well-being. *Psychological science*, 8: 141-144.

DENNISON, C.R. 2002. The role of patient-reported outcomes in evaluating the quality of oncology care. *American journal of managed care*, 8 (18): 580.

DERCON, S. (2002) Income risk, coping strategies, and safety nets. *World bank research observer*, 17 (2): 141-166.

DERIDDER, D., SCHREURS, K., & BENSING, J. 2000. The relative benefits of being optimistic: Optimism as a coping resource in multiple sclerosis and Parkinson's disease. *British journal of health psychology*, 5: 141-157.

DE SWAAN, A., MANOR, J., OYEN, E., & REIS, E.P. 2000. Elite perceptions of the poor: Reflections for a comparative research project. *Current sociology*, 48: 43-54.

DE VAUS, D. 2002. Marriage and mental health. *Family matters*, 62, 26-32.

DEVINSKY, O., WESTBROOK, L ET AL. 1999. Risk factors for poor health-related quality of life in adolescents with epilepsy. *Epilepsies*, 40 (12): 1715-1720.

DE VOS, H.G. 2001. A comparison of variables configurations across scale lengths: An empirical study. *Educational and psychological measurement*, 35: 39-44.

DE WET, 1994. Random sampling.

DEWITTE, H., & NASWELL, K. 2003. 'Objective' vs. 'subjective' job insecurity: Consequences of temporary work for job satisfaction and organisational commitment in four European countries. *Economic and industrial democracy*, 24 (2): 149-188.

DE WITZ, S.J., & WALSH, W.B. 2002. Self-efficacy and college student satisfaction. *Journal of career assessment*, 10 (3): 315-326.

DHONDT, T.D.F., BEEKMAN, A.T.F., DEEG, D.J.H., & VANTILBURG, W. 2002. Estrogenic depression in the elderly - results from a community-based study in the Netherlands. *Social psychiatry and psychiatric epidemiologist*, 37 (8): 393-398.

DI NOIA, J. 2002. Indicators of gender equality for American states and regions: An update. *Social indicators research*, 59: 35-77.

DICKENS, C., JACKSON, J., TOMENSON, B., HAY, E., & CREED, F. 2003. Association of depression and rheumatoid arthritis. *Psychosomatics*, 44 (3): 209-215.

DICKEY, W.P., BROWN, J.C., & STRECKFUS, C. 2002. Subjective well-being and dental treatment in African Americans. *Psychological reports*, 91 (2): 525-526.

DICKOW, H., & MOLTER, V. 2002. South Africa's 'rainbow people', national pride and optimism: A trend study. *Social indicators research*, 59 (2): 175-202.

DIENER, E. 1999. Personality and subjective well-being. In: Kahneman, D Diener, E and Schwartz, N. (eds.). *Well-being: the foundations of hedonic psychology*, 214-229.

DIENER, E. 2000. Subjective well-being: The science of happiness and a proposal for a national index. *American psychologist*, 55(1): 34-43.

DIENER, E., & BISWASDIENER, R. 2002. Will money increase subjective well-being?. *Social indicators research*, 57 (2): 119-170.

DIENER, E., & LUCAS, R.E. 2000. Explaining differences in societal levels of happiness: Relative standards, need fulfilment, culture, and evaluation theory. *Journal of happiness studies*, 1; 41-78.

DIENER, E., & SELIGMAN, M.E.P. 2002. Very happy people. *Psychological science*, 13 (1): 81-84.

DIENER, E., GOHM, C.L., SUH, E., & OISHI, S. 2000. Similarity of the relations between marital status and subjective well-being across cultures. *Journal of cross-cultural psychology*, 31: 419-437.

DIENER, E., LUCAS, R.E., OISHI, S., & SUH, E.M. 2002. Looking up and looking down: Weighting good and bad information in life satisfaction judgments. *Personality and social psychology bulletin*, 28 (4): 437-445.

DIENER, E., OISHI, S., & LUCAS, R.E. 2003. Personality, culture, and subjective well-being: Emotional and cognitive evaluations of life. *Annual review of psychology*, 54: 403-426.

DIENER, E., SUH, E.M., LUCAS, R.E., & SMITH, H.L. 1999. Subjective well-being: Three decades of progress. *Psychological bulletin*, 125(2): 276-302.

DIENER, E., WIRTZ, D., & OISHI, S. 2001. End effects of rated life quality: The James Dean effect. *Psychological science*, 12: 124-129.

DINAN, T.G. 1999. The physical consequences of depressive illness include coronary artery disease and reduced bone mineral density. *British medical journal*, 318: 826.

DIPAULA, A., & CAMPBELL, J.D. 2002. Self-esteem and persistence in the face of failure. *Journal of personality and social psychology*, 83 (3): 711-724.

DORAISWAMY, P.M., KHAN, Z.M., DONAHUE, R.M.J., & RICHARD, N.E. 2002. The spectrum of quality-of-life impairments in recurrent geriatric depression. *Journals of gerontology, series a, biological sciences and medical sciences*, 57 (2): 134-137.

DORAISWAMY, P.M., KHAN, Z.M., DONAHUE, R.M.J., & RICHARD, N.E. 2001. Quality of life in geriatric depression - a comparison of remitters, partial responders, and non-responders. *American journal of geriatric psychiatry*, 9 (4): 423-428.

DORLING, D., & WARD, N. 2003. Social science, public policy, and the search for happiness - commentary. *Environment and planning*, 35 (6): 954-958.

DORMANN, C., & ZAPF, D. 2001. Job satisfaction: a meta-analysis of stabilities. *Journal of organizational behaviour*, 22: 483-505.

DOUGALL, A.L., HYMAN, K.B., HAYWARD, M.C., M^CFEELEY, S., & BAUM, A. 2001. Optimism and traumatic stress: The importance of social support and coping. *Journal of applied social psychology*, 31: 223-246.

DOWIE, J. 2002. Decision validity should determine whether a generic or condition-specific HRQOL measure is used in health care decisions - a rejoinder. *Health economics*, 11 (1): 21-22.

DOWLEY, K.M., & SILVER, B.D. 2002. Social capital, ethnicity and support for democracy in the post-communist states. *Europe-Asia studies*, 54 (4): 505-528.

DOYLE, K.O., & YOUN, S. 2000. Exploring the traits of happy people. *Social indicators research*, 52: 195.

DRACHZAHAVY, A., & SOMECH, A. 2002. Coping with health problems: The distinctive relationships of Hope sub-scales with constructive thinking and resource allocation. *Personality and individual differences*, 33 (1): 103-118.

DREHER, H.M. 2003. The effect of caffeine reduction on sleep quality and well-being in persons with HIV. *Journal of psychosomatic research*, 54 (3): 191-198.

DRIGOTAS, S.M. 2002. The Michelangelo phenomenon and personal well-being. *Journal of personality*, 70 (1): 59-78.

DRIGOTAS, S.M., RUSBULT, C.E., & VERETTE, J. 1999. Level of commitment, mutuality of commitment, and couple well-being. *Personal relationships*, 6: 389.

DRUMMOND, N. 2000. Quality of life with asthma: the existential and the aesthetic. *Sociology of health and illness*, 22: 235-254.

DUBEAU, C.E., KIELY, D.K., & RESNICK, N.M. 1999. Quality of life impact of urge incontinence in older persons: A new measure and conceptual structure. *Journal of the American geriatrics society*, 47: 989-995.

DUBERSTEIN, P.R., CONNER, K.R., CONWELL, Y., & COX, C. 2001. Personality correlates of hopelessness in depressed inpatients 50 years of age and older. *Journal of personality assessment*, 77 (2), 380.

DUBERSTEIN, P.R., SORENSEN, S., LYNESS, J.M., KING, D.A., CONWELL, Y., SEIDITZ, L., & CAINE, E.D. 2003. Personality is associated with perceived health and functional status 446-479.

DUBOIS, D.L., & TEVENDALE, H.D. 1999. Self-esteem in childhood and adolescence: Vaccine or epiphenomenon? *Applied and preventative psychology*, 8: 103-119.

DUBOIS, D.L., FELNER, R.D., BRAND, S., & GEORGE, G.R. 1999. Profiles of self-esteem in early adolescence: Identification and investigation of adaptive correlates. *American journal of community psychology*, 27: 899-933.

DUDGEON, P., MALLARD, J., OXENHAM, D., & FIELDER, J. 2002. Contemporary aboriginal perceptions of community. In: Fisher A.T., Sonn C.C & Bishop B.J. (eds.) *Psychological sense of community: Research, applications, and implications*. Kluwer Academic/Plenum Publishers, New York, 117-249.

DUGGAN, C., MILTON, J., EGAN, V., M^CCARTHY, L., PALMER, B., & LEE, A. 2003. Theories of general personality and mental disorder. *British journal of psychiatry*, 182 (44): 19-23.

DUNBAR, M., FORD, G., HUNT, K., & DER, G. 2000. Question wording effects in the assessment of global self-esteem. *European journal of psychological assessment*, 16: 13-20.

DUNCANMYERS, A.M., & HUEBNER, R.A. 2000. Relationship between choice and quality of life among residents in long-term care facilities. *American journal of occupational therapy*, 54: 504-509.

DUNN, D.S. 2002. Teaching about the good life: Culture and subjective well-being. *Journal of Social and clinical psychology*, 21 (2): 218.

DUNN, E.C., & M^CCAULEY, E. 2000. Affective responses to exercise bouts of varying intensities. *Journal of social behaviour and personality*, 15: 201-215.

DUNN, J.R., & ROSENBERG, M.W. 2002. Contemporary urban problems and population health. *Environment and planning C- Government and Policy*, 20 (4): 475-476.

DUNNING, D. 1999. A newer look: Motivated social cognition and the schematic representation of social concepts. *Psychological inquiry*, 10, 1-11.

DURKIN, S.J., & PAXTON, S.J. 2002. Predictors of vulnerability to reduced body image satisfaction and psychological well-being in response to exposure to idealized female media images in adolescent girls. *Journal of psychosomatic research*, 53 (5): 995-1006.

DUVDEVANY, I. 2002. Self-concept and adaptive behaviour of people with intellectual disability in integrated and segregated recreation activities. *Journal of intellectual disability research*, 46 (5): 419-429.

DUVDEVANY, I., & ABBOUD, S. 2003. Stress, social support and well-being of Arab mothers of children with intellectual disability who are served by welfare services in northern Israel. *Journal of intellectual disability research*, 47 (4-5): 264-272.

DUVDEVANY, I., BEN-ZUR, H., & AMBAR, A. 2002. Self-determination and mental retardation: Is there an association with living arrangement and lifestyle satisfaction. *Mental retardation*, 40 (5): 379-389.

DYKSTRA, P., BUUNK, B.P., & BLANTON, H. 2000. The effect of target's physical attractiveness and dominance on STD-risk perceptions. *Journal of applied social psychology*, 30(8): 1738-1755.

DZUKA, J., & DALBERT, C. 2000. Well-being as a psychological indicator of health: A research agenda. *Studia psychological*, 42: 61-71.

DZUKA, J., & DALBERT, C. 2002. Mental health and personality of Slovak unemployed adolescents: The impact of belief in a just world. *Journal of applied social psychology*, 32 (4): 732-757

EBERT, J.E.J. 2001. The role of cognitive resources in the valuation of near and far future events. *Act psychological*, 108(2): 155-171.

FARMER, A., HARRIS, T., & REDMAN, K. 2000. Depression study. A sib-pair of life events and familiarity in major depression. *British journal of psychiatry* 176: 150-155.

FLYNN, M.E. 2000. Trauma, stressful life events and future: conjugating George Herber Mead's perspective on time. *Time and society*, 10(2-3): 147-161.

FOURNIER, L., LEMOINE, O., & CHEVALIER, S. 1999. Implementing a direct multi-method strategy for assessing community mental health needs. *Epidemiology to clinical practice*, (1-4): 265-398.

FROMMBERGER, U, STIEGLITZ, R.D., & STRAUB, S. 1999. The concept of sense of coherence and the development of post-traumatic stress disorder in traffic accident victims. *Journal of psychosomatic research*, 46: 8-343.

GLOVER, G.R. LEESE, M. & McCRONE, P. 1999. More severe mental illness is more concentrated in deprived areas. *British journal of psychiatry*, 175: 8-544.

GOODYER, I.M., HERBERT, J., & TAMPLIN, A. 2000. First episode major depression in adolescents. Affective, cognitive and endocrine characteristics of risk status and predictors of onset. *British journal of psychiatry*, 176: 142-149.

GOLDBERG, D.P. & HILLIER, V.F. 1979. A scaled version of the General Health Questionnaire. *Psychological medicine*, (9): 139-145.

HELGASON, T. 1999. Public health implications of increasing use of antidepressants . *Epidemiology to clinical practice*, 49.

HEYI, V., & WAHL, H. 2001. Psychosocial adaptation to age-related vision loss: A six year perspective. *Journal of visual impairment and blindness*, 95: 739-748.

HONORA, D.T. 2002. The relationship of gender and achievement to future outlook among African American adolescents. *Adolescence*, 37: 301-316.
HOYER, E.H., MORTENSEN, P.B., & OLESEN, A.V. 2000. Morality and causes of death in total national sample of patients with affective disorders admitted for first time between 1973 and 1993. *British journal of psychiatry*. 176: 76-82.

ISOMETSA, E. 2000. Suicide. *Curr Opin Psychiatry*. 13: 143-147.

JOHNSON, R.J., MCCAUL, K.D., & KLEIN, W.M.P. 2002. Risk involvement and risk perception among adolescents and young adults. *Journal of behavioral medicine*.76-98.

KASI, S.V., LEVY, B.R., & SLADE, M.D. 2002. Longitudinal benefit of positive self-perceptions of aging on functional health. *Journals of Gerontology: Series B: Psychological sciences & social sciences*, 57B(5): 118-207.

KENDLER, K.S., KARKOWSKI, L.M., & PRESCOTT, C.A. 1999. Causal relationship between stressful life events and the onset of major depression, *American journal of psychiatry*, 156: 837-841.

KENDLER, K.S., MYERS, J.M., NEALE, M.C. 2000. A multidimensional twin study of mental health in women. *American journal of psychiatry*, 157: 13-506.

KING, C.M, ROTHMAN, A.J., & JEFFERY, R.W. 2002. The challenge study: Theory based interventions for smoking and weight loss. *Health Education Research* (Special issue: Health Behaviour Change Research: Theory Comparison and Multiple Behaviour Research from the NIH Behavior Change Consortium (9): 12-56.

KLEIN, W. M. P. 2002. Social comparison and risk judgement: Recent work and new directions. *Risk, decision, and policy*, 7: 145-152.

KLEIN, W. M. P. 2002. Comparative risk estimates relative to the average peer predict behavioral intentions and concern about absolute risk. *Risk, decision, and policy*, 7: 193-202.

KLEIN, K.W. 2000. Object relation and futurity: the relationship between interpersonal meaning systems and future orientation. (*Unpublished doctoral dissertation*.) Temple University.

LANDO, H., HADDOCK, K., KLESGES, R., TALCOTT, W., & JENSEN, J. 1999. Smokeless tobacco use in a population of young adults. *Addictive behaviors*. 24: 431-437.

LANDO, H., & HATSUKAMI, D. 1999. Low rates of physicians counseling adolescents about smoking: A critical wake-up call. *Journal of the national cancer institute*. 91: 1795-1796.

LANDO, H., THAI, D., MURRAY, D, ROBINSON, L., JEFFERY, R., SHERWOOD, N., & HENNRİKUS, D. 1999. Age of initiation, smoking patterns, and risk in a population of working adults. *Preventive medicine*. 29: 590-598.

LANDO, H., VALANIS, B., LICHTENSTEIN, E., CURRY, S., MCBRIDE, C., PIRIE, P., & GROTHAUS, L. 2001. Promoting smoking abstinence in postpartum patients: A comparison of 2 approaches. *American Journal of Managed Care*; 7: 685-693.

LAWRENCE, J. W., CARVER, C.S., & SCHEIER, M.F. 2002. Velocity toward goal attainment in immediate experience as a determinant of affect. *Journal of applied social psychology*, 32: 788-802.

LIPKUS, I. M., KLEIN, W. M. P., & RIMER, B. K. 2001. Communicating uncertainty about breast cancer risk. *Cancer epidemiology, biomarkers and prevention*, 10: 895-898

MALMBERG, L., & NORRGARD, S. 1999. Adolescents' ideas of normative life span development and personal future goals. *Journal of adolescence*, 22(1): 33-47.

MATTIS, J. 2002. Religion and spirituality in the meaning-making and coping experiences of African American Women: A qualitative analysis. *Psychology of women quarterly*, 26: 309-321.

MATTIS, J., & JAGERS, R. 2001. A relational framework for the study of religiosity and spirituality in the lives of African Americans. *Journal of community psychology*, 29(5): 519-539.

McCABE, K.M. & DOUGLAS, B. 2000. The relation between familial factors and the future orientation of urban African American young adolescents. *Family relations: Journal of applied family and child studies*, 49(1): 63-70.

MCCAUL, K.D., JOHNSON, R.J., & ROTHMAN, A.J. 2002. The effects of framing and action instructions on whether older adults obtain flu shots. *Health psychology*, 43-59.

MCCAUL, K.D., & WOLD, K.S. 2002. The effects of mailed reminders and tailored messages on mammography screening. *Journal of community health*, 27: 181-190.

MCCAUL, K.D., & MULLENS, A.B. 2000. Affect, thought, and self-protective health behavior: The case of worry and cancer screening. *Social psychological foundations of health and illness*. Blackwell, 206-212.

OBRIEN, D. 2003 Sheep in wolf's clothing. *World today*, 59: 12-14.

O'CONOR, D.B., & SHIMIZU, M. 2002. Sense of personal control, stress and coping style: A cross-cultural study. *Stress and health*, 18: 173-184.

OENER, B. 2000. Future time orientation and relationships with the opposite sex. *Journal of psychology*, 134(3): 306-314.

OETTINGEN, G., & MAYER, D. 2002. The motivating function of thinking about the future: Expectations versus fantasies. *Journal of personality and social psychology*, 83: 1198-1212.

O'GORMAN, J.G., & BAXTER, E. 2002. Self-control as a personality measure. *Personality and individual differences*, 32: 533-540.

OISHI, S., WYER, R.S., & COLCOMBE, S.J. 2000. Cultural variation in the use of current life satisfaction to predict the future. *Journal of personality and social psychology*, 78: 434-446.

OKECH, A.P., & HARRINGTON, R. 2002. The relationships among Black consciousness, self-esteem, and academic self-efficacy in African American men. *Journal of psychology*, 136: 214-224.

O'KELLY, 2002. Work, women, and their beliefs. *Behaviour change*, 19: 12-41.

OLASON, D, T., & ROGER, D. 2001. Optimism, pessimism, and fighting spirit: A new approach to assessing expectancy and adaptation. *Personality and individual differences*, 31: 755-769.

OLIFF, M. 1999. Stress, depression and immunity: The role of defense and coping styles. *Psychiatry research*, 85: 7-17.

OLIVER, J., & BROUGH, P. 2002. Cognitive appraisal, negative affectivity and psychological well-being. *New Zealand journal of psychology*, 31: 2-7.

OLSEN, S.F., MARSHALL, E.S., CHIPMAN, S, BINGHAM, J., BUCHANAN, M., & MANDLECO, B.S. 1999. Daily stressors and coping responses of siblings of children with special needs. Through the eyes of the child: *Provisioning children as active agents of family life*, 311-329.

ONWUEGBUZIE, A. J., & DALEY, C.E. 1999. Relation of hope to self-perception. *Perceptual and motor skills*, 88: 535-542.

OOSTERWEGEL, A., FIELD, N., HART, D., & ANDERSON, K. 2001. The relation of self-esteem variability to emotion variability, mood, personality traits, and depressive tendencies. *Journal of personality*, 69: 689-708.

OPPIKOFER, S., ALBRECH, K., SCHELLING, H.R., & WETTSTEIN, A. 2002. Effects of social support on the well-being of demented institutionalized aged. *Zeitschrift für Gerontologie und Geriatrie*, 35:39-53.

ORLICKA, L. 1999. Interaction between religiosity and self-concept. *Studia psychology*, 41: 345-349.

ORLICKA, J., LINDENBERG, S., STEVERINK, N., & VERBRUGGE, L.M. 1999. Subjective well-being and social production functions. *Social indicators research*, 46: 61-91.

OROURDE, N., & CAPPER, P. 2002. Perceived control, coping, and expressed burden among spouses of suspected dementia patients; Analysis of the goodness-of-fit hypothesis. *Canadian journal on aging*, 21: 385-392.

ORSMOND, G.I., SELTZER, M.M., KRAUSS, M.W., & HONG, J. 2003. Behaviour problems in adults with mental retardation and maternal well-being: Examination of the direction of effects. *American journal on mental retardation*, 108: 257-271.

OSTIR, G.V., MARKIDES, K.S., BLACK, A.S., & GOODMAN, J.S. 2000. Emotional well-being predicts subsequent functional independence and survival. *Journal of the American geriatrics society*, 48: 473-479.

OSTIR, G.V., SIMONSICK, E., KASPER J.D., & GURALNIK, J.M. 2000. Satisfaction with support given and its association with subsequent health status. *Journal of aging and health*, 14: 355-369.

OSTMAN, M., & HANSSON, L. 2001. The relationship between coping strategies and family burden among relatives of admitted psychiatric patients. *Scandinavian journal of caring sciences*. 15:159-165.

OUNPUU, S., KRUEGER, P., VERMEULEN, M., & CHAMBERS, L. 2000. Using the US behaviour risk factor surveillance system's health-related quality of life survey tool in a Canadian city. *Canadian journal of public health*, 91: 67-73.

OWENS, T.J., & GOODNEY, S. 2000. Self, identity and the moral emotions across the life course. *Advances in life course research*, (5): 1-33.

OYSERMAN, D., COON, H.M., & KEMMELMEIR, M. 2002. Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological bulletin*. 128: 3-72.

PERCZEK, R., CARVER, C.S., PRINCE, A.A., & POZO-KADERNAM, C. 2000. Coping, cook, and aspects of personality in Spanish translation and evidence of convergence with English versions. *Journal of personality assessment*, 74: 63-87.

QUINLAN, K.B., & MCCAUL, K.D. 2000. Matched and mismatched interventions with young adult smokers: Testing a stage theory. *Health psychology*, 19: 1-7.

RADCLIFFE, N. M., & KLEIN, W. M. P. 2002. Dispositional, unrealistic, and comparative optimism: Differential relations with knowledge and processing of risk information and beliefs about personal risk. *Personality and social psychology bulletin*, 28: 836-846.

ROBINSON, D.A., WORELL, J. 2002. Issues in clinical assessment with women. (In: Butcher, James N (ed.). *Clinical personality assessment: Practical approaches* (2nd ed.). *Oxford textbooks in clinical psychology*. (2): 190-207.

ROTHMAN, A.J., KELLY, K.M, HERTEL, A., & SALOVEY P. 2002. Message frames and illness representations: Implications for interventions to promote and sustain healthy behavior. *The self-regulation of health and illness behavior*: 23-45.

ROTHMAN, A.J., & KIVINIEMI, M. 1999. "Treating people with health information": An analysis and review of approaches to communicating health risk information. *Journal of the national cancer institute monographs*, 25: 44-51.

ROTHMAN, A.J., MARTINO, S.C., BEDELL, B.T., DETWEILER, J.B., & SALOVEY, P. 1999. The systematic influence of gain- and loss-framed messages on people's interest in and use of different types of health behaviors. *Personality and social psychology bulletin*, 11: 1355-1369.

ROTTER, J. 1966. Internal – external locus of control scale. *Locus of control scale*, 1-3.

SANDERS -THOMPSON, V. 2000. Variables affecting racial-identity in perceived racial discrimination. *Journal of personality and social psychology*, 139(6): 748-761.

SALOVEY, P., ROTHMAN, A.J., DETWEILER, J.B., & STEWARD, W. 2000. Emotional states and physical health. *American psychologist*, 55: 110-121.

SCHEIER, M.F., CARVER, C.S., & BRIDGES, M.W., 2001. Optimism, pessimism, and psychological well-being. In: E.C. Chang (Ed.), *Optimism and pessimism: Implications for theory, research, and practice*. (pp. 189-216). Washington, D.C: American Psychological Association.

SCHEIER, M.F., CARVER, C.S., & BRIDGES, M.W., 1994. Life orientation test-revised.

SELLERS, R. & SHELTON, J.N. 2003. The role of racial identity in perceived racial discrimination. *Journal of personality and social psychology*, 84(5): 1079-1092.

STUART, A.E., & BLANTON, H. 2002. A conversational norms analysis of the effects of message framing on perceived behavioral prevalence. *European journal of social psychology*: 3-7.

THOMPSON, P., ANDERSON, L., BAKEMAN, R. 2000. Effects of racial socialization and racial identity on acculturative stress in African American college students. *Cultural diversity and ethnic minority psychology*, 6(2): 196-210.

WEINSTEIN, N. D., & LYON, J. E. 1999. Mindset and optimistic biases about personal risk. *British journal of health psychology*, 4: 289-300.

WEINSTEIN, N. D., & SANDMAN, P. M. 2002. The precaution adoption process model and its application. *Health behavior and health education*: 509-655.

WILLIAMS, D. & RIELS, F.L. 2001. The actor and the observer; How are their perceptions of causality divergent? *Psychological bulletin*, 92: 11-29.

WISSING, M.P. & VAN EEDEN, C, 1997. Facing the challenge to explicate mental health salutogenetically: *Sense of coherence and psychological wellbeing*, 142-153.

WORELL, J., STILWELL, D., OAKLEY, D., & ROBBINSON, D 1999. Educating about learners and gender: Cognitive, personal and professional outcomes. *Psychology of women quarterly*, 23(4): 797-811.

WROSCH, C., SCHEIER, M.F., CARVER, C.S., & SCHULZ, R. 2003. The importance of goal disengagement in adaptive self-regulation: When giving up is beneficial. *Self and identity*, 2: 1-20.

YOWELL, C.M. 2002. Dreams of the future: the pursuit of education and care: possible selves among ninth grade Latino youth. *Applied developmental science*. 6(2): 62-72.

ZAKIN, G., SOLOMON, Z., & NERIA, Y. 2003. Hardiness, attachment style, and long term psychological distress among Israeli POWs and combat veterans. *Personality and individual differences*, 34 (5): 819-830.

ZANI, B., CICOGNANI, E., & ALBANESI, C. 2001. Adolescents' sense of community and feeling of unsafety in the urban environment. *Journal of community & applied social psychology*, 11 (6): 475-490.

- ZANK, S., & LEIPOLD, B. 2001. The relationship between severity of dementia and subjective well-being. *Aging and mental health*, 5: 191-197.
- ZAUSZNIEWSKI, J.A., & RONG, J.R. 1999. Depressive cognitions and psychosocial functioning: A test of Beck's cognitive theory. *Archives of psychiatric nursing*, 13: 286-294.
- ZEBRACK, B.J., & CHESTER, M.A. 2002. Quality of life in childhood cancer survivors. *Psycho-oncology*, 11 (2): 132-141
- ZEKOVIC, B., & RENWICK, R. 2003. Quality of life for children and adolescents with developmental disabilities: Review of conceptual and methodological issues relevant to public policy. *Disability & society*, 18 (1): 19-34.
- ZELINA, M., & ZELINOVA, M. 2001. Quality of life in the creatively-humanistic concept of personality. *Studio psychological*, 43 (3): 195-202.
- ZHANG, J., & NORVILITIS, J.M. 2002. Measuring Chinese psychological well-being with western developed instruments. *Journal of personality assessment*, 79 (3): 492-511.
- ZHANG, J.P., VITALIANO, P.P., LUTGENDORF, S.K., SCANLAN, J.M., & SAVAGE, M.V. 2001. Sense of coherence buffers relationships of chronic stress with fasting glucose levels. *Journal of behavioral medicine*, 24: 33-57.
- ZHANG, L.F. 2001. Thinking styles, self-esteem, and extracurricular experiences. *International journal of psychology*, 36: 100-108.
- ZHANG, L.F., & POSTIGLIONE, G.A. 2001. Thinking styles, self esteem, and socio-economic status. *Personality and individual differences*, 31 (8): 1333-1346.
- ZHANG, L.W., & LEUNG, J.P. 2002. Moderating effects of gender and age on the relationship between self-esteem and life satisfaction in mainland Chinese. *International journal of psychology*, 37 (2): 83-91.

ZHOU, S.H., XUE, F., & ZHOU, P.Q. 2002. Self-esteem, life-satisfaction and materialism: Effects of advertising images on Chinese college students. In: C.R Taylor (Ed.). *New directions in international advertising research*. Amsterdam, 456-506.

ZIC, A., & IGRIC, L. 2001. Self-assessment of relationships with peers in children with intellectual disability. *Journal of intellectual disability research*, 45: 202-211.

ZIGLER, E., & BENNETT-GATES, D. 2002. Assessing personality traits of individuals with mental retardation. *American journal on mental retardation*, 107 (3): 181-193.

ZILLIG, L.M.P., HEMENOVER, S.H., & DIENSTBIER, R.A. 2002. What do we assess when we assess a Big 5 trait? A content analysis of the affective, behavioral, and cognitive processes represented in Big 5 personality inventories. *Personality and social psychology bulletin*, 28 (6): 847.

ZIMMERMAN, M.A., RAMIREZVALLES, J., & MATON, K.I. 1999. Resilience among urban African American male adolescents: A study of the protective effects of sociopolitical control in their mental health. *American journal of community psychology*, 27: 733-753.

ZINNBAUER, B.J., PARGAMENT, K.I., & SCOTT, A.B. 1999. The emerging meanings of religiousness and spirituality: Problems and prospects. *Journal of personality*, 67: 889-921.

ZULLIG, K.J., VALOIS, R.F., HUEBNER, E.S., OELTMANN, J.E., & DRANE, J.W. 2001. Relationship between perceived life satisfaction and adolescents' substance abuse. *Journal of adolescent health*, 29 (4): 279-288.

ZUMBO, B.D., & MICHALOS, A.C. 2000. Quality of life in Jasper, Alberta. *Social indicators research*, 49: 121-147.

ZUNZUNEGUI, M.V., LLACERCENTRO, A., & BELAND, F. 2002. The role of social and psychological resources in the evolution of depression in caregivers. 21 (3): 357-370.